



# RESERVE STUDY

For

**Plum Creek Condominium Association  
13913 Camelot Dr.  
Sterling Heights, MI**

**Date of Inspection: 8/15/2018**



**This Reserve Study was:**

- Submitted by Building Reserves on: November 9, 2018
- Inspected and prepared by: Andrew Herland, Reserve Specialist
- Professionally reviewed by: John Aiello, Engineer, Reserve Specialist



The RS (Reserve Specialist) designation is awarded by the Community Associations Institute (CAI) to qualified Reserve Specialists who, through years of specialized experience, can help ensure that community associations prepare their reserve budget as accurately as possible.



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### Revisions

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Revisions will be made to this Reserve Study in agreement with written instruction from the Board of Directors. No additional charge is incurred for the first (2) sets of revisions, if requested in writing and in list format, within six months of the shipment date of this report.

### Updates

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It is necessary to update this reserve study in two or three years to make certain an equitable funding plan is in place since a Reserve Study is a snapshot in time. Many variables can alter the study after it is completed which may result in significant underfunding or overfunding of the reserve account. Examples of variables that can change the recommended funding are:

- Timing of proposed projects
- Maintenance practices of reserve components
- Changes in interest rates on invested reserves
- Changes in inflationary cost of labor, equipment and materials





**Client Profile**

Client Reference Number:	17486
Type of Study:	Full Reserve Study
Date of Non-Invasive Inspection:	August 15, 2018
Date of Study Shipment:	November 9, 2018
Fiscal Year Start and End:	Jan 1 - Dec 31

**Community Description**

Type of Development:	Townhome and Apartment Style Condominiums
Number of Units:	237
Number of Buildings:	23
Year(s) Built:	1972
Description of Major Components by Property Class:	
EXTERNAL BUILDING COMPONENTS	Masonry, Roofs, Windows & Patio Doors
INTERNAL BUILDING COMPONENTS	Carpet, Light Fixtures, Paint Finishes
SERVICE COMPONENTS	Furnace, Condensing Unit, Intercom Panels
SITE COMPONENTS	Carports, Concrete, Fences
CLUBHOUSE COMPONENTS	N/A
POOL COMPONENTS	Concrete, Perimeter Fence, Pool Replacement
GARAGE COMPONENTS	N/A

**Macro Economic Factors**

Projected Interest Earned on Invested Reserves:	0.10%
Projected Local Inflation Costs:	2.90%

**Current Funding**

Current Reserve Status as of:	August 1, 2018
Current Reserve Balance:	\$99,673
Current Annual Reserve Contributions:	\$50,000
Current Reserve Contribution per Unit per Month (Ave.):	\$17.58
Current Operating Budget:	\$484,000
Current Percentage of Operating Budget to Reserve Account:	10.33%

**(Unaudited Cash Status Of the Reserve Fund)****Recommended Funding**

Recommended Fund Start as of:	January 1, 2019
<b>Recommended Annual Reserve Contribution:</b>	<b>\$352,500</b>
<i>Per Unit Per Month (Average):</i>	<i>\$123.95</i>
<b>Recommended Special Assessment:</b>	<b>\$85,000</b>
<i>Per Unit Per Month (Average):</i>	<i>\$29.89</i>
<b>Total Recommended Reserve Contribution:</b>	<b>\$437,500</b>
<i>Per Unit Per Month (Average):</i>	<i>\$153.83</i>

**Recommended Adjustment**

<b>Recommended Adjustment in Annual Reserve Contribution:</b>	<b>\$302,500</b>
<i>Per Unit per Month (Average):</i>	<i>\$106.36</i>

### **What Is A Reserve Study? Why Have One Done?**

A Reserve Study is a financial plan used to set aside the appropriate amount of money required for capital repairs and replacements for the development's infrastructure and surrounding assets. Reserve studies are one of the most reliable ways of protecting the value of the property's infrastructure and marketability. These studies help ensure that each homeowner pays their fair share of the deterioration in direct proportion to the amount of time they are owners.

It is best that community associations avoid the use of special assessments or loans to fund major replacements projects. Funding capital repairs and replacements using special assessments and loans is less cost effective than slowly accumulating reserves over time and investing the balance until the funds are needed for major projects.

### **A Reserve Study: A Multi-Functional Tool**

- 1.) Lending institutions often request Reserve Studies during the process of a loan application for the community and/or the individual owners.
- 2.) A Reserve Study contains a detailed inventory of the association's major assets and serves as a management tool for planning, scheduling and coordinating future repairs and replacements.
- 3.) A Reserve Study is an annual disclosure of the financial condition of the association to the current homeowner, and may be used as a "consumer's guide" by potential purchasers.
- 4.) A Reserve Study is a tool that can assist the board in fulfilling its legal and financial obligations of keeping the community in an economically manageable state of repair. If a community is operating on a deficit basis, it cannot guarantee that a special assessment, when needed, will be approved. Therefore, the association cannot guarantee its ability to perform necessary repairs and replacement to major components for which they are responsible.
- 5.) Reserve Studies are an essential tool for your accountant during the preparation of the association's annual audit.

### **Other Advantages Of Reserve Studies Include:**

- Assists in sale of residence
- Reduces cost of community maintenance
- Maintains market value of home
- Preserves community appearance
- Minimizes special assessments
- Equitable use of residence

### Current Funding

The current reserve funding plan as of **August 1, 2018** consists of:

- 1.) An overall operating budget of **\$484,000**
  - The current percentage contribution from the operating budget to reserves is **10.33%**
- 2.) A current reserve balance of **\$99,673**
- 3.) An annual reserve contribution of **\$50,000**

### Recommended Funding

Building Reserves recommends the following funding plan to be in effect on **January 1, 2019**  
Our recommend funding plan consists of:

- 1.) An annual reserve contribution of **\$352,500**
    - Equivalent to an average per unit per month contribution of **\$123.95**
  - 2.) Planned special assessment(s) which are listed below by year
- |                        |                        |                        |                        |
|------------------------|------------------------|------------------------|------------------------|
| <b>2019 , \$85,000</b> | <b>2020 , \$85,000</b> | <b>2021 , \$85,000</b> | <b>2022 , \$85,000</b> |
|------------------------|------------------------|------------------------|------------------------|

### Overall Recommended Adjustments In Current Funding Plan

- 1.) The recommended adjustment in the current fiscal year's reserve contribution is **\$302,500**
  - Equivalent to a per unit per month adjustment of **\$106.36**
- 2.) The recommended funding plan represents a percentage adjustment of **62.50%** in the current fiscal year's operating budget.

### **Our Recommended Funding Plan Is Based On The Following:**

#### 30-Year Cash Flow Analysis

This reserve study uses the Cash Flow Method to calculate the minimum recommended annual reserve contribution to determine adequate, but not excessive contributions. The Cash Flow Method pools all reserve expenses into one account. The 30-Year Cash Flow Analysis uses:

- 1.) The unaudited starting reserve fund balance and current reserve contributions, obtained from the Property Manager
- 2.) 30-Year projection of reserve expenses. This evaluation is based on:
  - Establishing each common reserve component
  - Quantifying each reserve component
  - Estimating the current replacement cost of each reserve component



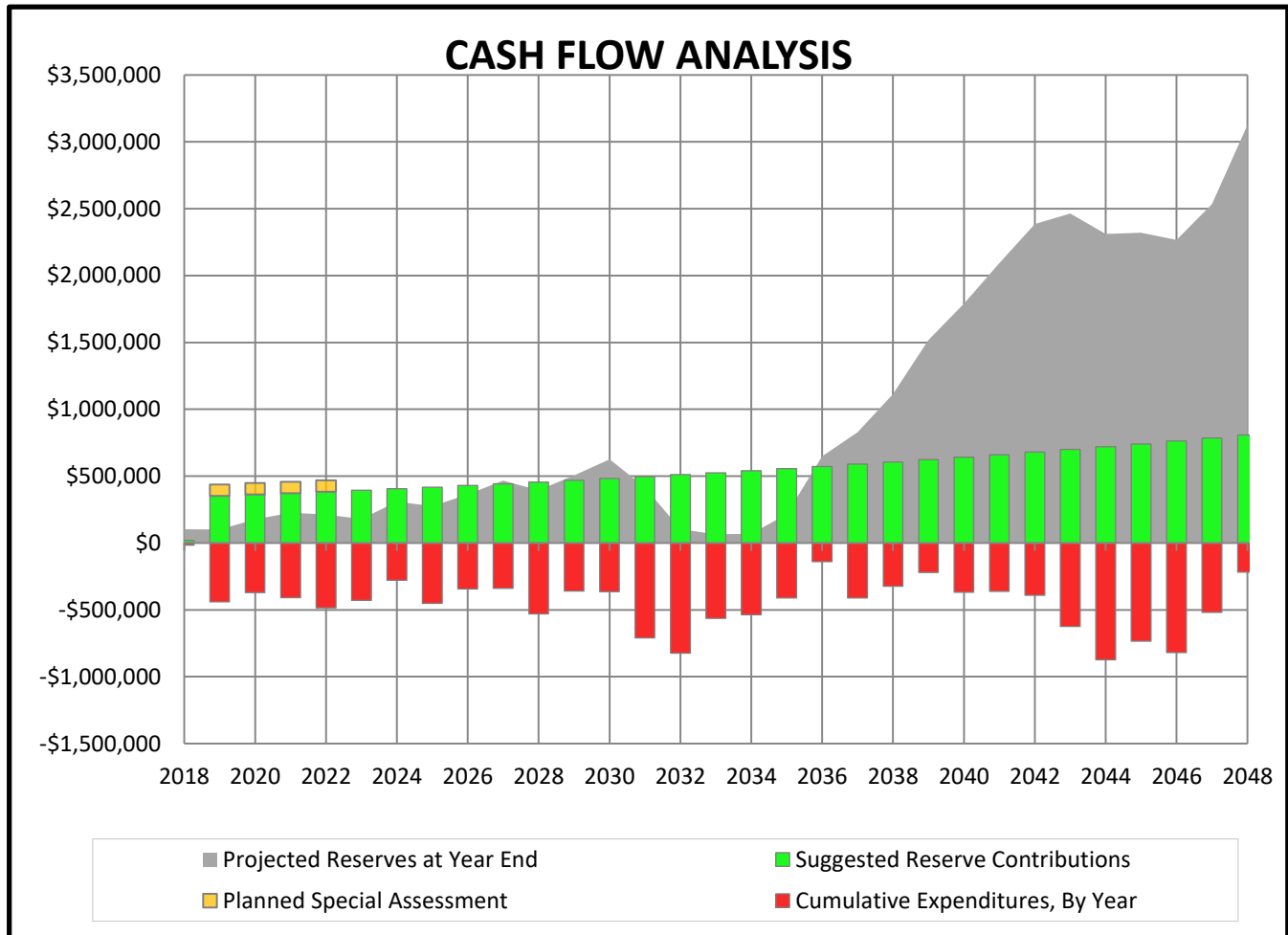
- Applying a useful life to each reserve component
  - Assessing current age and condition of each reserve component
- 3.) The projected local inflationary cost for labor, equipment and materials is **2.90%**
- This inflationary rate was obtained through Marshall and Swift, Inc.
- 4.) The projected interest earned on invested reserves is **0.10%**
- This interest rate is based on how reserves are currently being invested or the current average interest rate on a one-year certificate of deposit (CD). We assume that all interest or dividends earned are not subject to federal or state taxes.
- 5.) Properly scheduled times for projected projects
- Properly scheduled projects will allow communities to save time and money. By utilizing one contractor to complete multiple projects concurrently and by scheduling projects in a logical manner, time and money will be saved.
- 6.) Building Reserves uses level recommended monthly reserve contributions which are increased annually.
- Building Reserves has established reserve contributions, which are adjusted upwards annually to stay ahead of inflationary cost of labor, equipment and materials, thus while avoiding large initial increases or special assessments.

*Sources used to establish local costs of replacements and useful life of components includes, R.S. Means Incorporated (Reeds Construction Data), government standards, experience on comparable properties and engineering judgment.*

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

Total Suggested Annual Reserve Contributions For Next 30-Years					
Years	\$	Years	\$	Years	\$
2019	\$437,500	2029	\$469,000	2039	\$624,100
2020	\$447,700	2030	\$482,600	2040	\$642,200
2021	\$458,200	2031	\$496,600	2041	\$660,800
2022	\$469,000	2032	\$511,000	2042	\$680,000
2023	\$395,100	2033	\$525,800	2043	\$699,700
2024	\$406,600	2034	\$541,000	2044	\$720,000
2025	\$418,400	2035	\$556,700	2045	\$740,900
2026	\$430,500	2036	\$572,800	2046	\$762,400
2027	\$443,000	2037	\$589,400	2047	\$784,500
2028	\$455,800	2038	\$606,500	2048	\$807,300

## Recommended Reserve Funding Plan For Next 30-Years



This Reserve Study was submitted on November 9, 2018

By Building Reserves, Inc.

This Reserve Study was:

- Inspected and prepared by Andrew Herland, Reserve Specialist
- Review by: John Aiello, Engineer, Reserve Specialist

RS (Reserve Specialist) is the reserve provider professional designation of the Community Association Institute (CAI) representing America's 380,000 condominium, cooperative and homeowners association.

### **Property components are classified as one of the five following categories:**

- 1.) Reserve Components
- 2.) Operating Budget Components
- 3.) Long-Lived Components
- 4.) Unit Owner Responsibilities
- 5.) Components Maintained by Others

### **Reserve Components**

**Reserve Components are classified as items that are:**

- 1.) The Association's responsibility
- 2.) Have a limited useful life
- 3.) Have a remaining expected useful life
- 4.) Have a replacement cost above a minimum threshold
- 5.) Components which are funded from the Association's capital reserve funds

### **Non-Reserve Components**

**Operating Budget Components are classified as:**

- 1.) Relatively minor expenses which have little effect on Suggested Reserve contributions
- 2.) Components which are funded through the operating budget
- 3.) Components which have a current cost of replacement under **\$3,500**

**Long-Lived Components are classified as:**

- 1.) Components with estimated remaining useful life beyond 30-Years
- 2.) Components without predictable remaining useful life

**Unit Owner Responsibilities are classified as:**

- 1.) Components maintained and replaced by the individual unit owners

**Components Maintained by Others are classified as:**

- 1.) Components maintained and replaced by the local government, the utility service provider or others

## D. RESPONSIBILITY MATRIX

Component Name	Association-Responsibility				
	Reserve	Operating	Long-Lived	Owner	Other
Address Signage		X			
Air Handling Unit at Clubhouse, Furnace	X				
Balconies at Apartment Style Buildings, Railings, Repairs Addressed As-Needed		X			
Balconies at Apartment Style Buildings, Repairs and Partial Replacements		X			
Balconies at Apartment Style Buildings, Total Replacement (Per Direction)			X		
Balconies, Aluminum Wrap at Columns and Perimeter Boards, Replacement			X		
Balconies, Railings, Steel, Paint Finishes	X				
Balconies, Railings, Steel, Replacement	X				
Carports, Paint Finishes		X			
Carports, Phased Replacement	X				
Catch Basins at Landscape			X		
Catch Basins, Capital Repairs	X				
Clubhouse - Acoustic Ceiling Tile Grid at Lower Level			X		
Clubhouse - Acoustic Ceiling Tiles at Lower Level		X			
Clubhouse - Cabinetry and Countertops		X			
Clubhouse - Fireplace, Replacement			X		
Clubhouse - Furnishings		X			
Clubhouse - Light Fixtures, Interior		X			
Clubhouse - Paint Finishes, Interior		X			
Clubhouse - Security Cameras		X			
Clubhouse - Water Heater		X			
Common Interior Doors			X		
Concrete Sidewalks, Entry Stoops, and Patios, Phased Replacement	X				
Concrete Streets and Curbs, Partial Replacements	X				
Concrete Streets and Curbs, Phased Replacement	X				
Condensing Unit at Clubhouse, 5-ton	X				
Doors (Serving Only A Single Unit) at Apartment Style Buildings				X	
Doors, Entry Type at Townhomes and Clubhouse, Phased	X				
Doors, Glass, Front Entry and Surrounding Glass, Phased	X				
Electrical and Plumbing Systems (Serving Only A Single Unit)				X	
Electrical Systems, Common, Complete Replacement			X		
Electrical Utility Boxes and Meters					X
Fences, Vinyl, Privacy	X				
Fire Detection Devices (Serving Only A Single Unit)				X	
Fire Extinguishers at Apartment Style Buildings		X			
Fire Hydrants					X
Floor Coverings at Clubhouse, Resilient Flooring	X				
Floor Coverings, Carpet, Phased	X				
Foundations			X		
Gutters and Downspouts, Aluminum, Phased	X				
Heating, Ventilation, and Air Conditioning (Serving Only A Single Unit)				X	
Intercom Entry Panels	X				
Interiors (Of A Single Unit)				X	
Irrigation System, Annual Repairs and Interim Replacement of Controllers		X			
Irrigation System, Partial Replacements, Addressed As-Needed (Per Direction)		X			
Landscape Improvements		X			
Light Bulbs, Common Fixtures		X			
Light Fixtures, Exit Signs at Apartment Style Buildings		X			
Light Fixtures, Exterior	X				
Light Fixtures, Exterior Flood Lights, Addressed As-Needed		X			
Light Fixtures, Interior, Phased	X				
Mailboxes at Apartment Style Buildings		X			
Mailboxes at Townhome Units		X			
Maintenance Items Normally Funded through the Operating Budget		X			
Paint Finishes, Interior, Common Areas, Phased	X				

## D. RESPONSIBILITY MATRIX

Component Name	Association-Responsibility				
	Reserve	Operating	Long-Lived	Owner	Other
Pipes, Building Interior, Water and Sewer, Common			X		
Pipes, Subsurface, Common, Inspections		X			
Pipes, Subsurface, Storm Water			X		
Pipes, Subsurface, Utilities, Laterals, Water and Sanitary Sewer			X		
Pipes, Subsurface, Utilities, Mains, Water and Sanitary Sewer					X
Pool - Concrete Deck, Partial Replacements	X				
Pool - Concrete Deck, Total Replacement	X				
Pool - Coping, Concrete (No Replacement Anticipated Prior to the 2037 P			X		
Pool - Cover		X			
Pool - Fence, Chain Link, Proposed Replacement with Aluminum Picket	X				
Pool - Furnishings		X			
Pool - Mechanical Equipment, Filter, Pump, and Chlorinator	X				
Pool - Mechanical Equipment, Heater, 382-MBH	X				
Pool - Paint Finish	X				
Pool - Replacement, Pool Structure	X				
Pool - Resurfacing, Plaster	X				
Pool - Waterline Tile	X				
Reserve Study Update	X				
Rest Rooms, Renovation	X				
Roofs, Asphalt Shingles, Phased	X				
Roofs, Asphalt Shingles, Replacement of (3) Buildings in 2018 Only		X			
Sealants - Windows and Doors, Phased	X				
Shutters, Vinyl, Louvered (Per Direction of the Property Manager)		X			
Smoke Detectors at Common Areas of Apartment Style Buildings, Hard-W		X			
Soffits and Fascia, Aluminum, Phased	X				
Structural Building Frames			X		
Touch-Up Painting		X			
Walls, Aluminum and Vinyl Siding, Phased	X				
Walls, Masonry, Inspections and Partial Repointing, Phased	X				
Walls, Paint Finishes, Exterior, Phased	X				
Water Heaters				X	
Windows and Patio Doors, Phased	X				



# Balconies, Railings, Steel, Paint Finishes

## EXTERNAL BUILDING COMPONENT

PERCENTAGE OF TOTAL FUTURE COSTS: 1.10%

LINE ITEM: 1

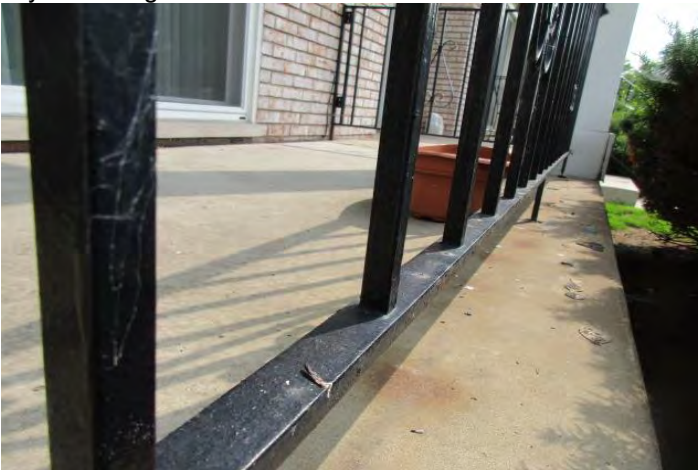
ESTIMATED UNIT QUANTITY			ESTIMATED REPLACEMENT COSTS	
Present:	2,740	Linear Feet	Current Unit Cost:	\$9.00
Replacement Per Phase:	2,740	Linear Feet	Current Cost Per Phase:	\$24,660
Replaced in Next 30-Years:	10,960	Linear Feet	Total Cost Next 30-Years:	\$152,645
ESTIMATED AGE AND REPLACEMENT YEARS			CONDITION AND USEFUL LIFE	
Estimated Current Age in Years:	Unknown		Overall Current Condition:	Fair
Remaining Years Until Replacement:	2		Useful Life in Sterling Heights, MI	6 to 8 Years
Estimated First Year of Replacement:	2020		Full or Partial Replacement:	Full



Overview of a typical railing at the balcony of an apartment style building



Typical condition



Typical surface condition at a bottom rail



Example of chipped paint and metal oxidation at a top rail

Schedule of Replacements Costs					
2018	\$0				
2019	\$0	2029	\$0	2039	\$0
2020	\$26,111	2030	\$0	2040	\$0
2021	\$0	2031	\$0	2041	\$0
2022	\$0	2032	\$0	2042	\$0
2023	\$0	2033	\$0	2043	\$0
2024	\$0	2034	\$0	2044	\$51,855
2025	\$0	2035	\$0	2045	\$0
2026	\$30,997	2036	\$0	2046	\$0
2027	\$0	2037	\$0	2047	\$0
2028	\$0	2038	\$43,682	2048	\$0

Engineering Narrative
The paint finishes of the metal railings, located at the balconies of the apartment style buildings, are of an unknown age, and they are in an overall fair condition. Per the current condition, we recommend for paint finishes in 2020, in 2 years. With an average useful life of 6 to 8 years, and per request of the property manager, subsequent paint applications are planned every 6 years after. Paint applications are not included in 2032, when railing replacements are recommended.



# Balconies, Railings, Steel, Replacement

## EXTERNAL BUILDING COMPONENT

PERCENTAGE OF TOTAL FUTURE COSTS: 1.77%

Line Item: 2

ESTIMATED UNIT QUANTITY				ESTIMATED REPLACEMENT COSTS	
Present:	2,740	Linear Feet		Current Unit Cost:	\$60.00
Replacement Per Phase:	2,740	Linear Feet		Current Cost Per Phase:	\$164,400
Replaced in Next 30-Years:	2,740	Linear Feet		Total Cost Next 30-Years:	\$245,311
ESTIMATED AGE AND REPLACEMENT YEARS				CONDITION AND USEFUL LIFE	
Estimated Current Age in Years:	46			Overall Current Condition:	Good
Remaining Years Until Replacement:	14			Useful Life in Sterling Heights, MI	50 to 60 Years
Estimated First Year of Replacement:	2032			Full or Partial Replacement:	Full



Overview of a typical railing at the balcony of an apartment style building



Isolated condition of a unique style of railing



Typical surface condition at a bottom rail



Typical surface condition at a top rail

### Schedule of Replacements Costs

2018	\$0				
2019	\$0	2029	\$0	2039	\$0
2020	\$0	2030	\$0	2040	\$0
2021	\$0	2031	\$0	2041	\$0
2022	\$0	2032	\$245,311	2042	\$0
2023	\$0	2033	\$0	2043	\$0
2024	\$0	2034	\$0	2044	\$0
2025	\$0	2035	\$0	2045	\$0
2026	\$0	2036	\$0	2046	\$0
2027	\$0	2037	\$0	2047	\$0
2028	\$0	2038	\$0	2048	\$0

### Engineering Narrative

The metal railings, located at the balconies of the apartment style buildings, are 46 years of age, and they are in good condition. Per the current condition, and an average useful life of 50 to 60 years, we are recommending a replacement of the railings in 2032, at 60 years of age.

# Doors, Glass, Front Entry and Surrounding Glass, Phased

## EXTERNAL BUILDING COMPONENT

PERCENTAGE OF TOTAL FUTURE COSTS: 2.33%

Line Item: 3

ESTIMATED UNIT QUANTITY		ESTIMATED REPLACEMENT COSTS	
Present:	2,580 Square Feet	Current Unit Cost:	\$90.00
Replacement Per Phase:	430 Square Feet	Current Cost Per Phase:	\$38,700
Replaced in Next 30-Years:	2,580 Square Feet	Total Cost Next 30-Years:	\$322,966
ESTIMATED AGE AND REPLACEMENT YEARS		CONDITION AND USEFUL LIFE	
Estimated Current Age in Years:	46	Overall Current Condition:	Good
Remaining Years Until Replacement:	9	Useful Life in Sterling Heights, MI	45 to 60 Years
Estimated First Year of Replacement:	2027	Full or Partial Replacement:	Full



Overview of a typical glass entry door and surrounding glass at an apartment style building



Typical condition



Typical surface condition at a door handle



Typical surface condition at the bottom of a door

### Schedule of Replacements Costs

2018	\$0	2029	\$53,001	2039	\$0
2019	\$0	2030	\$54,538	2040	\$0
2020	\$0	2031	\$56,119	2041	\$0
2021	\$0	2032	\$57,747	2042	\$0
2022	\$0	2033	\$0	2043	\$0
2023	\$0	2034	\$0	2044	\$0
2024	\$0	2035	\$0	2045	\$0
2025	\$0	2036	\$0	2046	\$0
2026	\$0	2037	\$0	2047	\$0
2027	\$50,055	2038	\$0	2048	\$0
2028	\$51,507				

### Engineering Narrative

The glass entry doors (and their surrounding glass) are 46 years of age, and they are in good condition. Per the current condition, and request of the property manager, we are recommending a phased replacement of these units between 2027 - 2032, ranging from 55 to 60 years of age.



# Doors, Entry Type at Townhomes and Clubhouse, Phased

## EXTERNAL BUILDING COMPONENT

PERCENTAGE OF TOTAL FUTURE COSTS: 1.05%

Line Item: 4

ESTIMATED UNIT QUANTITY			ESTIMATED REPLACEMENT COSTS	
Present:	115	Each	Current Unit Cost:	\$775.00
Replacement Per Phase:	23	Each	Current Cost Per Phase:	\$17,825
Replaced in Next 30-Years:	115	Each	Total Cost Next 30-Years:	\$145,016
ESTIMATED AGE AND REPLACEMENT YEARS			CONDITION AND USEFUL LIFE	
Estimated Current Age in Years:	Varies		Overall Current Condition:	Good
Remaining Years Until Replacement:	15		Useful Life in Sterling Heights, MI	20 to 25 Years
Estimated First Year of Replacement:	2033		Full or Partial Replacement:	Full



Overview of a typical entry door at a townhome unit



Typical condition



Typical surface condition



Isolated condition of a door that has been replaced with a finish that does not match other entry doors

Schedule of Replacements Costs					
2018	\$0				
2019	\$0	2029	\$0	2039	\$0
2020	\$0	2030	\$0	2040	\$0
2021	\$0	2031	\$0	2041	\$0
2022	\$0	2032	\$0	2042	\$0
2023	\$0	2033	\$27,369	2043	\$0
2024	\$0	2034	\$28,163	2044	\$0
2025	\$0	2035	\$28,980	2045	\$0
2026	\$0	2036	\$29,820	2046	\$0
2027	\$0	2037	\$30,685	2047	\$0
2028	\$0	2038	\$0	2048	\$0

Engineering Narrative	
<p>The entry doors, located at the townhomes and at the clubhouse, vary in age, and they are in good condition. Per the current condition, and request of the property manager, we are recommending a phased replacement of these doors between 2033 - 2037. The associated storm doors are the responsibility of the associated homeowner.</p>	

# Gutters and Downspouts, Aluminum, Phased

## EXTERNAL BUILDING COMPONENT

PERCENTAGE OF TOTAL FUTURE COSTS: 2.10%

Line Item: 5

ESTIMATED UNIT QUANTITY			ESTIMATED REPLACEMENT COSTS	
Present:	12,490	Linear Feet	Current Unit Cost:	\$7.50
Replacement Per Phase:	1,784	Linear Feet	Current Cost Per Phase:	\$13,382
Replaced in Next 30-Years:	24,980	Linear Feet	Total Cost Next 30-Years:	\$291,533
ESTIMATED AGE AND REPLACEMENT YEARS			CONDITION AND USEFUL LIFE	
Estimated Current Age in Years:	Varies		Overall Current Condition:	Fair
Remaining Years Until Replacement:	1		Useful Life in Sterling Heights, MI	20 to 25 Years
Estimated First Year of Replacement:	2019		Full or Partial Replacement:	Full



Overview of typical gutters



Typical condition



Typical gutter to downspout connection



Isolated condition of missing gutter and fascia

### Schedule of Replacements Costs

2018	\$0				
2019	\$13,770	2029	\$0	2039	\$24,392
2020	\$14,170	2030	\$0	2040	\$25,099
2021	\$14,580	2031	\$0	2041	\$25,827
2022	\$15,003	2032	\$0	2042	\$26,576
2023	\$15,438	2033	\$0	2043	\$27,347
2024	\$15,886	2034	\$0	2044	\$28,140
2025	\$16,347	2035	\$0	2045	\$28,956
2026	\$0	2036	\$0	2046	\$0
2027	\$0	2037	\$0	2047	\$0
2028	\$0	2038	\$0	2048	\$0

### Engineering Narrative

The gutters and downspouts vary in age, and they are in an overall fair condition. Per the current condition, and request of the property manager, a phased replacement is included between 2019 - 2025. A subsequent phased replacement is recommended 20 years after. Replacements are planned to coincide with asphalt shingle roof replacements.



# Light Fixtures, Exterior

## EXTERNAL BUILDING COMPONENT

PERCENTAGE OF TOTAL FUTURE COSTS: 0.28%

Line Item: 6

### ESTIMATED UNIT QUANTITY

Present:	362	Each
Replacement Per Phase:	362	Each
Replaced in Next 30-Years:	362	Each

### ESTIMATED REPLACEMENT COSTS

Current Unit Cost:	\$80.00
Current Cost Per Phase:	\$28,960
Total Cost Next 30-Years:	\$38,544

### ESTIMATED AGE AND REPLACEMENT YEARS

Estimated Current Age in Years:	Unknown
Remaining Years Until Replacement:	10
Estimated First Year of Replacement:	2028

### CONDITION AND USEFUL LIFE

Overall Current Condition:	Good
Useful Life in Sterling Heights, MI	20 to 25 Years
Full or Partial Replacement:	Full



Overview of typical exterior sconces



Typical condition



Example of a small sconce



Isolated condition of a damaged fixture

### Schedule of Replacements Costs

2018	\$0	2029	\$0	2039	\$0
2019	\$0	2030	\$0	2040	\$0
2020	\$0	2031	\$0	2041	\$0
2021	\$0	2032	\$0	2042	\$0
2022	\$0	2033	\$0	2043	\$0
2023	\$0	2034	\$0	2044	\$0
2024	\$0	2035	\$0	2045	\$0
2025	\$0	2036	\$0	2046	\$0
2026	\$0	2037	\$0	2047	\$0
2027	\$0	2038	\$0	2048	\$0
2028	\$38,544				

### Engineering Narrative

The exterior light fixtures have an unknown age, and they are in an overall good condition. Per the current condition, and request of the property manager, a replacement of the fixtures is included in 2028, in 10 years.



# Roofs, Asphalt Shingles, Phased

## EXTERNAL BUILDING COMPONENT

PERCENTAGE OF TOTAL FUTURE COSTS: 12.91%

Line Item: 7

ESTIMATED UNIT QUANTITY		ESTIMATED REPLACEMENT COSTS	
Present:	1,870 Squares	Current Unit Cost:	\$325.00
Replacement Per Phase:	234 Squares	Current Cost Per Phase:	\$75,969
Replaced in Next 30-Years:	3,506 Squares	Total Cost Next 30-Years:	\$1,789,566
ESTIMATED AGE AND REPLACEMENT YEARS		CONDITION AND USEFUL LIFE	
Estimated Current Age in Years:	Varies	Overall Current Condition:	Good
Remaining Years Until Replacement:	1	Useful Life in Sterling Heights, MI	15 to 20 Years
Estimated First Year of Replacement:	2019	Full or Partial Replacement:	Full



Overview of a typical asphalt shingle roof



Typical condition at the ridge of a gable



Typical surface condition at a valley



Isolated condition of shingles that have some "lift"

### Schedule of Replacements Costs

2018	\$0	2029	\$0	2039	\$138,471
2019	\$78,172	2030	\$0	2040	\$142,486
2020	\$80,439	2031	\$0	2041	\$146,618
2021	\$82,772	2032	\$0	2042	\$150,870
2022	\$85,172	2033	\$0	2043	\$155,246
2023	\$87,642	2034	\$0	2044	\$159,748
2024	\$90,184	2035	\$0	2045	\$164,380
2025	\$92,799	2036	\$0	2046	\$0
2026	\$0	2037	\$0	2047	\$0
2027	\$0	2038	\$134,568	2048	\$0
2028	\$0				

### Engineering Narrative

The asphalt shingle roofs vary in age, and they vary in condition from good to fair. Per the current condition, and request of the property manager, a phased replacement is planned between 2019 - 2025 (3 roofs are being addressed in 2018 as an operating expense). With an average useful life of 15 to 20 years, a subsequent phased replacement is recommended 20 years after, between 2038 - 2045.

# Sealants - Windows and Doors, Phased

## EXTERNAL BUILDING COMPONENT

PERCENTAGE OF TOTAL FUTURE COSTS: 2.30%

Line Item: 8

ESTIMATED UNIT QUANTITY			ESTIMATED REPLACEMENT COSTS	
Present:	16,150	Linear Feet	Current Unit Cost:	\$6.50
Replacement Per Phase:	3,230	Linear Feet	Current Cost Per Phase:	\$20,995
Replaced in Next 30-Years:	32,300	Linear Feet	Total Cost Next 30-Years:	\$318,255
ESTIMATED AGE AND REPLACEMENT YEARS			CONDITION AND USEFUL LIFE	
Estimated Current Age in Years:	Varies		Overall Current Condition:	Good
Remaining Years Until Replacement:	3		Useful Life in Sterling Heights, MI	8 to 12 Years
Estimated First Year of Replacement:	2021		Full or Partial Replacement:	Full



Overview of typical sealant at a window jamb



Typical condition



Overview of typical sealant at a window sill



Isolated condition of a crack in the sealant of a window jamb

### Schedule of Replacements Costs

2018	\$0				
2019	\$0	2029	\$0	2039	\$38,268
2020	\$0	2030	\$0	2040	\$39,378
2021	\$22,875	2031	\$0	2041	\$40,520
2022	\$23,538	2032	\$0	2042	\$41,695
2023	\$24,221	2033	\$0	2043	\$0
2024	\$24,923	2034	\$0	2044	\$0
2025	\$25,646	2035	\$0	2045	\$0
2026	\$0	2036	\$0	2046	\$0
2027	\$0	2037	\$0	2047	\$0
2028	\$0	2038	\$37,190	2048	\$0

### Engineering Narrative

The sealants, located at exterior windows and doors at masonry openings, vary in age, and they range from good to fair condition. Per the current condition, and request, sealant replacements are planned to be phased between 2021 - 2025. With an average useful life of 8 to 12 years, subsequent phased replacements are every 12 years after the initial year of phased window replacements, beginning in 2038. Sealant replacements coincide with every other paint application cycle.



# Soffits and Fascia, Aluminum, Phased

## EXTERNAL BUILDING COMPONENT

PERCENTAGE OF TOTAL FUTURE COSTS: 4.42%

Line Item: 9

ESTIMATED UNIT QUANTITY			ESTIMATED REPLACEMENT COSTS	
Present:	32,350	Square Feet	Current Unit Cost:	\$8.75
Replacement Per Phase:	6,470	Square Feet	Current Cost Per Phase:	\$56,613
Replaced in Next 30-Years:	32,350	Square Feet	Total Cost Next 30-Years:	\$612,988
ESTIMATED AGE AND REPLACEMENT YEARS			CONDITION AND USEFUL LIFE	
Estimated Current Age in Years:	Unknown		Overall Current Condition:	Good
Remaining Years Until Replacement:	25		Useful Life in Sterling Heights, MI	50 to 60 Years
Estimated First Year of Replacement:	2043		Full or Partial Replacement:	Full



Overview of a typical soffit and fascia



Overview of soffit at a front gable bump-out



The soffits and fascia are in good condition



Typical surface condition

Schedule of Replacements Costs					
2018	\$0				
2019	\$0	2029	\$0	2039	\$0
2020	\$0	2030	\$0	2040	\$0
2021	\$0	2031	\$0	2041	\$0
2022	\$0	2032	\$0	2042	\$0
2023	\$0	2033	\$0	2043	\$115,690
2024	\$0	2034	\$0	2044	\$119,045
2025	\$0	2035	\$0	2045	\$122,498
2026	\$0	2036	\$0	2046	\$126,050
2027	\$0	2037	\$0	2047	\$129,705
2028	\$0	2038	\$0	2048	\$0

Engineering Narrative
The aluminum soffits and fascia's age is unknown, and they are in good condition. Per the current condition, we are recommending a phased replacement between 2043 - 2047, coinciding with the planned phased siding replacement. Unit cost is based upon a weighted average among the soffits and fascia.

# Walls, Aluminum and Vinyl Siding, Phased

## EXTERNAL BUILDING COMPONENT

PERCENTAGE OF TOTAL FUTURE COSTS: 2.06%

Line Item: 10

ESTIMATED UNIT QUANTITY			ESTIMATED REPLACEMENT COSTS	
Present:	29,980	Square Feet	Current Unit Cost:	\$4.40
Replacement Per Phase:	5,996	Square Feet	Current Cost Per Phase:	\$26,382
Replaced in Next 30-Years:	29,980	Square Feet	Total Cost Next 30-Years:	\$285,663
ESTIMATED AGE AND REPLACEMENT YEARS			CONDITION AND USEFUL LIFE	
Estimated Current Age in Years:	Varies		Overall Current Condition:	Good
Remaining Years Until Replacement:	25		Useful Life in Sterling Heights, MI	Varies Years
Estimated First Year of Replacement:	2043		Full or Partial Replacement:	Full



Overview of typical siding surfaces



Typical condition at the end of a building



Some sided surfaces are aluminum siding, as seen in this photo



Typical surface condition

Schedule of Replacements Costs					
2018	\$0				
2019	\$0	2029	\$0	2039	\$0
2020	\$0	2030	\$0	2040	\$0
2021	\$0	2031	\$0	2041	\$0
2022	\$0	2032	\$0	2042	\$0
2023	\$0	2033	\$0	2043	\$53,914
2024	\$0	2034	\$0	2044	\$55,477
2025	\$0	2035	\$0	2045	\$57,086
2026	\$0	2036	\$0	2046	\$58,741
2027	\$0	2037	\$0	2047	\$60,445
2028	\$0	2038	\$0	2048	\$0

Engineering Narrative
<p>The aluminum and vinyl siding varies in age (it appears that vinyl siding surfaces are newer than the aluminum surfaces), and it is in good condition. Per the current condition, and request of the property manager, we are including a phased replacement of the siding surfaces between 2043 - 2047. Replacements are planned to coincide with soffit and fascia replacements. Unit cost is based upon replacing all surfaces with vinyl siding.</p>



# Walls, Masonry, Inspections and Partial Repointing, Phased

## EXTERNAL BUILDING COMPONENT

PERCENTAGE OF TOTAL FUTURE COSTS: 17.16%

Line Item: 11

ESTIMATED UNIT QUANTITY		ESTIMATED REPLACEMENT COSTS	
Present:	123,150 Square Feet	Current Unit Cost:	\$4.00
Replacement Per Phase:	24,630 Square Feet	Current Cost Per Phase:	\$98,520
Replaced in Next 30-Years:	394,080 Square Feet	Total Cost Next 30-Years:	\$2,377,626
ESTIMATED AGE AND REPLACEMENT YEARS		CONDITION AND USEFUL LIFE	
Estimated Current Age in Years:	Varies	Overall Current Condition:	Fair
Remaining Years Until Replacement:	0	Useful Life in Sterling Heights, MI	8 to 12 Years
Estimated First Year of Replacement:	2018	Full or Partial Replacement:	Full



Overview of typical surface conditions at masonry brick



Overview of spalled faces and damage at masonry bricks



Overview of spalled faces at masonry bricks



Overview of spalled faces at masonry bricks

Schedule of Replacements Costs			
2018	\$16,750		
2019	\$101,377	2029	\$0
2020	\$104,317	2030	\$0
2021	\$107,342	2031	\$142,864
2022	\$110,455	2032	\$147,008
2023	\$113,658	2033	\$151,271
2024	\$0	2034	\$155,658
2025	\$0	2035	\$160,172
2026	\$0	2036	\$0
2027	\$0	2037	\$0
2028	\$0	2038	\$0
		2039	\$0
		2040	\$0
		2041	\$0
		2042	\$0
		2043	\$201,330
		2044	\$207,169
		2045	\$213,177
		2046	\$219,359
		2047	\$225,720
		2048	\$0

Engineering Narrative
<p>The masonry surfaces are original (repairs have been addressed in the past as-needed, but surfaces vary between poor and good condition). Areas that are in poor condition have surface spalling and occasional brick deterioration. Accordingly, masonry repairs are recommended between 2019 - 2023. An additional \$16,750 is included in 2018, for repairs the association is addressing in 2018 (project cost provided by the property manager). Subsequent phased repairs are recommended every 12 years after.</p>

# Walls, Paint Finishes, Exterior, Phased

## EXTERNAL BUILDING COMPONENT

PERCENTAGE OF TOTAL FUTURE COSTS: 2.29%

Line Item: 12

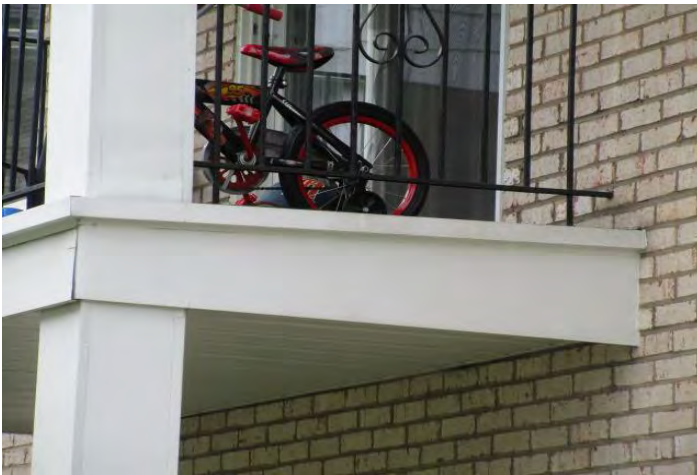
ESTIMATED UNIT QUANTITY		ESTIMATED REPLACEMENT COSTS	
Present:	39,600 Square Feet	Current Unit Cost:	\$1.35
Replacement Per Phase:	7,920 Square Feet	Current Cost Per Phase:	\$10,692
Replaced in Next 30-Years:	142,560 Square Feet	Total Cost Next 30-Years:	\$317,212
ESTIMATED AGE AND REPLACEMENT YEARS		CONDITION AND USEFUL LIFE	
Estimated Current Age in Years:	Varies	Overall Current Condition:	Fair
Remaining Years Until Replacement:	4	Useful Life in Sterling Heights, MI	6 to 8 Years
Estimated First Year of Replacement:	2022	Full or Partial Replacement:	Full



Overview of typical painted aluminum trim at balconies



Typical condition



The paint finishes (which are not factory original) range from fair to good condition



Typical surface condition

### Schedule of Replacements Costs

2018	\$0	2029	\$0	2039	\$19,489
2019	\$0	2030	\$15,068	2040	\$20,054
2020	\$0	2031	\$15,505	2041	\$20,635
2021	\$0	2032	\$15,954	2042	\$21,234
2022	\$11,987	2033	\$16,417	2043	\$0
2023	\$12,335	2034	\$16,893	2044	\$0
2024	\$12,693	2035	\$0	2045	\$0
2025	\$13,061	2036	\$0	2046	\$23,806
2026	\$13,439	2037	\$0	2047	\$24,497
2027	\$0	2038	\$18,939	2048	\$25,207
2028	\$0				

### Engineering Narrative

The columns and perimeter boards, located at the apartment style building balconies, are clad in aluminum and the paint finishes are not factory original. Per request, paint finishes are planned to be addressed on a 5 year cycle. Per the current condition, we are recommending the next paint finishes between 2021 - 2025. Subsequent paint applications cycles are recommended every 8 years after.



# Windows and Patio Doors, Phased

## EXTERNAL BUILDING COMPONENT

PERCENTAGE OF TOTAL FUTURE COSTS: 10.92%

Line Item: 13

ESTIMATED UNIT QUANTITY			ESTIMATED REPLACEMENT COSTS		
Present:	22,940	Square Feet	Current Unit Cost:	\$46.00	
Replacement Per Phase:	2,294	Square Feet	Current Cost Per Phase:	\$105,524	
Replaced in Next 30-Years:	22,940	Square Feet	Total Cost Next 30-Years:	\$1,513,584	
ESTIMATED AGE AND REPLACEMENT YEARS			CONDITION AND USEFUL LIFE		
Estimated Current Age in Years:	Varies		Overall Current Condition:	Fair	
Remaining Years Until Replacement:	8		Useful Life in Sterling Heights, MI	35 to 45	Years
Estimated First Year of Replacement:	2026		Full or Partial Replacement:	Full	



Overview of typical unit windows



Overview of a typical window, located over an apartment style building entry door



Overview of a typical patio door



Isolated condition of a common area window that has a broken seal

### Schedule of Replacements Costs

2018	\$0				
2019	\$0	2029	\$144,517	2039	\$0
2020	\$0	2030	\$148,708	2040	\$0
2021	\$0	2031	\$153,021	2041	\$0
2022	\$0	2032	\$157,459	2042	\$0
2023	\$0	2033	\$162,025	2043	\$0
2024	\$0	2034	\$166,724	2044	\$0
2025	\$0	2035	\$171,559	2045	\$0
2026	\$132,640	2036	\$0	2046	\$0
2027	\$136,486	2037	\$0	2047	\$0
2028	\$140,445	2038	\$0	2048	\$0

### Engineering Narrative

All common windows, private windows, and patio doors are the responsibility of the association. These elements vary in age, and they are in an overall fair to good condition. Per request, we are including a phased replacement between 2026 - 2035.

# Floor Coverings, Carpet, Phased

## INTERNAL BUILDING COMPONENT

PERCENTAGE OF TOTAL FUTURE COSTS: 3.39%

Line Item: 14

ESTIMATED UNIT QUANTITY		ESTIMATED REPLACEMENT COSTS	
Present:	1,780 Square Yards	Current Unit Cost:	\$55.00
Replacement Per Phase:	356 Square Yards	Current Cost Per Phase:	\$19,580
Replaced in Next 30-Years:	5,340 Square Yards	Total Cost Next 30-Years:	\$469,204
ESTIMATED AGE AND REPLACEMENT YEARS		CONDITION AND USEFUL LIFE	
Estimated Current Age in Years:	Varies	Overall Current Condition:	Fair
Remaining Years Until Replacement:	1	Useful Life in Sterling Heights, MI	8 to 12 Years
Estimated First Year of Replacement:	2019	Full or Partial Replacement:	Full



Overview of carpet at a typical common area interior of an apartment style building



Overview of carpet in the clubhouse



Example of a stain in the carpet of a hallway



Example of worn carpet at stair treads

### Schedule of Replacements Costs

2018	\$0	2029	\$0	2039	\$0
2019	\$20,148	2030	\$0	2040	\$0
2020	\$20,732	2031	\$28,393	2041	\$0
2021	\$21,333	2032	\$29,216	2042	\$0
2022	\$21,952	2033	\$30,064	2043	\$40,013
2023	\$22,589	2034	\$30,936	2044	\$41,173
2024	\$0	2035	\$31,833	2045	\$42,367
2025	\$0	2036	\$0	2046	\$43,596
2026	\$0	2037	\$0	2047	\$44,860
2027	\$0	2038	\$0	2048	\$0

### Engineering Narrative

Interior carpet floor coverings, located at the apartment style building common spaces and the clubhouse, vary in age, and they are in an overall fair condition. Per request, a phased replacement is planned between 2019 - 2023. With an average useful life of 8 to 12 years, subsequent phased replacement cycles are recommended every 12 years after.



# Floor Coverings at Clubhouse, Resilient Flooring

## INTERNAL BUILDING COMPONENT

PERCENTAGE OF TOTAL FUTURE COSTS: 0.27%

Line Item: 15

ESTIMATED UNIT QUANTITY			ESTIMATED REPLACEMENT COSTS	
Present:	1,770	Square Feet	Current Unit Cost:	\$6.50
Replacement Per Phase:	1,770	Square Feet	Current Cost Per Phase:	\$11,505
Replaced in Next 30-Years:	3,540	Square Feet	Total Cost Next 30-Years:	\$37,430
ESTIMATED AGE AND REPLACEMENT YEARS			CONDITION AND USEFUL LIFE	
Estimated Current Age in Years:	46		Overall Current Condition:	Fair
Remaining Years Until Replacement:	3		Useful Life in Sterling Heights, MI	20 to 25 Years
Estimated First Year of Replacement:	2021		Full or Partial Replacement:	Full



Overview of the resilient tile at the lower level of the clubhouse



Overview of the resilient sheet flooring at the grade level of the clubhouse



Typical surface condition



Typical surface condition

Schedule of Replacements Costs					
2018	\$0				
2019	\$0	2029	\$0	2039	\$0
2020	\$0	2030	\$0	2040	\$0
2021	\$12,535	2031	\$0	2041	\$0
2022	\$0	2032	\$0	2042	\$0
2023	\$0	2033	\$0	2043	\$0
2024	\$0	2034	\$0	2044	\$0
2025	\$0	2035	\$0	2045	\$24,894
2026	\$0	2036	\$0	2046	\$0
2027	\$0	2037	\$0	2047	\$0
2028	\$0	2038	\$0	2048	\$0

Engineering Narrative	
<p>The resilient floor covering surfaces, located at the clubhouse, are 46 years of age and they are in fair condition. Per the current condition, a replacement is recommended in 2021, in 3 years. With an average useful life of 20 to 25 years, a subsequent replacement is recommended 25 years after.</p>	



# Light Fixtures, Interior, Phased

## INTERNAL BUILDING COMPONENT

PERCENTAGE OF TOTAL FUTURE COSTS: 0.36%

Line Item: 16

ESTIMATED UNIT QUANTITY			ESTIMATED REPLACEMENT COSTS	
Present:	108	Each	Current Unit Cost:	\$140.00
Replacement Per Phase:	22	Each	Current Cost Per Phase:	\$3,024
Replaced in Next 30-Years:	216	Each	Total Cost Next 30-Years:	\$49,231
ESTIMATED AGE AND REPLACEMENT YEARS			CONDITION AND USEFUL LIFE	
Estimated Current Age in Years:	Varies		Overall Current Condition:	Fair
Remaining Years Until Replacement:	1		Useful Life in Sterling Heights, MI	20 to 25 Years
Estimated First Year of Replacement:	2019		Full or Partial Replacement:	Full



Overview of a typical chandelier at the entry area of an apartment style building



Typical condition



Overview of a typical interior ceiling mounted fixture at an apartment style building



Isolated condition of a previously replaced ceiling mounted fixture

### Schedule of Replacements Costs

2018	\$0				
2019	\$3,112	2029	\$0	2039	\$0
2020	\$3,202	2030	\$0	2040	\$0
2021	\$3,295	2031	\$0	2041	\$0
2022	\$3,390	2032	\$0	2042	\$0
2023	\$3,489	2033	\$0	2043	\$6,180
2024	\$0	2034	\$0	2044	\$6,359
2025	\$0	2035	\$0	2045	\$6,543
2026	\$0	2036	\$0	2046	\$6,733
2027	\$0	2037	\$0	2047	\$6,928
2028	\$0	2038	\$0	2048	\$0

### Engineering Narrative

The interior light fixtures, located at the apartment style common interior spaces, vary in age and they are in fair condition. Per request, a phased replacement is included between 2019 - 2023. With an average useful life of 20 to 25 years, a subsequent phased replacement is recommended 25 years after. Unit cost is based upon a weighted average among the (46) chandeliers and (62) ceiling mounted fixtures. Light fixtures in the clubhouse are addressed as an operating expense.

# Paint Finishes, Interior, Common Areas, Phased

## INTERNAL BUILDING COMPONENT

PERCENTAGE OF TOTAL FUTURE COSTS: 2.02%

Line Item: 17

ESTIMATED UNIT QUANTITY		ESTIMATED REPLACEMENT COSTS	
Present:	53,000 Square Feet	Current Unit Cost:	\$1.10
Replacement Per Phase:	10,600 Square Feet	Current Cost Per Phase:	\$11,660
Replaced in Next 30-Years:	159,000 Square Feet	Total Cost Next 30-Years:	\$279,413
ESTIMATED AGE AND REPLACEMENT YEARS		CONDITION AND USEFUL LIFE	
Estimated Current Age in Years:	Varies	Overall Current Condition:	Good
Remaining Years Until Replacement:	1	Useful Life in Sterling Heights, MI	6 to 12 Years
Estimated First Year of Replacement:	2019	Full or Partial Replacement:	Full



Overview of typical common area paint finishes at an apartment style building interior



Typical paint finishes at a common entry area of an apartment style building interior



Typical surface condition



Example of typical surface texture in the common hallways

### Schedule of Replacements Costs

2018	\$0	2029	\$0	2039	\$0
2019	\$11,998	2030	\$0	2040	\$0
2020	\$12,346	2031	\$16,908	2041	\$0
2021	\$12,704	2032	\$17,399	2042	\$0
2022	\$13,073	2033	\$17,903	2043	\$23,828
2023	\$13,452	2034	\$18,422	2044	\$24,519
2024	\$0	2035	\$18,957	2045	\$25,230
2025	\$0	2036	\$0	2046	\$25,961
2026	\$0	2037	\$0	2047	\$26,714
2027	\$0	2038	\$0	2048	\$0
2028	\$0				

### Engineering Narrative

The interior paint finishes, located at the apartment style common interior spaces, vary in age and they range from good to fair condition. Per request, a phased paint application is included between 2019 - 2023. With an average useful life of 6 to 12 years, and per request, subsequent applications are planned every 12 years after. Paint application years coincide with carpet replacements. Paint finishes in the clubhouse are addressed as an operating expense.

# Rest Rooms, Renovation

## INTERNAL BUILDING COMPONENT

PERCENTAGE OF TOTAL FUTURE COSTS: 0.27%

Line Item: 18

ESTIMATED UNIT QUANTITY			ESTIMATED REPLACEMENT COSTS	
Present:	1	Allowance	Current Unit Cost:	\$30,000.00
Replacement Per Phase:	1	Allowance	Current Cost Per Phase:	\$30,000
Replaced in Next 30-Years:	1	Allowance	Total Cost Next 30-Years:	\$37,709
ESTIMATED AGE AND REPLACEMENT YEARS			CONDITION AND USEFUL LIFE	
Estimated Current Age in Years:	46		Overall Current Condition:	Fair
Remaining Years Until Replacement:	8		Useful Life in Sterling Heights, MI	to 35 Years
Estimated First Year of Replacement:	2026		Full or Partial Replacement:	Full



Overview of a typical urinal, toilet, and partitions



Overview of a typical sink with cabinet and a urinal



Overview of a typical floor mounted toilet



Typical surface condition at ceramic tile of a restroom

Schedule of Replacements Costs					
2018	\$0				
2019	\$0	2029	\$0	2039	\$0
2020	\$0	2030	\$0	2040	\$0
2021	\$0	2031	\$0	2041	\$0
2022	\$0	2032	\$0	2042	\$0
2023	\$0	2033	\$0	2043	\$0
2024	\$0	2034	\$0	2044	\$0
2025	\$0	2035	\$0	2045	\$0
2026	\$37,709	2036	\$0	2046	\$0
2027	\$0	2037	\$0	2047	\$0
2028	\$0	2038	\$0	2048	\$0

Engineering Narrative
There are (4) restrooms in the clubhouse: (2) serving the interior gathering space and (2) serving the pool area. At 46 years of age, the restrooms are in fair condition. Per the current condition, and request, we are recommending restroom renovations in 2026, in 8 years. Renovations include: tile replacements, paint finishes, partitions, plumbing fixtures, and related restroom accessories.



# Air Handling Unit at Clubhouse, Furnace

## SERVICE COMPONENT

PERCENTAGE OF TOTAL FUTURE COSTS: 0.08%

Line Item: 19

ESTIMATED UNIT QUANTITY			ESTIMATED REPLACEMENT COSTS	
Present:	1	Each	Current Unit Cost:	\$3,500.00
Replacement Per Phase:	1	Each	Current Cost Per Phase:	\$3,500
Replaced in Next 30-Years:	2	Each	Total Cost Next 30-Years:	\$11,515
ESTIMATED AGE AND REPLACEMENT YEARS			CONDITION AND USEFUL LIFE	
Estimated Current Age in Years:	Unknown		Overall Current Condition:	Good
Remaining Years Until Replacement:	6		Useful Life in Sterling Heights, MI	15 to 20 Years
Estimated First Year of Replacement:	2024		Full or Partial Replacement:	Full



Overview of the "front access side" of the clubhouse furnace



Overview of the "back side" of the clubhouse furnace



The furnace is reported to be in good working condition



Typical condition

### Schedule of Replacements Costs

2018	\$0	2029	\$0	2039	\$0
2019	\$0	2030	\$0	2040	\$0
2020	\$0	2031	\$0	2041	\$0
2021	\$0	2032	\$0	2042	\$0
2022	\$0	2033	\$0	2043	\$0
2023	\$0	2034	\$0	2044	\$7,360
2024	\$4,155	2035	\$0	2045	\$0
2025	\$0	2036	\$0	2046	\$0
2026	\$0	2037	\$0	2047	\$0
2027	\$0	2038	\$0	2048	\$0

### Engineering Narrative

The furnace, serving the clubhouse, has an unknown age, and it is reported to be in good working condition. Per the current condition, we recommend to plan for a replacement of this unit in 2024, in 6 years. With an average useful life of 15 to 20 years, a subsequent replacement is recommended 20 years after. Replacements coincide with the associated condensing unit. Actual furnace size is unknown and presumed to be +/- 100-MBH.



# Condensing Unit at Clubhouse, 5-ton

## SERVICE COMPONENT

PERCENTAGE OF TOTAL FUTURE COSTS: 0.15%

Line Item: 20

### ESTIMATED UNIT QUANTITY

Present:	1	Each
Replacement Per Phase:	1	Each
Replaced in Next 30-Years:	2	Each

### ESTIMATED REPLACEMENT COSTS

Current Unit Cost:	\$6,500.00
Current Cost Per Phase:	\$6,500
Total Cost Next 30-Years:	\$21,384

### ESTIMATED AGE AND REPLACEMENT YEARS

Estimated Current Age in Years:	Unknown
Remaining Years Until Replacement:	6
Estimated First Year of Replacement:	2024

### CONDITION AND USEFUL LIFE

Overall Current Condition:	Good	
Useful Life in Sterling Heights, MI	15 to 20	Years
Full or Partial Replacement:	Full	



Overview of the 5-ton condensing unit for the clubhouse



Typical condition



The condensing unit is reported to be in good working condition



Typical condition

### Schedule of Replacements Costs

2018	\$0	2029	\$0	2039	\$0
2019	\$0	2030	\$0	2040	\$0
2020	\$0	2031	\$0	2041	\$0
2021	\$0	2032	\$0	2042	\$0
2022	\$0	2033	\$0	2043	\$0
2023	\$0	2034	\$0	2044	\$13,668
2024	\$7,716	2035	\$0	2045	\$0
2025	\$0	2036	\$0	2046	\$0
2026	\$0	2037	\$0	2047	\$0
2027	\$0	2038	\$0	2048	\$0

### Engineering Narrative

The 5-ton condensing unit, serving the clubhouse, has an unknown age, and it is reported to be in good working condition. Per the current condition, we recommend to plan for a replacement of this unit in 2024, in 6 years. With an average useful life of 15 to 20 years, a subsequent replacement is recommended 20 years after. Replacements coincide with the associated furnace unit.

# Intercom Entry Panels

## SERVICE COMPONENT

PERCENTAGE OF TOTAL FUTURE COSTS: 0.44%

Line Item: 21

ESTIMATED UNIT QUANTITY			ESTIMATED REPLACEMENT COSTS	
Present:	46	Each	Current Unit Cost:	\$1,000.00
Replacement Per Phase:	46	Each	Current Cost Per Phase:	\$46,000
Replaced in Next 30-Years:	46	Each	Total Cost Next 30-Years:	\$61,223
ESTIMATED AGE AND REPLACEMENT YEARS			CONDITION AND USEFUL LIFE	
Estimated Current Age in Years:	46		Overall Current Condition:	Fair
Remaining Years Until Replacement:	10		Useful Life in Sterling Heights, MI	to 25 Years
Estimated First Year of Replacement:	2028		Full or Partial Replacement:	Full



Overview of a typical intercom entry panel



Typical condition



Schedule of Replacements Costs					
2018	\$0				
2019	\$0	2029	\$0	2039	\$0
2020	\$0	2030	\$0	2040	\$0
2021	\$0	2031	\$0	2041	\$0
2022	\$0	2032	\$0	2042	\$0
2023	\$0	2033	\$0	2043	\$0
2024	\$0	2034	\$0	2044	\$0
2025	\$0	2035	\$0	2045	\$0
2026	\$0	2036	\$0	2046	\$0
2027	\$0	2037	\$0	2047	\$0
2028	\$61,223	2038	\$0	2048	\$0

Engineering Narrative
The (46) entry intercom panels, located at the apartment style building entries, are 46 years of age and they are in fair, but functional, condition. Per the current working condition, and discussion with the property manager, we are recommending a replacement of these units in 2028, in 10 years.



# Carports, Phased Replacement

## SITE COMPONENT

PERCENTAGE OF TOTAL FUTURE COSTS: 0.91%

Line Item: 22

ESTIMATED UNIT QUANTITY		ESTIMATED REPLACEMENT COSTS	
Present:	88 Stalls	Current Unit Cost:	\$1,170.00
Replacement Per Phase:	13 Stalls	Current Cost Per Phase:	\$14,709
Replaced in Next 30-Years:	88 Stalls	Total Cost Next 30-Years:	\$126,594
ESTIMATED AGE AND REPLACEMENT YEARS		CONDITION AND USEFUL LIFE	
Estimated Current Age in Years:	Varies	Overall Current Condition:	Fair
Remaining Years Until Replacement:	1	Useful Life in Sterling Heights, MI	25 to 30 Years
Estimated First Year of Replacement:	2019	Full or Partial Replacement:	Full



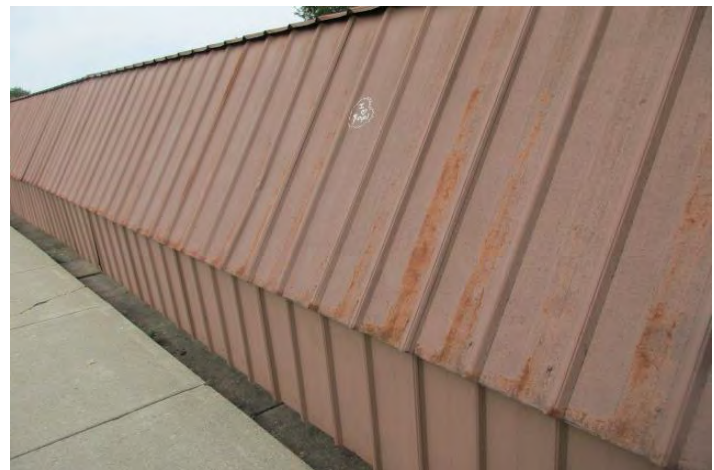
Overview of a typical carport structure



Overview of a (2) car carport structure



Typical surface condition at the metal roofs are the carports



Isolated condition of oxidation at the roof of a carport

Schedule of Replacements Costs			
2018	\$0	2029	\$20,144
2019	\$15,135	2030	\$0
2020	\$0	2031	\$21,329
2021	\$16,026	2032	\$0
2022	\$0	2033	\$0
2023	\$16,969	2034	\$0
2024	\$0	2035	\$0
2025	\$17,967	2036	\$0
2026	\$0	2037	\$0
2027	\$19,024	2038	\$0
2028	\$0		

Engineering Narrative
The carports vary in age and the range from fair to good condition. Per request, replacements are planned to be phased over the next 15 years, addressed in coordination with phased concrete street replacements. Paint finishes are addressed as an operating expense. The estimated unit cost has been provided by the property manager.

# Catch Basins, Capital Repairs

## SITE COMPONENT

PERCENTAGE OF TOTAL FUTURE COSTS: 0.55%

Line Item: 23

ESTIMATED UNIT QUANTITY			ESTIMATED REPLACEMENT COSTS	
Present:	20	Each	Current Unit Cost:	\$1,125.00
Replacement Per Phase:	20	Each	Current Cost Per Phase:	\$22,500
Replaced in Next 30-Years:	40	Each	Total Cost Next 30-Years:	\$76,170
ESTIMATED AGE AND REPLACEMENT YEARS			CONDITION AND USEFUL LIFE	
Estimated Current Age in Years:	Varies		Overall Current Condition:	Good
Remaining Years Until Replacement:	7		Useful Life in Sterling Heights, MI	15 to 20 Years
Estimated First Year of Replacement:	2025		Full or Partial Replacement:	Full



Overview of a previously repaired catch basin



Typical condition



The catch basins are in good condition



Isolated condition of damaged concrete around a catch basin

### Schedule of Replacements Costs

2018	\$0	2029	\$0	2039	\$0
2019	\$0	2030	\$0	2040	\$0
2020	\$0	2031	\$0	2041	\$0
2021	\$0	2032	\$0	2042	\$0
2022	\$0	2033	\$0	2043	\$0
2023	\$0	2034	\$0	2044	\$0
2024	\$0	2035	\$0	2045	\$48,685
2025	\$27,485	2036	\$0	2046	\$0
2026	\$0	2037	\$0	2047	\$0
2027	\$0	2038	\$0	2048	\$0

### Engineering Narrative

The catch basins vary in age and they are in an overall good condition. Per the current condition, we recommend to plan for repairs in 2025, coinciding with a year of partial concrete street replacements. With an average useful life of 15 to 20 years, a subsequent cycle of repairs is recommended 20 years after.



# Concrete Streets and Curbs, Phased Replacement

## SITE COMPONENT

PERCENTAGE OF TOTAL FUTURE COSTS: 14.13%

Line Item: 24

### ESTIMATED UNIT QUANTITY

Present:	219,900	Square Feet
Replacement Per Phase:	14,660	Square Feet
Replaced in Next 30-Years:	219,900	Square Feet

### ESTIMATED REPLACEMENT COSTS

Current Unit Cost:	\$7.00
Current Cost Per Phase:	\$102,620
Total Cost Next 30-Years:	\$1,958,341

### ESTIMATED AGE AND REPLACEMENT YEARS

Estimated Current Age in Years:	Varies
Remaining Years Until Replacement:	1
Estimated First Year of Replacement:	2019

### CONDITION AND USEFUL LIFE

Overall Current Condition:	Fair	
Useful Life in Sterling Heights, MI	to 65	Years
Full or Partial Replacement:	Full	



Overview of a typical concrete street



Example of typical damage found through out the property



Isolated condition of significant damage to a concrete street



Isolated condition of damaged concrete around a catch basin

### Schedule of Replacements Costs

2018	\$0				
2019	\$114,300	2029	\$140,540	2039	\$0
2020	\$108,658	2030	\$144,616	2040	\$0
2021	\$111,809	2031	\$148,810	2041	\$0
2022	\$115,052	2032	\$153,125	2042	\$0
2023	\$118,388	2033	\$157,566	2043	\$0
2024	\$121,822	2034	\$0	2044	\$0
2025	\$125,354	2035	\$0	2045	\$0
2026	\$128,990	2036	\$0	2046	\$0
2027	\$132,730	2037	\$0	2047	\$0
2028	\$136,580	2038	\$0	2048	\$0

### Engineering Narrative

The concrete streets (and integrated curbs) vary in age and they are in an overall fair condition. Per the current condition, and request of the property manager, the association is planning a phased replacement of the concrete streets between 2019 - 2033. Subsequent repairs to the streets are included on page 2-25.



# Concrete Streets and Curbs, Partial Replacements

## SITE COMPONENT

PERCENTAGE OF TOTAL FUTURE COSTS: 2.78%

Line Item: 25

ESTIMATED UNIT QUANTITY			ESTIMATED REPLACEMENT COSTS		
Present:	219,900	Square Feet	Current Unit Cost:	\$9.00	
Replacement Per Phase:	7,330	Square Feet	Current Cost Per Phase:	\$65,970	
Replaced in Next 30-Years:	21,990	Square Feet	Total Cost Next 30-Years:	\$384,569	
ESTIMATED AGE AND REPLACEMENT YEARS			CONDITION AND USEFUL LIFE		
Estimated Current Age in Years:	N/A		Overall Current Condition:	N/A	
Remaining Years Until Replacement:	18		Useful Life in Sterling Heights, MI	to 65	Years
Estimated First Year of Replacement:	2036		Full or Partial Replacement:	Partial	10.0%



Overview of a typical concrete street



Typical condition



Typical condition



Example of typical damage found throughout the property

Schedule of Replacements Costs					
2018	\$0				
2019	\$0	2029	\$0	2039	\$0
2020	\$0	2030	\$0	2040	\$0
2021	\$0	2031	\$0	2041	\$127,321
2022	\$0	2032	\$0	2042	\$0
2023	\$0	2033	\$0	2043	\$0
2024	\$0	2034	\$0	2044	\$0
2025	\$0	2035	\$0	2045	\$0
2026	\$0	2036	\$110,363	2046	\$146,885
2027	\$0	2037	\$0	2047	\$0
2028	\$0	2038	\$0	2048	\$0

Engineering Narrative
Upon completion of the concrete street replacements, they will range from good to very good condition. A 10% replacement is recommended to be phased between 2036 and the end of the reserve study.



# Concrete Sidewalks, Entry Stoops, and Patios, Phased Replacement

## SITE COMPONENT

PERCENTAGE OF TOTAL FUTURE COSTS: 10.94%

Line Item: 26

### ESTIMATED UNIT QUANTITY

Present:	63,800	Square Feet
Replacement Per Phase:	5,317	Square Feet
Replaced in Next 30-Years:	63,800	Square Feet

### ESTIMATED REPLACEMENT COSTS

Current Unit Cost:	\$14.25
Current Cost Per Phase:	\$75,763
Total Cost Next 30-Years:	\$1,515,444

### ESTIMATED AGE AND REPLACEMENT YEARS

Estimated Current Age in Years:	Varies
Remaining Years Until Replacement:	1
Estimated First Year of Replacement:	2019

### CONDITION AND USEFUL LIFE

Overall Current Condition:	Good	
Useful Life in Sterling Heights, MI	to 65	Years
Full or Partial Replacement:	Full	



Overview of a typical concrete sidewalk



Isolated condition of cracks in a section of sidewalk



Isolated condition of a damaged entry stoop



Isolated condition of surface spalling at a portion of sidewalk

### Schedule of Replacements Costs

2018	\$0	2029	\$0	2039	\$0
2019	\$77,960	2030	\$0	2040	\$142,099
2020	\$0	2031	\$109,864	2041	\$0
2021	\$0	2032	\$0	2042	\$150,461
2022	\$84,941	2033	\$0	2043	\$0
2023	\$0	2034	\$119,702	2044	\$159,314
2024	\$0	2035	\$0	2045	\$0
2025	\$92,547	2036	\$0	2046	\$168,688
2026	\$0	2037	\$130,421	2047	\$0
2027	\$0	2038	\$0	2048	\$178,614
2028	\$100,834				

### Engineering Narrative

The concrete sidewalks, entry stoops, and patios vary in age. These surfaces range from fair to good condition. Over time, erosion, landscape growth, vehicular traffic, and the freeze-and-thaw cycles cause the need for periodic partial replacements. Per the current condition, and discussion with the property manager, we are recommending a 100% replacement to be phased over the next 30 years.



# Fences, Vinyl, Privacy

## SITE COMPONENT

PERCENTAGE OF TOTAL FUTURE COSTS: 0.64%

Line Item: 27

ESTIMATED UNIT QUANTITY			ESTIMATED REPLACEMENT COSTS	
Present:	1,145	Linear Feet	Current Unit Cost:	\$44.00
Replacement Per Phase:	1,145	Linear Feet	Current Cost Per Phase:	\$50,380
Replaced in Next 30-Years:	1,145	Linear Feet	Total Cost Next 30-Years:	\$89,241
ESTIMATED AGE AND REPLACEMENT YEARS			CONDITION AND USEFUL LIFE	
Estimated Current Age in Years:	5		Overall Current Condition:	Good
Remaining Years Until Replacement:	20		Useful Life in Sterling Heights, MI	20 to 25 Years
Estimated First Year of Replacement:	2038		Full or Partial Replacement:	Full



Overview of typical vinyl privacy fences



Typical condition



Typical surface condition



Isolated condition of a damaged privacy fence

Schedule of Replacements Costs					
2018	\$0				
2019	\$0	2029	\$0	2039	\$0
2020	\$0	2030	\$0	2040	\$0
2021	\$0	2031	\$0	2041	\$0
2022	\$0	2032	\$0	2042	\$0
2023	\$0	2033	\$0	2043	\$0
2024	\$0	2034	\$0	2044	\$0
2025	\$0	2035	\$0	2045	\$0
2026	\$0	2036	\$0	2046	\$0
2027	\$0	2037	\$0	2047	\$0
2028	\$0	2038	\$89,241	2048	\$0

Engineering Narrative
The vinyl privacy fences are 5 years of age, and they are in good condition. With an average useful life of 20 to 25 years, we recommend to plan for a replacement in 2038, at 25 years of age. Interim repairs, and potential adjustments needed from the heaving of freeze/thaw cycles, are addressed as an operating expense.



# Pool - Concrete Deck, Partial Replacements

## POOL COMPONENT

PERCENTAGE OF TOTAL FUTURE COSTS: 0.22%

Line Item: 28

### ESTIMATED UNIT QUANTITY

Present:	3,200	Square Feet
Replacement Per Phase:	560	Square Feet
Replaced in Next 30-Years:	1,680	Square Feet

### ESTIMATED REPLACEMENT COSTS

Current Unit Cost:	\$11.00
Current Cost Per Phase:	\$6,160
Total Cost Next 30-Years:	\$30,980

### ESTIMATED AGE AND REPLACEMENT YEARS

Estimated Current Age in Years:	46
Remaining Years Until Replacement:	7
Estimated First Year of Replacement:	2025

### CONDITION AND USEFUL LIFE

Overall Current Condition:	Good	
Useful Life in Sterling Heights, MI	to 65	Years
Full or Partial Replacement:	Partial	52.5%



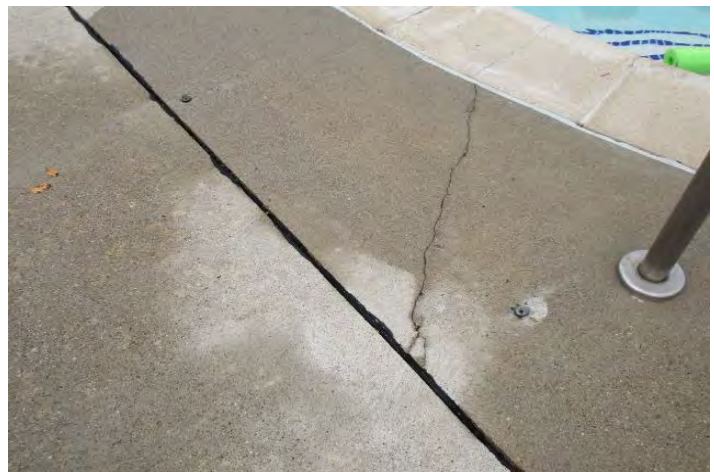
Overview of a portion of the concrete deck around the pool



Typical condition



Typical surface condition



Isolated condition of a crack in the concrete deck

### Schedule of Replacements Costs

2018	\$0				
2019	\$0	2029	\$0	2039	\$0
2020	\$0	2030	\$0	2040	\$0
2021	\$0	2031	\$8,933	2041	\$0
2022	\$0	2032	\$0	2042	\$0
2023	\$0	2033	\$0	2043	\$0
2024	\$0	2034	\$0	2044	\$0
2025	\$7,525	2035	\$0	2045	\$0
2026	\$0	2036	\$0	2046	\$0
2027	\$0	2037	\$0	2047	\$0
2028	\$0	2038	\$0	2048	\$14,523

### Engineering Narrative

The concrete deck, located around the pool, is 46 years of age, and it is in good condition. We have included a 35% partial replacement (in 2 phases) prior to the planned pool replacement in 2037. An additional phase has been included at the end of the study, 11 years after the proposed pool and deck replacement in 2037.



# Pool - Concrete Deck, Total Replacement

## POOL COMPONENT

PERCENTAGE OF TOTAL FUTURE COSTS: 0.44%

Line Item: 29

ESTIMATED UNIT QUANTITY			ESTIMATED REPLACEMENT COSTS	
Present:	3,200	Square Feet	Current Unit Cost:	\$11.00
Replacement Per Phase:	3,200	Square Feet	Current Cost Per Phase:	\$35,200
Replaced in Next 30-Years:	3,200	Square Feet	Total Cost Next 30-Years:	\$60,595
ESTIMATED AGE AND REPLACEMENT YEARS			CONDITION AND USEFUL LIFE	
Estimated Current Age in Years:	46		Overall Current Condition:	Good
Remaining Years Until Replacement:	19		Useful Life in Sterling Heights, MI	to 65 Years
Estimated First Year of Replacement:	2037		Full or Partial Replacement:	Full



Overview of a portion of the concrete deck around the pool



Typical condition



Typical surface condition



Isolated condition of a crack in the concrete deck

### Schedule of Replacements Costs

2018	\$0				
2019	\$0	2029	\$0	2039	\$0
2020	\$0	2030	\$0	2040	\$0
2021	\$0	2031	\$0	2041	\$0
2022	\$0	2032	\$0	2042	\$0
2023	\$0	2033	\$0	2043	\$0
2024	\$0	2034	\$0	2044	\$0
2025	\$0	2035	\$0	2045	\$0
2026	\$0	2036	\$0	2046	\$0
2027	\$0	2037	\$60,595	2047	\$0
2028	\$0	2038	\$0	2048	\$0

### Engineering Narrative

The pool deck is 46 years of age, and it is in good condition. We are recommending a 100% replacement of the pool deck in 2037, at 60 years of age and coinciding with a recommended pool replacement.



# Pool - Fence, Chain Link, Proposed Replacement with Aluminum Picket

## POOL COMPONENT

PERCENTAGE OF TOTAL FUTURE COSTS: 0.14%

Line Item: 30

ESTIMATED UNIT QUANTITY			ESTIMATED REPLACEMENT COSTS	
Present:	200	Linear Feet	Current Unit Cost:	\$55.00
Replacement Per Phase:	200	Linear Feet	Current Cost Per Phase:	\$11,000
Replaced in Next 30-Years:	200	Linear Feet	Total Cost Next 30-Years:	\$18,936
ESTIMATED AGE AND REPLACEMENT YEARS			CONDITION AND USEFUL LIFE	
Estimated Current Age in Years:	Unknown		Overall Current Condition:	Good
Remaining Years Until Replacement:	19		Useful Life in Sterling Heights, MI	to 35 Years
Estimated First Year of Replacement:	2037		Full or Partial Replacement:	Full



Overview of a portion of the pool's chain-link fence



Typical condition



Typical surface condition at the top rail of the fence



Typical surface condition at the base of the fence

### Schedule of Replacements Costs

2018	\$0				
2019	\$0	2029	\$0	2039	\$0
2020	\$0	2030	\$0	2040	\$0
2021	\$0	2031	\$0	2041	\$0
2022	\$0	2032	\$0	2042	\$0
2023	\$0	2033	\$0	2043	\$0
2024	\$0	2034	\$0	2044	\$0
2025	\$0	2035	\$0	2045	\$0
2026	\$0	2036	\$0	2046	\$0
2027	\$0	2037	\$18,936	2047	\$0
2028	\$0	2038	\$0	2048	\$0

### Engineering Narrative

The chain-link fence, located around the pool perimeter, has an unknown age, and it is in good condition. Per the current condition, and discussion with the property manager, a fence replacement is recommended in 2037, coinciding with the pool and pool deck replacement. It is our recommendation to replace this fence with an aluminum, picket style fence.



# Pool - Mechanical Equipment, Filter, Pump, and Chlorinator

## POOL COMPONENT

PERCENTAGE OF TOTAL FUTURE COSTS: 0.05%

Line Item: 31

### ESTIMATED UNIT QUANTITY

Present:	1	Allowance
Replacement Per Phase:	1	Allowance
Replaced in Next 30-Years:	1	Allowance

### ESTIMATED REPLACEMENT COSTS

Current Unit Cost:	\$6,000.00
Current Cost Per Phase:	\$6,000
Total Cost Next 30-Years:	\$7,329

### ESTIMATED AGE AND REPLACEMENT YEARS

Estimated Current Age in Years:	Varies
Remaining Years Until Replacement:	7
Estimated First Year of Replacement:	2025

### CONDITION AND USEFUL LIFE

Overall Current Condition:	Good
Useful Life in Sterling Heights, MI	8 to 15 Years
Full or Partial Replacement:	Full



Overview of the pool's mechanical equipment



Overview of the sand filter for the pool



Overview of the 2-hp pump for the pool



Overview of the pool's chlorinator

### Schedule of Replacements Costs

2018	\$0	2029	\$0	2039	\$0
2019	\$0	2030	\$0	2040	\$0
2020	\$0	2031	\$0	2041	\$0
2021	\$0	2032	\$0	2042	\$0
2022	\$0	2033	\$0	2043	\$0
2023	\$0	2034	\$0	2044	\$0
2024	\$0	2035	\$0	2045	\$0
2025	\$7,329	2036	\$0	2046	\$0
2026	\$0	2037	\$0	2047	\$0
2027	\$0	2038	\$0	2048	\$0

### Engineering Narrative

The pool's sand filter, 2-hp pump, and chlorinator vary in age, and they are reported to be in good working condition. Per the current condition, we are recommending a replacement of these devices in 2025, in 7 years. A subsequent replacement is not included on this page because a replacement is included in the 2037 pool replacement cost.

# Pool - Mechanical Equipment, Heater, 382-MBH

## POOL COMPONENT

PERCENTAGE OF TOTAL FUTURE COSTS: 0.04%

Line Item: 32

ESTIMATED UNIT QUANTITY			ESTIMATED REPLACEMENT COSTS	
Present:	1	Each	Current Unit Cost:	\$4,350.00
Replacement Per Phase:	1	Each	Current Cost Per Phase:	\$4,350
Replaced in Next 30-Years:	1	Each	Total Cost Next 30-Years:	\$5,314
ESTIMATED AGE AND REPLACEMENT YEARS			CONDITION AND USEFUL LIFE	
Estimated Current Age in Years:	Unknown		Overall Current Condition:	Good
Remaining Years Until Replacement:	7		Useful Life in Sterling Heights, MI	8 to 12 Years
Estimated First Year of Replacement:	2025		Full or Partial Replacement:	Full



Overview of the pool's 382-MBH heater



Typical condition



The pool heater is reported to be in good working condition



Typical condition

Schedule of Replacements Costs					
2018	\$0	2029	\$0	2039	\$0
2019	\$0	2030	\$0	2040	\$0
2020	\$0	2031	\$0	2041	\$0
2021	\$0	2032	\$0	2042	\$0
2022	\$0	2033	\$0	2043	\$0
2023	\$0	2034	\$0	2044	\$0
2024	\$0	2035	\$0	2045	\$0
2025	\$5,314	2036	\$0	2046	\$0
2026	\$0	2037	\$0	2047	\$0
2027	\$0	2038	\$0	2048	\$0

Engineering Narrative
The 382-MBH heater, serving the pool's water, has an unknown age, and it is reported to be in good working condition. Per the current condition, it is our recommendation to plan to replace this unit in 2025, coinciding with the other pool mechanical equipment. A subsequent replacement is not included on this page because a replacement is included in the 2037 pool replacement cost.



## Pool - Paint Finish

### POOL COMPONENT

PERCENTAGE OF TOTAL FUTURE COSTS: 0.09%

Line Item: 33

ESTIMATED UNIT QUANTITY			ESTIMATED REPLACEMENT COSTS	
Present:	1,400	Square Feet	Current Unit Cost:	\$3.60
Replacement Per Phase:	1,400	Square Feet	Current Cost Per Phase:	\$5,040
Replaced in Next 30-Years:	2,800	Square Feet	Total Cost Next 30-Years:	\$12,495
ESTIMATED AGE AND REPLACEMENT YEARS			CONDITION AND USEFUL LIFE	
Estimated Current Age in Years:	N/A		Overall Current Condition:	N/A
Remaining Years Until Replacement:	1		Useful Life in Sterling Heights, MI	4 to 6 Years
Estimated First Year of Replacement:	2019		Full or Partial Replacement:	Full



Overview of the pool



Typical condition



Paint finishes at the pool are in fair condition



Typical surface condition

#### Schedule of Replacements Costs

2018	\$0	2029	\$0	2039	\$0
2019	\$5,186	2030	\$0	2040	\$0
2020	\$0	2031	\$7,309	2041	\$0
2021	\$0	2032	\$0	2042	\$0
2022	\$0	2033	\$0	2043	\$0
2023	\$0	2034	\$0	2044	\$0
2024	\$0	2035	\$0	2045	\$0
2025	\$0	2036	\$0	2046	\$0
2026	\$0	2037	\$0	2047	\$0
2027	\$0	2038	\$0	2048	\$0

#### Engineering Narrative

The age of the pool's plaster finish is unknown. The surfaces have not been painted to date. Per request, we have planned for paint finishes in 2019. A subsequent paint cycle is included in 2031, 6 years after a recommended plaster resurfacing. No paint finishes have been included after the 2037 pool replacement, as it is anticipated that a different type of pool finish will be used.

# Pool - Resurfacing, Plaster

## POOL COMPONENT

PERCENTAGE OF TOTAL FUTURE COSTS: 0.10%

Line Item: 34

ESTIMATED UNIT QUANTITY			ESTIMATED REPLACEMENT COSTS	
Present:	1,400	Square Feet	Current Unit Cost:	\$8.00
Replacement Per Phase:	1,400	Square Feet	Current Cost Per Phase:	\$11,200
Replaced in Next 30-Years:	1,400	Square Feet	Total Cost Next 30-Years:	\$13,681
ESTIMATED AGE AND REPLACEMENT YEARS			CONDITION AND USEFUL LIFE	
Estimated Current Age in Years:	Unknown		Overall Current Condition:	Good
Remaining Years Until Replacement:	7		Useful Life in Sterling Heights, MI	8 to 12 Years
Estimated First Year of Replacement:	2025		Full or Partial Replacement:	Full



Overview of the pool



Typical condition



Plaster finishes at the pool are in good condition



Typical surface condition

Schedule of Replacements Costs					
2018	\$0	2029	\$0	2039	\$0
2019	\$0	2030	\$0	2040	\$0
2020	\$0	2031	\$0	2041	\$0
2021	\$0	2032	\$0	2042	\$0
2022	\$0	2033	\$0	2043	\$0
2023	\$0	2034	\$0	2044	\$0
2024	\$0	2035	\$0	2045	\$0
2025	\$13,681	2036	\$0	2046	\$0
2026	\$0	2037	\$0	2047	\$0
2027	\$0	2038	\$0	2048	\$0

Engineering Narrative	
<p>The plaster finishes of the pool surfaces have an unknown age, but they are in good condition. Per the current condition, we recommend to re-plaster the pool surfaces in 2025, 6 years after a recommended 2019 paint finish application. With a pool replacement recommended in 2037, which will include new surfaces, there are no subsequent resurfacing applications included.</p>	



## Pool - Waterline Tile

### POOL COMPONENT

PERCENTAGE OF TOTAL FUTURE COSTS: 0.05%

Line Item: 35

ESTIMATED UNIT QUANTITY			ESTIMATED REPLACEMENT COSTS	
Present:	110	Linear Feet	Current Unit Cost:	\$51.00
Replacement Per Phase:	110	Linear Feet	Current Cost Per Phase:	\$5,610
Replaced in Next 30-Years:	110	Linear Feet	Total Cost Next 30-Years:	\$6,853
ESTIMATED AGE AND REPLACEMENT YEARS			CONDITION AND USEFUL LIFE	
Estimated Current Age in Years:	Unknown		Overall Current Condition:	Good
Remaining Years Until Replacement:	7		Useful Life in Sterling Heights, MI	20 to 25 Years
Estimated First Year of Replacement:	2025		Full or Partial Replacement:	Full



Overview of the pool's perimeter tile



Typical surface condition



The perimeter tile is in good condition



Typical surface condition

#### Schedule of Replacements Costs

2018	\$0				
2019	\$0	2029	\$0	2039	\$0
2020	\$0	2030	\$0	2040	\$0
2021	\$0	2031	\$0	2041	\$0
2022	\$0	2032	\$0	2042	\$0
2023	\$0	2033	\$0	2043	\$0
2024	\$0	2034	\$0	2044	\$0
2025	\$6,853	2035	\$0	2045	\$0
2026	\$0	2036	\$0	2046	\$0
2027	\$0	2037	\$0	2047	\$0
2028	\$0	2038	\$0	2048	\$0

#### Engineering Narrative

The pool's perimeter tile has an unknown age, and it is in good condition. Per the current condition, and request, we have included a replacement of the perimeter tile in 2025, in 7 years. This replacement is planned to coincide with the plaster resurfacing of the pool. With a pool replacement recommended in 2037, which will include new perimeter tile, there are no subsequent tile replacements included.

# Pool - Replacement, Pool Structure

## POOL COMPONENT

PERCENTAGE OF TOTAL FUTURE COSTS: 1.23%

Line Item: 36

ESTIMATED UNIT QUANTITY			ESTIMATED REPLACEMENT COSTS	
Present:	940	Hor. Sq. Ft.	Current Unit Cost:	\$105.00
Replacement Per Phase:	940	Hor. Sq. Ft.	Current Cost Per Phase:	\$98,700
Replaced in Next 30-Years:	940	Hor. Sq. Ft.	Total Cost Next 30-Years:	\$169,906
ESTIMATED AGE AND REPLACEMENT YEARS			CONDITION AND USEFUL LIFE	
Estimated Current Age in Years:	46		Overall Current Condition:	Good
Remaining Years Until Replacement:	19		Useful Life in Sterling Heights, MI	60 to 65 Years
Estimated First Year of Replacement:	2037		Full or Partial Replacement:	Full



Overview of the community pool



Typical condition



The pool has been maintained in good condition



Typical condition

### Schedule of Replacements Costs

2018	\$0				
2019	\$0	2029	\$0	2039	\$0
2020	\$0	2030	\$0	2040	\$0
2021	\$0	2031	\$0	2041	\$0
2022	\$0	2032	\$0	2042	\$0
2023	\$0	2033	\$0	2043	\$0
2024	\$0	2034	\$0	2044	\$0
2025	\$0	2035	\$0	2045	\$0
2026	\$0	2036	\$0	2046	\$0
2027	\$0	2037	\$169,906	2047	\$0
2028	\$0	2038	\$0	2048	\$0

### Engineering Narrative

The pool is 46 years of age, and it is in good condition. With an average useful life of 60 to 65 years, a replacement is recommended in 2037, at 60 years of age. Replacement coincides with the concrete pool deck and the pool's fence. Unit cost includes: concrete shell, quartz aggregate finishes, perimeter coping, perimeter waterline tile, mechanical equipment, subsurface piping, new plumbing, valves, drains, skimmers, and entry stairs.



# Reserve Study Update

## OTHER COMPONENTS

PERCENTAGE OF TOTAL FUTURE COSTS: 0.03%

Line Item: 37

ESTIMATED UNIT QUANTITY			ESTIMATED REPLACEMENT COSTS	
Present:	1	Each	Current Unit Cost:	\$3,500.00
Replacement Per Phase:	1	Each	Current Cost Per Phase:	\$3,500
Replaced in Next 30-Years:	1	Each	Total Cost Next 30-Years:	\$3,813
ESTIMATED AGE AND REPLACEMENT YEARS			CONDITION AND USEFUL LIFE	
Estimated Current Age in Years:	0		Overall Current Condition:	N/A
Remaining Years Until Replacement:	3		Useful Life in Sterling Heights, MI	to 3 Years
Estimated First Year of Replacement:	2021		Full or Partial Replacement:	Full



### Schedule of Replacements Costs

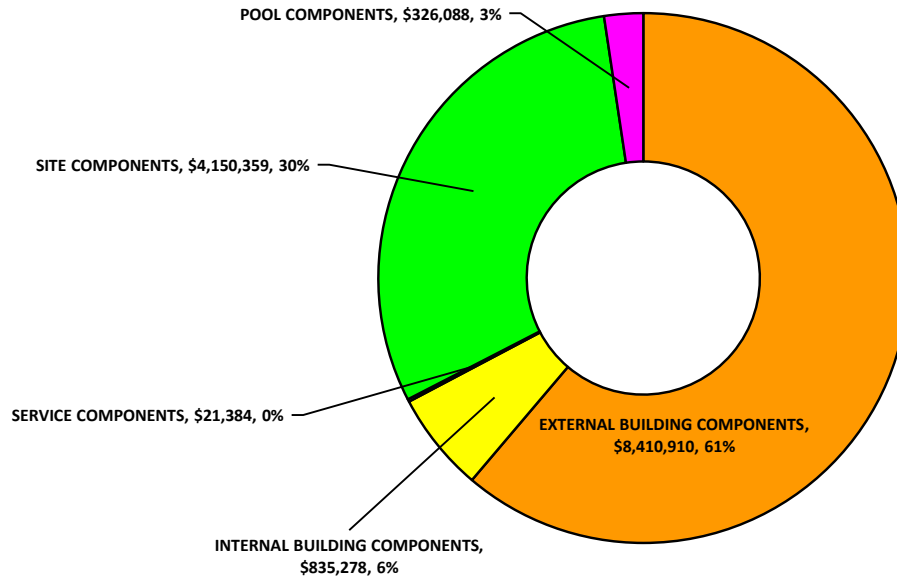
2018	\$0				
2019	\$0	2029	\$0	2039	\$0
2020	\$0	2030	\$0	2040	\$0
2021	\$3,813	2031	\$0	2041	\$0
2022	\$0	2032	\$0	2042	\$0
2023	\$0	2033	\$0	2043	\$0
2024	\$0	2034	\$0	2044	\$0
2025	\$0	2035	\$0	2045	\$0
2026	\$0	2036	\$0	2046	\$0
2027	\$0	2037	\$0	2047	\$0
2028	\$0	2038	\$0	2048	\$0

### Engineering Narrative

It is necessary to update the association's reserve study every three years +/- to make certain an equitable funding plan is in place. A variety of factors can alter reserve recommendations, including changes in the following: maintenance practices, reserve balance, construction inflation rates, construction labor rates, interest rates on invested reserves and / or unforeseen damage from weather events.

# QUANTITY AND COST PROJECTIONS FOR NEXT 30-YEARS

Graph Illustrates Total Future Cost of Replacement By Property Class



Reserve Inventory		Replacement Quantities			Replacement Costs		
Line Item	Reserve Component Listed by Property Class	Units	Per Phase	Total for 30-Years	Unit Cost	Current Cost Per Phase	Total Future Cost
EXTERNAL BUILDING COMPONENTS							
1	Balconies, Railings, Steel, Paint Finishes	Linear Feet	2,740	10,960	\$9.00	\$24,660	\$152,645
2	Balconies, Railings, Steel, Replacement	Linear Feet	2,740	2,740	\$60.00	\$164,400	\$245,311
3	Doors, Glass, Front Entry and Surrounding Glass, Phased	Square Feet	430	2,580	\$90.00	\$38,700	\$322,966
4	Doors, Entry Type at Townhomes and Clubhouse, Phased	Each	23	115	\$775.00	\$17,825	\$145,016
5	Gutters and Downspouts, Aluminum, Phased	Linear Feet	1,784	24,980	\$7.50	\$13,382	\$291,533
6	Light Fixtures, Exterior	Each	362	362	\$80.00	\$28,960	\$38,544
7	Roofs, Asphalt Shingles, Phased	Squares	234	3,506	\$325.00	\$75,969	\$1,789,566
8	Sealants - Windows and Doors, Phased	Linear Feet	3,230	32,300	\$6.50	\$20,995	\$318,255
9	Soffits and Fascia, Aluminum, Phased	Square Feet	6,470	32,350	\$8.75	\$56,613	\$612,988
10	Walls, Aluminum and Vinyl Siding, Phased	Square Feet	5,996	29,980	\$4.40	\$26,382	\$285,663
11	Walls, Masonry, Inspections and Partial Repointing, Phased	Square Feet	24,630	394,080	\$4.00	\$98,520	\$2,377,626
12	Walls, Paint Finishes, Exterior, Phased	Square Feet	7,920	142,560	\$1.35	\$10,692	\$317,212
13	Windows and Patio Doors, Phased	Square Feet	2,294	22,940	\$46.00	\$105,524	\$1,513,584
INTERNAL BUILDING COMPONENTS							
14	Floor Coverings, Carpet, Phased	Square Yards	356	5,340	\$55.00	\$19,580	\$469,204
15	Floor Coverings at Clubhouse, Resilient Flooring	Square Feet	1,770	3,540	\$6.50	\$11,505	\$37,430
16	Light Fixtures, Interior, Phased	Each	22	216	\$140.00	\$3,024	\$49,231
17	Paint Finishes, Interior, Common Areas, Phased	Square Feet	10,600	159,000	\$1.10	\$11,660	\$279,413
18	Rest Rooms, Renovation	Allowance	1	1	\$30,000.00	\$30,000	\$37,709
SERVICE COMPONENTS							
19	Air Handling Unit at Clubhouse, Furnace	Each	1	2	\$3,500.00	\$3,500	\$11,515
20	Condensing Unit at Clubhouse, 5-ton	Each	1	2	\$6,500.00	\$6,500	\$21,384
21	Intercom Entry Panels	Each	46	46	\$1,000.00	\$46,000	\$61,223
SITE COMPONENTS							
22	Carports, Phased Replacement	Stalls	13	88	\$1,170.00	\$14,709	\$126,594
23	Catch Basins, Capital Repairs	Each	20	40	\$1,125.00	\$22,500	\$76,170
24	Concrete Streets and Curbs, Phased Replacement	Square Feet	14,660	219,900	\$7.00	\$102,620	\$1,958,341
25	Concrete Streets and Curbs, Partial Replacements	Square Feet	7,330	21,990	\$9.00	\$65,970	\$384,569
26	Concrete Sidewalks, Entry Stoops, and Patios, Phased Replacement	Square Feet	5,317	63,800	\$14.25	\$75,763	\$1,515,444
27	Fences, Vinyl, Privacy	Linear Feet	1,145	1,145	\$44.00	\$50,380	\$89,241

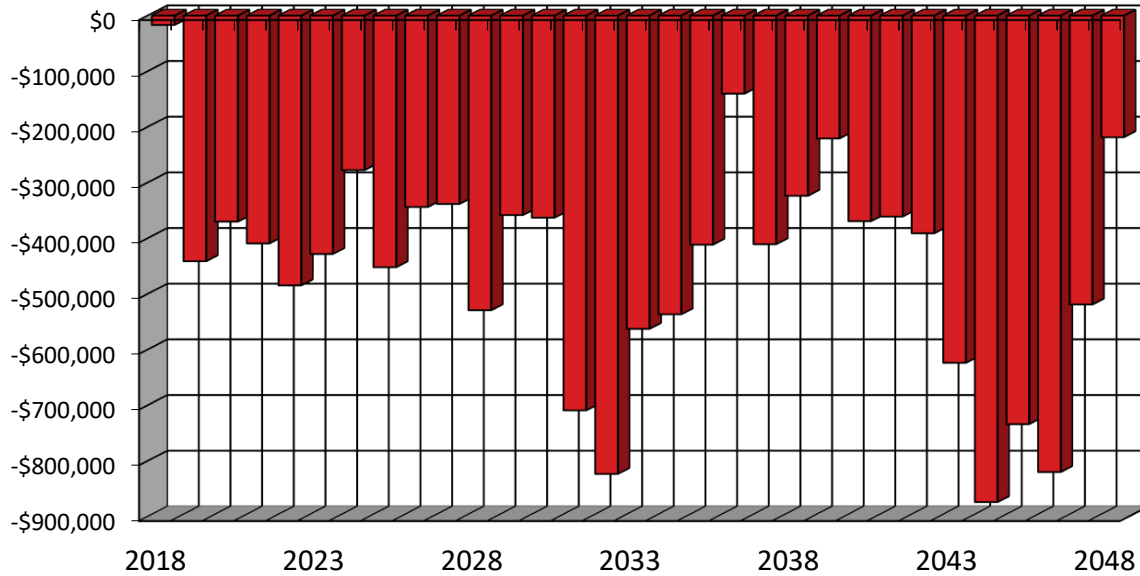


QUANTITY AND COST PROJECTIONS FOR NEXT 30-YEARS  
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# LIFE ANALYSIS AND CONDITION ASSESSMENT

Graph Illustrates Reserve Expenses Per Year, Displaying Years 1-30



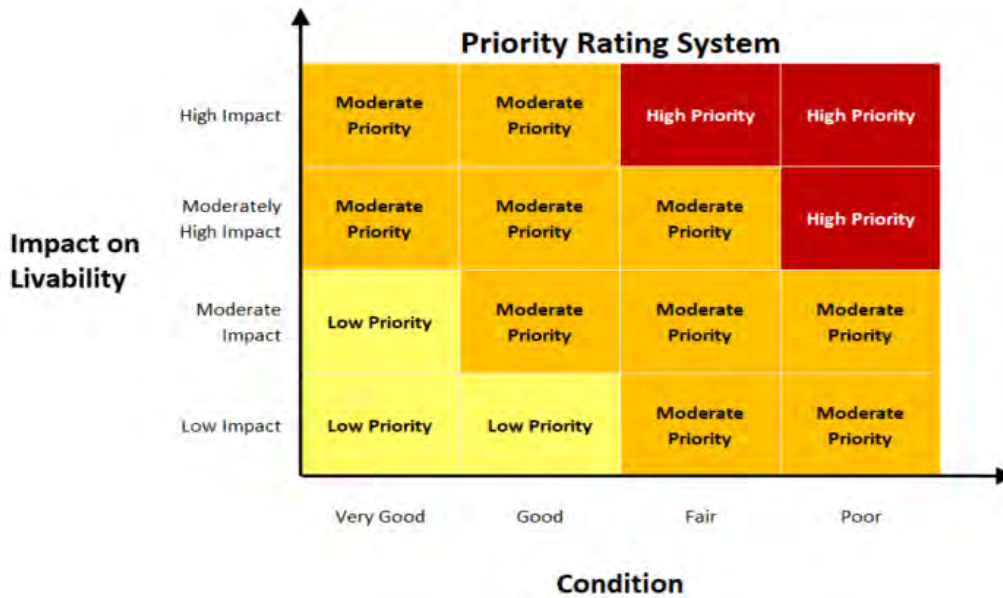
Reserve Inventory		Life Analysis and Condition Assessment				
Line Item	Reserve Component Listed by Property Class	Useful life	Remaining Useful Life	Estimated 1st Year of Replacement	Estimated Current Age	Current Condition
EXTERNAL BUILDING COMPONENTS						
1	Balconies, Railings, Steel, Paint Finishes	6 to 8	2	2020	Unknown	Fair
2	Balconies, Railings, Steel, Replacement	50 to 60	14	2032	46	Good
3	Doors, Glass, Front Entry and Surrounding Glass, Phased	45 to 60	9	2027	46	Good
4	Doors, Entry Type at Townhomes and Clubhouse, Phased	20 to 25	15	2033	Varies	Good
5	Gutters and Downspouts, Aluminum, Phased	20 to 25	1	2019	Varies	Fair
6	Light Fixtures, Exterior	20 to 25	10	2028	Unknown	Good
7	Roofs, Asphalt Shingles, Phased	15 to 20	1	2019	Varies	Good
8	Sealants - Windows and Doors, Phased	8 to 12	3	2021	Varies	Good
9	Soffits and Fascia, Aluminum, Phased	50 to 60	25	2043	Unknown	Good
10	Walls, Aluminum and Vinyl Siding, Phased	Varies	25	2043	Varies	Good
11	Walls, Masonry, Inspections and Partial Repointing, Phased	8 to 12		2018	Varies	Fair
12	Walls, Paint Finishes, Exterior, Phased	6 to 8	4	2022	Varies	Fair
13	Windows and Patio Doors, Phased	35 to 45	8	2026	Varies	Fair
INTERNAL BUILDING COMPONENTS						
14	Floor Coverings, Carpet, Phased	8 to 12	1	2019	Varies	Fair
15	Floor Coverings at Clubhouse, Resilient Flooring	20 to 25	3	2021	46	Fair
16	Light Fixtures, Interior, Phased	20 to 25	1	2019	Varies	Fair
17	Paint Finishes, Interior, Common Areas, Phased	6 to 12	1	2019	Varies	Good
18	Rest Rooms, Renovation	to 35	8	2026	46	Fair
SERVICE COMPONENTS						
19	Air Handling Unit at Clubhouse, Furnace	15 to 20	6	2024	Unknown	Good
20	Condensing Unit at Clubhouse, 5-ton	15 to 20	6	2024	Unknown	Good
21	Intercom Entry Panels	to 25	10	2028	46	Fair
SITE COMPONENTS						
22	Carports, Phased Replacement	25 to 30	1	2019	Varies	Fair
23	Catch Basins, Capital Repairs	15 to 20	7	2025	Varies	Good
24	Concrete Streets and Curbs, Phased Replacement	to 65	1	2019	Varies	Fair
25	Concrete Streets and Curbs, Partial Replacements	to 65	18	2036	N/A	
26	Concrete Sidewalks, Entry Stoops, and Patios, Phased Replacement	to 65	1	2019	Varies	Good
27	Fences, Vinyl, Privacy	20 to 25	20	2038	5	Good



## LIFE ANALYSIS AND CONDITION ASSESSMENT CONTINUED

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# PRIORITY CHART



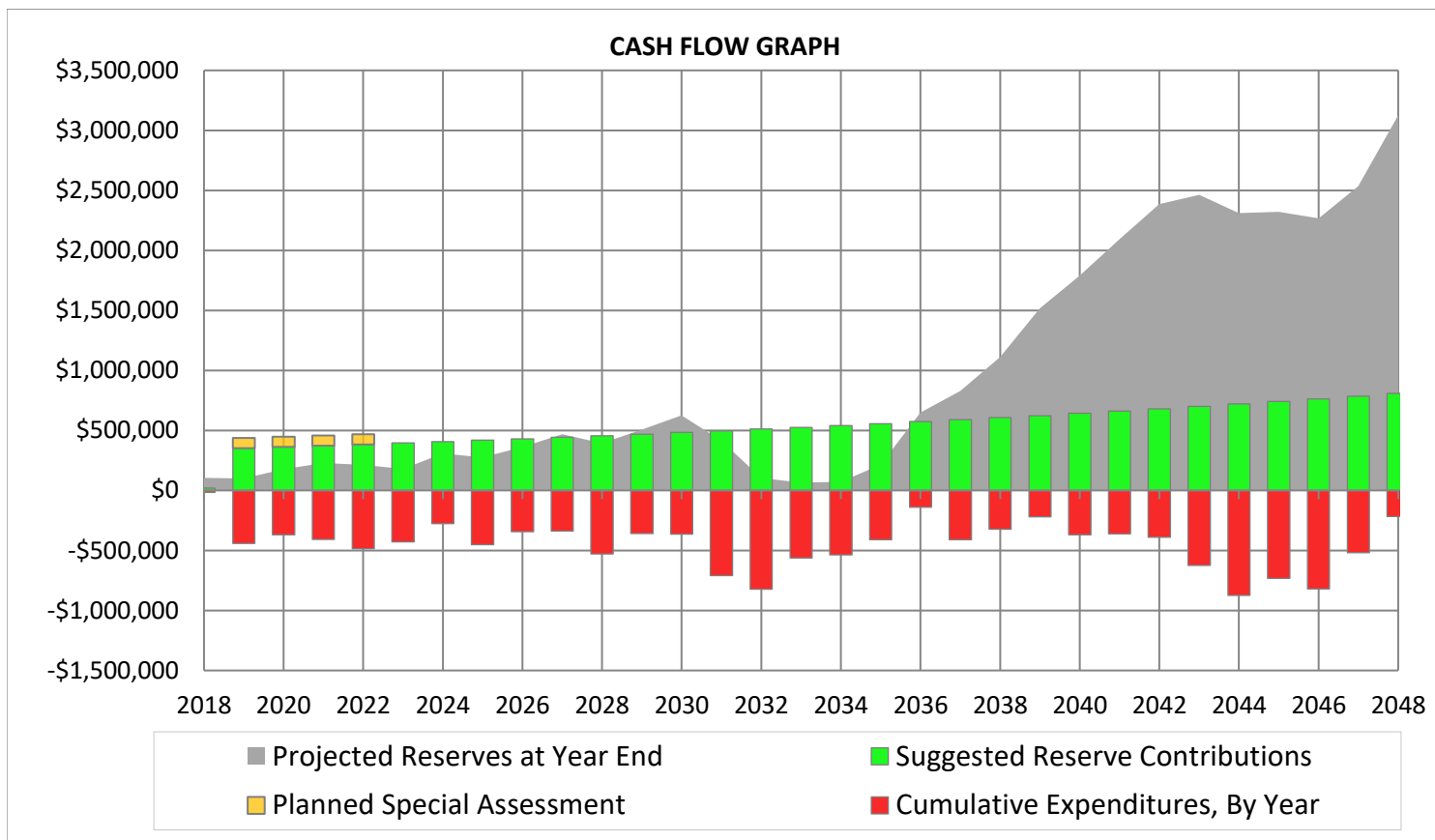
Reserve Inventory		Priority Rating, Condition & Impact on Livability Assessment		
Line Item	Reserve Component Listed by Property Class	Priority	Current Condition	Impact on Livability
EXTERNAL BUILDING COMPONENTS				
1	Balconies, Railings, Steel, Paint Finishes	Moderate Priority	Fair	Moderate Impact
2	Balconies, Railings, Steel, Replacement	Moderate Priority	Good	High Impact
3	Doors, Glass, Front Entry and Surrounding Glass, Phased	Moderate Priority	Good	Moderately High Impact
4	Doors, Entry Type at Townhomes and Clubhouse, Phased	Moderate Priority	Good	Moderately High Impact
5	Gutters and Downspouts, Aluminum, Phased	Moderate Priority	Fair	Moderately High Impact
6	Light Fixtures, Exterior	Moderate Priority	Good	Moderate Impact
7	Roofs, Asphalt Shingles, Phased	Moderate Priority	Good	High Impact
8	Sealants - Windows and Doors, Phased	Moderate Priority	Good	Moderately High Impact
9	Soffits and Fascia, Aluminum, Phased	Moderate Priority	Good	Moderately High Impact
10	Walls, Aluminum and Vinyl Siding, Phased	Moderate Priority	Good	High Impact
11	Walls, Masonry, Inspections and Partial Repointing, Phased	High Priority	Fair	High Impact
12	Walls, Paint Finishes, Exterior, Phased	Moderate Priority	Fair	Low Impact
13	Windows and Patio Doors, Phased	Moderate Priority	Fair	Moderately High Impact
INTERNAL BUILDING COMPONENTS				
14	Floor Coverings, Carpet, Phased	Moderate Priority	Fair	Moderate Impact
15	Floor Coverings at Clubhouse, Resilient Flooring	Moderate Priority	Fair	Low Impact
16	Light Fixtures, Interior, Phased	Moderate Priority	Fair	Moderate Impact
17	Paint Finishes, Interior, Common Areas, Phased	Moderate Priority	Good	Moderate Impact
18	Rest Rooms, Renovation	Moderate Priority	Fair	Moderate Impact
SERVICE COMPONENTS				
19	Air Handling Unit at Clubhouse, Furnace	Moderate Priority	Good	Moderately High Impact
20	Condensing Unit at Clubhouse, 5-ton	Moderate Priority	Good	Moderate Impact
21	Intercom Entry Panels	Moderate Priority	Fair	Moderate Impact
SITE COMPONENTS				
22	Carports, Phased Replacement	Moderate Priority	Fair	Moderate Impact
23	Catch Basins, Capital Repairs	Moderate Priority	Good	Moderately High Impact
24	Concrete Streets and Curbs, Phased Replacement	Moderate Priority	Fair	Moderately High Impact
25	Concrete Streets and Curbs, Partial Replacements			Moderately High Impact
26	Concrete Sidewalks, Entry Stoops, and Patios, Phased Replacement	Moderate Priority	Good	High Impact
27	Fences, Vinyl, Privacy	Low Priority	Good	Low Impact



## LIFE ANALYSIS AND CONDITION ASSESSMENT CONTINUED

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# 30-YEAR CASH FLOW ANALYSIS DISPLAYING YEARS: 1-30



	Start Year	1	2	3	4	5	6	7	8	9	10
	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
+ Reserves at Beginning of Year	\$99,673	103,798	100,243	178,107	227,425	212,081	179,197	308,662	275,447	362,491	467,610
+ Suggested Reserve Contribution	\$20,833	352,500	362,700	373,200	384,000	395,100	406,600	418,400	430,500	443,000	455,800
+ Planned Special Assessment	\$0	85,000	85,000	85,000	85,000	0	0	0	0	0	0
+ Estimated Interest Earned	\$42	102	139	203	220	196	244	292	319	415	431
+ Cumulative Expenditure, By Year	-\$16,750	-\$441,158	-\$369,975	-\$409,085	-\$484,563	-\$428,180	-\$277,378	-\$451,907	-\$343,775	-\$338,296	-\$529,131
= Projected Reserves at Year End	\$103,798	100,243	178,107	227,425	212,081	179,197	308,662	275,447	362,491	467,610	394,709

	11	12	13	14	15	16	17	18	19	20
	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
+ Reserves at Beginning of Year	394,709	505,957	626,194	414,259	102,299	65,568	70,140	215,483	648,533	828,129
+ Suggested Reserve Contribution	469,000	482,600	496,600	511,000	525,800	541,000	556,700	572,800	589,400	606,500
+ Planned Special Assessment	0	0	0	0	0	0	0	0	0	0
+ Estimated Interest Earned	450	566	520	258	84	68	143	432	738	970
+ Cumulative Expenditure, By Year	-\$358,202	-\$362,930	-\$709,054	-\$823,218	-\$562,615	-\$536,497	-\$411,499	-\$140,183	-\$410,542	-\$323,620
= Projected Reserves at Year End	505,957	626,194	414,259	102,299	65,568	70,140	215,483	648,533	828,129	1,111,978

	21	22	23	24	25	26	27	28	29	30
	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
+ Reserves at Beginning of Year	1,111,978	1,516,772	1,791,508	2,093,327	2,384,729	2,463,305	2,311,864	2,321,263	2,266,136	2,534,165
+ Suggested Reserve Contribution	624,100	642,200	660,800	680,000	699,700	720,000	740,900	762,400	784,500	807,300
+ Planned Special Assessment	0	0	0	0	0	0	0	0	0	0
+ Estimated Interest Earned	1,314	1,653	1,941	2,238	2,423	2,386	2,315	2,293	2,399	2,829
+ Cumulative Expenditure, By Year	-\$220,620	-\$369,117	-\$360,922	-\$390,836	-\$623,547	-\$873,827	-\$733,816	-\$819,820	-\$518,870	-\$218,343
= Projected Reserves at Year End	1,516,772	1,791,508	2,093,327	2,384,729	2,463,305	2,311,864	2,321,263	2,266,136	2,534,165	3,125,951



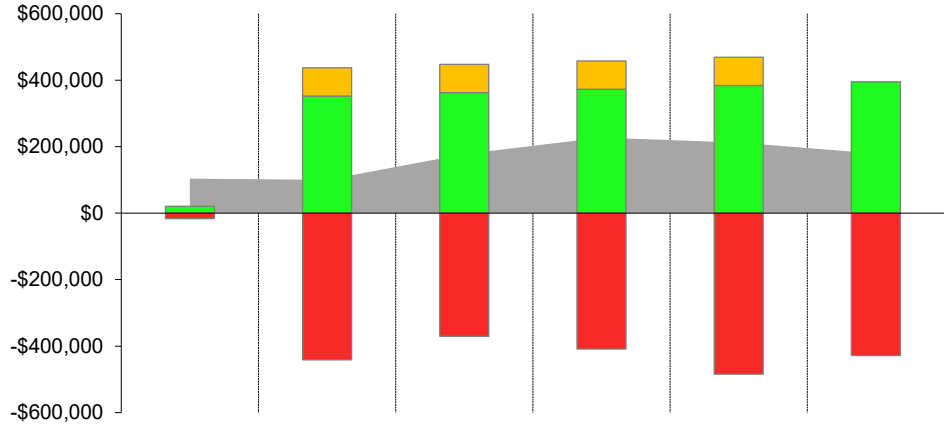
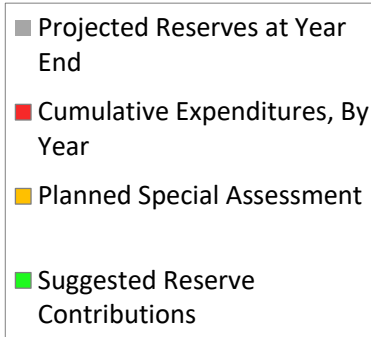
# DIVISION 1: YEARS 1-5 OF CASH FLOW ANALYSIS

Local Inflationary Costs for Labor, Equipment and Materials:

2.90%

Interest Earned on Invested Reserves:

0.10%



		2018	2019	2020	2021	2022	2023
+	Reserves at Beginning of Year	99,673	103,798	100,243	178,107	227,425	212,081
+	Suggested Reserve Contribution	20,833	352,500	362,700	373,200	384,000	395,100
+	Planned Special Assessment		85,000	85,000	85,000	85,000	
+	Estimated Interest Earned on Invested Reserves	42	102	139	203	220	196
+	Cumulative Expenses, By Year	-16,750	-441,158	-369,975	-409,085	-484,563	-428,180
=	Projected Reserves at Year End	103,798	100,243	178,107	227,425	212,081	179,197
Line Item	Reserve Component Listed by Property Class	Year Start	1	2	3	4	5
		2018	2019	2020	2021	2022	2023
	EXTERNAL BUILDING COMPONENTS						
1	Balconies, Railings, Steel, Paint Finishes			26,111			
2	Balconies, Railings, Steel, Replacement						
3	Doors, Glass, Front Entry and Surrounding Glass, Phased						
4	Doors, Entry Type at Townhomes and Clubhouse, Phased						
5	Gutters and Downspouts, Aluminum, Phased		13,770	14,170	14,580	15,003	15,438
6	Light Fixtures, Exterior						
7	Roofs, Asphalt Shingles, Phased		78,172	80,439	82,772	85,172	87,642
8	Sealants - Windows and Doors, Phased				22,875	23,538	24,221
9	Soffits and Fascia, Aluminum, Phased						
10	Walls, Aluminum and Vinyl Siding, Phased						
11	Walls, Masonry, Inspections and Partial Repointing, Phased	16,750	101,377	104,317	107,342	110,455	113,658
12	Walls, Paint Finishes, Exterior, Phased					11,987	12,335
13	Windows and Patio Doors, Phased						
	INTERNAL BUILDING COMPONENTS						
14	Floor Coverings, Carpet, Phased		20,148	20,732	21,333	21,952	22,589
15	Floor Coverings at Clubhouse, Resilient Flooring				12,535		
16	Light Fixtures, Interior, Phased		3,112	3,202	3,295	3,390	3,489
17	Paint Finishes, Interior, Common Areas, Phased		11,998	12,346	12,704	13,073	13,452
18	Rest Rooms, Renovation						
	SERVICE COMPONENTS						
19	Air Handling Unit at Clubhouse, Furnace						
20	Condensing Unit at Clubhouse, 5-ton						
21	Intercom Entry Panels						
	SITE COMPONENTS						
22	Carports, Phased Replacement		15,135		16,026		16,969
23	Catch Basins, Capital Repairs						
24	Concrete Streets and Curbs, Phased Replacement		114,300	108,658	111,809	115,052	118,388
25	Concrete Streets and Curbs, Partial Replacements						
26	Concrete Sidewalks, Entry Stoops, and Patios, Phased Replacement		77,960			84,941	
27	Fences, Vinyl, Privacy						

## DIVISION 1: YEARS 1-5 OF CASH FLOW ANALYSIS

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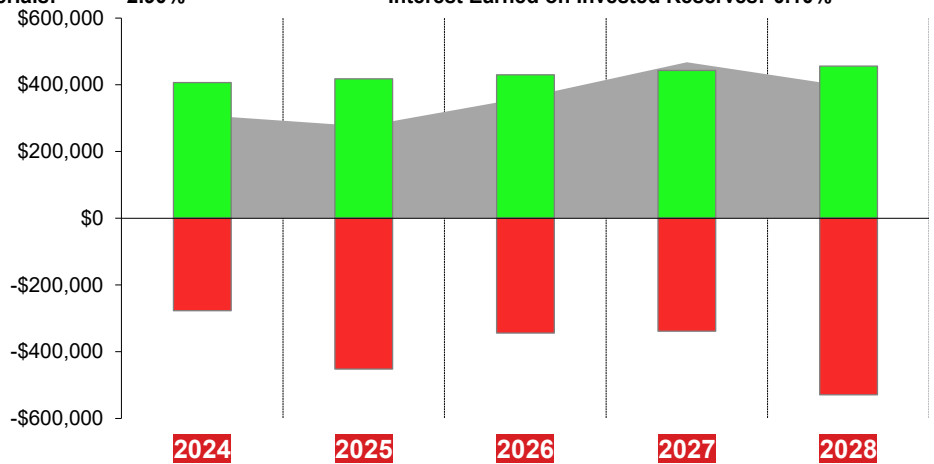
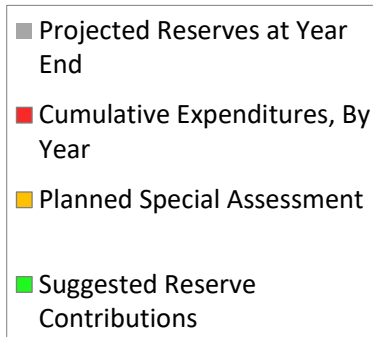


# DIVISION 2: YEARS 6-10 OF CASH FLOW ANALYSIS

Local Inflationary Costs for Labor, Equipment and Materials:

2.90%

Interest Earned on Invested Reserves: 0.10%



		2024	2025	2026	2027	2028
+	Reserves at Beginning of Year	179,197	308,662	275,447	362,491	467,610
+	Suggested Reserve Contribution	406,600	418,400	430,500	443,000	455,800
+	Planned Special Assessment					
+	Estimated Interest Earned on Invested Reserves	244	292	319	415	431
+	Cumulative Expenditure, By Year	-277,378	-451,907	-343,775	-338,296	-529,131
=	Projected Reserves at Year End	308,662	275,447	362,491	467,610	394,709
Line Item	Reserve Component Listed by Property Class	6	7	8	9	10
		2024	2025	2026	2027	2028
	EXTERNAL BUILDING COMPONENTS					
1	Balconies, Railings, Steel, Paint Finishes			30,997		
2	Balconies, Railings, Steel, Replacement					
3	Doors, Glass, Front Entry and Surrounding Glass, Phased				50,055	51,507
4	Doors, Entry Type at Townhomes and Clubhouse, Phased					
5	Gutters and Downspouts, Aluminum, Phased	15,886	16,347			
6	Light Fixtures, Exterior					38,544
7	Roofs, Asphalt Shingles, Phased	90,184	92,799			
8	Sealants - Windows and Doors, Phased	24,923	25,646			
9	Soffits and Fascia, Aluminum, Phased					
10	Walls, Aluminum and Vinyl Siding, Phased					
11	Walls, Masonry, Inspections and Partial Repointing, Phased					
12	Walls, Paint Finishes, Exterior, Phased	12,693	13,061	13,439		
13	Windows and Patio Doors, Phased			132,640	136,486	140,445
	INTERNAL BUILDING COMPONENTS					
14	Floor Coverings, Carpet, Phased					
15	Floor Coverings at Clubhouse, Resilient Flooring					
16	Light Fixtures, Interior, Phased					
17	Paint Finishes, Interior, Common Areas, Phased					
18	Rest Rooms, Renovation			37,709		
	SERVICE COMPONENTS					
19	Air Handling Unit at Clubhouse, Furnace	4,155				
20	Condensing Unit at Clubhouse, 5-ton	7,716				
21	Intercom Entry Panels					61,223
	SITE COMPONENTS					
22	Carports, Phased Replacement		17,967		19,024	
23	Catch Basins, Capital Repairs		27,485			
24	Concrete Streets and Curbs, Phased Replacement	121,822	125,354	128,990	132,730	136,580
25	Concrete Streets and Curbs, Partial Replacements					
26	Concrete Sidewalks, Entry Stoops, and Patios, Phased Replacement		92,547			100,834
27	Fences, Vinyl, Privacy					

## DIVISION 2: YEARS 6-10 OF CASH FLOW ANALYSIS

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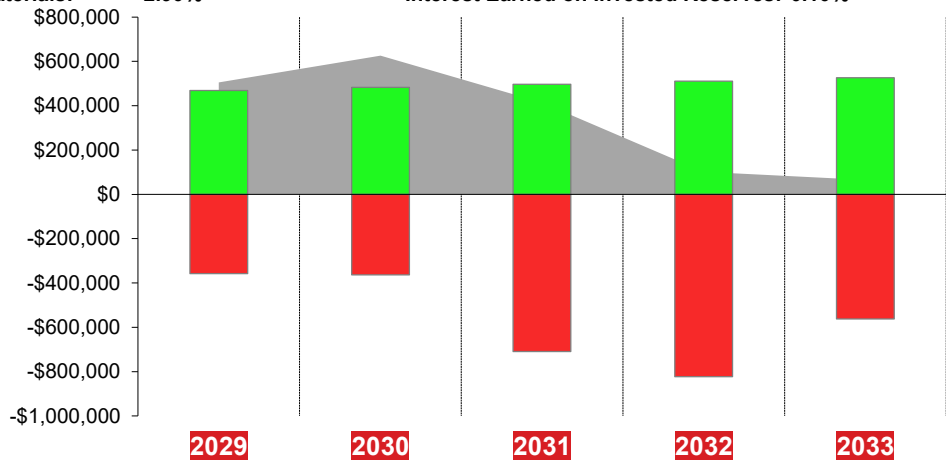
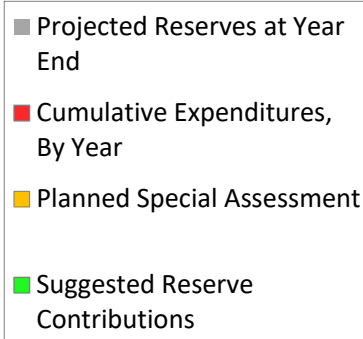
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# DIVISION 3: YEARS 11-15 OF CASH FLOW ANALYSIS

Local Inflationary Costs for Labor, Equipment and Materials: 2.90%

Interest Earned on Invested Reserves: 0.10%



		2029	2030	2031	2032	2033
+	Reserves at Beginning of Year	394,709	505,957	626,194	414,259	102,299
+	Suggested Reserve Contribution	469,000	482,600	496,600	511,000	525,800
+	Planned Special Assessment					
+	Estimated Interest Earned on Invested Reserves	450	566	520	258	84
+	Cumulative Expenditure, By Year	-358,202	-362,930	-709,054	-823,218	-562,615
=	Projected Reserves at Year End	505,957	626,194	414,259	102,299	65,568
Line Item	Reserve Component Listed by Property Class	11	12	13	14	15
		2029	2030	2031	2032	2033
	EXTERNAL BUILDING COMPONENTS					
1	Balconies, Railings, Steel, Paint Finishes					
2	Balconies, Railings, Steel, Replacement				245,311	
3	Doors, Glass, Front Entry and Surrounding Glass, Phased	53,001	54,538	56,119	57,747	
4	Doors, Entry Type at Townhomes and Clubhouse, Phased					27,369
5	Gutters and Downspouts, Aluminum, Phased					
6	Light Fixtures, Exterior					
7	Roofs, Asphalt Shingles, Phased					
8	Sealants - Windows and Doors, Phased					
9	Soffits and Fascia, Aluminum, Phased					
10	Walls, Aluminum and Vinyl Siding, Phased					
11	Walls, Masonry, Inspections and Partial Repointing, Phased			142,864	147,008	151,271
12	Walls, Paint Finishes, Exterior, Phased		15,068	15,505	15,954	16,417
13	Windows and Patio Doors, Phased	144,517	148,708	153,021	157,459	162,025
	INTERNAL BUILDING COMPONENTS					
14	Floor Coverings, Carpet, Phased			28,393	29,216	30,064
15	Floor Coverings at Clubhouse, Resilient Flooring					
16	Light Fixtures, Interior, Phased					
17	Paint Finishes, Interior, Common Areas, Phased			16,908	17,399	17,903
18	Rest Rooms, Renovation					
	SERVICE COMPONENTS					
19	Air Handling Unit at Clubhouse, Furnace					
20	Condensing Unit at Clubhouse, 5-ton					
21	Intercom Entry Panels					
	SITE COMPONENTS					
22	Carpports, Phased Replacement	20,144		21,329		
23	Catch Basins, Capital Repairs					
24	Concrete Streets and Curbs, Phased Replacement	140,540	144,616	148,810	153,125	157,566
25	Concrete Streets and Curbs, Partial Replacements					
26	Concrete Sidewalks, Entry Stoops, and Patios, Phased Replacement			109,864		
27	Fences, Vinyl, Privacy					

## DIVISION 3: YEARS 11-15 OF CASH FLOW ANALYSIS

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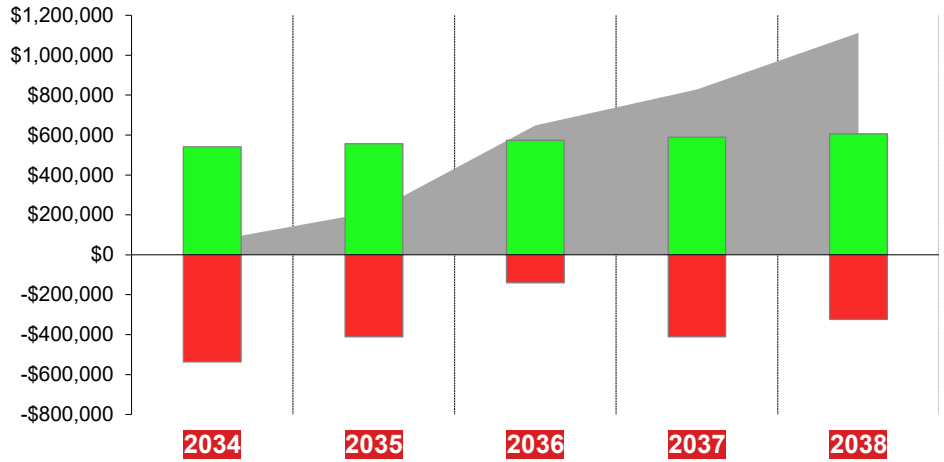
# DIVISION 4: YEARS 16-20 OF CASH FLOW ANALYSIS

Local Inflationary Costs for Labor, Equipment and Materials:

2.90%

Interest Earned on Invested Reserves: 0.10%

- Projected Reserves at Year End
- Cumulative Expenditures, By Year
- Planned Special Assessment
- Suggested Reserve Contributions



		2034	2035	2036	2037	2038
+	Reserves at Beginning of Year	65,568	70,140	215,483	648,533	828,129
+	Suggested Reserve Contribution	541,000	556,700	572,800	589,400	606,500
+	Planned Special Assessment					
+	Estimated Interest Earned on Invested Reserves	68	143	432	738	970
+	Cumulative Expenditure, By Year	-536,497	-411,499	-140,183	-410,542	-323,620
=	Projected Reserves at Year End	70,140	215,483	648,533	828,129	1,111,978
Line Item	Reserve Component Listed by Property Class	16	17	18	19	20
		2034	2035	2036	2037	2038
	EXTERNAL BUILDING COMPONENTS					
1	Balconies, Railings, Steel, Paint Finishes					43,682
2	Balconies, Railings, Steel, Replacement					
3	Doors, Glass, Front Entry and Surrounding Glass, Phased					
4	Doors, Entry Type at Townhomes and Clubhouse, Phased	28,163	28,980	29,820	30,685	
5	Gutters and Downspouts, Aluminum, Phased					
6	Light Fixtures, Exterior					
7	Roofs, Asphalt Shingles, Phased					134,568
8	Sealants - Windows and Doors, Phased					37,190
9	Soffits and Fascia, Aluminum, Phased					
10	Walls, Aluminum and Vinyl Siding, Phased					
11	Walls, Masonry, Inspections and Partial Repointing, Phased	155,658	160,172			
12	Walls, Paint Finishes, Exterior, Phased	16,893				18,939
13	Windows and Patio Doors, Phased	166,724	171,559			
	INTERNAL BUILDING COMPONENTS					
14	Floor Coverings, Carpet, Phased	30,936	31,833			
15	Floor Coverings at Clubhouse, Resilient Flooring					
16	Light Fixtures, Interior, Phased					
17	Paint Finishes, Interior, Common Areas, Phased	18,422	18,957			
18	Rest Rooms, Renovation					
	SERVICE COMPONENTS					
19	Air Handling Unit at Clubhouse, Furnace					
20	Condensing Unit at Clubhouse, 5-ton					
21	Intercom Entry Panels					
	SITE COMPONENTS					
22	Carports, Phased Replacement					
23	Catch Basins, Capital Repairs					
24	Concrete Streets and Curbs, Phased Replacement			110,363		
25	Concrete Streets and Curbs, Partial Replacements					
26	Concrete Sidewalks, Entry Stoops, and Patios, Phased Replacement	119,702			130,421	
27	Fences, Vinyl, Privacy					89,241



## DIVISION 4: YEARS 16-20 OF CASH FLOW ANALYSIS

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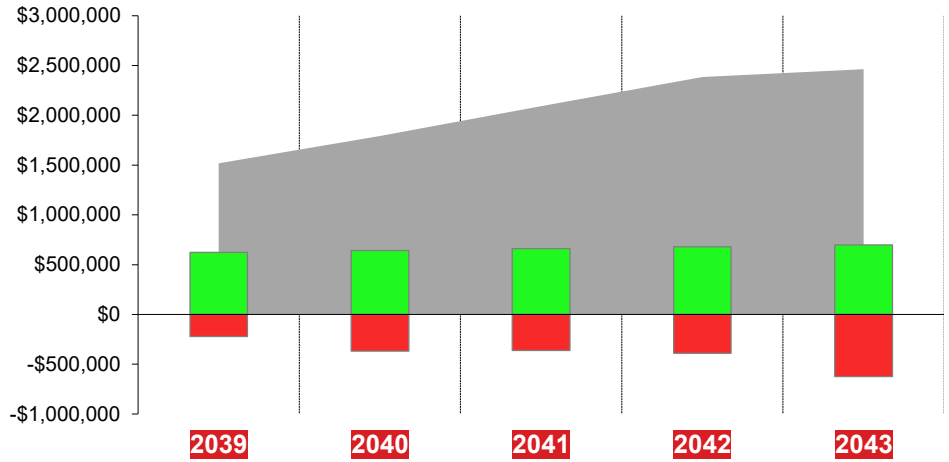
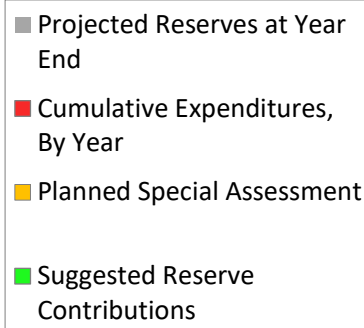
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# DIVISION 5: YEARS 21-25 OF CASH FLOW ANALYSIS

Local Inflationary Costs for Labor, Equipment and Materials:

2.90%

Interest Earned on Invested Reserves: 0.10%



		2039	2040	2041	2042	2043
+	Reserves at Beginning of Year	1,111,978	1,516,772	1,791,508	2,093,327	2,384,729
+	Suggested Reserve Contribution	624,100	642,200	660,800	680,000	699,700
+	Planned Special Assessment					
+	Estimated Interest Earned on Invested Reserves	1,314	1,653	1,941	2,238	2,423
+	Cumulative Expenditure, By Year	-220,620	-369,117	-360,922	-390,836	-623,547
=	Projected Reserves at Year End	1,516,772	1,791,508	2,093,327	2,384,729	2,463,305
Line Item	Reserve Component Listed by Property Class	21	22	23	24	25
		2039	2040	2041	2042	2043
	EXTERNAL BUILDING COMPONENTS					
1	Balconies, Railings, Steel, Paint Finishes					
2	Balconies, Railings, Steel, Replacement					
3	Doors, Glass, Front Entry and Surrounding Glass, Phased					
4	Doors, Entry Type at Townhomes and Clubhouse, Phased					
5	Gutters and Downspouts, Aluminum, Phased	24,392	25,099	25,827	26,576	27,347
6	Light Fixtures, Exterior					
7	Roofs, Asphalt Shingles, Phased	138,471	142,486	146,618	150,870	155,246
8	Sealants - Windows and Doors, Phased	38,268	39,378	40,520	41,695	
9	Soffits and Fascia, Aluminum, Phased					115,690
10	Walls, Aluminum and Vinyl Siding, Phased					53,914
11	Walls, Masonry, Inspections and Partial Repointing, Phased					201,330
12	Walls, Paint Finishes, Exterior, Phased	19,489	20,054	20,635	21,234	
13	Windows and Patio Doors, Phased					
	INTERNAL BUILDING COMPONENTS					
14	Floor Coverings, Carpet, Phased					40,013
15	Floor Coverings at Clubhouse, Resilient Flooring					
16	Light Fixtures, Interior, Phased					6,180
17	Paint Finishes, Interior, Common Areas, Phased					23,828
18	Rest Rooms, Renovation					
	SERVICE COMPONENTS					
19	Air Handling Unit at Clubhouse, Furnace					
20	Condensing Unit at Clubhouse, 5-ton					
21	Intercom Entry Panels					
	SITE COMPONENTS					
22	Carports, Phased Replacement					
23	Catch Basins, Capital Repairs					
24	Concrete Streets and Curbs, Phased Replacement			127,321		
25	Concrete Streets and Curbs, Partial Replacements					
26	Concrete Sidewalks, Entry Stoops, and Patios, Phased Replacement		142,099		150,461	
27	Fences, Vinyl, Privacy					

DIVISION 5: YEARS 21-25 OF CASH FLOW ANALYSIS

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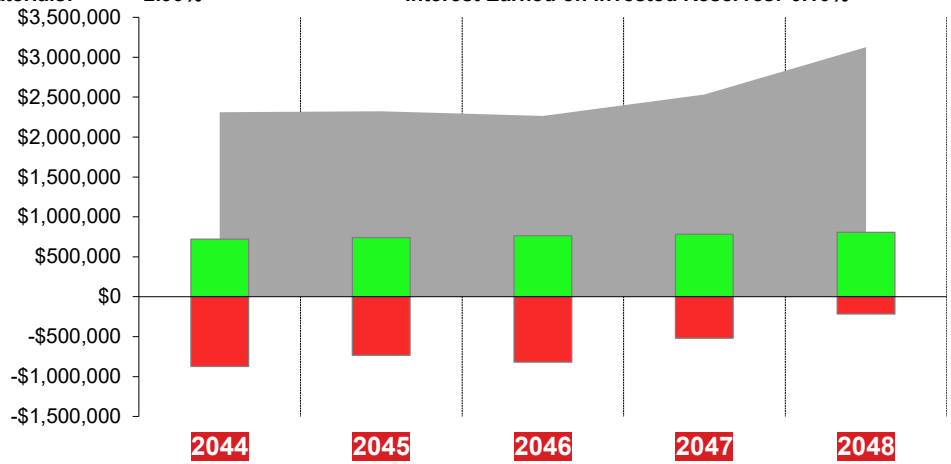
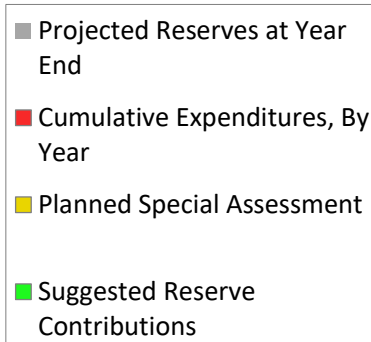


# DIVISION 6: YEARS 26-30 OF CASH FLOW ANALYSIS

Local Inflationary Costs for Labor, Equipment and Materials:

2.90%

Interest Earned on Invested Reserves: 0.10%



		2044	2045	2046	2047	2048
+	Reserves at Beginning of Year	2,463,305	2,311,864	2,321,263	2,266,136	2,534,165
+	Suggested Reserve Contribution	720,000	740,900	762,400	784,500	807,300
+	Planned Special Assessment					
+	Estimated Interest Earned on Invested Reserves	2,386	2,315	2,293	2,399	2,829
+	Cumulative Expenditure, By Year	-873,827	-733,816	-819,820	-518,870	-218,343
=	Projected Reserves at Year End	2,311,864	2,321,263	2,266,136	2,534,165	3,125,951
Line Item	Reserve Component Listed by Property Class	26	27	28	29	30
		2044	2045	2046	2047	2048
	EXTERNAL BUILDING COMPONENTS					
1	Balconies, Railings, Steel, Paint Finishes	51,855				
2	Balconies, Railings, Steel, Replacement					
3	Doors, Glass, Front Entry and Surrounding Glass, Phased					
4	Doors, Entry Type at Townhomes and Clubhouse, Phased					
5	Gutters and Downspouts, Aluminum, Phased	28,140	28,956			
6	Light Fixtures, Exterior					
7	Roofs, Asphalt Shingles, Phased	159,748	164,380			
8	Sealants - Windows and Doors, Phased					
9	Soffits and Fascia, Aluminum, Phased	119,045	122,498	126,050	129,705	
10	Walls, Aluminum and Vinyl Siding, Phased	55,477	57,086	58,741	60,445	
11	Walls, Masonry, Inspections and Partial Repointing, Phased	207,169	213,177	219,359	225,720	
12	Walls, Paint Finishes, Exterior, Phased			23,806	24,497	25,207
13	Windows and Patio Doors, Phased					
	INTERNAL BUILDING COMPONENTS					
14	Floor Coverings, Carpet, Phased	41,173	42,367	43,596	44,860	
15	Floor Coverings at Clubhouse, Resilient Flooring		24,894			
16	Light Fixtures, Interior, Phased	6,359	6,543	6,733	6,928	
17	Paint Finishes, Interior, Common Areas, Phased	24,519	25,230	25,961	26,714	
18	Rest Rooms, Renovation					
	SERVICE COMPONENTS					
19	Air Handling Unit at Clubhouse, Furnace	7,360				
20	Condensing Unit at Clubhouse, 5-ton	13,668				
21	Intercom Entry Panels					
	SITE COMPONENTS					
22	Carpports, Phased Replacement					
23	Catch Basins, Capital Repairs		48,685			
24	Concrete Streets and Curbs, Phased Replacement			146,885		
25	Concrete Streets and Curbs, Partial Replacements			168,688		
26	Concrete Sidewalks, Entry Stoops, and Patios, Phased Replacement	159,314				178,614
27	Fences, Vinyl, Privacy					

## DIVISION 6: YEARS 26-30 OF CASH FLOW ANALYSIS

### CONTINUED

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## TERMS AND DEFINITIONS

(Definitions are derived from the standards set forth by the Community Association Institute, C.A.I.)

**CASH FLOW METHOD:** A method of developing a Reserve Funding Plan 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.

**CURRENT COST OF REPLACEMENT:** That amount required today derived from the quantity of the 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 manufacturing equipment, contractor' overhead, profit and fees, but without provisions for building permits, over time, bonuses for labor or premiums for material and equipment. We include removal and disposal costs in the cost of replacement where applicable.

**COMPONENT:** The individual line items in the Reserve Study, developed or updated in the Physical Analysis. These elements form the building blocks for the Reserve Study. Components typically are: 1) Association responsibility, 2) with limited Useful Life expectancies, 3) predictable Remaining Useful Life expectancies, 4) above a minimum threshold cost, and 5) as required by local codes.

**COMPONENT INVENTORY:** The task of selecting and quantifying Reserve Components. This task can be accomplished through on-site visual observations, review of association design and organizational documents, a review of established association precedents, and discussion with appropriate Association representative(s) of the association or cooperative.

**FINANCIAL ANALYSIS:** The portion of a Reserve Study where current status of the Reserves (measured as cash or Percent Funded) and a recommended Reserve contribution rate (Reserve Funding Plan) are derived, and the projected Reserve income and expense over time is presented. The Financial Analysis is one of the two parts of a Reserve Study.

**FUNDING PLAN:** An association's plan to provide income to a Reserve fund to offset anticipated expenditures from that fund.

**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 material, labor and equipment.

**LONG-LASTING PROPERTY COMPONENTS:** Property components of Association 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.

**PHYSICAL ANALYSIS:** The portion of the Reserve Study where the Component Inventory, Condition Assessment, and Life and Valuation Estimate tasks are performed. This represents one of the two parts of the Reserve Study.

**RECOMMENDED FUNDING:** The stated purpose of this Reserve Study to determine the adequate, not excessive, future annual, reasonable Reserve Contributions to fund future Reserve Expenditures.

**REMAINING YEARS UNTIL REPLACEMENT:** Also referred to as "Remaining Life" (RL). The estimated time, in years, that a reserve component can be expected to continue to serve its intended function. Projects anticipated to occur in the initial year have "zero" Remaining Useful Life.

**REPLACEMENT COST:** The cost of replacing, repairing, or restoring a Reserve Component to its original functional condition. The Current Replacement Cost would be the cost to replace, repair, or restore the component during that particular year.

**RESERVE BALANCE:** Actual or projected funds as of a particular point in time that the association has identified for use to defray the future repair or replacement of those major components which the association is obligated to maintain. Also known as Reserves, Reserve Accounts, Cash Reserves Based upon information provided and not audited.

**RESERVE STUDY:** A budget planning tool which identifies the current status of the Reserve fund and a stable and equitable Funding Plan to offset the anticipated future major common area expenditures. The Reserve Study consists of two parts: the Physical Analysis and the Financial Analysis. "Our budget and finance committee is soliciting proposals to update our Reserve Study for next year's budget."

**SPECIAL ASSESSMENT:** An assessment levied on the members of an association in addition to regular assessments. Special Assessments are often regulated by governing documents or local statutes

**USEFUL LIFE (UL):** Total Useful Life or Depreciable Life. The estimated time, in years, that a reserve component can be expected to serve its intended function if properly constructed in its present



## **RESOURCES USED**

**Building Reserves INC., uses different national and local data to conduct its professional services. A concise list of several of these resources follows.**

**Association of Construction Inspectors - The largest professional organization for those involved in providing inspection and construction project management. ACI is the leading association providing standards, guild lines, regulations, education and training.**

**Community Association Institute – America’s leading advocate for responsible communities noted as the only national organization. Their mission is to assist communities 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. 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>**

# Service Contract

**Contract Date:** 5/8/2018

**Customer:** Plum Creek Condominium Association

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This Agreement is between Building Reserves, Inc. located at 1341 W Fullerton Ave #314, Chicago, IL 60614 (herein referred to as "BR"), and (herein referred to as "Customer"). BR agrees to complete an investigation and reserve study of the Property (the "Study") that provides, among other things, an analysis of the unit quantities and unit costs, a life analysis and condition assessment, projected replacement times and a cash flow analysis with recommended reserve contributions to offset capital and replacement costs of Customer property.

Customer may elect to purchase additional or alternate services or packages provided by BR, which include but are not limited to Preventative Maintenance Plans (herein referred to as "PMP") and Loyalty Package (herein referred to as "LP"). These additional or alternate services are also governed by the terms of this contract.

Customer shall pay to BR an amount equal to the Fee, as determined in accordance with the payment schedule set forth in the Proposal and any riders (and which may include the PMP, LP or other such programs or services.).

Customer agrees to cooperate and provide BR with access to the Property within a reasonable period of time following BR's request for an on-site inspection. Customer will use its best efforts to provide BR with historical and budgetary information for the Property as well as all governing documents and other information requested by BR with respect to the Property.

BR's inspection and analysis of the Property is limited to visual observations, with no testing, and is non-invasive. BR is not qualified to detect or quantify the impact of hazardous materials or adverse environmental concerns. Unless BR expressly states otherwise in writing, BR does not investigate or consider (nor assume any responsibility or liability for) the existence or impact of any hazardous materials or any structural, latent or hidden defects on or within the Property. BR will not conduct any soil or water analysis, geological survey or investigation of subsurface mineral rights (including, without limitation, water, oil, gas, coal or metal). The validity of BR's Study (and BR's opinions and estimates) could be affected adversely by the presence of substances such as asbestos, urea-formaldehyde foam insulation, toxic wastes, environmental mold, and other chemicals or hazardous materials. BR does not conduct any invasive or structural testing or inspections; accordingly, BR makes no representation, warranty or guarantee regarding (nor does BR assume any liability or responsibility for) the structural integrity of the Property, including, without limitation, any physical defects that were not readily apparent during BR's onsite inspection. BR will inspect sloped roofs only from the ground level. BR will inspect flat roofs from the roof level when and where safe access is available (as determined in BR's sole discretion). BR specifically disclaims any liability associated with studies or reports that are selected which do not include an on-site inspection at the onset, as all information necessary to provide the reports and plans are subject to information provided by Customer.

As a result of the Study or upon information provided by the Customer, as the case may be, BR will prepare an initial report (the "Initial Report") that represents a valid opinion of BR's findings and recommendations. If requested by Customer within six (6) calendar months following the date of the Initial Report, BR will prepare two (2) revised reports, incorporating new information that is provided by Customer in written and list format, as well as any changes that are requested reasonably by Customer and agreed-upon by BR (the "Final Report" and, together with the Initial Report, the "Reports"). If Customer does not request a Final Report within six (6) calendar months following the date of the Initial Report, then the Initial Report shall be deemed as the Final Report.

Should customer select a Loyalty Package product, this service contract shall remain in full force and effect for each term of the Package. BR specifically disclaims any liability associated with any Loyalty Packages that are selected which do not include an on-site inspection at the onset, as all information necessary to provide the reports and plans are subject to information provided by Customer. Should there be any conflicts between the Loyalty Package Rider and this contract, the terms of this contract shall control.

This Preventative Maintenance Plan is provided as guidance only and provides suggestions for the Customers that may help maintain its property. It contains recognized information, standards and suggestions on the types and frequency of practices, and maintenance that may sustain the property and systems of the Customer. Sections of the guidance may not be applicable to every Customer and this guidance should be considered advisory, as individual conditions for each Customer property may affect the required maintenance of the individual Customer.

The Reports contain intellectual property that was developed by BR and is provided on a confidential basis to only Customer for only Customer's benefit. The Reports are limited to only the express purpose stated herein and may be relied upon only by Customer. The Reports, whether in whole or in part, may not be used for any purpose other than its intended purpose, including, but not limited to, as a design specification, design engineering study or an appraisal. Without BR's prior written consent, Customer may not reference BR's name or the Reports (or any information contained therein, whether in whole or in part) in any document that is reproduced or distributed to third parties without BR's prior written consent.

# Service Contract

**Contract Date:** 5/8/2018

**Customer:** Plum Creek Condominium Association

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BR's opinions and estimates (whether oral or contained within the Initial Report or Final Report) are not (and shall not be construed as) a representation, warranty or guarantee of (i) the actual costs of replacement; (ii) the integrity of condition any common elements; (iii) the actual remaining useful life of the Property or any elements contained thereon or therein; or (iv) the actual quantities of components present at the property. BR's opinions and estimates do not constitute any representation, warranty or guarantee of the performance of any products, materials or workmanship with respect to the Property.

BR's compensation is not dependent or contingent upon any conclusions in the Reports. Customer agrees to pay BR fifty percent (50%) of the quoted fee upon signing as a retainer, and prior to site inspection or shipment of Initial Report. The remaining Fifty percent (50%) is due within 30 days of shipment of Initial Report, and late payments are subject to a monthly interest rate of one and one-half percent (1.5%). If BR does not receive the Fee in accordance with such payment schedule, then BR shall have the immediate right (in BR's sole and absolute discretion) to cease all services hereunder and to withhold any Initial Report and/or Final Reports. Customer understands that the quoted Fee is based on the accuracy of relevant Customer information provided to BR in the initial request for proposal. Should the information provided by Customer pertaining to Customer's maintenance responsibilities, property or quantity of independent budgets be found to be misrepresented or inaccurate, BR reserves the right to requote the project. In addition, the accuracy of any Reports is subject to the accuracy of information provided by Customer. BR makes no representations that it will be able to identify all commonly-owned components unless they are properly identified by Customer.

BR assumes that all data and information provided to BR by Customer is accurate, without any independent investigation or verification by BR. Customer indemnifies and holds harmless BR (and its employees, officers and directors) from and against any and all losses, claims, actions, causes of action, damages, expenses or liabilities (including, without limitation, reasonable attorneys' fees and court costs) that BR might suffer or incur as a result of (i) any false, misleading or incomplete information supplied by or on behalf of Customer to BR; or (ii) any improper use or reliance on the Reports. To the best of BR's knowledge, all data set forth in the reports is true and accurate. Notwithstanding the foregoing, BR assumes no liability for the accuracy of any data, opinions or estimates that are furnished by third parties, even if BR relied upon such information in generating its reports. BR's liability (including, without limitation, the collective liability of any of BR's employees, officers or directors) is limited to actual damages in an amount not to exceed the amount of the fee actually received by BR.

Customer shall indemnify, defend and hold harmless BR (and its employees, officers and directors) from and against any and all losses, liabilities, claims, actions, lawsuits, demands, damages, costs, money judgments and expenses (including reasonable attorneys' fees) arising out of a breach of this Agreement by Customer. Customer warrants that it has all rights necessary to provide the Proprietary Information to BR. Customer's obligation for indemnification and reimbursement shall extend to any director, officer, employee, affiliate, or agent of BR.

Customer hereby grants BR the right to use Customer's name in marketing materials and in BR's client list; provided, however, BR reserves the right to use property information to obtain estimates of replacement costs, useful life estimations, or other information that BR, in its sole discretion, believes may be appropriate or beneficial.

This Agreement represents the entire understanding and agreement of the Parties and supersedes all prior communications, agreements and understandings, if any, between the Parties relating to the subject matter hereof. This Agreement may not be modified, amended or waived except by a written instrument duly executed by both Parties. No failure or delay in exercising any right, power or privilege hereunder shall operate as a waiver thereof, nor shall any single or partial exercise thereof preclude any other or further exercise thereof or the exercise of any right, power or privilege hereunder. If any clause or provision herein shall be adjudged invalid or unenforceable, it shall not affect the validity of any other provision, which shall remain in full force and effect.

This Agreement is made subject to, and shall be construed in accordance with, the laws of the State of Wisconsin (without regard to its conflict of laws provisions). The Parties agree to sole venue in the state or federal courts located in Waukesha County, Wisconsin, and each Party hereby consents to the jurisdiction of such courts over itself in any action relating to this Agreement.

This Agreement may be executed in two or more counterparts, each of which shall be considered an original, but all of which together shall constitute the same instrument. The Parties acknowledge and agree to accept and be bound by this Agreement and its counterparts.

By signing the Proposal, Customer is indicating Customer's agreement to all of the terms & conditions of the Proposal and this Service Contract. Customer has the full right, power, and authority to enter into and be bound by the terms and conditions of this agreement and to perform Customer's obligations under this agreement without the approval or consent of any other party. The person signing this agreement on behalf of Customer represents and warrants that he/she has the authority to do so.



## Loyalty Package Rider

**Contract Date:** 5/8/2018

**Customer:** Plum Creek Condominium Association

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Building Reserves, Inc. (BR) will perform (1) Full New Reserve Study or (1) Update With Site Inspection, in addition to (2) Updates Without Site Inspection, delivered over three consecutive years, in the order specified in the Customer's signed proposal. The studies will be prepared in accordance with National Reserve Study Standards, pursuant to the scope of work indicated in the proposal and contract. Customer may choose to provide its own on-site analysis at the onset of this contract, however, in so choosing, Customer understands that BR is not liable for its reliance on any misrepresentations or misinformation provided in said study.

The agreement shall consist of 3 one year terms. Upon completion of the first one year term, this agreement shall automatically renew for an additional one-year term, with an additional renewal upon the completion of that term (3 terms in total), unless and until the Customer gives BR written notice of non-renewal. This written notice shall be provided at least thirty (30) days prior to the expiration of any given one-year term.

Customer agrees to pay BR, pursuant to Customer's chosen plan in BR payment schedule below. Fifty percent (50%) of the quoted fee each year shall be due upon signing (or on the renewal dates as the case may be) as a retainer, and prior to site inspection or shipment of Initial Report. The remaining Fifty percent (50%) is due within 30 days of shipment of Initial Report, and late payments are subject to a monthly interest rate of one and one-half percent (1.5%). The renewal dates are defined as the one and two year anniversaries of when the contract is signed. BR will notify Customer of the renewal at least 60 days prior to the renewal date. Notwithstanding the foregoing, Customer shall not be relieved of any of its obligations under this agreement should said notice not be timely delivered. If BR does not receive the Fee in accordance with such payment schedule, then BR shall have the immediate right (in BR's sole and absolute discretion) to cease all services hereunder and to withhold any Initial Report and/or Final Reports.

Customer understands and agrees that the fee structure for this agreement is based upon BR's reliance on Customer's representations in this contract. Should the Customer not renew the contract at any point during the 3 year agreement, the Customer agrees to pay BR a non-renewal fee, as specified in Customer's proposal, payable at the time of any notice of non-renewal as described above.



[WWW.BUILDINGRESERVES.COM](http://WWW.BUILDINGRESERVES.COM)