LEVEL 2 REPLACEMENT RESERVE REPORT FY 2025
BRANDYWINE HOA

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REPLACEMENT RESERVE REPORT

BRANDYWINE HOA

MECHANICSBURG, PENNSYLVANIA
April 15, 2025
Revised May 14, 2025

Description.
Brandywine HOA is a homeowners' association located in Mechanicsburg, Pennsylvania. Constructed between 2005 and 2008, the community consists of duplex buildings and triplex buildings containing 121 units. The survey examined the common elements of the property, including:

- Asphalt driveways and pathways.
- Concrete sidewalks and lead walks.
- Fencing and street signs.
- Stormwater detention ponds' fencing.

EXECUTIVE SUMMARY
This Reserve Study has been prepared for the Brandywine HOA for the Fiscal Year 2025 covering the period from January 1, 2025 to December 31, 2025. The Replacement Reserves Starting Balance as of January 1, 2025 is reported to be $257,849. The reported Current Annual Funding for Reserves is $40,656. The Recommended Annual Reserve Funding level for 2025 is $32,186.

The Association is currently funding the Reserves at a higher funding level than is calculated in this Reserve Study. However, due to the high rate of inflation in today's construction industry and its effect on increased Replacement costs, we recommend that the Association continue to fund at its current higher funding level.

MillerDodson welcomes the opportunity to answer questions or to discuss this Reserve Study in more detail should the Board so desire.

Current Funding. The Starting Balance and Current Annual Reserve Funding figures have been supplied by the managing agent and/or Board of Directors. Confirmation or audit of these figures is beyond the scope of the study. For the purposes of this study, it is assumed that the annual contribution will be deposited at the end of each month.

Level of Service. This study has been performed as a Level 2 Update with Site Visit/On-Site Review as defined by the Community Associations Institute's, National Reserve Study Standards. As such, the component inventory is based on the study that was performed by Miller-Dodson Associates, Inc. in August 2021.. This inventory was adjusted to reflect changes provided by the Community Manager and/or the Board of Directors, or adjustments made based on the site visit and visual assessment performed by the Analyst. The analysis, including fund status and funding plan, is developed from the adjusted inventory.

To aid in the understanding of this report and its concepts and practices, on our website, we have developed videos addressing frequently asked topics. In addition, there are posted links covering a variety of subjects under the resources page of our website at millerdodson.com.

Purpose. The purpose of this Replacement Reserve Study is to provide Brandywine HOA (hereinafter called the Association) with an inventory of the common community facilities and infrastructure components that require periodic replacement. The Study includes a general view of the condition of these items and an effective financial plan to fund projected periodic replacements.

- **Inventory of Items Owned by the Association.** Section B lists the Projected Replacements of the commonly owned items that require periodic replacement using funding from Replacement Reserves. The Replacement Reserve Inventory also provides information about excluded items, which are items whose replacements are not scheduled for funding from Replacement Reserves.

- **Condition of Items Owned by the Association.** Section B includes our estimates of the normal economic life and the remaining economic life for the projected replacements. Section C provides a year-by-year listing of the projected replacements. Section D provides additional detail for items that are unique or deserving of attention because of their condition or the manner in which they have been treated in this study.

- **Financial Plan.** The Association has a fiduciary responsibility to protect the appearance, value, and safety of the property and it is therefore essential the Association have a financial plan that provides funding for the projected replacements. In conformance with American Institute of Certified Public Accountant guidelines, Section A, Replacement Reserve Analysis evaluates the current funding of Replacement Reserves as reported by the Association and recommends annual funding of Replacement Reserves by the Cash Flow Method. Section A, Replacement Reserve Analysis includes graphic and tabular presentations of the reported current funding and the recommended funding based on the Cash Flow Method. An Executive Summary of these calculations is provided on Page A1.

Basis. The data contained in this Replacement Reserve Study is based on the following:

- The Request for Proposal submitted and executed by the Association.

- Miller+Dodson performed a visual evaluation commencing on April 02, 2025 to determine the remaining useful life and replacement cost for the commonly owned elements of this facility.

- This study contains additional recommendations to address inflation for the Cash Flow Method only. For this recommendation, Miller+Dodson uses the Producers Price Index (PPI), which gauges inflation in manufacturing and construction. Please see page A5 for further details.

To-Scale Drawings. Site and building plans were not used in the development of this study. We recommend the Association assemble and maintain a library of site and building plans of the entire facility. Record drawings should be scanned into an electronic format for safe storage and ease of distribution. Upon request for a nominal fee, Miller+Dodson can provide scanning services.

Acknowledgment. Miller+Dodson Associates would like to acknowledge the assistance and input of Rich Wilson, Board member, who provided very helpful insight into the current operations of the property.

Analyst's Credentials. Brian J. Oates graduated from the University of Maryland with a degree in Urban Planning and studied the Principals and Practices of appraisal at the American University. Brian has owned and operated management companies and developed single and multifamily properties in the Washington metropolitan area. As a reserve analyst, Mr. Oates has performed reserve studies for Miller+Dodson Associates since 2009.

Respectfully Submitted,

millerdodson
CAPITAL RESERVE CONSULTANTS

Brian J. Oates
Brian J. Oates

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SECTION A - FINANCIAL ANALYSIS

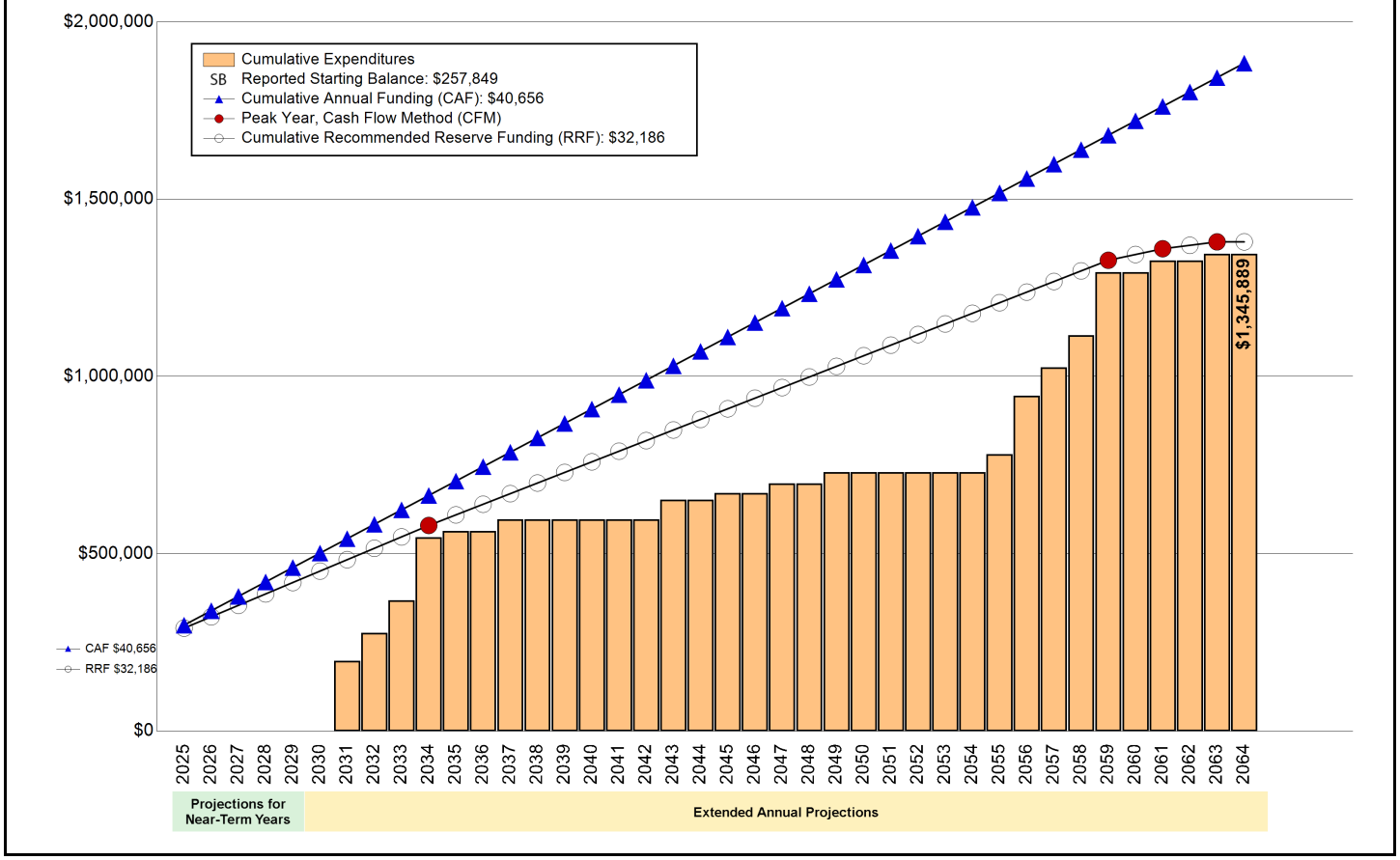
The Association Reserve for Brandywine HOA Replacement Reserve Analysis uses the Cash Flow Method (CFM) to calculate Replacement Reserve funding for the periodic replacement of the 15 Projected Replacements identified in the Replacement Reserve Inventory.

$32,186 **RECOMMENDED REPLACEMENT RESERVE FUNDING FOR THE STUDY YEAR, 2025**
$22.17 Per unit (average), minimum monthly funding of Replacement Reserves

We recommend the Association adopt a Replacement Reserve Funding Plan based on the annual funding recommendation above. Inflation adjusted funding for subsequent years is shown on Page A.5.

Association Reserve for Brandywine HOA reports a Starting Balance of $257,849 and Annual Funding totaling $40,656, which adequately funds projected replacements for the near-term years. See Page A.3 for a more detailed evaluation.

#1 - Cumulative Replacement Reserve Funding and Expenditures Graph



The Association is currently funding the Reserves at a higher funding level than is calculated in this Reserve Study. However, due to the high rate of inflation in today's construction industry and its effect on increased Replacement costs, we recommend that the Association continue to fund at its current higher funding level.

REPLACEMENT RESERVE ANALYSIS - GENERAL INFORMATION

The Association Reserve for Brandywine HOA Replacement Reserve Analysis calculations of recommended funding of Replacement Reserves by the Cash Flow Method (CFM) and the evaluation of the Current Funding are based upon the same Study Year, Study Period, Beginning Balance, Replacement Reserve Inventory and Level of Service.

2025 **STUDY YEAR**

The Association reports that their accounting year begins on January 1, and the Study Year, the first year evaluated by the Replacement Reserve Analysis, begins on January 1, 2025.

40 Years **STUDY PERIOD**

The Replacement Reserve Analysis evaluates the funding of Replacement Reserves over a 40-year Study Period

$257,849 **STARTING BALANCE**

The Association reports Replacement Reserves on Deposit totaling $257,849 at the start of the Study Year.

Level Two **LEVEL OF SERVICE**

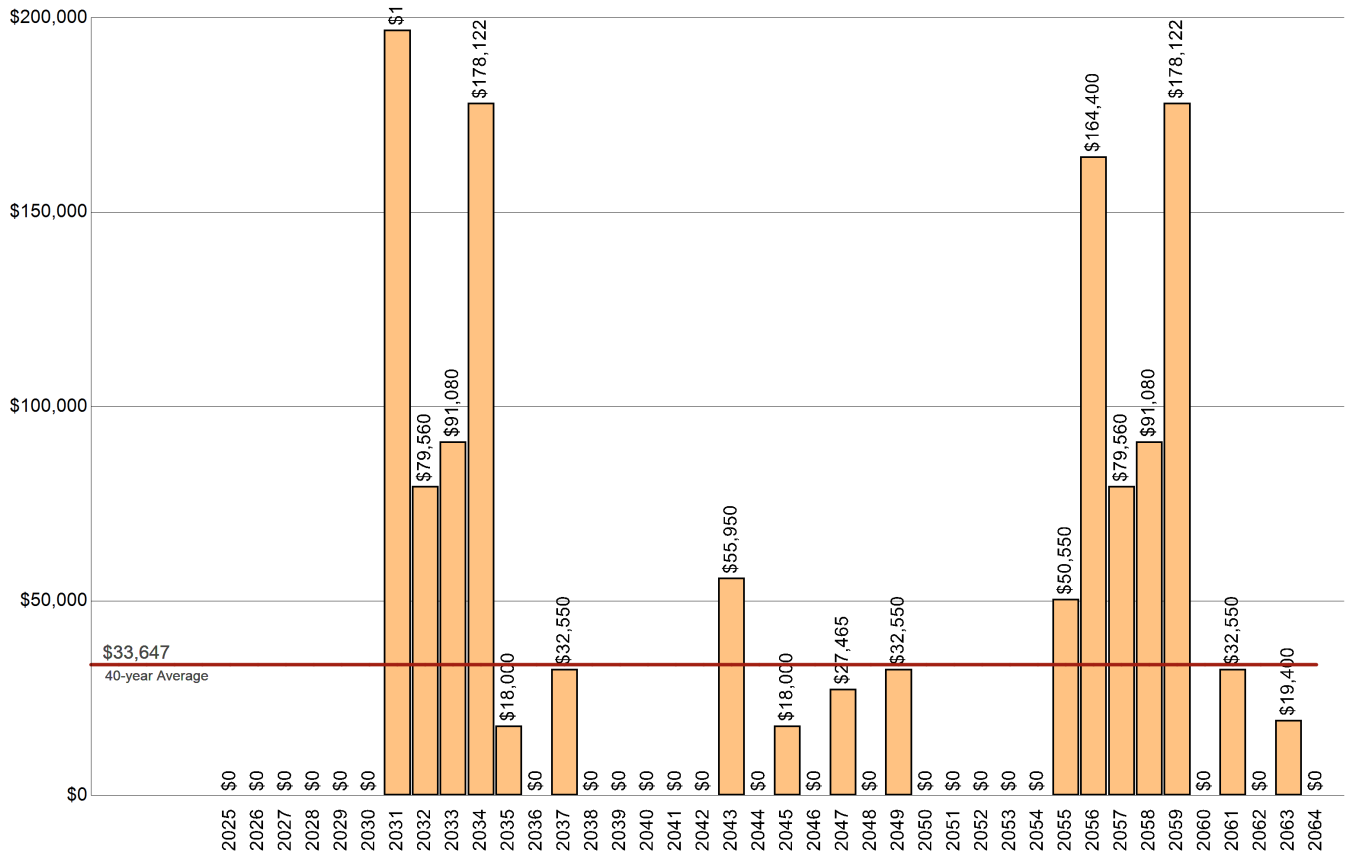
The Replacement Reserve Inventory has been developed in compliance with the National Reserve Study Standards for a Level Two Study, as defined by the Community Associations Institute (CAI).

$1,345,889 **REPLACEMENT RESERVE INVENTORY - PROJECTED REPLACEMENTS**

The Association Reserve for Brandywine HOA Replacement Reserve Inventory identifies 15 items that will require periodic replacement, that are to be funded from Replacement Reserves. We estimate the cost of these replacements will be $1,345,889 over the 40-year Study Period. The Projected Replacements are divided into 1 major categories starting on Page B.3. Pages B.1-B.2 provide detailed information on the Replacement Reserve Inventory.

#2 - Annual Expenditures for Projected Replacements Graph

This graph shows annual expenditures for Projected Replacements over the 40-year Study Period. The red line shows the average annual expenditure of $33,647. Section C provides a year by year Calendar of these expenditures.



UPDATING OF THE FUNDING PLAN

The Association has a responsibility to review the Funding Plan annually. The review should include a comparison and evaluation of actual reserve funding with recommended levels shown on Page A.4 and A.5. The Projected Replacements listed on Page C.2 should be compared with any replacements accomplished and funded from Replacement Reserves. Discrepancies should be evaluated and if necessary, the Reserve Study should be updated or a new study commissioned. We recommend annual increases in replacement reserve funding to account for the impact of inflation. Inflation Adjusted Funding is discussed on Page A.5.

UPDATING OF THE REPLACEMENT RESERVE STUDY

At a minimum, the Replacement Reserve Study should be professionally updated every three to five years or after completion of a major replacement project. Updating should also be considered if during the annual review of the Funding Plan, discrepancies are noted between projected and actual reserve funding or replacement costs. Updating may also be necessary if there is a meaningful discrepancy between the actual inflation rate and the inflation rate used for the Inflation Adjusted Funding of Replacement Reserves on Page A.5.

ANNUAL EXPENDITURES AND CURRENT FUNDING

The annual expenditures that comprise the $1,345,889 of Projected Expenditures over the 40-year Study Period and the impact of the Association continuing to fund Replacement Reserves at the current level are detailed in Table 3.

#3 - Table of Annual Expenditures and Current Funding Data - Years 0 through 39

Year	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Starting Balance	$257,849									
Projected Replacements							($196,950)	($79,560)	($91,080)	($178,122)
Annual Deposit	$40,656	$40,656	$40,656	$40,656	$40,656	$40,656	$40,656	$40,656	$40,656	$40,656
End of Year Balance	$298,505	$339,161	$379,817	$420,473	$461,129	$501,785	$345,491	$306,587	$256,163	$118,697
Cumulative Expenditures							($196,950)	($276,510)	($367,590)	($545,712)
Cumulative Receipts	$298,505	$339,161	$379,817	$420,473	$461,129	$501,785	$542,441	$583,097	$623,753	$664,409

Year	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
Projected Replacements	($18,000)		($32,550)						($55,950)	
Annual Deposit	$40,656	$40,656	$40,656	$40,656	$40,656	$40,656	$40,656	$40,656	$40,656	$40,656
End of Year Balance	$141,353	$182,009	$190,115	$230,771	$271,427	$312,083	$352,739	$393,395	$378,101	$418,757
Cumulative Expenditures	($563,712)	($563,712)	($596,262)	($596,262)	($596,262)	($596,262)	($596,262)	($596,262)	($652,212)	($652,212)
Cumulative Receipts	$705,065	$745,721	$786,377	$827,033	$867,689	$908,345	$949,001	$989,657	$1,030,313	$1,070,969

Year	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054
Projected Replacements	($18,000)		($27,465)		($32,550)					
Annual Deposit	$40,656	$40,656	$40,656	$40,656	$40,656	$40,656	$40,656	$40,656	$40,656	$40,656
End of Year Balance	$441,413	$482,069	$495,260	$535,916	$544,022	$584,678	$625,334	$665,990	$706,646	$747,302
Cumulative Expenditures	($670,212)	($670,212)	($697,677)	($697,677)	($730,227)	($730,227)	($730,227)	($730,227)	($730,227)	($730,227)
Cumulative Receipts	$1,111,625	$1,152,281	$1,192,937	$1,233,593	$1,274,249	$1,314,905	$1,355,561	$1,396,217	$1,436,873	$1,477,529

Year	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064
Projected Replacements	($50,550)	($164,400)	($79,560)	($91,080)	($178,122)		($32,550)		($19,400)	
Annual Deposit	$40,656	$40,656	$40,656	$40,656	$40,656	$40,656	$40,656	$40,656	$40,656	$40,656
End of Year Balance	$737,408	$613,664	$574,760	$524,336	$386,870	$427,526	$435,632	$476,288	$497,544	$538,200
Cumulative Expenditures	($780,777)	($945,177)	($1,024,737)	($1,115,817)	($1,293,939)	($1,293,939)	($1,326,489)	($1,326,489)	($1,345,889)	($1,345,889)
Cumulative Receipts	$1,518,185	$1,558,841	$1,599,497	$1,640,153	$1,680,809	$1,721,465	$1,762,121	$1,802,777	$1,843,433	$1,884,089

EVALUATION OF CURRENT FUNDING

The evaluation of Current Funding (Starting Balance of $257,849 & annual funding of $40,656), is done in today's dollars with no adjustments for inflation or interest earned on Replacement Reserves. The evaluation assumes Replacement Reserves will only be used for the 15 Projected Replacements identified in the Replacement Reserve Inventory and that the Association will continue Annual Funding of $40,656 throughout the 40-year Study Period.

Annual Funding of $40,656 is approximately 126 percent of the $32,186 recommended Annual Funding calculated by the Cash Flow Method for 2025, the Study Year.

See the Executive Summary for the Current Funding Statement.

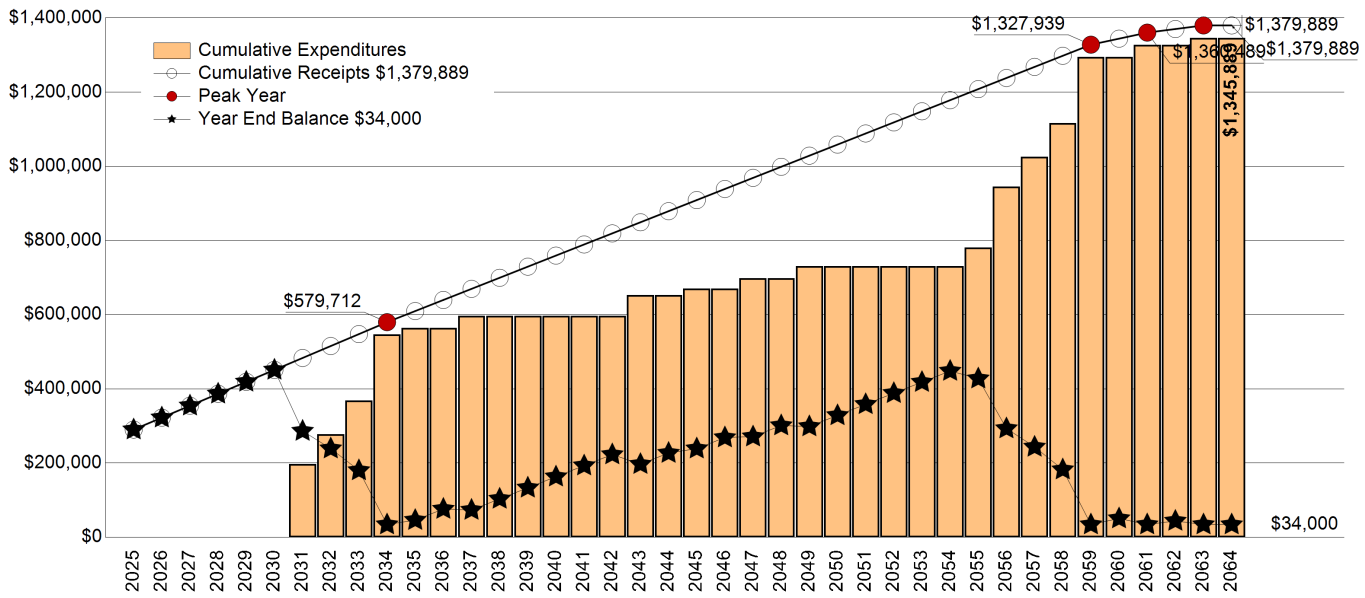
CASH FLOW METHOD FUNDING

$32,186 **RECOMMENDED REPLACEMENT RESERVE FUNDING FOR 2025**
$22.17 Per unit (average), minimum monthly funding of Replacement Reserves

Recommended Replacement Reserve Funding has been calculated using the Cash Flow Method (also called the Straight Line or Threshold Method). This method calculates a constant annual funding between peaks in cumulative expenditures, while maintaining a Minimum Balance (threshold) in the Peak Years.

- **Peak Years.** The First Peak Year occurs in 2034 with Replacement Reserves on Deposit dropping to the Minimum Balance after the completion of $545,712 of replacements from 2025 to 2034. Recommended funding is projected to decline from $32,186 in 2034 to $29,929 in 2035. Peak Years are identified in Chart 4 and Table 5.
- **Threshold (Minimum Balance).** The calculations assume a Minimum Balance of $34,000 will always be held in reserve, which is calculated by rounding the 12-month 40-year average annual expenditure of $33,647 as shown on Graph #2.
- **Cash Flow Method Study Period.** Cash Flow Method calculates funding for $1,345,889 of expenditures over the 40-year Study Period. It does not include funding for any projects beyond 2064 and in 2064, the end of year balance will always be the Minimum Balance.

#4 - Cash Flow Method - Graph of Cumulative Receipts and Expenditures - Years 0 through 39



#5 - Cash Flow Method - Table of Receipts & Expenditures - Years 0 through 39

Year	2025	2026	2027	2028	2029	2030	2031	2032	2033	1st Peak - 2034
Starting Balance	$257,849									
Projected Replacements							($196,950)	($79,560)	($91,080)	($178,122)
Annual Deposit	$32,186	$32,186	$32,186	$32,186	$32,186	$32,186	$32,186	$32,186	$32,186	$32,186
End of Year Balance	$290,035	$322,222	$354,408	$386,594	$418,781	$450,967	$286,203	$238,829	$179,936	$34,000
Cumulative Expenditures							($196,950)	($276,510)	($367,590)	($545,712)
Cumulative Receipts	$290,035	$322,222	$354,408	$386,594	$418,781	$450,967	$483,153	$515,339	$547,526	$579,712

Year	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
Projected Replacements	($18,000)		($32,550)						($55,950)	
Annual Deposit	$29,929	$29,929	$29,929	$29,929	$29,929	$29,929	$29,929	$29,929	$29,929	$29,929
End of Year Balance	$45,929	$75,858	$73,237	$103,166	$133,095	$163,024	$192,954	$222,883	$196,862	$226,791
Cumulative Expenditures	($563,712)	($563,712)	($596,262)	($596,262)	($596,262)	($596,262)	($596,262)	($596,262)	($652,212)	($652,212)
Cumulative Receipts	$609,641	$639,570	$669,499	$699,428	$729,357	$759,286	$789,216	$819,145	$849,074	$879,003

Year	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054
Projected Replacements	($18,000)		($27,465)		($32,550)					
Annual Deposit	$29,929	$29,929	$29,929	$29,929	$29,929	$29,929	$29,929	$29,929	$29,929	$29,929
End of Year Balance	$238,720	$268,649	$271,113	$301,042	$298,421	$328,350	$358,279	$388,208	$418,138	$448,067
Cumulative Expenditures	($670,212)	($670,212)	($697,677)	($697,677)	($730,227)	($730,227)	($730,227)	($730,227)	($730,227)	($730,227)
Cumulative Receipts	$908,932	$938,861	$968,790	$998,719	$1,028,648	$1,058,577	$1,088,506	$1,118,435	$1,148,365	$1,178,294

Year	2055	2056	2057	2058	2nd Peak - 2059	2060	3rd Peak - 2061	2062	4th Peak - 2063	2064
Projected Replacements	($50,550)	($164,400)	($79,560)	($91,080)	($178,122)		($32,550)		($19,400)	
Annual Deposit	$29,929	$29,929	$29,929	$29,929	$29,929	$16,275	$16,275	$9,700	$9,700	
End of Year Balance	$427,446	$292,975	$243,344	$182,193	$34,000	$50,275	$34,000	$43,700	$34,000	$34,000
Cumulative Expenditures	($780,777)	($945,177)	($1,024,737)	($1,115,817)	($1,293,939)	($1,293,939)	($1,326,489)	($1,326,489)	($1,345,889)	($1,345,889)
Cumulative Receipts	$1,208,223	$1,238,152	$1,268,081	$1,298,010	$1,327,939	$1,344,214	$1,360,489	$1,370,189	$1,379,889	$1,379,889

INFLATION ADJUSTED FUNDING

The Cash Flow Method calculations on Page A4 have been done in today's dollars with no adjustment for inflation. At Miller+Dodson, we believe that long-term inflation forecasting is effective at demonstrating the power of compounding, not at calculating appropriate funding levels for Replacement Reserves. We have developed this proprietary model to estimate the short-term impact of inflation on Replacement Reserve funding.

$32,186 **2025 - CASH FLOW METHOD RECOMMENDED FUNDING**
The 2025 Study Year calculations have been made using current replacement costs

$34,117 **2026 - 6.0% INFLATION ADJUSTED FUNDING**
A new analysis calculates the 2026 funding based on three assumptions:

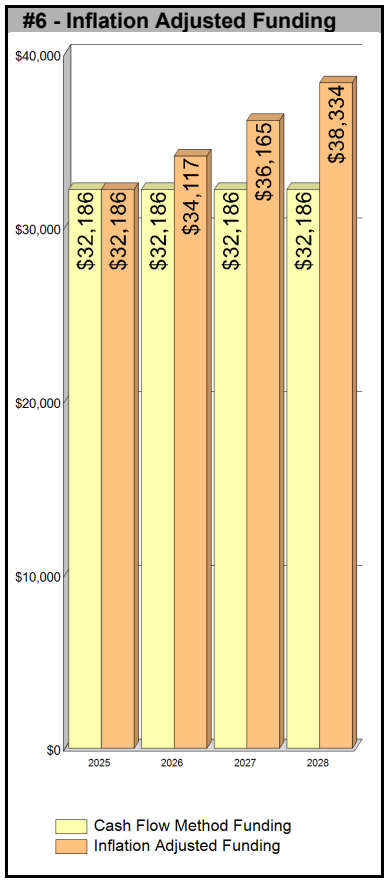
- Starting Balance totaling $290,035 on January 1, 2026.
- No Expenditures from Replacement Reserves in 2026.

$36,165 **2027 - 6.0% INFLATION ADJUSTED FUNDING**
A new analysis calculates the 2027 funding based on three assumptions:

- Starting balance of approximately $324,153 = 2027 Starting Balance $290,035, plus Inflation Adjusted Funding $34,117 for 2026, minus $0 2026 Inflation Adjusted Cost.
- No Expenditures from Replacement Reserves in 2027.

$38,334 **2028 - 6.0% INFLATION ADJUSTED FUNDING**
A new analysis calculates the 2028 funding based on three assumptions:

- Starting balance of approximately $360,317 = 2028 Starting Balance $324,153, plus Inflation Adjusted Funding $36,165 for 2027, minus $0 2027 Inflation Adjusted Cost.
- No Expenditures from Replacement Reserves in 2028.



Year Four and Beyond
The inflation-adjusted funding calculations outlined above are not intended to be a substitute for periodic evaluation of common elements by an experienced Reserve Analyst. Industry Standards, lender requirements, and many state and local statutes require a Replacement Reserve Study to be professionally updated every 3 to 5 years.

Inflation Adjustment
Prior to approving a budget based upon the 2026, 2027 and 2028 inflation-adjusted funding calculations above, the 6.00 percent base rate of inflation used in our calculations should be compared to rates published by the Bureau of Labor Statistics. If there is a significant discrepancy (over 1 percentage point), contact Miller+Dodson Associates prior to using the Inflation Adjusted Funding.

Interest on Reserves
The recommended funding calculations do not account for interest earned on Replacement Reserves. In 2025, based on a 1.00 percent interest rate, we estimate the Association may earn $2,739 on an average balance of $273,942, $3,071 on an average balance of $307,094 in 2026, and $3,422 on $342,235 in 2027. The Association may elect to attribute 100 percent of the earned interest to Reserves, resulting in a reduction in the 2025 funding from $32,186 to $29,447 (a 8.51 percent reduction), $34,117 to $31,047 in 2026 (a 9.00 percent reduction), and $36,165 to $32,742 in 2027 (a 9.46 percent reduction).

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SECTION B - REPLACEMENT RESERVE INVENTORY

- **PROJECTED REPLACEMENTS.** Association Reserve for Brandywine HOA - Replacement Reserve Inventory identifies 15 items that are Projected Replacements and the periodic replacements of these items are scheduled for funding from Replacement Reserves. The Projected Replacements have an estimated one-time replacement cost of $633,977. Cumulative Replacements totaling $1,345,889 are scheduled in the Replacement Reserve Inventory over the 40-year Study Period. Cumulative Replacements include those components that are replaced more than once during the period of the study.

  Projected Replacements are the replacement of commonly-owned physical assets that require periodic replacement and whose replacement is to be funded from Replacement Reserves.

- **TAX CODE.** The United States Tax Code grants favorable tax status to Replacement Reserves, conditioned on expenditures being made within certain guidelines. These guidelines typically exclude maintenance activities, minor repairs, and capital improvements.

- **EXCLUDED ITEMS.** Some of the items contained in the Replacement Reserve Inventory are 'Excluded Items'. Multiple categories of items are typically excluded from funding by Replacement Reserves, including but not limited to:

  Value. Items with a replacement cost of less than $1000 and/or a normal economic life of less than 3 years are typically excluded from funding from Replacement Reserves. This exclusion should reflect the Association policy on the administration of Replacement Reserves. If the Association has selected an alternative level, it will be noted in the Replacement Reserve Inventory - General Comments on Page B.2.

  Long-lived Items. Items are excluded from the Replacement Reserve Inventory when items are properly maintained and are assumed to have a life equal to the property.

  Unit Improvements. Items owned by a single unit and where the items serve a single unit are generally assumed to be the responsibility of that unit, not the Association.

  Other Non-Common Improvements. Items owned by the local government, public and private utility companies, the United States Postal Service, Master Associations, state and local highway authorities, etc., may be installed on property that is owned by the Association. These types of items are generally not the responsibility of the Association and are excluded from the Replacement Reserve Inventory.

- **CATEGORIES.** The 15 items included in the Association Reserve for Brandywine HOA Replacement Reserve Inventory are divided into 1 major categories. Each category is printed on a separate page, beginning on page B.3.

- **LEVEL OF SERVICE.** This Replacement Reserve Inventory has been developed in compliance with the standards established for a Level 2 Update, as defined by the National Reserve Study Standards, established in 1998 by the Community Associations Institute, which states:

  This study has been performed as a Level 2 Update with Site Visit/On-Site Review as defined by the Community Associations Institute's, National Reserve Study Standards. As such, the component inventory is based on the study that was performed by Miller-Dodson Associates, Inc. in August 2021.. This inventory was adjusted to reflect changes provided by the Community Manager and/or the Board of Directors, or adjustments made based on the site visit and visual assessment performed by the Analyst. The analysis, including fund status and funding plan, is developed from the adjusted inventory.

REPLACEMENT RESERVE INVENTORY - GENERAL INFORMATION (CONT'D)

- **INVENTORY DATA.** Each of the 15 Projected Replacements listed in the Replacement Reserve Inventory includes the following data:

  Item Number. The Item Number is assigned sequentially and is intended for identification purposes only.

  Item Description. We have identified each item included in the Inventory. Additional information may be included in the Comments section at the bottom of each page of the Inventory.

  Units. We have used standard abbreviations to identify the number of units including SF-square feet, LF-lineal feet, SY-square yard, LS-lump sum, EA-each, and PR-pair. Non-standard abbreviations are noted in the Comments section at the bottom of the page.

  Number of Units. The methods used to develop the quantities are discussed in "Level of Service" above.

  Unit Replacement Cost. We use four sources to develop the unit cost data shown in the Inventory; actual replacement cost data provided by the client, information provided by local contractors and suppliers, industry standard estimating manuals, and a cost database we have developed based upon our detailed interviews with contractors and service providers who are specialists in their respective lines of work.

  Normal Economic Life (Years). The number of years that a new and properly installed item should be expected to remain in service.

  Remaining Economic Life (Years). The estimated number of years before an item will need to be replaced. In "normal" conditions, this could be calculated by subtracting the age of the item from the Normal Economic Life of the item, but only rarely do physical assets age "normally". Some items may have longer or shorter lives depending on many factors such as environment, initial quality of the item, maintenance, etc.

  Total Replacement Cost. This is calculated by multiplying the Unit Replacement Cost by the Number of Units.

- **PARTIAL FUNDING.** Items may have been included in the Replacement Reserve Inventory at less than 100 percent of their full quantity and/or replacement cost. This is done on items that will never be replaced in their entirety, but which may require periodic replacements over an extended period of time. The assumptions that provide the basis for any partial funding are noted in the Comments section.
- **REMAINING ECONOMIC LIFE GREATER THAN 40 YEARS.** The calculations do not include funding for initial replacements beyond 40 years. These replacements are included in this Study for tracking and evaluation. They should be included for funding in future Studies, when they enter the 40-year window.
- **ACCURACY OF THE ANALYSIS.** The accuracy of the Replacement Reserve Analysis is dependent upon expenditures from Replacement Reserves being made ONLY for the 15 Projected Replacements specifically listed in the Replacement Reserve Inventory. The inclusion/exclusion of items from the Replacement Reserve Inventory is discussed on Page B.1.

SITE ITEMS
PROJECTED REPLACEMENTS

NEL- Normal Economic Life (yrs)
REL- Remaining Economic Life (yrs)

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST ($)	NEL	REL	REPLACEMENT COST ($)
1	Asphalt driveway, pavement, Rivendale Blvd.	sf	27,400	$6.00	25	6	$164,400
2	Asphalt driveway, pavement, Amherst Court	sf	13,260	$6.00	25	7	$79,560
3	Asphalt driveway, pavement, Revere Drive	sf	15,180	$6.00	25	8	$91,080
4	Asphalt driveway, pavement, Williamsburg Way	sf	16,875	$6.00	25	9	$101,250
5	Asphalt walkway, overlay	sf	840	$6.00	25	9	$5,040
6	Asphalt bicycle path, overlay*	sf	11,972	$6.00	25	9	$71,832
7	Concrete driveway apron (6% allowance)	sf	510	$14.00	6	6	$7,140
8	Concrete sidewalk replacement (6% allowance)	sf	1,185	$14.00	6	6	$16,590
9	Concrete leadwalk replacement (6% allowance)	sf	630	$14.00	6	6	$8,820
10	Stormwater hard structure (allowance)	ls	1	$18,000.00	10	10	$18,000
11	Street sign post, cast aluminum	ea	9	$2,600.00	35	18	$23,400
12	Fence, 4' 8" aluminum at Rivendale Blvd. pond	ft	515	$51.00	40	22	$26,265
13	Gate (allowance)	ea	2	$600.00	40	22	$1,200
14	Fence, 6' coated chain-link fence Jerusalem Dr.	ft	520	$35.00	40	38	$18,200
15	Gate (allowance)	ea	2	$600.00	40	38	$1,200
	Retaining wall, segmental block reset (allowance)						EXCLUDED
	Retaining wall, segmental block						EXCLUDED
	Fence, 4' aluminum atop retaining wall						EXCLUDED

Replacement Costs - Page Subtotal $633,977

COMMENTS

- Asphalt pavement replacement will be manual removal of aged driveways. Excavation includes costs for excavation, removal of spoils, and preparation of sub-grade. In addition an incremental cost based on size and 2-3" depth of asphalt is included. Hot mix asphalt will be dumped, spread, and rolled into place at each location. This cost is different than roadway pavement as a milling machine and paving machine are not compact enough to perform work in driveways.
- Note: Please see Paragraph entitled “TAX CODE” on page C1. Under IRS guidelines the planting of seasonal plants is considered a maintenance item and therefore not reservable. We recommend that you contact your Association’s tax professional to discuss your inclusion of this item within your Reserve Study. However, Architectural or Foundational plantings, like trees or large shrubs is a reservable item. We have included it at the Association's request.
- Item #10: Stormwater hard structure (allowance) - Two riser/catch basins and seven inflow headwalls.
- Item #12: Fence, 4' 8" aluminum at Rivendale Blvd. pond - Aluminum picket fence installed in or around 2007.
- Item #14: Fence, 6' coated chain-link fence Jerusalem Dr. pond - Aluminum picket fence installed in or around 2023.
- Retaining wall, segmental block reset (allowance) - [04/02/2025] excluded per board
- Retaining wall, segmental block - [04/02/2025] excluded per board
- Fence, 4' aluminum atop retaining wall - [04/02/2025] excluded per board

VALUATION EXCLUSIONS
Excluded Items

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST ($)	NEL	REL	REPLACEMENT COST ($)
	Miscellaneous signage						EXCLUDED

VALUATION EXCLUSIONS
Comments

- Valuation Exclusions. For ease of administration of the Replacement Reserves and to reflect accurately how Replacement Reserves are administered, items with a dollar value less than $1000 have not been scheduled for funding from Replacement Reserve. Examples of items excluded by Replacement Reserves by this standard are listed above.

- The list above exemplifies exclusions by the cited standard(s) and is not intended to be comprehensive.

LONG-LIFE EXCLUSIONS
Excluded Items

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST ($)	NEL	REL	REPLACEMENT COST ($)
	Miscellaneous culverts						EXCLUDED

LONG-LIFE EXCLUSIONS
Comments

- Long Life Exclusions. Components that when properly maintained, can be assumed to have a life equal to the property as a whole, are normally excluded from the Replacement Reserve Inventory. Examples of items excluded from funding by Replacement Reserves by this standard are listed above.
- Exterior masonry is generally assumed to have an unlimited economic life, but periodic repointing is required, and we have included this for funding in the Replacement Reserve Inventory.
- The list above exemplifies exclusions by the cited standard(s) and is not intended to be comprehensive.

UNIT IMPROVEMENTS EXCLUSIONS

Excluded Items

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST ($)	NEL	REL	REPLACEMENT COST ($)
	Domestic water pipes serving one unit						EXCLUDED
	Sanitary sewers serving one unit						EXCLUDED
	Electrical wiring serving one unit						EXCLUDED
	Cable TV service serving one unit						EXCLUDED
	Telephone service serving one unit						EXCLUDED
	Gas service serving one unit						EXCLUDED
	Retaining wall on an individual lot						EXCLUDED
	Fence on an individual lot						EXCLUDED
	Unit exterior						EXCLUDED
	Unit windows						EXCLUDED
	Unit doors						EXCLUDED
	Unit deck, patio, and/or balcony						EXCLUDED
	Unit mailbox						EXCLUDED
	Unit interior						EXCLUDED
	Unit HVAC system						EXCLUDED

UNIT IMPROVEMENTS EXCLUSIONS

Comments

- Unit improvement Exclusions. We understand that the elements of the project that relate to a single unit are the responsibility of that unit owner. Examples of items excluded from funding by Replacement Reserves by this standard are listed above.
- The list above exemplifies exclusions by the cited standard(s) and is not intended to be comprehensive.

UTILITY EXCLUSIONS
Excluded Items

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST ($)	NEL	REL	REPLACEMENT COST ($)
	Primary electric feeds						EXCLUDED
	Electric transformers						EXCLUDED
	Cable TV systems and structures						EXCLUDED
	Telephone cables and structures						EXCLUDED
	Site lighting						EXCLUDED
	Gas mains and meters						EXCLUDED
	Water mains and meters						EXCLUDED
	Sanitary sewers						EXCLUDED

UTILITY EXCLUSIONS
Comments

- Utility Exclusions. Many improvements owned by utility companies are on property owned by the Association. We have assumed that repair, maintenance, and replacements of these components will be done at the expense of the appropriate utility company. Examples of items excluded from funding Replacement Reserves by this standard are listed above.

- The list above exemplifies exclusions by the cited standard(s) and is not intended to be comprehensive.

MAINTENANCE AND REPAIR EXCLUSIONS

Excluded Items

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST ($)	NEL	REL	REPLACEMENT COST ($)
	Cleaning of asphalt pavement						EXCLUDED
	Crack sealing of asphalt pavement						EXCLUDED
	Landscaping and site grading						EXCLUDED
	Repair services						EXCLUDED
	Partial replacements						EXCLUDED
	Capital improvements						EXCLUDED

MAINTENANCE AND REPAIR EXCLUSIONS

Comments

- Maintenance activities, one-time-only repairs, and capital improvements. These activities are NOT appropriately funded from Replacement Reserves. The inclusion of such component in the Replacement Reserve Inventory could jeopardize the special tax status of ALL Replacement Reserves, exposing the Association to significant tax liabilities. We recommend that the Board of Directors discuss these exclusions and Revenue Ruling 75-370 with a Certified Public Accountant.

- Examples of items excluded from funding by Replacement Reserves are listed above. The list above exemplifies exclusions by the cited standard(s) and is not intended to be comprehensive.

GOVERNMENT EXCLUSIONS

Excluded Items

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST ($)	NEL	REL	REPLACEMENT COST ($)
	Government, roadways and parking						EXCLUDED
	Government, curb and gutter						EXCLUDED
	Government, stormwater mgmt. curb inlet						EXCLUDED
	Government, ponds						EXCLUDED

GOVERNMENT EXCLUSIONS

Comments

- Government Exclusions. We have assumed that some of the improvements installed on property owned by the Association will be maintained by the state, county, or local government, or other association or other responsible entity. Examples of items excluded from funding by Replacement Reserves by this standard are listed above.
- Excluded rights-of-way, including adjacent properties and adjacent roadways.
- The list above exemplifies exclusions by the cited standard(s) and is not intended to be comprehensive.

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SECTION C - CALENDAR OF PROJECTED ANNUAL REPLACEMENTS

GENERAL STATEMENT. The 15 Projected Replacements in the Association Reserve for Brandywine HOA Replacement Reserve Inventory whose replacement is scheduled to be funded from Replacement Reserves are broken down on a year-by-year basis, beginning on Page C.2.

REPLACEMENT RESERVE ANALYSIS AND INVENTORY POLICIES, PROCEDURES, AND ADMINISTRATION

- **REVIEW OF THE REPLACEMENT RESERVE STUDY.** For this study to be effective, it should be reviewed by the Board of Directors, those responsible for the management of the items included in the Replacement Reserve Inventory, and the accounting professionals employed by the Association.
- **REVISIONS.** Revisions will be made to the Replacement Reserve Analysis and Replacement Reserve Inventory in accordance with the written instructions of the Board of Directors. No additional charge is incurred for the first revision if requested in writing within three months of the date of the Replacement Reserve Study. It is our policy to provide revisions in electronic (Adobe PDF) format only. We acknowledge that there are instances in which multiple revisions are necessary. However, unnecessary multiple revisions drain our time and manpower resources. Therefore, MillerDodson will exercise its sole discretion as to whether additional charges are incurred.
- **TAX CODE**. The United States Tax Code grants favorable tax status to a common interest development (CID) meeting certain guidelines for their Replacement Reserve. If a CID files their taxes as a 'Corporation' on Form 1120 (IRC Section 277), these guidelines typically require maintenance activities, partial replacements, minor replacements, capital improvements, and one-time-only replacements to be excluded from Reserves. A CID cannot co-mingle planning for maintenance activities with capital replacement activities in the Reserves (Revenue Ruling 75-370). Funds for maintenance activities and capital replacement activities must be held in separate accounts. If a CID files taxes as an "Exempt Homeowners Association" using Form 1120H (IRC Section 528), the CID does not have to segregate these activities. However, because the CID may elect to change their method of filing from year to year within the Study Period, we advise using the more restrictive approach. We further recommend that the CID consult with their Accountant and consider creating separate and independent accounts and reserves for large maintenance items, such as painting.
- **CONFLICT OF INTEREST.** Neither MillerDodson Associates nor the Reserve Analyst has any prior or existing relationship with this Association which would represent a real or perceived conflict of interest.
- **RELIANCE ON DATA PROVIDED BY THE CLIENT.** Information provided by an official representative of the Association regarding financial, physical conditions, quality, or historical issues is deemed reliable.
- **INTENT.** This Replacement Reserve Study is a reflection of the information provided by the Association and the visual evaluations of the Analyst. It has been prepared for the sole use of the Association and is not for the purpose of performing an audit, quality/forensic analyses, or background checks of historical records.
- **PREVIOUS REPLACEMENTS.** Information provided to MillerDodson Associates regarding prior replacements is considered to be accurate and reliable. Our visual evaluation is not a project audit or quality inspection.
- **EXPERIENCE WITH FUTURE REPLACEMENTS.** The Calendar of Annual Projected Replacements, lists replacements we have projected to occur over the Study Period and begins on Page C2. Actual experience in replacing the items may differ significantly from the cost estimates and time frames shown because of conditions beyond our control. These differences may be caused by maintenance practices, inflation, variations in pricing and market conditions, future technological developments, regulatory actions, acts of God, and luck. Some items may function normally during our visual evaluation and then fail without notice.

PROJECTED REPLACEMENTS

Item	2025 - Study Year	$

No Scheduled Replacements

Item	2026 - YEAR 1	$

No Scheduled Replacements

Item	2027 - YEAR 2	$

No Scheduled Replacements

Item	2028 - YEAR 3	$

No Scheduled Replacements

Item	2029 - YEAR 4	$

No Scheduled Replacements

Item	2030 - YEAR 5	$

No Scheduled Replacements

Item	2031 - YEAR 6	$
1	Asphalt driveway, pavement, Rivendale Blvd.	$164,400
7	Concrete driveway apron (6% allowance)	$7,140
8	Concrete sidewalk replacement (6% allowance)	$16,590
9	Concrete leadwalk replacement (6% allowance)	$8,820
Total Scheduled Replacements		$196,950

Item	2032 - YEAR 7	$
2	Asphalt driveway, pavement, Amherst Court	$79,560
Total Scheduled Replacements		$79,560

Item	2033 - YEAR 8	$
3	Asphalt driveway, pavement, Revere Drive	$91,080
Total Scheduled Replacements		$91,080

Item	2034 - YEAR 9	$
4	Asphalt driveway, pavement, Williamsburg Way	$101,250
5	Asphalt walkway, overlay	$5,040
6	Asphalt bicycle path, overlay*	$71,832
Total Scheduled Replacements		$178,122

PROJECTED REPLACEMENTS

Item	2035 - YEAR 10	$
10	Stormwater hard structure (allowance)	$18,000
	Total Scheduled Replacements	$18,000

Item	2036 - YEAR 11	$
	No Scheduled Replacements	

Item	2037 - YEAR 12	$
7	Concrete driveway apron (6% allowance)	$7,140
8	Concrete sidewalk replacement (6% allowance)	$16,590
9	Concrete leadwalk replacement (6% allowance)	$8,820
	Total Scheduled Replacements	$32,550

Item	2038 - YEAR 13	$
	No Scheduled Replacements	

Item	2039 - YEAR 14	$
	No Scheduled Replacements	

Item	2040 - YEAR 15	$
	No Scheduled Replacements	

Item	2041 - YEAR 16	$
	No Scheduled Replacements	

Item	2042 - YEAR 17	$
	No Scheduled Replacements	

Item	2043 - YEAR 18	$
7	Concrete driveway apron (6% allowance)	$7,140
8	Concrete sidewalk replacement (6% allowance)	$16,590
9	Concrete leadwalk replacement (6% allowance)	$8,820
11	Street sign post, cast aluminum	$23,400
	Total Scheduled Replacements	$55,950

Item	2044 - YEAR 19	$
	No Scheduled Replacements	

PROJECTED REPLACEMENTS

Item	2045 - YEAR 20	$
10	Stormwater hard structure (allowance)	$18,000
	Total Scheduled Replacements	$18,000

Item	2046 - YEAR 21	$
	No Scheduled Replacements	

Item	2047 - YEAR 22	$
12	Fence, 4' 8" aluminum at Rivendale Blvd. pond	$26,265
13	Gate (allowance)	$1,200
	Total Scheduled Replacements	$27,465

Item	2048 - YEAR 23	$
	No Scheduled Replacements	

Item	2049 - YEAR 24	$
7	Concrete driveway apron (6% allowance)	$7,140
8	Concrete sidewalk replacement (6% allowance)	$16,590
9	Concrete leadwalk replacement (6% allowance)	$8,820
	Total Scheduled Replacements	$32,550

Item	2050 - YEAR 25	$
	No Scheduled Replacements	

Item	2051 - YEAR 26	$
	No Scheduled Replacements	

Item	2052 - YEAR 27	$
	No Scheduled Replacements	

Item	2053 - YEAR 28	$
	No Scheduled Replacements	

Item	2054 - YEAR 29	$
	No Scheduled Replacements	

PROJECTED REPLACEMENTS

Item	2055 - YEAR 30	$
7	Concrete driveway apron (6% allowance)	$7,140
8	Concrete sidewalk replacement (6% allowance)	$16,590
9	Concrete leadwalk replacement (6% allowance)	$8,820
10	Stormwater hard structure (allowance)	$18,000
Total Scheduled Replacements		$50,550

Item	2056 - YEAR 31	$
1	Asphalt driveway, pavement, Rivendale Blvd.	$164,400
Total Scheduled Replacements		$164,400

Item	2057 - YEAR 32	$
2	Asphalt driveway, pavement, Amherst Court	$79,560
Total Scheduled Replacements		$79,560

Item	2058 - YEAR 33	$
3	Asphalt driveway, pavement, Revere Drive	$91,080
Total Scheduled Replacements		$91,080

Item	2059 - YEAR 34	$
4	Asphalt driveway, pavement, Williamsburg Way	$101,250
5	Asphalt walkway, overlay	$5,040
6	Asphalt bicycle path, overlay*	$71,832
Total Scheduled Replacements		$178,122

Item	2060 - YEAR 35	$
No Scheduled Replacements		

Item	2061 - YEAR 36	$
7	Concrete driveway apron (6% allowance)	$7,140
8	Concrete sidewalk replacement (6% allowance)	$16,590
9	Concrete leadwalk replacement (6% allowance)	$8,820
Total Scheduled Replacements		$32,550

Item	2062 - YEAR 37	$
No Scheduled Replacements		

Item	2063 - YEAR 38	$
14	Fence, 6' coated chain-link fence Jerusalem Dr. pond	$18,200
15	Gate (allowance)	$1,200
Total Scheduled Replacements		$19,400

Item	2064 - YEAR 39	$
No Scheduled Replacements		

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SECTION D - CONDITION ASSESSMENT

General Comments. Miller-Dodson Associates conducted a Reserve Study at Association Reserve for Brandywine HOA in April 2025. Association Reserve for Brandywine HOA appears to be generally in good condition for a homeowner's association constructed in 2005. A review of the Replacement Reserve Inventory will show that we anticipate most of the components achieving their normal economic lives.

The following comments pertain to the larger, more significant components in the Replacement Reserve Inventory and to those items that are unique or deserving of attention because of their condition or the manner in which they have been treated in the Replacement Reserve Analysis or Inventory.

IMPORTANT NOTE: This Condition Assessment is based upon visual and apparent conditions of the common elements of the community which were observed by the Reserve Analyst at the time of the site visit. This Condition Assessment does not constitute, nor is it a substitute for, a professional Structural Evaluation of the buildings, amenities, or systems. MillerDodson strongly recommends that the Association retain the services of a Structural Engineer to conduct thorough and periodic evaluations of the buildings, balconies, and any other structural components of the buildings and amenities of the Association.

General Condition Statements.

Excellent. 100% to 90% of Normal Economic Life expected, with no appreciable wear or defects.

Good. 90% to 60% of Normal Economic Life expected, minor wear or cosmetic defects found. Normal maintenance should be expected. If performed properly, normal maintenance may increase the useful life of a component. Otherwise, the component is wearing normally.

Fair. 60% to 30% of Normal Economic Life expected moderate wear with defects found. Repair actions should be taken to extend the life of the component or to correct repairable defects and distress. Otherwise, the component is wearing normally.

Marginal. 30% to 10% of Normal Economic Life expected, with moderate to significant wear or distress found. Repair actions are expected to be cost-effective for localized issues, but normal wear and use are evident. The component is reaching the end of the Normal Economic Life.

Poor. 10% to 0% of Normal Economic Life expected, with significant distress and wear. Left unattended, additional damage to underlying structures is likely to occur. Further maintenance is unlikely to be cost-effective.

(Continued on next page)

SITE ITEMS

Asphalt Pavement. The Association is responsible for the residences' driveways, walking paths, and bike paths in the community. The township or other municipality maintains other roadways. In general, the Association's asphalt pavements appear to be in good overall condition. The community was developed over several years. The future replacement of asphalt has been separated into four phases to account for the age of the asphalt.

Pricing assumes the current asphalt will be removed, any subsurface deficiencies identified, and addressed before installation of the new asphalt.

The Association maintains an inventory of asphalt pavement along the following streets and areas:

Driveways & Paths	Sf.
Rivendale Boulevard:	27,400
Amherst Court:	13,260
Revere Drive:	15,180
Williamsburg Way:	16,875
Walking path:	840
Bike Path:	9,040

The community's asphalt is currently in good overall condition. Minor defects were noted during the site visit. The following are examples of defects that affect asphalt pavements. This information is provided for educational purposes only:

- **Open Cracks.** Open cracks allow water to penetrate the asphalt base and the bearing soils beneath. Over time, water will erode the base and accelerate the deterioration of the asphalt pavement. Remove the damaged areas and replace defective materials if cracks extend to the base and bearing materials. As a part of normal maintenance, clean and fill all other cracks.
- **Alligatoring.** When asphalt develops patterned cracks, it is known as alligatoring. The primary cause of alligatoring is an unstable base. Once these cracks extend through the asphalt, they will allow water to penetrate the base, accelerating the rate of deterioration and eventually leading to potholes. The only solution is to remove the defective asphalt, compact the base, and install new base materials and asphalt.
- **Improper Grading.** When asphalt pavement is not properly graded, it results in water ponding. Proper grading of the asphalt pavement will require replacing portions of the asphalt. It may also require resetting improperly sloped curb and gutter segments not convey water to the stormwater management system. If ponding is left unattended, it can result in unsafe travel areas by creating conditions for hydroplaning and pockets of ice to form.
- **Wheel Rutting.** These are depressions along the wheel lines of asphalt drives. Repair of these areas will require full-depth and full-width pavement replacement. Wheel rutting, if left unattended, can adversely affect vehicle steering.
- **Edge Cracking.** Asphalt pavement develops cracks along the pavement edges due to improper confinement. Installation of curbs or installation of a compacted gravel shoulder at the time of an overlay project can address this defect.

A more detailed summary of pavement distress can be found at https://asphaltinstitute.org/engineering/maintenance-and-rehabilitation/pavement-distress-summary/.

As a rule of thumb, asphalt should be overlaid when approximately 5% of the surface area is cracked or otherwise deteriorated. The normal service life of asphalt pavement is typically 18 to 20 years.

To maintain the condition of the pavement throughout the community and ensure the longest life of the asphalt, we recommend that the Association adopt a systematic and comprehensive maintenance program that includes:

- **Cleaning.** Long-term exposure to oil or gas breaks down asphalt. Because this asphalt pavement is generally not used for long-term parking, it is unlikely that frequent cleaning will be necessary. When necessary, spill areas should be cleaned or patched if deterioration has penetrated the asphalt. This is a maintenance activity, and we have assumed that Reserves will not fund it.
- **Crack Repair.** All cracks should be repaired with an appropriate compound to prevent water infiltration through the asphalt into the base. This repair should be done annually. Crack repair is normally considered a maintenance activity and is not funded by Reserves. Areas of extensive cracking or deterioration that cannot be made watertight should be cut out and patched.

- **Seal Coating.** The asphalt should be seal-coated every five to seven years. For this maintenance activity to be effective in extending the life of the asphalt, cleaning and crack repair should be performed first.

The pricing is based on recent contracts for a two-inch overlay, which reflects the current local market for this work.

For seal coating, several different products are available. The older, more traditional seal coating product is paint. They coat the surface of the asphalt, and they are minimally effective. However, the newer coating materials, such as those from Total Asphalt Management and Asphalt Restoration Technologies, Inc., are penetrating. They are engineered, so to speak, to 're-moisturize' the pavement. Asphalt pavement is intended to be flexible. Over time, the volatile chemicals in the pavement dry, the pavement becomes brittle, and degradation follows as cracking and potholes. Re-moisturizing the pavement can return its flexibility and extend pavement life.




Concrete Work. The concrete work includes the community's driveway aprons, sidewalks, and lead walks. Curb replacement, the obligation of the township, should be performed in conjunction with roadway pavement. The overall condition of the concrete work appears to be good, with evidence of ongoing replacement of damaged concrete.

The standards we use for recommending replacement are as follows:

- Trip hazard, 1/4 inch height difference.
- Severe cracking.
- Severe spalling and scale.
- Uneven riser heights on steps.
- Steps with risers over 81/4 inches.

Because it is highly unlikely that all of the concrete components will fail and require replacement in the period of the study, we have programmed funds for the replacement of these inventories and spread the funds over an extended timeframe to reflect the incremental nature of this work.

Expansion Joint. Expansion joints are composed of sacrificial, asphalt-impregnated fibrous material. This joint material should be installed between concrete elements to separate the curb, sidewalk, concrete drives, and other concrete components. The expansion joints should be installed at regular intervals during concrete replacement. Expansion joints allow for independent movement between adjoining structural members. Joints allow for thermal expansion and contraction without inducing stress in the system. Installing expansion joins in concrete permits independent horizontal and vertical movement between adjoining parts of the structure and helps minimize cracking. Expansion joins also mitigate the inflow of stormwater that undermines substrata and causes concrete to subside. The expansion joints should be inspected periodically and replaced as needed. The replacement of expansion joints is considered a maintenance function and, therefore, excluded from the reserve funding analysis.








Street Signs. The Association is responsible for the community's metal post street signs. The signs are in good overall condition. Future funding for replacements has been programmed in the analysis.

Stormwater Ponds. The community is served by two stormwater detention ponds. One pond is located on Rivendale Boulevard and the other on Jerusalem Drive. The ponds have features of retention ponds, but it appears that any captured stormwater is absorbed into the ground, and any release via the catch basins is limited.

Detention ponds, also known as drainage ponds or detention basins, are engineered facilities designed to temporarily store and gradually release stormwater. Detention ponds are commonly utilized in urban and suburban areas where impervious surfaces can lead to increased runoff. These ponds are typically shallower than retention ponds and primarily focus on flood control and filtering pollutants. They manage stormwater by capturing water after rainfall events, allowing it to flow into the pond through the inlet. This stored water is then released at a controlled rate through the outlet structure, which helps minimize downstream flooding and reduces the risk of erosion and water quality degradation in nearby water bodies.

Additionally, some detention ponds may have vegetation to help absorb the water and safely release it back into the ground. When it comes to managing a detention pond, aquatic solutions like algae and aquatic weed control or aeration are not needed. However, it's important to manage any vegetation to ensure it doesn't become overgrown, limit water storage capabilities, or inhibit water flow.

Please note that the periodic removal of overgrown vegetation from the pond is considered a maintenance activity and has not been reserved for or included in this study.

Ponds will/may accumulate silt over time, which could result in overflows and minor local flooding. In addition, water quality can be negatively affected by increased siltation and debris accumulation. Accordingly, ponds require periodic dredging.

Based on our understanding, we recommend the following:

- Periodically remove accumulated debris and vegetation growing in the ponds.
- Inspect inflow and outflow inlets and pipes to ensure there is no blockage.
- Survey the ponds to establish the current profile of the bottom. After five years of operation, re-survey the pond to establish new depths to determine the local siltation rate. This will establish whether there is or will be a requirement for material removal.
- Periodically sample and test for contaminants.
- Consult with local contractors to determine the cost of removing and disposing of the spoiler once its nature is known.

Firms that specialize in this work can typically be found by internet searching Lake and Pond, Construction and Maintenance for your state or area of the country. Some states provide shortlists of companies that specialize in this type of work.

Stormwater management components include: pond hard structures, swale, drains, riprap, geo fabric (or geotextile fabric), and site grading. Many installations have a service life equal to or greater or grater than the life of the community and will not require replacement. There were no reported issues, and the stormwater system appears to be stable. A limited allowance has been programmed for the repairs of the structures.

Various authorities are involved with and have oversight of runoff water. There are historic, newly developed, and ongoing improvements in the protection of the water table. Regulations on runoff water are established to reduce sediment in the watershed, eliminate contamination of the water table, and retain freshwater within the watershed. Sanctions on tributaries will expand upstream to all possible sources of collection. Communities are responsible for the volume of water produced within their boundaries until it reaches the end of the watershed. We have included an allowance for stormwater management. This allowance is for situations where systems fail or do not meet current code and require replacement.

This study includes a review of the visible stormwater management components that are considered common and observations of system failure when evident. A thorough review of engineering plans, codes, system functioning, and applicable regulations was not performed as part of this study. Our estimate considers likely replacements and practical costs from communities of similar size and complexity. Inspection and evaluation of underground lines and structures is beyond the scope of work for this study. Additional information is available on our website at:
https://mdareserves.com/resources/links/site-components

Vegetation Management. Grass is usually used around and in storage ponds to prevent erosion and to filter sediment. The grass near the pond should not be over-fertilized, or the excessive nutrients will be washed into the pond and contribute to the growth of algae. Grass should be cut no shorter than 6-8 inches.

Please note that the periodic removal of overgrown vegetation from the pond is considered a maintenance activity and has not been reserved for or included in this study.




Aluminum Fencing. The Association maintains aluminum fencing at the community ponds located on Rivendale Blvd. The fence enclosing the Rivendale Blvd. pond is 4'8 in height and was installed in or around 2007. The fence is in good to fair condition with minor defects. Fencing systems have a large number of configurations and finishes that can usually be repaired as a maintenance activity by replacing individual components as they become damaged or weathered. Protection from weed trimmer string during lawn maintenance can extend the useful life of some fence types. Protection from this type of damage is typically provided by applying herbicides around post bases or installing protective sheathing. Aluminum fencing can have a useful life of 40 years or more. Periodic cleaning and touch-up painting may be required to keep the fence attractive.

As part of normal maintenance, we recommend the following:

- Lift or remove ornamental base covers, if applicable.
- Clean, prime, and paint all posts.
- Apply an appropriate caulk around each post cover.
- Reinstall covers, seal and paint all joints.

Fence posts can have an extended useful life if these simple maintenance activities are performed. If left unattended, the pressure from expansive post rust can crack and damage the supporting material.


Chain Link Fencing. The fence enclosing the Jerusalem Drive pond is 6' in height. This vinyl-coated, chain-link fence was installed in or around 2023 and is in good condition.

Each of the pond fences has a set of double-entry gates. The gates are in good overall condition.

This Condition Assessment is based upon our visual survey of the property. The sole purpose of the visual survey was an evaluation of the common and limited common elements of the property to ascertain their remaining useful life and replacement cost. Our evaluation assumed that all components met building code requirements in force at the time of construction. Our visual survey was conducted with care by experienced persons, but no warranty or guarantee is expressed or implied.

End of Condition Assessment

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1. COMMON INTEREST DEVELOPMENTS - AN OVERVIEW

Over the past 40 years, the responsibility for many services, facilities, and infrastructure around our homes has shifted from the local government to Community Associations. Thirty years ago, a typical new townhouse abutted a public street on the front and a public alley on the rear. Open space was provided by a nearby public park, and recreational facilities were purchased ala carte from privately owned country clubs, swim clubs, tennis clubs, and gymnasiums. Today, 60% of all new residential construction, i.e., townhouses, single-family homes, condominiums, and cooperatives, is in Common Interest Developments (CID). In a CID, a homeowner is bound to a Community Association that owns, maintains, and is responsible for periodic replacements of various components that may include the roads, curbs, sidewalks, playgrounds, streetlights, recreational facilities, and other community facilities and infrastructure.

The growth of Community Associations has been explosive. In 1965, there were only approximately 500 Community Associations in the United States. According to the 1990 U.S. Census, there were roughly 130,000 Community Associations. The Community Associations Institute (CAI), a national trade association, estimated in 2020 that there were more than 350,000 communities with over 75 million residents.

The shift of responsibility for billions of dollars of community facilities and infrastructure from the local government and private sector to Community Associations has generated new and unanticipated issues. Although Community Associations have succeeded in solving many short-term issues, many Associations still fail to properly plan for the significant expenses of replacing community facilities and infrastructure components. When inadequate Replacement Reserve funding results in less than timely replacements of failing components, homeowners are invariably exposed to the burden of special assessments, major increases in Association fees, and often a decline in property values.

2. REPLACEMENT RESERVE STUDY

The purpose of a Replacement Reserve Study is to provide the Association with an inventory of the common community facilities and infrastructure components that require periodic major repair or replacement, a general view of the physical condition of these components, and an effective financial plan to fund projected periodic replacements or major repairs. The Replacement Reserve Study consists of the following:

Replacement Reserve Study Introduction. The introduction provides a description of the property, an Executive Summary of the Funding Recommendations, Level of Reserve Study service, and a statement of the Purpose of the Replacement Reserve Study. It also lists documents and site evaluations upon which the Replacement Reserve Study is based and provides the Credentials of the Reserve Analyst.

Section A Replacement Reserve Analysis. Many components that are owned by the Association have a limited life and require periodic replacement. Therefore, it is essential that the Association have a financial plan that provides funding for the timely replacement of these components in order to protect the safety, appearance, and ultimately, the property value of the homes in the community. In conformance with National Reserve Study Standards, a Replacement Reserve Analysis evaluates the current funding of Replacement Reserves as reported by the Association and recommends annual funding of Replacement Reserves using the Threshold Cash Flow Method. See the definition below.

Section B Replacement Reserve Inventory. The Replacement Reserve Inventory lists the commonly owned components within the community that require periodic replacement using funding from Replacement Reserves. Replacement Reserve Inventory includes estimates of the Normal Economic Life (NEL) and the Remaining Economic Life (REL) for those components whose replacement is scheduled for funding from Replacement Reserves.

The Replacement Reserve Inventory also provides information about those components that are excluded from the Replacement Reserve Inventory and whose replacement is not scheduled for funding from Replacement Reserves.

Section C Projected Annual Replacements. The Calendar of Projected Annual Replacements provides a year-by-year listing of the Projected Replacements based on the data in the Replacement Reserve Inventory.

Section D Condition Assessment. The observed condition of the major items listed in the Replacement Reserve Inventory is discussed in more detail. The Condition Assessment includes a narrative and photographs that document conditions at the property observed at the time of our visual evaluation.

The Appendix is provided as an attachment to the Replacement Reserve Study. Additional attachments may include supplemental photographs to document conditions at the property and additional information specific to the property cited in the Conditions Assessment (i.e., Consumer Product Safety Commission, Handbook for Public Playground Safety, information on segmental retaining walls, manufacturer recommendations for asphalt shingles or siding, etc.).

3. METHODS OF ANALYSIS

The Replacement Reserve industry generally recognizes two different methods of accounting for Replacement Reserve Analysis, the Cash Flow Method. Due to the difference in accounting methodologies, these methods lead to different calculated values for the Recommended Annual Funding to the Reserves. A brief description is included below:

Cash Flow Threshold Method. This Reserve Study uses the Threshold Cash Flow Method, sometimes referred to as the "Pooling Method." It calculates the minimum constant annual funding to reserves (Minimum Annual Deposit) required to meet projected expenditures without allowing total reserves on hand to fall below the predetermined Minimum Balance, or Threshold, in any year.

4. REPLACEMENT RESERVE STUDY DATA

Identification of Reserve Components. The Reserve Analyst has only two methods of identifying Reserve Components; (1) information provided by the Association and (2) observations made at the site. The Reserve Analyst must be provided with all available information detailing the components owned by the Association. It is our policy to request such information prior to bidding on a project and to meet with the parties responsible for maintaining the community after acceptance of our proposal. Upon submission of the Initial Study, the Study should be reviewed by the Board of Directors and the individuals responsible for maintaining the community. We depend upon the Association for correct information, documentation, and drawings. We also look to the Association representative to help us fashion the Reserve Study so that it reflects what the community hopes to accomplish in the coming years.

Unit Costs. Unit costs are developed using nationally published standards and estimating guides and are adjusted by state or region. In some instances, recent data received in the course of our work is used to modify these figures. Contractor proposals or actual cost experience may be available as part of the Association records. This is useful information, which should be incorporated into your report. Please bring any such available data to our attention, preferably before the report is commenced.

Replacement vs. Repair and Maintenance. A Replacement Reserve Study addresses the required funding for Capital Replacement Expenditures. This should not be confused with operational costs or the cost of regular repairs or maintenance.

5. DEFINITIONS

Adjusted Cash Flow Analysis. Cash flow analysis adjusted to take into account annual cost increases due to inflation and interest earned on invested reserves. In this method, the annual contribution is assumed to grow annually at the inflation rate.

Cash Flow Analysis. See the Cash Flow Threshold Method, above.

Contingency. An allowance for unexpected requirements. The “Threshold” used in the Cash Flow Method is a predetermined minimum balance that serves the same purpose as a “contingency.” However, IRS Guidelines do not allow for a “contingency” line item in the inventory. Therefore, it is built into the mathematical model as a “Threshold.”

Cyclic Replacement Item. A component item that typically begins to fail after an initial period (Estimated Initial Replacement), but which will be replaced in increments over a number of years (the Estimated Replacement Cycle). The Reserve Analysis program divides the number of years in the Estimated Replacement Cycle into five equal increments. It then allocates the Estimated Replacement Cost equally over those five increments. (As distinguished from Normal Replacement Items, see below)

Estimated Normal Economic Life (NEL). Used in the Normal Replacement Schedules. This represents the industry average number of years that a new item should be expected to last until it has to be replaced. This figure is sometimes modified by climate, region, or original construction conditions.

Estimated Remaining Economic Life (REL). Used in the Normal Replacement Schedules. Number of years until the item is expected to need replacement. Normally, this number would be considered to be the difference between the Estimated Economic Life and the age of the item. However, this number must be modified to reflect maintenance practice, climate, original construction, quality, or other conditions. For the purpose of this report, this number is determined by the Reserve Analyst based on the present condition of the item relative to the actual age.

Minimum Annual Deposit. Shown on the Summary Sheet A1. The calculated requirement for annual contribution to reserves is calculated by the Cash Flow Method (see above).

Minimum Balance. Otherwise referred to as the Threshold, this amount is used in the Cash Flow Threshold Method only. Normally derived using the average annual expenditure over the study period, this is the minimum amount held in reserves in the Peak Year.

National Reserve Study Standards. A set of Standards developed by the Community Associations Institute in 1995 (and updated in 2017) which establishes the accepted methods of Reserve Calculation and stipulates what data must be included in the Reserve Study for each component listed in the inventory. These Standards can be found at CAIonline.org.

Normal Replacement Item. A component of the property that, after an expected economic life, is replaced in its entirety. (As distinguished from Cyclic Replacement Items, see above.)

Number of Years of the Study. The number of years into the future for which expenditures are projected and reserve levels calculated. This number should be large enough to include the projected replacement of every item on the schedule, at least once. The Reserve Study must cover a minimum of 20 years to comply with the National Reserve Study Standards. However, your study covers a 40-year period.

Peak Year. In the Cash Flow Threshold Method, a year in which the reserves on hand are projected to fall to the established threshold level. See Minimum Balance, above.

Reserves Currently on Deposit. Shown on the Summary Sheet A1, this is the amount of accumulated reserves as reported by the Association in the current year.

Replacement Reserve Study. An analysis of all of the components of the common property of a Community Association for which replacement should be anticipated within the economic life of the property as a whole. The analysis involves estimation for each component of its Estimated Replacement Cost, Normal Economic Life, and Remaining Economic Life. The objective of the study is to calculate a Recommended Annual Funding for the Association's Replacement Reserve Fund.

Total Replacement Cost. Shown on the Summary Sheet A1, this is total of the Estimated Replacement Costs for all items on the schedule if they were to be replaced once.

Unit Replacement Cost. Estimated replacement cost for a single unit of a given item on the schedule.

Unit (of Measure). Non-standard abbreviations are defined on the page of the Replacement Reserve Inventory where the item appears. The following standard abbreviations are used in this report:

ea each	**ls** lump sum	**sy** square yard
ft or lf linear foot	**pr** pair	**cy** cubic yard
sf square foot		

What is a Reserve Study?
Who are we?

https://youtu.be/m4BcOE6q3Aw

What kind of property uses a Reserve Study?
Who are our clients?

https://youtu.be/40SodajTW1g

Who conducts a Reserve Study?
Reserve Specialist (RS) what does this mean?

https://youtu.be/pYSMZO13VjQ

When should a Reserve Study be updated?
What are the different types of Reserve Studies?

https://youtu.be/Qx8WHB9Cgnc

What's in a Reserve Study and what's out?
Improvement/Component, what's the difference?

https://youtu.be/ZfBoAEhtf3E

What is my role as a Community Manager?
Will the report help me explain Reserves?

https://youtu.be/1J2h7FIU3qw

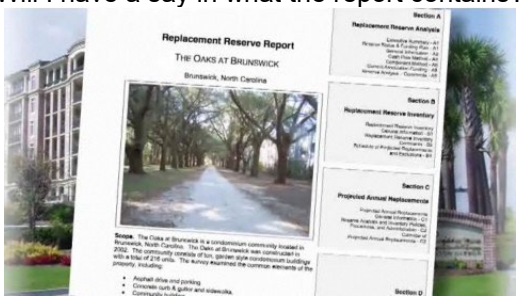
What is my role as a community Board Member?
Will a Reserve Study meet my needs?

https://youtu.be/aARD1B1Oa3o

Community dues, how can a Reserve Study help?
Will a study keep my property competitive?

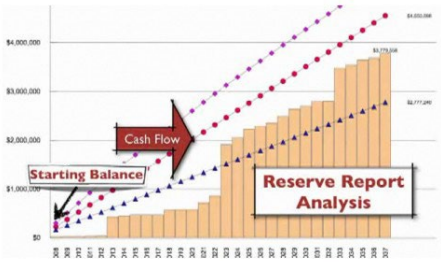
https://youtu.be/diZfM1IyJYU

How do I read the report?
Will I have a say in what the report contains?



https://youtu.be/qCeVJhFf9ag

Where do the numbers come from?
Cumulative expenditures and funding, what?

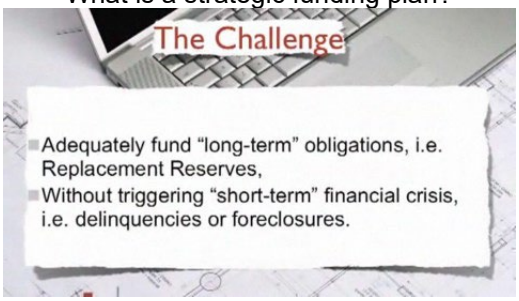


https://youtu.be/SePdwVDvHWI

How are interest and inflation addressed?
Inflation, what should we consider?

https://youtu.be/W8CDLwRIv68

A community needs more help, where do we go?
What is a strategic funding plan?



https://youtu.be/hIxV9X1tIcA