

LEVEL 2 REPLACEMENT RESERVE REPORT FY 2023 RUSSELL TOWNSHIP



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Community Management by:

RUSSELL TOWNSHIP

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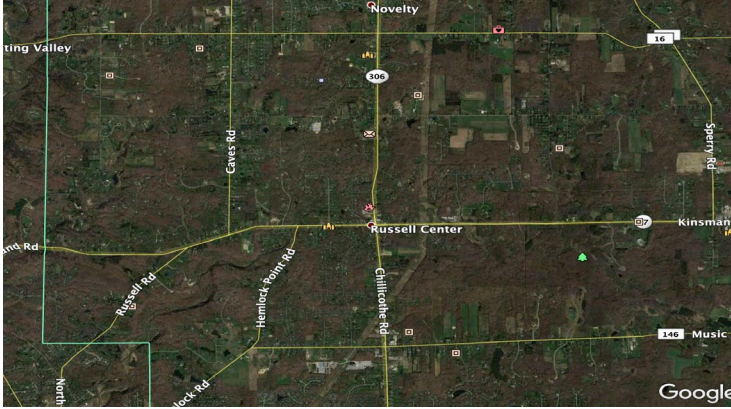
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REPLACEMENT RESERVE REPORT

RUSSELL TOWNSHIP

NOVELTY, OHIO
September 6, 2022
Revised December 8, 2022
Revised February 14, 2023



Description. Russell Township is a municipal Township located in Novelty, Ohio. This study includes the following:

- Road department, equipment, and maintenance buildings
- Administration Building site, exteriors, interiors, and systems
- Town Hall Building site, exteriors, interiors, and systems
- Police Station, and vehicles site, exteriors, interiors, and systems
- Fire Station, and vehicles site, exteriors, interiors, and systems
- Cemetery and baseball field

EXECUTIVE SUMMARY

This Reserve Study has been prepared for the Russell Township for the Fiscal Year 2023 covering the period from January 1, 2023 to December 31, 2023.

This Reserve Study that contains 7 separate Analyses. Section A in each Analysis will display each Opening Balance, Current Annual Contribution, and Recommended Annual Funding.

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

Report Cover

Section 1
Township Properties

Section 2
Police Dept

Section 3
Police Dept Vehicles

Section 4
Fire Station

Section 5
Fire Station Vehicles

Section 6
Road Dept

Section 7
Road Dept Vehicles

Appendix

Overview, Standard Terms, and Definitions
Video Answers to Frequently Asked Questions

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 MillerDodson Associates in 2020. 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 web site, 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 web site at mdareserves.com.

Purpose. The purpose of this Replacement Reserve Study is to provide Russell Township (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. The alternative Component Method of funding is provided in the Appendix.

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

- The Request for Proposal submitted and executed by the Association.
- Miller+Dodson performed a visual evaluation on September 06, 2022 to determine a 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 Ms. Karen Walder who provided very helpful insight into the current operations of the property.

Analyst's Credentials. Mr. Mark Haase, RS holds a Bachelor's Degree in Economics from the State University of New York at Fredonia and an Associate's degree in Civil Engineering from Northern Virginia Community College. Mr. Haase has experience in all phases of construction, project design, initiation, administration, and inspection of facilities. As a project manager, he has managed all phases of commercial construction. He is currently a Reserve Specialist for MillerDodson Associates.

Respectfully Submitted,



Mark Haase

Mark Haase, RS

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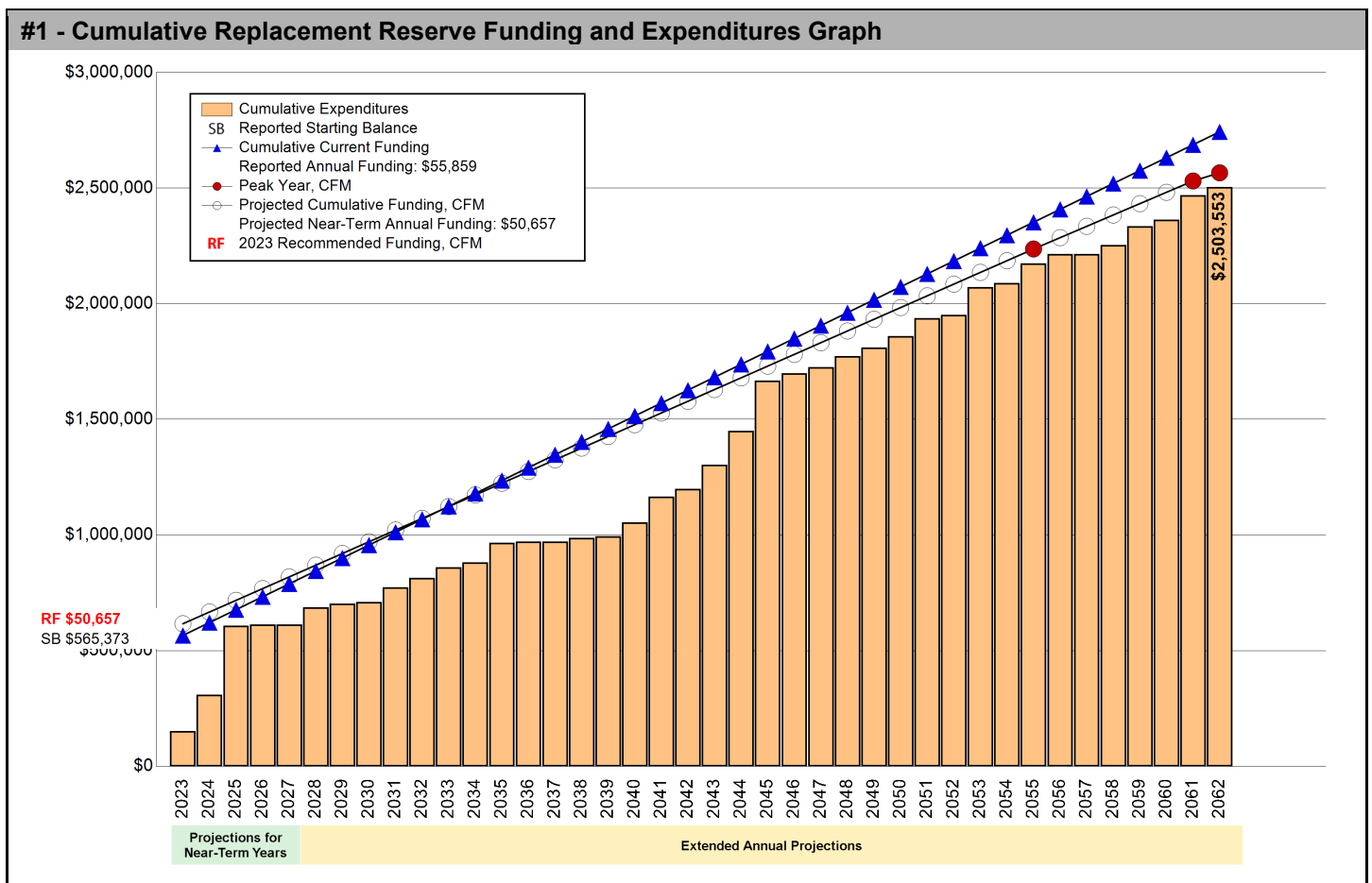
SECTION A - FINANCIAL ANALYSIS

The Township Properties Replacement Reserve Analysis uses the Cash Flow Method (CFM) to calculate Replacement Reserve funding for the periodic replacement of the 87 Projected Replacements identified in the Replacement Reserve Inventory.

\$50,657 RECOMMENDED REPLACEMENT RESERVE FUNDING FOR THE STUDY YEAR, 2023

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.

Township Properties reports a Starting Balance of \$565,373 and Annual Funding totaling \$55,859, which adequately funds projected replacements for the near-term years. See Page A.3 for a more detailed evaluation.



REPLACEMENT RESERVE ANALYSIS - GENERAL INFORMATION

The Township Properties 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.

2023 | 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, 2023.

40 Years | STUDY PERIOD

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

\$565,373 | STARTING BALANCE

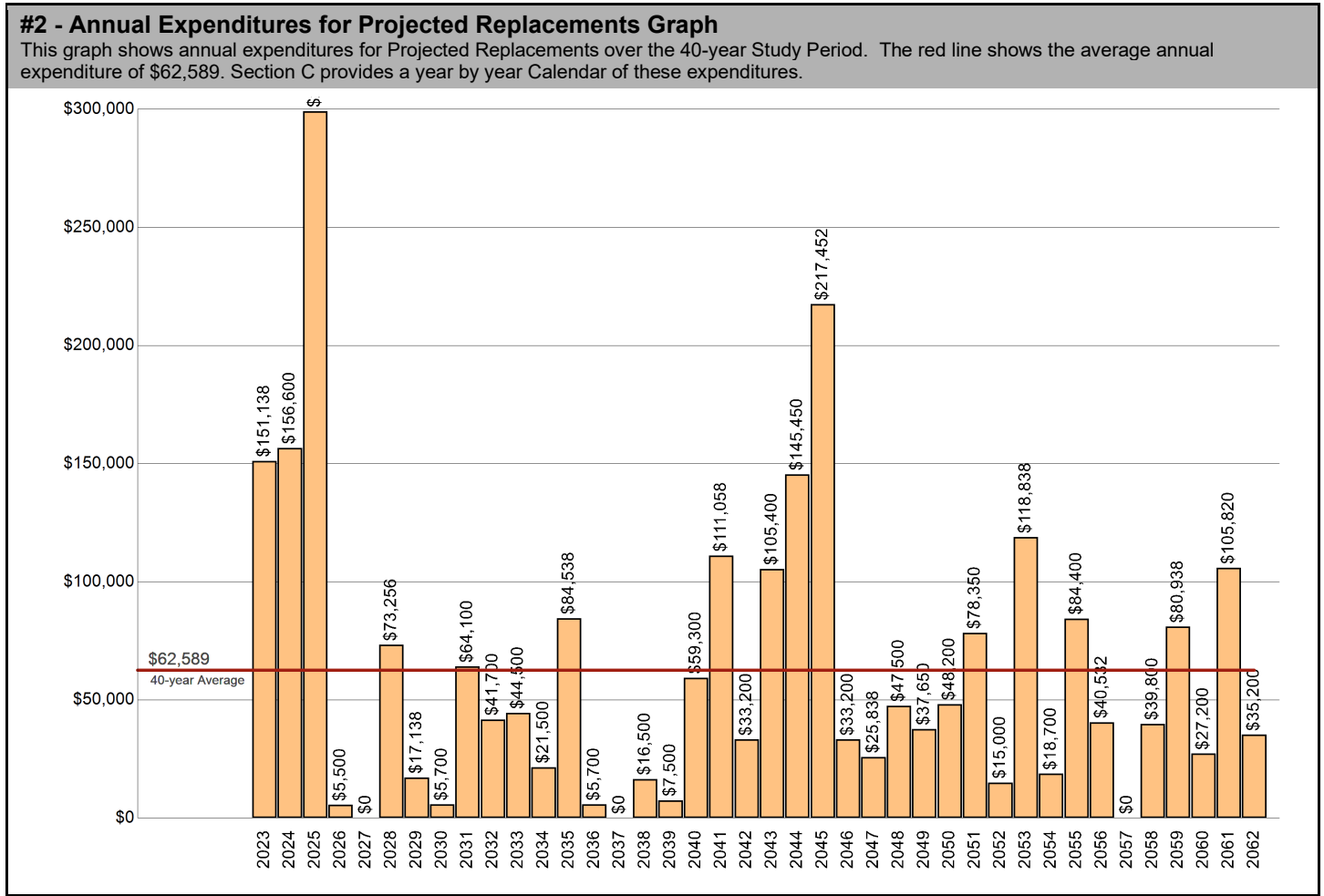
The Association reports Replacement Reserves on Deposit totaling \$565,373 at the start of the Study Year.

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).

\$2,503,553 | REPLACEMENT RESERVE INVENTORY - PROJECTED REPLACEMENTS

The Township Properties Replacement Reserve Inventory identifies 87 items that will require periodic replacement, that are to be funded from Replacement Reserves. We estimate the cost of these replacements will be \$2,503,553 over the 40-year Study Period. The Projected Replacements are divided into 5 major categories starting on Page B.3. Pages B.1-B.2 provide detailed information on the Replacement Reserve Inventory.



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 \$2,503,553 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 1 through 40										
Year	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Starting Balance	\$565,373									
Projected Replacements	(\$151,138)	(\$156,600)	(\$299,160)	(\$5,500)		(\$73,256)	(\$17,138)	(\$5,700)	(\$64,100)	(\$41,700)
Annual Deposit	\$55,859	\$55,859	\$55,859	\$55,859	\$55,859	\$55,859	\$55,859	\$55,859	\$55,859	\$55,859
End of Year Balance	\$470,095	\$369,354	\$126,053	\$176,412	\$232,271	\$214,874	\$253,595	\$303,754	\$295,513	\$309,672
Cumulative Expenditures	(\$151,138)	(\$307,738)	(\$606,898)	(\$612,398)	(\$612,398)	(\$685,654)	(\$702,791)	(\$708,491)	(\$772,591)	(\$814,291)
Cumulative Receipts	\$621,232	\$677,091	\$732,950	\$788,809	\$844,668	\$900,527	\$956,386	\$1,012,245	\$1,068,104	\$1,123,963
Year	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
Projected Replacements	(\$44,500)	(\$21,500)	(\$84,538)	(\$5,700)		(\$16,500)	(\$7,500)	(\$59,300)	(\$111,058)	(\$33,200)
Annual Deposit	\$55,859	\$55,859	\$55,859	\$55,859	\$55,859	\$55,859	\$55,859	\$55,859	\$55,859	\$55,859
End of Year Balance	\$321,031	\$355,390	\$326,712	\$376,871	\$432,730	\$472,089	\$520,448	\$517,007	\$461,808	\$484,467
Cumulative Expenditures	(\$858,791)	(\$880,291)	(\$964,829)	(\$970,529)	(\$970,529)	(\$987,029)	(\$994,529)	(\$1,053,829)	(\$1,164,886)	(\$1,198,086)
Cumulative Receipts	\$1,179,822	\$1,235,681	\$1,291,540	\$1,347,399	\$1,403,258	\$1,459,117	\$1,514,976	\$1,570,835	\$1,626,694	\$1,682,553
Year	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052
Projected Replacements	(\$105,400)	(\$145,450)	(\$217,452)	(\$33,200)	(\$25,838)	(\$47,500)	(\$37,650)	(\$48,200)	(\$78,350)	(\$15,000)
Annual Deposit	\$55,859	\$55,859	\$55,859	\$55,859	\$55,859	\$55,859	\$55,859	\$55,859	\$55,859	\$55,859
End of Year Balance	\$434,926	\$345,335	\$183,742	\$206,401	\$236,423	\$244,782	\$262,991	\$270,650	\$248,159	\$289,018
Cumulative Expenditures	(\$1,303,486)	(\$1,448,936)	(\$1,666,388)	(\$1,699,588)	(\$1,725,426)	(\$1,772,926)	(\$1,810,576)	(\$1,858,776)	(\$1,937,126)	(\$1,952,126)
Cumulative Receipts	\$1,738,412	\$1,794,271	\$1,850,130	\$1,905,989	\$1,961,848	\$2,017,707	\$2,073,566	\$2,129,425	\$2,185,284	\$2,241,143
Year	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062
Projected Replacements	(\$118,838)	(\$18,700)	(\$84,400)	(\$40,532)		(\$39,800)	(\$80,938)	(\$27,200)	(\$105,820)	(\$35,200)
Annual Deposit	\$55,859	\$55,859	\$55,859	\$55,859	\$55,859	\$55,859	\$55,859	\$55,859	\$55,859	\$55,859
End of Year Balance	\$226,039	\$263,198	\$234,657	\$249,984	\$305,843	\$321,902	\$296,824	\$325,483	\$275,522	\$296,181
Cumulative Expenditures	(\$2,070,963)	(\$2,089,663)	(\$2,174,063)	(\$2,214,595)	(\$2,214,595)	(\$2,254,395)	(\$2,335,333)	(\$2,362,533)	(\$2,468,353)	(\$2,503,553)
Cumulative Receipts	\$2,297,002	\$2,352,861	\$2,408,720	\$2,464,579	\$2,520,438	\$2,576,297	\$2,632,156	\$2,688,015	\$2,743,874	\$2,799,733

EVALUATION OF CURRENT FUNDING

The evaluation of Current Funding (Starting Balance of \$565,373 & annual funding of \$55,859), 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 87 Projected Replacements identified in the Replacement Reserve Inventory and that the Association will continue Annual Funding of \$55,859 throughout the 40-year Study Period.

Annual Funding of \$55,859 is approximately 110 percent of the \$50,657 recommended Annual Funding calculated by the Cash Flow Method for 2023, the Study Year.

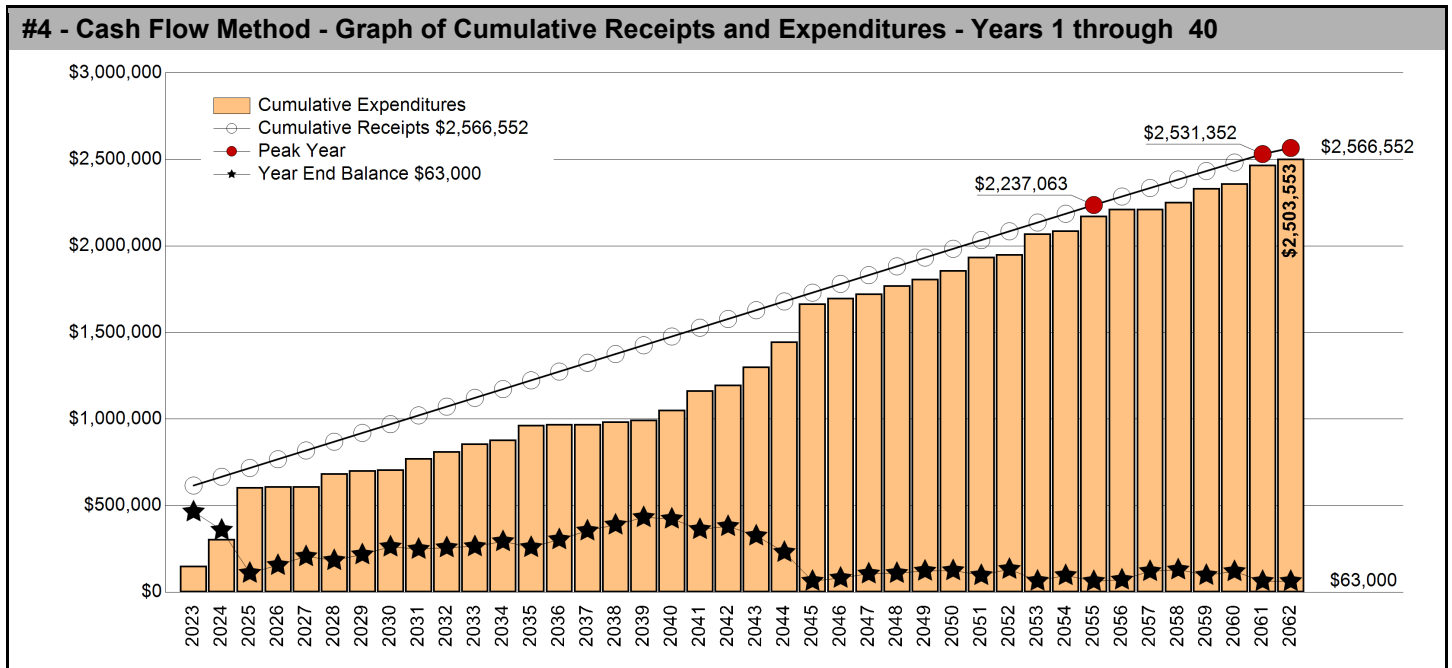
See the Executive Summary for the Current Funding Statement.

CASH FLOW METHOD FUNDING

\$50,657 RECOMMENDED REPLACEMENT RESERVE FUNDING FOR 2023

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 2055 with Replacement Reserves on Deposit dropping to the Minimum Balance after the completion of \$2,174,063 of replacements from 2023 to 2055. Recommended funding is anticipated to decline in 2056. Peak Years are identified in Chart 4 and Table 5.
- Threshold (Minimum Balance).** The calculations assume a Minimum Balance of \$63,000 will always be held in reserve, which is calculated by rounding the 12-month 40-year average annual expenditure of \$62,589 as shown on Graph #2.
- Cash Flow Method Study Period.** Cash Flow Method calculates funding for \$2,503,553 of expenditures over the 40-year Study Period. It does not include funding for any projects beyond 2062 and in 2062, the end of year balance will always be the Minimum Balance.



#5 - Cash Flow Method - Table of Receipts & Expenditures - Years 1 through 40

Year	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Starting Balance	\$565,373									
Projected Replacements	(\$151,138)	(\$156,600)	(\$299,160)	(\$5,500)		(\$73,256)	(\$17,138)	(\$5,700)	(\$64,100)	(\$41,700)
Annual Deposit	\$50,657	\$50,657	\$50,657	\$50,657	\$50,657	\$50,657	\$50,657	\$50,657	\$50,657	\$50,657
End of Year Balance	\$464,893	\$358,950	\$110,447	\$155,605	\$206,262	\$183,663	\$217,183	\$262,140	\$248,697	\$257,655
Cumulative Expenditures	(\$151,138)	(\$307,738)	(\$606,898)	(\$612,398)	(\$612,398)	(\$685,654)	(\$702,791)	(\$708,491)	(\$772,591)	(\$814,291)
Cumulative Receipts	\$616,030	\$666,688	\$717,345	\$768,002	\$818,659	\$869,317	\$919,974	\$970,631	\$1,021,288	\$1,071,946
Year	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
Projected Replacements	(\$44,500)	(\$21,500)	(\$84,538)	(\$5,700)		(\$16,500)	(\$7,500)	(\$59,300)	(\$111,058)	(\$33,200)
Annual Deposit	\$50,657	\$50,657	\$50,657	\$50,657	\$50,657	\$50,657	\$50,657	\$50,657	\$50,657	\$50,657
End of Year Balance	\$263,812	\$292,969	\$259,089	\$304,046	\$354,704	\$388,861	\$432,018	\$423,375	\$362,975	\$380,432
Cumulative Expenditures	(\$858,791)	(\$880,291)	(\$964,829)	(\$970,529)	(\$970,529)	(\$987,029)	(\$994,529)	(\$1,053,829)	(\$1,164,886)	(\$1,198,086)
Cumulative Receipts	\$1,122,603	\$1,173,260	\$1,223,918	\$1,274,575	\$1,325,232	\$1,375,889	\$1,426,547	\$1,477,204	\$1,527,861	\$1,578,518
Year	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052
Projected Replacements	(\$105,400)	(\$145,450)	(\$217,452)	(\$33,200)	(\$25,838)	(\$47,500)	(\$37,650)	(\$48,200)	(\$78,350)	(\$15,000)
Annual Deposit	\$50,657	\$50,657	\$50,657	\$50,657	\$50,657	\$50,657	\$50,657	\$50,657	\$50,657	\$50,657
End of Year Balance	\$325,690	\$230,897	\$64,102	\$81,560	\$106,379	\$109,537	\$122,544	\$125,001	\$97,308	\$132,966
Cumulative Expenditures	(\$1,303,486)	(\$1,448,936)	(\$1,666,388)	(\$1,699,588)	(\$1,725,426)	(\$1,772,926)	(\$1,810,576)	(\$1,858,776)	(\$1,937,126)	(\$1,952,126)
Cumulative Receipts	\$1,629,176	\$1,679,833	\$1,730,490	\$1,781,148	\$1,831,805	\$1,882,462	\$1,933,119	\$1,983,777	\$2,034,434	\$2,085,091
Year	2053	2054	1st Peak - 2055	2056	2057	2058	2059	2060	2nd Peak - 2061	3rd Peak - 2062
Projected Replacements	(\$118,838)	(\$18,700)	(\$84,400)	(\$40,532)		(\$39,800)	(\$80,938)	(\$27,200)	(\$105,820)	(\$35,200)
Annual Deposit	\$50,657	\$50,657	\$60,657	\$49,048	\$49,048	\$49,048	\$49,048	\$49,048	\$49,048	\$35,200
End of Year Balance	\$64,785	\$96,743	\$63,000	\$71,516	\$120,564	\$129,813	\$97,923	\$119,772	\$63,000	\$63,000
Cumulative Expenditures	(\$2,070,963)	(\$2,089,663)	(\$2,174,063)	(\$2,214,595)	(\$2,214,595)	(\$2,254,395)	(\$2,335,333)	(\$2,362,533)	(\$2,468,353)	(\$2,503,553)
Cumulative Receipts	\$2,135,748	\$2,186,406	\$2,237,063	\$2,286,111	\$2,335,159	\$2,384,208	\$2,433,256	\$2,482,304	\$2,531,352	\$2,566,552

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.

\$50,657 2023 - CASH FLOW METHOD RECOMMENDED FUNDING

The 2023 Study Year calculations have been made using current replacement costs (see Page B.2), modified by the Analyst for any project specific conditions.

\$52,684 2024 - INFLATION ADJUSTED FUNDING

A new analysis calculates the 2024 funding based on three assumptions:

- Replacement Reserves on Deposit totaling \$464,893 on January 1, 2024.
- All 2023 Projected Replacements listed on Page C.2 accomplished at a cost to Replacement Reserves less than \$151,138.
- Construction Cost Inflation of 4.00 percent in 2023.

The \$52,684 inflation adjusted funding in 2024 is a 3.99 percent increase over the non-inflation adjusted funding of \$50,657.

\$54,791 2025 - INFLATION ADJUSTED FUNDING

A new analysis calculates the 2025 funding based on three assumptions:

- Replacement Reserves on Deposit totaling \$385,921 on January 1, 2025.
- All 2024 Projected Replacements listed on Page C.2 accomplished at a cost to Replacement Reserves less than \$158,130.
- Construction Cost Inflation of 4.00 percent in 2024.

The \$54,791 inflation adjusted funding in 2025 is a 8.15 percent increase over the non-inflation adjusted funding of \$50,657.

\$56,983 2026 - INFLATION ADJUSTED FUNDING

A new analysis calculates the 2026 funding based on three assumptions:

- Replacement Reserves on Deposit totaling \$300,198 on January 1, 2026.
- All 2025 Projected Replacements listed on Page C.2 accomplished at a cost to Replacement Reserves less than \$313,663.
- Construction Cost Inflation of 4.00 percent in 2025.

The \$56,983 inflation adjusted funding in 2026 is a 12.48 percent increase over the non-inflation adjusted funding of \$50,657.



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 2024, 2025 and 2026 inflation-adjusted funding calculations above, the 4.00 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 2023, based on a 1.00 percent interest rate, we estimate the Association may earn \$5,151 on an average balance of \$515,133, \$4,254 on an average balance of \$425,407 in 2024, and \$3,431 on \$343,060 in 2025. The Association may elect to attribute 100 percent of the earned interest to Reserves, resulting in a reduction in the 2023 funding from \$50,657 to \$45,506 (a 10.16 percent reduction), \$52,684 to \$48,429 in 2024 (a 8.07 percent reduction), and \$54,791 to \$51,360 in 2025 (a 6.26 percent reduction).

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SECTION B - REPLACEMENT RESERVE INVENTORY

- **PROJECTED REPLACEMENTS.** Township Properties - Replacement Reserve Inventory identifies 87 items which 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 \$1,100,160. Cumulative Replacements totaling \$2,503,553 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.

- **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:

Tax Code. The United States Tax Code grants very 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.

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 87 items included in the Township Properties Replacement Reserve Inventory are divided into 5 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 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 MillerDodson Associates in 2020. 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 87 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 87 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.

ADMIN BUILDING - SITE COMPONENTS 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 pavement, mill and overlay	sf	14,000	\$2.00	18	none	\$28,000
2	Pavement, rejuvenator seal coat	sf	14,000	\$0.25	6	6	\$3,500
3	Concrete flatwork and sidewalk	sf	2,600	\$12.00	60	57	\$31,200
	Bollards						EXCLUDED
	Building exterior lighting						EXCLUDED
	Privacy fencing at generator						EXCLUDED
	Signage lighting						EXCLUDED
4	Russell Township sign (foamcore, full color with	sf	72	\$200.00	10	2	\$14,400
5	Admin. Bldg. sign (wood, full color w/ graphic)	sf	128	\$200.00	10	8	\$25,600
6	Flagpole (approx. 30')	ea	1	\$6,500.00	25	12	\$6,500
	Flagpole lighting						EXCLUDED
	Wood post signage						EXCLUDED
7	Stormwater Management (allowance)	ls	1	\$3,000.00	30	22	\$3,000
8	Sanitary sewer (allowance)	ls	1	\$10,000.00	30	21	\$10,000
9	Sanitary sewer, lift station alternate pumps	ls	1	\$15,000.00	30	22	\$15,000
	Sanitary sewer, grinder and tank						EXCLUDED
10	Hardscapes/foundation plantings (allowance)	ls	1	\$3,000.00	3	3	\$3,000
Replacement Costs - Page Subtotal							\$140,200

COMMENTS
<ul style="list-style-type: none"> Item #1: Asphalt pavement, mill and overlay - 02/13/2023 revised REL based on a planned project for 2023 which will require tearing up and replacing the pavement Bollards - 12/08/22 - is excluded as a valuation exclusion that does not meet the minimum threshold for reserves. Building exterior lighting - 12/08/22 - is excluded as a valuation exclusion that does not meet the minimum threshold for reserves. Privacy fencing at generator - 12/08/22 - is excluded as a valuation exclusion that does not meet the minimum threshold for reserves. Signage lighting - 12/08/22 - is excluded as a valuation exclusion that does not meet the minimum threshold for reserves. Flagpole lighting - 12/08/22 - is excluded as a valuation exclusion that does not meet the minimum threshold for reserves. Wood post signage - 12/08/22 - is excluded as a valuation exclusion that does not meet the minimum threshold for reserves. Sanitary sewer, grinder and tank - 12/08/22 - is excluded as a valuation exclusion that does not meet the minimum threshold for reserves.

ADMIN BUILDING - EXTERIORS 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 (\$)	
11	Roofing, asphalt shingle	sf	7,100	\$5.00	25	2	\$35,500	
12	Gutters and downspouts	lf	2,800	\$13.00	20	2	\$36,400	
	Plumbing vent flashing/boot						EXCLUDED	
13	Caulking (allowance)	ls	1	\$5,000.00	10	9	\$5,000	
14	Exterior door	ea	6	\$1,200.00	25	2	\$7,200	
15	Siding, wood (replace w/ Hardiplank)	sf	4,250	\$20.00	20	2	\$85,000	
16	Soffit, wood (replace w/ Hardiplank)	sf	850	\$20.00	20	2	\$17,000	
17	Fascia, wood (replace w/ Hardiplank)	ft	213	\$20.00	20	2	\$4,260	
18	Overhead door (10' x 8')	ea	1	\$8,000.00	15	none	\$8,000	
19	Overhead door (10' x 10')	ea	1	\$10,000.00	15	10	\$10,000	
20	Windows (3' x 5')	ea	21	\$1,020.00	35	22	\$21,420	
21	Windows (2' x 3')	ea	3	\$612.00	35	22	\$1,836	
Replacement Costs - Page Subtotal							\$231,616	

COMMENTS
<ul style="list-style-type: none"> Exterior wood materials will be replaced with cement fiber materials (Hardiplank). This will require additional funds as Hardiplank is about twice the cost of wood. This is reflected in the unit cost. Plumbing vent flashing/boot - problematic boots have been eliminated with the new roof installation. Item #13: Caulking (allowance) - was completed with painting in 2022.

ADMIN BUILDING - SYSTEMS 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 (\$)	
22	Fire Alarm Control Panel, sub panel	ea	1	\$10,500.00	20	19	\$10,500	
23	Smoke detector	ea	8	\$250.00	20	19	\$2,000	
	Fire alarm pull						EXCLUDED	
24	Domestic water piping (allowance)	ls	1	\$4,500.00	10	none	\$4,500	
25	Water heater, 40 gal., residential	ea	1	\$2,200.00	15	9	\$2,200	
26	Storage tank	ea	1	\$7,500.00	20	none	\$7,500	
27	Well pump	ea	1	\$8,500.00	10	none	\$8,500	
28	Well clean-up service	ea	1	\$3,000.00	10	none	\$3,000	
29	Well pressure tank	ea	1	\$7,500.00	10	none	\$7,500	
30	Well water softener	ea	1	\$5,700.00	12	7	\$5,700	
	Water testing						EXCLUDED	
31	Well replacement	ea	1	\$15,000.00	25	12	\$15,000	
32	Heat pump, furnace (60,000 btu)	ea	1	\$6,500.00	24	12	\$6,500	
33	Heat pump, compressor (5 ton)	ea	1	\$6,500.00	12	none	\$6,500	
34	Heat pump, furnace (60,000 btu)	ea	2	\$6,500.00	24	20	\$13,000	
35	Heat pump, compressor (5 ton)	ea	2	\$6,500.00	12	9	\$13,000	
36	Emergency Generator (25 Kw)	ea	1	\$35,000.00	30	2	\$35,000	
37	Electrical (allowance)	ls	1	\$7,500.00	15	2	\$7,500	
38	Security system (allowance)	ea	1	\$16,000.00	15	11	\$16,000	
39	Network (allowance)	ls	1	\$10,000.00	10	9	\$10,000	
Replacement Costs - Page Subtotal							\$173,900	

COMMENTS
<ul style="list-style-type: none"> Item #22: Fire Alarm Control Panel, sub panel - completed in 2022. Fire alarm pull - 12/08/22 - is excluded as a valuation exclusion that does not meet the minimum threshold for reserves. Water testing - 12/08/22 - is excluded as a valuation exclusion that does not meet the minimum threshold for reserves. Item #39: Network (allowance) - Item #39: Network (allowance) - included for network and cloud equipment. Much of the network infrastructure is service based subscription or cloud server. 02/06/2023 revised REL because the work was completed in 2022.

TOWN HALL BUILDING - SITE COMPONENTS						NEL- Normal Economic Life (yrs)		REPLACEMENT COST (\$)
PROJECTED REPLACEMENTS						REL- Remaining Economic Life (yrs)		
ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST (\$)	NEL	REL	REPLACEMENT COST (\$)	
40	Asphalt pavement, chip & seal over pavement Pavement, rejuvenator seal coat	sf	18,400	\$2.00	18	17	\$36,800 EXCLUDED	
	Concrete flatwork and sidewalk						EXCLUDED	
41	Accessible ramp at entrance	ls	1	\$7,500.00	35	32	\$7,500	
42	Staircase w/ pavers and railing	ls	1	\$3,500.00	25	1	\$3,500	
	Unit paver walkways (re-set allowance)						EXCLUDED	
	Unit paver walkways (replace)						EXCLUDED	
	Building exterior lighting						EXCLUDED	
	Sign, text and/or graphic						EXCLUDED	
43	Steel post site signage	ea	10	\$275.00	20	1	\$2,750	
44	Stormwater management (allowance)	ls	1	\$1,500.00	30	2	\$1,500	
45	Sanitary sewer (allowance)	ls	1	\$5,000.00	10	2	\$5,000	
46	Hardscapes/foundation plantings (allowance)	ls	1	\$2,500.00	3	none	\$2,500	
Replacement Costs - Page Subtotal							\$59,550	

COMMENTS
<ul style="list-style-type: none"> • Pavement, rejuvenator seal coat - is not required with chip and seal surfaces. • Concrete flatwork and sidewalk - 12/08/22 - is excluded as a valuation exclusion that does not meet the minimum threshold for reserves. • Item #41: Accessible ramp at entrance - we understand this ramp was completed in 2020. • Item #42: Staircase w/ pavers and railing - 02/13/2023 revised REL to align with other projects. • Unit paver walkways (re-set allowance) - 12/08/22 - is excluded as a valuation exclusion that does not meet the minimum threshold for reserves. • Unit paver walkways (replace) - 12/08/22 - is excluded as a valuation exclusion that does not meet the minimum threshold for reserves. • Building exterior lighting - 12/08/22 - is excluded as a valuation exclusion that does not meet the minimum threshold for reserves. • Sign, text and/or graphic - 12/08/22 - is excluded as a valuation exclusion that does not meet the minimum threshold for reserves. • Item #43: Steel post site signage - 02/13/2023 revised REL to align with other projects. • Item #44: Stormwater management (allowance) - 02/13/2023 revised REL to align with other projects.

TOWN HALL BUILDING - EXTERIORS						NEL- Normal Economic Life (yrs)		REPLACEMENT COST (\$)
PROJECTED REPLACEMENTS						REL- Remaining Economic Life (yrs)		
ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST (\$)	NEL	REL		REPLACEMENT COST (\$)
47	Roofing, asphalt shingle Roofing, plywood sheeting	sf	2,200	\$5.00	30	28		\$11,000 EXCLUDED
48	Gutters and downspouts	lf	250	\$13.00	30	28		\$3,250
49	Exterior door, restoration (allowance)	ea	4	\$1,375.00	10	1		\$5,500
50	Soffit, vinyl	sf	170	\$9.00	25	1		\$1,530
51	Siding, replace with Hardiplank	sf	3,600	\$20.00	20	1		\$72,000
52	Fascia, brake metal	ft	180	\$9.00	25	1		\$1,620
53	Building insulation	ls	1	\$15,000.00	25	1		\$15,000
54	Window shutter, wood Window shutter (allowance)	ea	22	\$850.00	20	1		\$18,700 EXCLUDED
55	Windows (4' x 7'), restoration	ea	6	\$2,800.00	35	1		\$16,800
56	Windows (3' x 4'), restoration	ea	5	\$1,200.00	35	1		\$6,000
57	Window, glass block	sf	12	\$53.00	35	22		\$636
Replacement Costs - Page Subtotal								\$152,036

COMMENTS
<ul style="list-style-type: none"> Roofing, plywood sheeting - was completed with last roof installation and should last for the next roof replacement. Item #49: Exterior door, restoration (allowance) - 12/08/22 revised quantity and cost to per door estimate. Item #53: Building insulation - 02/13/2023 revised REL to align with other projects. Item #54: Window shutter, wood - 02/13/2023 revised REL to align with other projects. Window shutter (allowance) - is not required with planned restoration.

TOWN HALL BUILDING - SYSTEMS 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 (\$)
58	Fire Alarm Control Annunciator Panel (FACP)	ea	1	\$10,500.00	20	20	\$10,500
	Smoke detector						EXCLUDED
	Fire strobe						EXCLUDED
	Fire alarm pull						EXCLUDED
	Emergency lights						EXCLUDED
	Water heater, 6 gal., closet system						EXCLUDED
59	Well pump	ea	1	\$8,500.00	10	8	\$8,500
60	Well clean-up service	ea	1	\$3,000.00	10	2	\$3,000
61	Well pressure tank	ea	1	\$7,500.00	10	2	\$7,500
62	Well water softener	ea	1	\$5,700.00	12	1	\$5,700
	Water testing						EXCLUDED
63	Well replacement	ea	1	\$15,000.00	25	17	\$15,000
64	Split system HVAC, furnace (48,000 btu)	ea	1	\$6,000.00	24	21	\$6,000
65	Split system HVAC, compressor (4 ton)	ea	1	\$6,000.00	12	9	\$6,000
	Sump pump						EXCLUDED
66	Electrical (allowance)	ls	1	\$7,500.00	15	1	\$7,500
Replacement Costs - Page Subtotal							\$69,700

COMMENTS
<ul style="list-style-type: none"> Item #58: Fire Alarm Control Annunciator Panel (FACP) - 12/08/22 new system is in the design and planning phase. Smoke detector - 12/08/22 - is excluded as a valuation exclusion that does not meet the minimum threshold for reserves. Fire strobe - 12/08/22 - is excluded as a valuation exclusion that does not meet the minimum threshold for reserves. Fire alarm pull - 12/08/22 - is excluded as a valuation exclusion that does not meet the minimum threshold for reserves. Emergency lights - 12/08/22 - is excluded as a valuation exclusion that does not meet the minimum threshold for reserves. Water heater, 6 gal., closet system - 12/08/22 - is excluded as a valuation exclusion that does not meet the minimum threshold for reserves. Item #62: Well water softener - 02/13/2023 revised REL to align with other projects. Water testing - 12/08/22 - is excluded as a valuation exclusion that does not meet the minimum threshold for reserves. Item #64: Split system HVAC, furnace (48,000 btu) - 12/08/22 it is estimated this system was installed in 2020. Item #65: Split system HVAC, compressor (4 ton) - 12/08/22 it is estimated this system was installed in 2020. Sump pump - 12/08/22 - is excluded as a valuation exclusion that does not meet the minimum threshold for reserves. Item #66: Electrical (allowance) - 02/13/2023 revised REL to align with other projects.

CEMETERY - SITE COMPONENTS 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 (\$)	
67	Asphalt pavement, mill and overlay	sf	19,950	\$2.00	18	2	\$39,900	
68	Pavement, rejuvenator seal coat	sf	19,950	\$0.25	6	none	\$4,988	
	Gravel path, replenish						EXCLUDED	
69	Chip & seal parking area	ls	1	\$5,000.00	10	none	\$5,000	
70	PTL rail fencing	ft	1,000	\$26.00	30	none	\$26,000	
	Concrete stairs (full set)						EXCLUDED	
	Wood sign						EXCLUDED	
	Storage shed						EXCLUDED	
Replacement Costs - Page Subtotal								\$75,888

COMMENTS
<ul style="list-style-type: none"> Gravel path, replenish - 12/08/22 - excluded per board. Part of Road department. Concrete stairs (full set) - 12/08/22 - is excluded as a valuation exclusion that does not meet the minimum threshold for reserves. Wood sign - 12/08/22 - is excluded as a valuation exclusion that does not meet the minimum threshold for reserves. Storage shed - 12/08/22 - is excluded as a valuation exclusion that does not meet the minimum threshold for reserves.

CEMETERY - EXTERIORS 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 (\$)
71	Roofing, asphalt shingle	sf	1,600	\$5.00	25	23	\$8,000
72	Gutters and downspouts	lf	140	\$13.00	20	18	\$1,820
73	Rebuild/restore exterior doors (allowance)	ls	1	\$3,000.00	20	12	\$3,000
74	Siding, wood	sf	3,200	\$9.00	20	5	\$28,800
75	Soffit, wood	sf	160	\$10.00	25	5	\$1,600
76	Fascia, wood	ft	160	\$10.00	25	5	\$1,600
77	Windows, restoration (3' x 8')	ea	8	\$1,632.00	35	5	\$13,056
78	Window shutter (allowance)	sf	192	\$83.50	35	33	\$16,032
	Misc. signage (allowance)						EXCLUDED
	Exterior building lights						EXCLUDED
Replacement Costs - Page Subtotal							\$73,908

COMMENTS
<ul style="list-style-type: none"> Item #71: Roofing, asphalt shingle - 12/08/22 completed in 2021. Item #72: Gutters and downspouts - 12/08/22 completed in 2021. Item #77: Windows, restoration (3' x 8') - 12/08/22 estimate is for restoration of existing wood windows. 02/13/2023 revised REL to align with other projects. Misc. signage (allowance) - 12/08/22 - is excluded as a valuation exclusion that does not meet the minimum threshold for reserves. Exterior building lights - 12/08/22 - is excluded as a valuation exclusion that does not meet the minimum threshold for reserves.

CEMETERY - SYSTEMS				NEL- Normal Economic Life (yrs)		REL- Remaining Economic Life (yrs)			
PROJECTED REPLACEMENTS									
ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST (\$)	NEL	REL	REPLACEMENT COST (\$)		
79	Heat pump, furnace (60,000 btu)	ea	1	\$6,000.00	24	21	\$6,000		
	Heat pump, compressor (5 ton)						EXCLUDED		
	Electrical (allowance)						EXCLUDED		
Replacement Costs - Page Subtotal							\$6,000		

COMMENTS
<ul style="list-style-type: none"> Heat pump, compressor (5 ton) - the building does not have air conditioning. Electrical (allowance) - 12/08/22 - is excluded as a valuation exclusion that does not meet the minimum threshold for reserves.

BASEBALL FIELD - SITE COMPONENTS					NEL- Normal Economic Life (yrs)		
PROJECTED REPLACEMENTS					REL- Remaining Economic Life (yrs)		
ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST (\$)	NEL	REL	REPLACEMENT COST (\$)
80	Gravel over tar and chip	sf	24,000	\$1.25	10	8	\$30,000
	Pavement, rejuvenator seal coat						EXCLUDED
81	Chain link fence and backstop	ft	750	\$40.00	30	none	\$30,000
82	PTL sign structure, text and/or graphic	sf	40	\$150.00	10	none	\$6,000
	Bleachers						EXCLUDED
	Team bench						EXCLUDED
	Park bench						EXCLUDED
Replacement Costs - Page Subtotal							\$66,000

COMMENTS
<ul style="list-style-type: none"> • Pavement, rejuvenator seal coat - not required with tar and chip. • Item #81: Chain link fence and backstop - 02/13/2023 revised REL this work will be completed in 2023 due to the condition of the existing fence. • Bleachers - is not maintained by the township. • Team bench - is not maintained by the township. • Park bench - is not maintained by the township.

RECYCLE AREA - SITE COMPONENTS						NEL- Normal Economic Life (yrs)		REPLACEMENT COST (\$)
PROJECTED REPLACEMENTS						REL- Remaining Economic Life (yrs)		
ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST (\$)	NEL	REL	REPLACEMENT COST (\$)	
83	Asphalt pavement, mill and overlay	sf	12,600	\$2.00	18	5	\$25,200	
84	Pavement, rejuvenator seal coat	sf	12,600	\$0.25	6	none	\$3,150	
85	Fence	ft	300	\$40.00	60	59	\$12,000	
86	Stormwater Management (allowance)	ls	1	\$3,000.00	30	22	\$3,000	
87	Hardscapes/foundation plantings (allowance)	ls	1	\$3,000.00	10	5	\$3,000	
Replacement Costs - Page Subtotal							\$46,350	

COMMENTS
<ul style="list-style-type: none"> Item #85: Fence - 12/08/22 based on current planning the the fence is being installed as a 2022 project. The fence was not installed at the time of the site visit.

VALUATION EXCLUSIONS							
Excluded Items							
ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST (\$)	NEL	REL	REPLACEMENT COST (\$)
	Emergency lighting, exit light, etc.						EXCLUDED
	Interior doors						EXCLUDED
	Window unit						EXCLUDED
	Electric heaters						EXCLUDED

VALUATION EXCLUSIONS
Comments
<ul style="list-style-type: none"> 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	REPLACEMENT COST (\$)	UNIT REL	REL	REPLACEMENT COST (\$)
	Building foundation(s)						EXCLUDED
	Concrete floor slabs (interior)						EXCLUDED
	Wall, floor, and roof structure						EXCLUDED
	Electrical wiring						EXCLUDED
	Water piping at common facilities						EXCLUDED
	Waste piping at common facilities						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.

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
<ul style="list-style-type: none"> 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 (\$)
	Landscaping and site grading						EXCLUDED
	Exterior painting						EXCLUDED
	Interior painting						EXCLUDED
	Janitorial service						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.

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SECTION C - CALENDAR OF PROJECTED ANNUAL REPLACEMENTS

GENERAL STATEMENT. The 87 Projected Replacements in the Township Properties 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 on our time and manpower resources. Therefore, Miller Dodson 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 replacements 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 Miller - Dodson 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 Miller - Dodson 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, 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	2023 - Study Year	\$	Item	2024 - YEAR 1	\$
1	Asphalt pavement, mill and overlay	\$28,000	42	Staircase w/ pavers and railing	\$3,500
18	Overhead door (10' x 8')	\$8,000	43	Steel post site signage	\$2,750
24	Domestic water piping (allowance)	\$4,500	49	Exterior door, restoration (allowance)	\$5,500
26	Storage tank	\$7,500	50	Soffit, vinyl	\$1,530
27	Well pump	\$8,500	51	Siding, replace with Hardiplank	\$72,000
28	Well clean-up service	\$3,000	52	Fascia, brake metal	\$1,620
29	Well pressure tank	\$7,500	53	Building insulation	\$15,000
33	Heat pump, compressor (5 ton)	\$6,500	54	Window shutter, wood	\$18,700
46	Hardscapes/foundation plantings (allowance)	\$2,500	55	Windows (4' x 7'), restoration	\$16,800
68	Pavement, rejuvenator seal coat	\$4,988	56	Windows (3' x 4'), restoration	\$6,000
69	Chip & seal parking area	\$5,000	62	Well water softener	\$5,700
70	PTL rail fencing	\$26,000	66	Electrical (allowance)	\$7,500
81	Chain link fence and backstop	\$30,000			
82	PTL sign structure, text and/or graphic	\$6,000			
84	Pavement, rejuvenator seal coat	\$3,150			
Total Scheduled Replacements		\$151,138	Total Scheduled Replacements		\$156,600

Item	2025 - YEAR 2	\$	Item	2026 - YEAR 3	\$
4	Russell Township sign (foamcore, full color with graphic)	\$14,400	10	Hardscapes/foundation plantings (allowance)	\$3,000
11	Roofing, asphalt shingle	\$35,500	46	Hardscapes/foundation plantings (allowance)	\$2,500
12	Gutters and downspouts	\$36,400			
14	Exterior door	\$7,200			
15	Siding, wood (replace w/ Hardiplank)	\$85,000			
16	Soffit, wood (replace w/ Hardiplank)	\$17,000			
17	Fascia, wood (replace w/ Hardiplank)	\$4,260			
36	Emergency Generator (25 Kw)	\$35,000			
37	Electrical (allowance)	\$7,500			
44	Stormwater management (allowance)	\$1,500			
45	Sanitary sewer (allowance)	\$5,000			
60	Well clean-up service	\$3,000			
61	Well pressure tank	\$7,500			
67	Asphalt pavement, mill and overlay	\$39,900			
Total Scheduled Replacements		\$299,160	Total Scheduled Replacements		\$5,500

Item	2027 - YEAR 4	\$	Item	2028 - YEAR 5	\$
			74	Siding, wood	\$28,800
			75	Soffit, wood	\$1,600
			76	Fascia, wood	\$1,600
			77	Windows, restoration (3' x 8')	\$13,056
			83	Asphalt pavement, mill and overlay	\$25,200
			87	Hardscapes/foundation plantings (allowance)	\$3,000
No Scheduled Replacements			Total Scheduled Replacements		\$73,256

PROJECTED REPLACEMENTS

Item	2029 - YEAR 6	\$	Item	2030 - YEAR 7	\$
2	Pavement, rejuvenator seal coat	\$3,500	30	Well water softener	\$5,700
10	Hardscapes/foundation plantings (allowance)	\$3,000			
46	Hardscapes/foundation plantings (allowance)	\$2,500			
68	Pavement, rejuvenator seal coat	\$4,988			
84	Pavement, rejuvenator seal coat	\$3,150			
Total Scheduled Replacements		\$17,138	Total Scheduled Replacements		\$5,700

Item	2031 - YEAR 8	\$	Item	2032 - YEAR 9	\$
5	Admin. Bldg. sign (wood, full color w/ graphic)	\$25,600	10	Hardscapes/foundation plantings (allowance)	\$3,000
59	Well pump	\$8,500	13	Caulking (allowance)	\$5,000
80	Gravel over tar and chip	\$30,000	25	Water heater, 40 gal., residential	\$2,200
			35	Heat pump, compressor (5 ton)	\$13,000
			39	Network (allowance)	\$10,000
			46	Hardscapes/foundation plantings (allowance)	\$2,500
			65	Split system HVAC, compressor (4 ton)	\$6,000
Total Scheduled Replacements		\$64,100	Total Scheduled Replacements		\$41,700

Item	2033 - YEAR 10	\$	Item	2034 - YEAR 11	\$
19	Overhead door (10' x 10')	\$10,000	38	Security system (allowance)	\$16,000
24	Domestic water piping (allowance)	\$4,500	49	Exterior door, restoration (allowance)	\$5,500
27	Well pump	\$8,500			
28	Well clean-up service	\$3,000			
29	Well pressure tank	\$7,500			
69	Chip & seal parking area	\$5,000			
82	PTL sign structure, text and/or graphic	\$6,000			
Total Scheduled Replacements		\$44,500	Total Scheduled Replacements		\$21,500

PROJECTED REPLACEMENTS

Item	2035 - YEAR 12	\$	Item	2036 - YEAR 13	\$
2	Pavement, rejuvenator seal coat	\$3,500	62	Well water softener	\$5,700
4	Russell Township sign (foamcore, full color with graphic)	\$14,400			
6	Flagpole (approx. 30')	\$6,500			
10	Hardscapes/foundation plantings (allowance)	\$3,000			
31	Well replacement	\$15,000			
32	Heat pump, furnace (60,000 btu)	\$6,500			
33	Heat pump, compressor (5 ton)	\$6,500			
45	Sanitary sewer (allowance)	\$5,000			
46	Hardscapes/foundation plantings (allowance)	\$2,500			
60	Well clean-up service	\$3,000			
61	Well pressure tank	\$7,500			
68	Pavement, rejuvenator seal coat	\$4,988			
73	Rebuild/restore exterior doors (allowance)	\$3,000			
84	Pavement, rejuvenator seal coat	\$3,150			
Total Scheduled Replacements		\$84,538	Total Scheduled Replacements		\$5,700

Item	2037 - YEAR 14	\$	Item	2038 - YEAR 15	\$
No Scheduled Replacements			10	Hardscapes/foundation plantings (allowance)	\$3,000
			18	Overhead door (10' x 8')	\$8,000
			46	Hardscapes/foundation plantings (allowance)	\$2,500
			87	Hardscapes/foundation plantings (allowance)	\$3,000
No Scheduled Replacements			Total Scheduled Replacements		\$16,500

Item	2039 - YEAR 16	\$	Item	2040 - YEAR 17	\$
66	Electrical (allowance)	\$7,500	37	Electrical (allowance)	\$7,500
			40	Asphalt pavement, chip & seal over pavement	\$36,800
			63	Well replacement	\$15,000
Total Scheduled Replacements		\$7,500	Total Scheduled Replacements		\$59,300

PROJECTED REPLACEMENTS

Item	2041 - YEAR 18	\$	Item	2042 - YEAR 19	\$
1	Asphalt pavement, mill and overlay	\$28,000	13	Caulking (allowance)	\$5,000
2	Pavement, rejuvenator seal coat	\$3,500	22	Fire Alarm Control Panel, sub panel	\$10,500
5	Admin. Bldg. sign (wood, full color w/ graphic)	\$25,600	23	Smoke detector	\$2,000
10	Hardscapes/foundation plantings (allowance)	\$3,000	30	Well water softener	\$5,700
46	Hardscapes/foundation plantings (allowance)	\$2,500	39	Network (allowance)	\$10,000
59	Well pump	\$8,500			
68	Pavement, rejuvenator seal coat	\$4,988			
72	Gutters and downspouts	\$1,820			
80	Gravel over tar and chip	\$30,000			
84	Pavement, rejuvenator seal coat	\$3,150			
Total Scheduled Replacements		\$111,058	Total Scheduled Replacements		\$33,200

Item	2043 - YEAR 20	\$	Item	2044 - YEAR 21	\$
24	Domestic water piping (allowance)	\$4,500	8	Sanitary sewer (allowance)	\$10,000
26	Storage tank	\$7,500	10	Hardscapes/foundation plantings (allowance)	\$3,000
27	Well pump	\$8,500	35	Heat pump, compressor (5 ton)	\$13,000
28	Well clean-up service	\$3,000	43	Steel post site signage	\$2,750
29	Well pressure tank	\$7,500	46	Hardscapes/foundation plantings (allowance)	\$2,500
34	Heat pump, furnace (60,000 btu)	\$13,000	49	Exterior door, restoration (allowance)	\$5,500
58	Fire Alarm Control Annunciator Panel (FACP)	\$10,500	51	Siding, replace with Hardiplank	\$72,000
67	Asphalt pavement, mill and overlay	\$39,900	54	Window shutter, wood	\$18,700
69	Chip & seal parking area	\$5,000	64	Split system HVAC, furnace (48,000 btu)	\$6,000
82	PTL sign structure, text and/or graphic	\$6,000	65	Split system HVAC, compressor (4 ton)	\$6,000
			79	Heat pump, furnace (60,000 btu)	\$6,000
Total Scheduled Replacements		\$105,400	Total Scheduled Replacements		\$145,450

Item	2045 - YEAR 22	\$	Item	2046 - YEAR 23	\$
4	Russell Township sign (foamcore, full color with graphic)	\$14,400	71	Roofing, asphalt shingle	\$8,000
7	Stormwater Management (allowance)	\$3,000	83	Asphalt pavement, mill and overlay	\$25,200
9	Sanitary sewer, lift station alternate pumps	\$15,000			
12	Gutters and downspouts	\$36,400			
15	Siding, wood (replace w/ Hardiplank)	\$85,000			
16	Soffit, wood (replace w/ Hardiplank)	\$17,000			
17	Fascia, wood (replace w/ Hardiplank)	\$4,260			
20	Windows (3' x 5')	\$21,420			
21	Windows (2' x 3')	\$1,836			
45	Sanitary sewer (allowance)	\$5,000			
57	Window, glass block	\$636			
60	Well clean-up service	\$3,000			
61	Well pressure tank	\$7,500			
86	Stormwater Management (allowance)	\$3,000			
Total Scheduled Replacements		\$217,452	Total Scheduled Replacements		\$33,200

PROJECTED REPLACEMENTS

2047 - YEAR 24			2048 - YEAR 25		
Item		\$	Item		\$
2	Pavement, rejuvenator seal coat	\$3,500	19	Overhead door (10' x 10')	\$10,000
10	Hardscapes/foundation plantings (allowance)	\$3,000	62	Well water softener	\$5,700
25	Water heater, 40 gal., residential	\$2,200	74	Siding, wood	\$28,800
33	Heat pump, compressor (5 ton)	\$6,500	87	Hardscapes/foundation plantings (allowance)	\$3,000
46	Hardscapes/foundation plantings (allowance)	\$2,500			
68	Pavement, rejuvenator seal coat	\$4,988			
84	Pavement, rejuvenator seal coat	\$3,150			
Total Scheduled Replacements		\$25,838	Total Scheduled Replacements		\$47,500

2049 - YEAR 26			2050 - YEAR 27		
Item		\$	Item		\$
38	Security system (allowance)	\$16,000	10	Hardscapes/foundation plantings (allowance)	\$3,000
42	Staircase w/ pavers and railing	\$3,500	11	Roofing, asphalt shingle	\$35,500
50	Soffit, vinyl	\$1,530	14	Exterior door	\$7,200
52	Fascia, brake metal	\$1,620	46	Hardscapes/foundation plantings (allowance)	\$2,500
53	Building insulation	\$15,000			
Total Scheduled Replacements		\$37,650	Total Scheduled Replacements		\$48,200

2051 - YEAR 28			2052 - YEAR 29		
Item		\$	Item		\$
5	Admin. Bldg. sign (wood, full color w/ graphic)	\$25,600	13	Caulking (allowance)	\$5,000
47	Roofing, asphalt shingle	\$11,000	39	Network (allowance)	\$10,000
48	Gutters and downspouts	\$3,250			
59	Well pump	\$8,500			
80	Gravel over tar and chip	\$30,000			
Total Scheduled Replacements		\$78,350	Total Scheduled Replacements		\$15,000

PROJECTED REPLACEMENTS

Item	2053 - YEAR 30	\$	Item	2054 - YEAR 31	\$
2	Pavement, rejuvenator seal coat	\$3,500	30	Well water softener	\$5,700
10	Hardscapes/foundation plantings (allowance)	\$3,000	49	Exterior door, restoration (allowance)	\$5,500
18	Overhead door (10' x 8')	\$8,000	66	Electrical (allowance)	\$7,500
24	Domestic water piping (allowance)	\$4,500			
27	Well pump	\$8,500			
28	Well clean-up service	\$3,000			
29	Well pressure tank	\$7,500			
46	Hardscapes/foundation plantings (allowance)	\$2,500			
68	Pavement, rejuvenator seal coat	\$4,988			
69	Chip & seal parking area	\$5,000			
70	PTL rail fencing	\$26,000			
75	Soffit, wood	\$1,600			
76	Fascia, wood	\$1,600			
81	Chain link fence and backstop	\$30,000			
82	PTL sign structure, text and/or graphic	\$6,000			
84	Pavement, rejuvenator seal coat	\$3,150			
Total Scheduled Replacements		\$118,838	Total Scheduled Replacements		\$18,700

Item	2055 - YEAR 32	\$	Item	2056 - YEAR 33	\$
4	Russell Township sign (foamcore, full color with graphic)	\$14,400	10	Hardscapes/foundation plantings (allowance)	\$3,000
36	Emergency Generator (25 Kw)	\$35,000	35	Heat pump, compressor (5 ton)	\$13,000
37	Electrical (allowance)	\$7,500	46	Hardscapes/foundation plantings (allowance)	\$2,500
41	Accessible ramp at entrance	\$7,500	65	Split system HVAC, compressor (4 ton)	\$6,000
44	Stormwater management (allowance)	\$1,500	78	Window shutter (allowance)	\$16,032
45	Sanitary sewer (allowance)	\$5,000			
60	Well clean-up service	\$3,000			
61	Well pressure tank	\$7,500			
73	Rebuild/restore exterior doors (allowance)	\$3,000			
Total Scheduled Replacements		\$84,400	Total Scheduled Replacements		\$40,532

Item	2057 - YEAR 34	\$	Item	2058 - YEAR 35	\$
No Scheduled Replacements			40	Asphalt pavement, chip & seal over pavement	\$36,800
			87	Hardscapes/foundation plantings (allowance)	\$3,000
			Total Scheduled Replacements		\$39,800

PROJECTED REPLACEMENTS

Item	2059 - YEAR 36	\$	Item	2060 - YEAR 37	\$
1	Asphalt pavement, mill and overlay	\$28,000	6	Flagpole (approx. 30')	\$6,500
2	Pavement, rejuvenator seal coat	\$3,500	31	Well replacement	\$15,000
10	Hardscapes/foundation plantings (allowance)	\$3,000	62	Well water softener	\$5,700
32	Heat pump, furnace (60,000 btu)	\$6,500			
33	Heat pump, compressor (5 ton)	\$6,500			
46	Hardscapes/foundation plantings (allowance)	\$2,500			
55	Windows (4' x 7'), restoration	\$16,800			
56	Windows (3' x 4'), restoration	\$6,000			
68	Pavement, rejuvenator seal coat	\$4,988			
84	Pavement, rejuvenator seal coat	\$3,150			
Total Scheduled Replacements		\$80,938	Total Scheduled Replacements		\$27,200

Item	2061 - YEAR 38	\$	Item	2062 - YEAR 39	\$
5	Admin. Bldg. sign (wood, full color w/ graphic)	\$25,600	10	Hardscapes/foundation plantings (allowance)	\$3,000
59	Well pump	\$8,500	13	Caulking (allowance)	\$5,000
67	Asphalt pavement, mill and overlay	\$39,900	22	Fire Alarm Control Panel, sub panel	\$10,500
72	Gutters and downspouts	\$1,820	23	Smoke detector	\$2,000
80	Gravel over tar and chip	\$30,000	25	Water heater, 40 gal., residential	\$2,200
			39	Network (allowance)	\$10,000
			46	Hardscapes/foundation plantings (allowance)	\$2,500
Total Scheduled Replacements		\$105,820	Total Scheduled Replacements		\$35,200

Item	2063 (beyond study period)	\$	Item	2064 (beyond study period)	\$
19	Overhead door (10' x 10')	\$10,000	38	Security system (allowance)	\$16,000
24	Domestic water piping (allowance)	\$4,500	43	Steel post site signage	\$2,750
26	Storage tank	\$7,500	49	Exterior door, restoration (allowance)	\$5,500
27	Well pump	\$8,500	51	Siding, replace with Hardiplank	\$72,000
28	Well clean-up service	\$3,000	54	Window shutter, wood	\$18,700
29	Well pressure tank	\$7,500	83	Asphalt pavement, mill and overlay	\$25,200
58	Fire Alarm Control Annunciator Panel (FACP)	\$10,500			
69	Chip & seal parking area	\$5,000			
77	Windows, restoration (3' x 8')	\$13,056			
82	PTL sign structure, text and/or graphic	\$6,000			
Total Scheduled Replacements		\$75,556	Total Scheduled Replacements		\$140,150

SECTION D - CONDITION ASSESSMENT

General Comments. Miller+Dodson Associates conducted a Reserve Study at Township Properties in September 2022. Russell Township Properties is in generally good condition for a township. A review of the Replacement Reserve Inventory will show that we are anticipating 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. Miller Dodson 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.

ADMIN BUILDING

8501 Kinsman Road, Novelty, OH 44072



Entry Monument and Signage. The building features an entry monument. The monument is in good condition.

The monument sign is made of wood board and are in good condition. To keep the monument fresh and appealing, we recommend replacement every 10 to 15 years.

Small miscellaneous signs are not considered in this study and should be replaced using other funds.

Parking Areas. The building features parking areas and drive lanes constructed of asphalt pavement. The pavements are in fair condition.



Typical defects that require replacement include the following:

- **Open Cracks.** There are multiple locations where open cracks are allowing water to penetrate to the asphalt base and the bearing soils beneath. Over time, water will erode the base and accelerate the deterioration of the asphalt pavement. If cracks extend to the base and bearing materials, remove the damaged areas, and replace defective materials. As a part of normal maintenance, clean and fill all other cracks.
- **Alligatoring.** There are multiple locations where the asphalt has developed a pattern of cracking 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 to 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.** The asphalt pavement is not properly graded, resulting in the ponding of water. Proper grading of the asphalt pavement will require replacing portions of the asphalt. It may also require resetting improperly sloped curb and gutter segments that are not conveying 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.
- **Potholes.** Potholes have formed as the result of full-depth pavement failure, including base materials. The repair will require removal of the asphalt and base materials, installation and compaction of new base materials, and asphalt resurfacing.
- **Depressions.** There are areas where the asphalt surface is depressed due to deformation in the surface or underlying layers. These depressions may continue to grow with exposure to traffic. Water ponding is evident in several of these areas. Repair of these areas will require the removal of the asphalt and base material and reinstallation, by compacting the new base material and resurfacing with asphalt.
- **Wheel Rutting.** Depressions along the wheel lines extend along portions of the roadway. Repair of these areas will require full-depth and full-width pavement replacement. Wheel rutting, if left unattended can adversely affect vehicle steering.
- **Shoving.** Occurring at locations of sharp braking or turning. The primary cause of this defect is from large truck traffic. If addressed early, surface milling and overlay using a stiffer topcoat of asphalt pavement shoving can be mitigated.
- **Tree Root Damage.** This is known as Heaving, there are locations where tree roots caused heaving in the pavement surface. The repair of these areas requires the removal of the asphalt and the tree roots, then replenish and re-

compact the base material and resurface the asphalt. Root trimming can also be an effective way to control this defect.

- **Edge Cracking.** Sections of the asphalt pavement have developed 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.
- **Reflective Cracking.** The asphalt pavement has a significant number of reflective cracks. Reflective cracks occur when placing a new asphalt overlay over an existing cracked pavement. With time and movement, existing cracks will migrate through the new asphalt. Installing a bridging membrane or fabric at the time of overlay can control reflective cracking.

A more detailed summary of pavement distress can be found at <http://www.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.

In an effort to maintain the condition of the pavement throughout the community and ensure the longest life of the asphalt, we recommend the Association adopts 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 it will not be funded from Reserves.
- **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 from 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 used is based on recent contracts for a two-inch mill and overlay with repairs to 10% to 15% of the subgrade. This reflects the current local market for this work. Pavement surfaces that are deteriorated more than 2" of have multiple areas of full depth deterioration will cost additional amounts to repair.

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 are minimally effective. However, the newer coating materials, such as those from Total Asphalt Management, Asphalt Restoration Technologies, Inc., and others, are penetrating. They are engineered, so to speak, to 'remoisturize' 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 in the forms of cracking and potholes. Remoisturizing the pavement can return its flexibility and extend the life of the pavement.

Concrete Work. The concrete work includes the sidewalks, leadwalks, stairs, stoops, and other flatwork. The overall condition of the concrete work is fair with areas of defects consistent with the age of the installation.



The standards we use for recommending replacement are as follows:

- Trip hazard, ½ inch height difference
- Severe cracking
- Severe spalling and scale
- Uneven riser heights on steps
- Steps with risers in excess of 8¼ inches
- Settlement and heaving
- Tree root damage

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.

Stormwater Management. We have included an allowance for stormwater management. This allowance is intended to address drainage issues, wet areas, inlets, structures, etc.



Foundation Plantings. The building features rooted woody plants that are designed to support soil integrity, provide shade, add to the aesthetic appeal of the site, and at times conceal utilities.



Proper selection of foundation plants will allow nature to do its thing and fill the space without the negative effects of overgrowing. The concept of the foundation plantings is to remain for 20 – 30 years. Periodic assessment of the function of plantings in the community should be conducted with a landscape specialist or arborist. In some areas, the municipality has oversight on trees and regulates what can be removed entirely.

Listed below are a few of the conditions that will require the removal and replacement of trees.

- Nuisance roots that lift sidewalk and pavement sections
- Large trees that grow too close to roofs and gutters
- Tree canopy hanging over parking spots
- Trunk and roots too close to building foundations
- Trunk and canopy that is taller than the building structures
- Dying and diseased trees
- Bushes and shrubs that are overgrown and cannot be trimmed back
- Roots that damage sidewalks or pavements.

This study includes an allowance to perform the replacement of individual trees or shrubs. The understanding that trees would be cut down, removed, stump ground, and a new tree planted in its place. The allowance is not intended for planting annuals, seasonal flowers, mulch, or landscaping services.

Well and Water Softener. The building features a ground water well and septic system. We consider the system to include the well casing, well pump, and piping. These items are concealed underground and were not reviewed but we understand they are in good operating condition. The system also includes a water softener system which includes a water softener system, brine tank, and pressure tank. The water softener is reported to be in good condition.



Septic System. The building features a septic system. The system includes a box, pump, valve, and leach bed. The system was concealed underground and not reviewed but is reported to be in good condition. The system includes an ejector pump.

Building Roofing. The building features a pitched structure that is roofed in asphalt shingles. The roofing is in good condition.



Asphalt shingle roofs can have a useful life of 20 to 50 years depending on the weight and quality of the shingle. Weathered, curled, and missing shingles are all indications that the shingles may be nearing the end of their useful life.

Access to the roof was not provided at the time of inspection. The roofing was observed from the ground level.

Annual inspections are recommended, with cleaning, repair, and mitigation of vegetation performed as needed. Access, inspection, and repair work should be performed by contractors and personnel with the appropriate access equipment who are experienced in the types of roofing used for the facility.

Gutters and Downspouts. The building features aluminum gutters and downspouts. The gutters and downspouts are in fair condition.



A gutter and downspout system will remove rainwater from the area of the building's roof, siding, and foundation, protect the exterior surfaces from water damage. Gutters should run the full length of all drip edges of the building's roof. Even with full gutters, it is important to inspect the function of the gutters during heavy rain to identify any deficiencies. It may be necessary to periodically adjust the slope of sections, repair connections, replace hangers, and install shrouds to the gutter system. Downspouts should be securely attached to the side of the structure. Any broken straps should be replaced. The area of the outlet should be inspected to promote run-off in the desired direction. Long straight runs should have an elbow at the bottom. Splash blocks should be installed to fray the water out-letting from the downspout.

It is recommended that all gutters be cleaned at least twice each year. If there are a large number of trees located close to a building, consider installing a gutter debris shield that will let water into the gutters but will filter out leaves, twigs, and other debris.

It is recommended that gutters and downspouts be installed on all buildings. It is also recommended that the discharge from the downspouts be extended at least ten feet away from the foundations.

Siding and Trim. The building is sided in wood t-111 or plank and batten wood. The building exterior was just painted and is in fair condition with moderate weathering. We have estimated that these exteriors will be replaced with cement fiber boards.





Soffit, Fascia, and trim. Wooden exterior materials are typically repaired as needed during normal painting cycles. Painting cycles for wooden exteriors vary between five and ten years depending on the grade of wood and the quality of the materials and finish work. In this study, we have modeled for an incremental wood material replacement to coincide with the painting cycle of the facility. As an alternative to high-maintenance materials, the Association may want to consider replacements using low maintenance synthetic or cementitious materials. These materials are constructed from wood fiber, wax, PVC, and resins that extruded to create boards that resemble wood; perform better in exterior applications; and are aesthetically superior to materials that warp, sag, and rot. Often times wood trim is constructed of paint grade moldings that require routine maintenance and painting. Many of these types of materials have a history of problems and premature failure.

Periodic inspection of trim, wrap, and sheathing should be conducted. The Association may discover that concealed damage is present at the underlying sheathing and building structure. Structural repairs and latent damage are not accounted for in this study.

Cement fiber exterior siding and trim are pressed from a mold using cellulose fibers, Portland cement, and sand. The result is a siding system that is strong, durable, and long-lasting material. Cement fiber or cementitious materials typically have an extended useful life and require repainting and recaulking every 10 to 15 years. Following the manufacturer's recommendations for cleaning, painting, and caulking, we expect cementitious products to have a useful life of 40 years or more.

Windows. The community maintains the windows of the facility. The windows are generally in good condition.



Window and door units play an integral part in a facility's overall comfort, efficiency, and energy use. The quality of the installed units and the care taken in their installation and maintenance are major factors in their effectiveness and useful life. These units can have a useful life of 20 to 35 years or more depending on their use and other factors mentioned above.

Vinyl double hung and casement windows. These types of windows are usually constructed of factory assembled frames and sashes. The glass or glazing is normally constructed of multiple panels of glass with inert gasses between the layers of glass for insulating purposes. Additional seals are inserted around the sashes to seal out drafts. Springs or balances are installed to make it easier to open and close the sashes.

Aluminum double hung and casement windows. These types of windows are usually constructed of factory assembled frames and sashes. The glass or glazing is normally constructed of multiple panels of glass with inert gasses between the layers of glass for insulating purposes. Additional seals are inserted around the sashes to seal out drafts. Springs or balances are installed to make it easier to open and close the sashes.

In general, we recommend coordinating the replacement of the window units with other exterior work, such as siding and roof replacements. The weather tightness of the building envelope often requires wraps, transitional flashing, and caulking that should be performed in coordination with each other. Warranties and advantages in 'economy of scale' can often result in lower overall replacement costs and results that are more reliable. Lastly, coordinated replacements offer the opportunity to correct initial construction defects and improve the effectiveness of details with improved construction techniques and materials.

Exterior Doors. The Community maintains the exterior doors of the community building.



Pre-hung exterior doors provide a door, frame, and hinges that function as a unit. Doors can be wood, steel, aluminum, and fiberglass. Frames can also be wood, steel, and aluminum.

Doors should be maintained to the extent that the fully open and close, hinges swing easily, hardware latches and opens. With exterior doors it is necessary to maintain a weather seal, and prevent frames from rusting.

Overhead Doors. The building features 2 overhead doors. One door is new and in good condition, the other door is deteriorated and needs to be replaced.



Overhead doors should be maintained to the extent that they fully open and fully close. All tracks and rollers operate in a smooth continuous cycle free of binding and stops. Safety features such as stops, return sensors, a close tension should be checked periodically.

Automatic operators provide a one touch operation to open or close. These normally include operator motor, track or roller, and controls. The openers are reported to be in good condition.

Building Interiors. Building interiors are excluded from reserves.

Building Systems.

HVAC Systems. The heating ventilation and air conditioning (HVAC) of the facility are provided by furnace/compressor split systems. The HVAC is in good working order. Detailed inspection and testing of these systems are beyond the scope of this study.



The Association maintains a number of HVAC systems that use one of the new generation refrigerants. Unlike the old R22 refrigerant, the new refrigerants are expected to be available throughout the period of this study. However, the operating pressure for new refrigerant systems is approximately twice as high as older systems. Many of the standard components have not been redesigned for these higher pressures, including the coils, which generally fail due to metal fatigue.

Even though manufacturers continue to predict 15 to 20-year life cycles for HVAC equipment that uses these new refrigerants, this is not proven by historical data. We, therefore, recommend anticipating a normal economic life of 12 years for all HVAC equipment that uses pressurized refrigerants of these types.

In addition, the Association maintains air handlers/furnaces throughout the facility, and these components can have a useful life of 20 to 40 years. With fan, motor, and coil replacements performed as needed, the casings of these systems can last significantly longer.

As is the case with most equipment, to achieve a maximum useful economic life, proper maintenance is essential. In some cases, proper and proactive maintenance can greatly extend the useful life of these components.

Domestic Hot Water. Domestic hot water is provided by a residential water heater tank which is in good condition.



Typically these types of systems have a service life of 12-15 years. This system should be serviced periodically to provide the most reliable service.

Fire Safety Systems. The facility includes a fire safety system to notify the occupants in the event of a fire. The system includes a fire alarm panel, smoke detectors, speakers, strobes, emergency pulls, sprinkler, and a pressure pump system.

Fire Alarm Control Panel (FACP). The FACP provides the function of central processing and notifying channel for emergencies. Every device in the building is programmed into the FACP. Furthermore, the FACP is initiate the alarm. Please note the type of alarm is determined by the system settings. The Association should review how the system is programmed with the system engineer.



The fire alarm panel is an electronic device that programs and receives signals from the devices of the system.

Building fire alarm systems have a service life of 15 to 25 years. While the panels may continue to operate past this point, changes in fire safety technology and building fire safety codes tend to render them obsolete. In addition, manufacturers only support their systems for a limited period, typically about 15 years. After this time, it may be increasingly difficult to obtain replacement parts and services.

When it becomes necessary to upgrade the fire alarm system, differences in the technologies and new code requirements are likely to require upgrades in lighting, sensors, alarms, and other system and sub-components.



Fire Sprinkler. The building does not have a fire sprinkler system.

Testing and Inspection. Local building and fire codes will require periodic inspections and tests of your systems. These requirements vary from county to county and state to state. Most fire safety systems are listed with the local fire marshal that has jurisdiction in your area. Annual inspections, 5-year testing, 10-year testing, and 20-year testing are not considered in reserves. Subsequent repairs and annual maintenance work are not accounted for or included in this study.

Fire panel manufacturers typically have approved contractors that will provide service and support for their systems. The facility should have an ongoing contractual relationship with one of these such contractors.

Building Electrical Service. Electrical service enters the building via the vault which is maintained by the utility company. This includes the meter, feed lines, conduits, and buss ducts.



The system should be protected from water damage, overloading, and modifications to ensure safe reliable service. The utility service cabling and components are considered long-life installations, and unless otherwise noted, are excluded from this study.

Responsible facilities management will require maintenance of the equipment even when there are no system issues. Periodic inspection of the busses and tightening of all connections is recommended every three to five years. Insurance policies in some cases may have specific requirements regarding the tightening of electrical connections.

Replacement of these smaller components, unless otherwise identified, is considered incidental to refurbishment or is considered a Valuation Exclusion.

Electrical Distribution Panels. The building's electrical systems features a number of electrical distribution panels located throughout the facility. These panels separate the building's electrical power into separate identifiable circuits. All panels track back to the service and have panel schedules identifying the circuits within the breaker panel. These panels date to the original construction of the building and have a rated service life of 50 years or more.

The overall condition of the distribution panels is good. As the distribution panel's age, obtaining replacement parts can be expected to become more difficult. When parts no longer are available, the Association will have to replace some of the existing panels. The replacement will have to be performed on an incremental basis, panel by panel. Therefore, we have included funding in the Reserve Analysis for distribution panel replacement on an incremental basis.

It is also recommended that outlets, sockets, switches, and minor fixtures be replaced at a maximum of every 30 years. These are not included in reserves.

Emergency Generator. The facility features an emergency generator. The system operates on standby until needed. The generator includes a natural gas generator, voltage generator, transfer switches, and an enclosure.



The generator power is distributed to the Automatic Transfer Switch (ATS) which powers designated panels. These panels are typically emergency panels that service necessary building features and safety features such as lighting, fire alarm, and elevators. Generators should be exercised regularly. Regular maintenance is required to keep the system functional.

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TOWN HALL BUILDING

Kinsman Road, Novelty, OH 44072



Tar and Chip Pavement. The parking areas and drive lanes include tar and chip pavements. Generally, tar and chip provide an economical way to pave areas with light traffic. The tar and chip will eventually become a hardened surface from vehicle traffic.



Stormwater Management. We have included an allowance for stormwater management. This allowance is intended to address drainage issues, wet areas, inlets, structures, etc.

Foundation Plantings. The community features rooted woody plants that are designed to support soil integrity, provide shade, add to the aesthetic appeal of the community, and at times conceal utilities.



Proper selection of foundation plants will allow nature to do its thing and fill the space without the negative effects of overgrowing. The concept of the foundation plantings is to remain for 20 – 30 years. Periodic assessment of the function of plantings in the community should be conducted with a landscape specialist or arborist. In some areas, the municipality has oversight on trees and regulates what can be removed entirely.

Listed below are a few of the conditions that will require the removal and replacement of trees.

- Nuisance roots that lift sidewalk and pavement sections
- Large trees that grow too close to roofs and gutters
- Tree canopy hanging over parking spots
- Trunk and roots too close to building foundations
- Trunk and canopy that is taller than the building structures
- Dying and diseased trees
- Bushes and shrubs that are overgrown and cannot be trimmed back
- Roots that damage sidewalks or pavements.

This study includes an allowance to perform the replacement of individual trees or shrubs. The understanding that trees would be cut down, removed, stump ground, and a new tree planted in its place. The allowance is not intended for planting annuals, seasonal flowers, mulch, or landscaping services.

Well and Water Softener. The building features a ground water well and septic system. We consider the system to include the well casing, well pump, and piping. These items are concealed underground and were not reviewed but we understand they are in good operating condition. The system also includes a water softener system which includes a water softener system, brine tank, and pressure tank. The water softener is reported to be in good condition.



Septic System or Sewer connection. We could not determine if the building features a septic system or connection to the sewer. We have included an allowance for either situation.

Building Roofing. The building features a pitched structure that is roofed in asphalt shingles. The roofing is in good condition.



Asphalt shingle roofs can have a useful life of 20 to 50 years depending on the weight and quality of the shingle. Weathered, curled, and missing shingles are all indications that the shingles may be nearing the end of their useful life.

Access to the roof was not provided at the time of inspection. The roofing was observed from the ground level.

Annual inspections are recommended, with cleaning, repair, and mitigation of vegetation performed as needed. Access, inspection, and repair work should be performed by contractors and personnel with the appropriate access equipment who are experienced in the types of roofing used for the facility.

Gutters and Downspouts. The building features aluminum gutters and downspouts. The gutters and downspouts are in good condition.



A gutter and downspout system will remove rainwater from the area of the building's roof, siding, and foundation, protect the exterior surfaces from water damage. Gutters should run the full length of all drip edges of the building's roof. Even with full gutters, it is important to inspect the function of the gutters during heavy rain to identify any deficiencies. It may be necessary to periodically adjust the slope of sections, repair connections, replace hangers, and install shrouds to the gutter system. Downspouts should be securely attached to the side of the structure. Any broken straps should be replaced. The area of the outlet should be inspected to promote run-off in the desired direction. Long straight runs should have an elbow at the bottom. Splash blocks should be installed to fray the water out-letting from the downspout.

It is recommended that all gutters be cleaned at least twice each year. If there are a large number of trees located close to a building, consider installing a gutter debris shield that will let water into the gutters but will filter out leaves, twigs, and other debris.

It is recommended that gutters and downspouts be installed on all buildings. It is also recommended that the discharge from the downspouts be extended at least ten feet away from the foundations.

Siding and Trim. The building is sided aluminum siding or clapboards. The building exterior is in good condition. We have estimated that these exteriors will be replaced with cement fiber boards.



Soffit, Fascia, and trim. Wooden exterior materials are typically repaired as needed during normal painting cycles. Painting cycles for wooden exteriors vary between five and ten years depending on the grade of wood and the quality of the materials and finish work. In this study, we have modeled for an incremental wood material replacement to coincide with the painting cycle of the facility. As an alternative to high-maintenance materials, the Association may want to consider replacements using low maintenance synthetic or cementitious materials. These materials are constructed from wood fiber, wax, PVC, and resins that are extruded to create boards that resemble wood; perform better in exterior applications; and are aesthetically superior to materials that warp, sag, and rot. Often times wood trim is constructed of paint grade moldings that require routine maintenance and painting. Many of these types of materials have a history of problems and premature failure.

Periodic inspection of trim, wrap, and sheathing should be conducted. The Association may discover that concealed damage is present at the underlying sheathing and building structure. Structural repairs and latent damage are not accounted for in this study.

Cement fiber exterior siding and trim are pressed from a mold using cellulose fibers, Portland cement, and sand. The result is a siding system that is strong, durable, and long-lasting material. Cement fiber or cementitious materials typically have an extended useful life and require repainting and recaulking every 10 to 15 years. Following the manufacturer's recommendations for cleaning, painting, and caulking, we expect cementitious products to have a useful life of 40 years or more.

Windows. The Township maintains the windows of the facility. The windows are historic wood and glass and are generally in good condition.



Window and door units play an integral part in a facility's overall comfort, efficiency, and energy use. The quality of the installed units and the care taken in their installation and maintenance are major factors in their effectiveness and useful life. These units can have a useful life of 20 to 35 years or more depending on their use and other factors mentioned above.

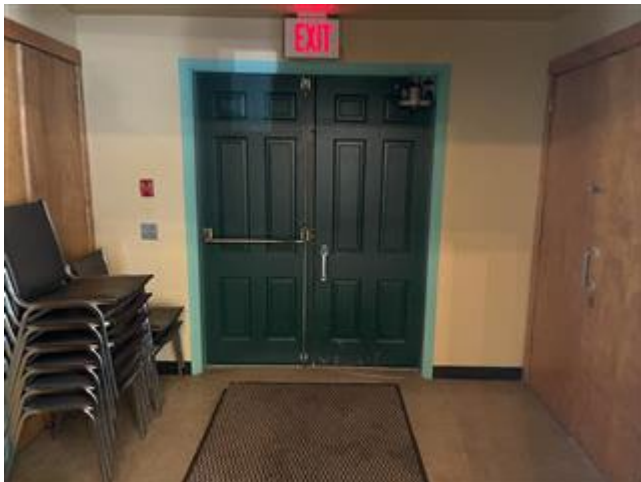
Vinyl double hung and casement windows. These types of windows are usually constructed of factory assembled frames and sashes. The glass or glazing is normally constructed of multiple panels of glass with inert gasses between the layers of glass for insulating purposes. Additional seals are inserted around the sashes to seal out drafts. Springs or balances are installed to make it easier to open and close the sashes.

Wood double hung and casement windows. These types of windows are usually constructed of factory assembled frames and sashes. The glass or glazing is normally constructed of multiple panels of glass with inert gasses between the layers of glass for insulating purposes. Additional seals are inserted around the sashes to seal out drafts. Springs or balances are installed to make it easier to open and close the sashes.

Aluminum double hung and casement windows. These types of windows are usually constructed of factory assembled frames and sashes. The glass or glazing is normally constructed of multiple panels of glass with inert gasses between the layers of glass for insulating purposes. Additional seals are inserted around the sashes to seal out drafts. Springs or balances are installed to make it easier to open and close the sashes.

In general, we recommend coordinating the replacement of the window units with other exterior work, such as siding and roof replacements. The weather tightness of the building envelope often requires wraps, transitional flashing, and caulking that should be performed in coordination with each other. Warranties and advantages in 'economy of scale' can often result in lower overall replacement costs and results that are more reliable. Lastly, coordinated replacements offer the opportunity to correct initial construction defects and improve the effectiveness of details with improved construction techniques and materials.

Exterior Doors. The Community maintains the exterior doors of the community building.



Pre-hung exterior doors provide a door, frame, and hinges that function as a unit. Doors can be wood, steel, aluminum, and fiberglass. Frames can also be wood, steel, and aluminum.

Doors should be maintained to the extent that the fully open and close, hinges swing easily, hardware latches and opens. With exterior doors, it is necessary to maintain a weather seal and prevent frames from rusting.

Building Interiors. Building interiors are excluded from reserves.

Building Systems.

HVAC Systems. The heating ventilation and air conditioning (HVAC) of the facility are provided by furnace/compressor split systems. The HVAC is in good working order. Detailed inspection and testing of these systems are beyond the scope of this study.

Even though manufacturers continue to predict 15 to 20-year life cycles for HVAC equipment that uses these new refrigerants, this is not proven by historical data. We, therefore, recommend anticipating a normal economic life of 15 years for all HVAC equipment that uses pressurized refrigerants of these types.

In addition, the Association maintains air handlers/furnaces throughout the facility, and these components can have a useful life of 20 to 40 years. With fan, motor, and coil replacements performed as needed, the casings of these systems can last significantly longer.

As is the case with most equipment, to achieve a maximum useful economic life, proper maintenance is essential. In some cases, proper and proactive maintenance can greatly extend the useful life of these components.



Domestic Hot Water. Domestic hot water is provided by a water heater tank which is in good condition.



Typically these types of systems have a service life of 12-15 years. This system should be serviced periodically to provide the most reliable service.

Fire Safety Systems. The facility includes a fire safety system to notify the occupants in the event of a fire. The system includes a fire alarm panel, smoke detectors, speakers, strobes, emergency pulls, a sprinkler, and a pressure pump system.

Fire Alarm Control Panel (FACP). The FACP provides the function of central processing and notifying channels for emergencies. Every device in the building is programmed into the FACP. Furthermore, the FACP initiates the alarm. Please note the type of alarm is determined by the system settings. The Association should review how the system is programmed with the system engineer.

The fire alarm panel is an electronic device that programs and receives signals from the devices of the system.

Building fire alarm systems have a service life of 15 to 25 years. While the panels may continue to operate past this point, changes in fire safety technology and building fire safety codes tend to render them obsolete. In addition, manufacturers only support their systems for a limited period, typically about 15 years. After this time, it may be increasingly difficult to obtain replacement parts and services.

When it becomes necessary to upgrade the fire alarm system, differences in the technologies and new code requirements are likely to require upgrades in lighting, sensors, alarms, and other system and sub-components.



Fire Sprinkler. The building does not have a fire sprinkler.

Testing and Inspection. Local building and fire codes will require periodic inspections and tests of your systems. These requirements vary from county to county and state to state. Most fire safety systems are listed with the local fire marshal that has jurisdiction in your area. Annual inspections, 5-year testing, 10-year testing, and 20-year testing are not considered in reserves. Subsequent repairs and annual maintenance work are not accounted for or included in this study.

Fire panel manufacturers typically have approved contractors that will provide service and support for their systems. The facility should have an ongoing contractual relationship with one of these such contractors.

Building Electrical Service. Electrical service enters the building via the vault which is maintained by the utility company. This includes the meter, feed lines, conduits, and buss ducts.

The system should be protected from water damage, overloading, and modifications to ensure safe reliable service. The utility service cabling and components are considered long-life installations, and unless otherwise noted, are excluded from this study.

Responsible facilities management will require maintenance of the equipment even when there are no system issues. Periodic inspection of the busses and tightening of all connections is recommended every three to five years. Insurance policies in some cases may have specific requirements regarding the tightening of electrical connections.

Replacement of these smaller components, unless otherwise identified, is considered incidental to refurbishment or is considered a Valuation Exclusion.

Electrical Distribution Panels. The building's electrical systems feature a number of electrical distribution panels located throughout the facility. These panels separate the building's electrical power into separate identifiable circuits. All panels track back to the service and have panel schedules identifying the circuits within the breaker panel. Some of these panels date to the original construction of the building and have a rated service life of 50 years or more.



The overall condition of the distribution panels is good. As the distribution panel's age, obtaining replacement parts can be expected to become more difficult. When parts no longer are available, the Association will have to replace some of the existing panels. The replacement will have to be performed on an incremental basis, panel by panel. Therefore, we have included funding in the Reserve Analysis for distribution panel replacement on an incremental basis.

It is also recommended that outlets, sockets, switches, and minor fixtures be replaced at a maximum of every 30 years. These are not included in reserves.

Emergency Generator. The facility features an emergency generator. The system operates on standby until needed. The generator includes a natural gas engine, a voltage generator, a control panel, and an enclosure.



The generator power is distributed to Automatic Transfer Switch (ATS) which powers designated panels. These panels are typically emergency panels that service necessary building features and safety features such as lighting, fire alarm, and elevators. Generators should be exercised regularly. Regular maintenance is required to keep the system functional.

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CEMETERY

Fairmont Road, Novelty, OH 44072



Parking Areas. The building features parking areas and drive lanes constructed of asphalt pavement. The pavements are in good condition.



Typical defects that require replacement include the following:

- **Open Cracks.** There are multiple locations where open cracks are allowing water to penetrate to the asphalt base and the bearing soils beneath. Over time, water will erode the base and accelerate the deterioration of the asphalt pavement. If cracks extend to the base and bearing materials, remove the damaged areas, and replace defective materials. As a part of normal maintenance, clean and fill all other cracks.
- **Alligatoring.** There are multiple locations where the asphalt has developed a pattern of cracking 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 to 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.** The asphalt pavement is not properly graded, resulting in the ponding of water. Proper grading of the asphalt pavement will require replacing portions of the asphalt. It may also require resetting improperly sloped curb and gutter segments that are not conveying 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.
- **Potholes.** Potholes have formed as the result of full-depth pavement failure, including base materials. The repair will require removal of the asphalt and base materials, installation and compaction of new base materials, and asphalt resurfacing.

- **Depressions.** There are areas where the asphalt surface is depressed due to deformation in the surface or underlying layers. These depressions may continue to grow with exposure to traffic. Water ponding is evident in several of these areas. Repair of these areas will require the removal of the asphalt and base material and reinstallation, by compacting the new base material and resurfacing with asphalt.
- **Wheel Rutting.** Depressions along the wheel lines extend along portions of the roadway. Repair of these areas will require full-depth and full-width pavement replacement. Wheel rutting, if left unattended can adversely affect vehicle steering.
- **Shoving.** Occurring at locations of sharp braking or turning. The primary cause of this defect is from large truck traffic. If addressed early, surface milling and overlay using a stiffer topcoat of asphalt pavement shoving can be mitigated.
- **Tree Root Damage.** This is known as Heaving, there are locations where tree roots caused heaving in the pavement surface. The repair of these areas requires the removal of the asphalt and the tree roots, then replenish and re-compact the base material and resurface the asphalt. Root trimming can also be an effective way to control this defect.
- **Edge Cracking.** Sections of the asphalt pavement have developed 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.
- **Reflective Cracking.** The asphalt pavement has a significant number of reflective cracks. Reflective cracks occur when placing a new asphalt overlay over an existing cracked pavement. With time and movement, existing cracks will migrate through the new asphalt. Installing a bridging membrane or fabric at the time of overlay can control reflective cracking.

A more detailed summary of pavement distress can be found at <http://www.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.

In an effort to maintain the condition of the pavement throughout the community and ensure the longest life of the asphalt, we recommend the Association adopts 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 it will not be funded from Reserves.
- **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 from 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 used is based on recent contracts for a two-inch mill and overlay with repairs to 10% to 15% of the subgrade. This reflects the current local market for this work. Pavement surfaces that are deteriorated more than 2" of have multiple areas of full depth deterioration will cost additional amounts to repair.

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 are minimally effective. However, the newer coating materials, such as those from Total Asphalt Management, Asphalt Restoration Technologies, Inc., and others, are penetrating. They are engineered, so to speak, to 'remoisturize' 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 in the forms of cracking and potholes. Remoisturizing the pavement can return its flexibility and extend the life of the pavement.

Stormwater Management. We have included an allowance for stormwater management. This allowance is intended to address drainage issues, wet areas, inlets, structures, etc.



Building Roofing. The building features a pitched structure that is roofed in asphalt shingles. The roofing is in good condition.

The building features a pitched structure that is roofed in metal roofing. The roofing is new and in good condition.

The building features a flat roofing system. The roofing consists of a Built-Up Roofing system (BUR). The roofing is in fair condition.



Asphalt shingle roofs can have a useful life of 20 to 50 years depending on the weight and quality of the shingle. Weathered, curled, and missing shingles are all indications that the shingles may be nearing the end of their useful life.

Slate shingle roofing can have an extended useful life of 100 years or more. Failures with slate roofs are primarily from the use of improper fasteners, damage from improper access to the roof, and physical damage, primarily from hail. The metalwork including flashings and valleys will need to be replaced, and we assume that this work will be required every 30 years.

Metal roofing can be a standing seam, rolled seam, or shingle with a normal economic life of 50 to 100 years. In some cases, recoating or repainting can extend the useful life of a metal roof.

Flat roofing systems can have a variety of configurations that will greatly affect the cost of replacement including insulation, ballast, the height of the building, and the density of installed mechanical equipment. Flat roofing systems typically have a useful life of 15 to 25 years.

Access to the roof was not provided at the time of inspection. The roofing was observed from the ground level.

Annual inspections are recommended, with cleaning, repair, and mitigation of vegetation performed as needed. Access, inspection, and repair work should be performed by contractors and personnel with the appropriate access equipment who are experienced in the types of roofing used for the facility.

Siding and Trim. The building is sided in wood clapboards. The building exterior is in good condition.



Soffit, Fascia, and trim. Wooden exterior materials are typically repaired as needed during normal painting cycles. Painting cycles for wooden exteriors vary between five and ten years depending on the grade of wood and the quality of the materials and finish work. In this study, we have modeled for an incremental wood material replacement to coincide with the painting cycle of the facility. As an alternative to high-maintenance materials, the Association may want to consider replacements using low maintenance synthetic or cementitious materials. These materials are constructed from wood fiber, wax, PVC, and resins that extruded to create boards that resemble wood; perform better in exterior applications; and are aesthetically superior to materials that warp, sag, and rot. Often times wood trim is constructed of paint grade moldings that require routine maintenance and painting. Many of these types of materials have a history of problems and premature failure.

Periodic inspection of trim, wrap, and sheathing should be conducted. The Association may discover that concealed damage is present at the underlying sheathing and building structure. Structural repairs and latent damage are not accounted for in this study.

Cement fiber exterior siding and trim are pressed from a mold using cellulose fibers, Portland cement, and sand. The result is a siding system that is strong, durable, and long-lasting material. Cement fiber or cementitious materials typically have an extended useful life and require repainting and recaulking every 10 to 15 years. Following the manufacturer's recommendations for cleaning, painting, and caulking, we expect cementitious products to have a useful life of 40 years or more.

Windows. The Township maintains the windows of the facility. The windows are generally in good condition.



Window and door units play an integral part in a facility's overall comfort, efficiency, and energy use. The quality of the installed units and the care taken in their installation and maintenance are major factors in their effectiveness and useful life. These units can have a useful life of 20 to 35 years or more depending on their use and other factors mentioned above.

Vinyl double hung and casement windows. These types of windows are usually constructed of factory assembled frames and sashes. The glass or glazing is normally constructed of multiple panels of glass with inert gasses between the layers of glass for insulating purposes. Additional seals are inserted around the sashes to seal out drafts. Springs or balances are installed to make it easier to open and close the sashes.

Wood double hung and casement windows. These types of windows are usually constructed of factory assembled frames and sashes. The glass or glazing is normally constructed of multiple panels of glass with inert gasses between the layers of glass for insulating purposes. Additional seals are inserted around the sashes to seal out drafts. Springs or balances are installed to make it easier to open and close the sashes.

Aluminum double hung and casement windows. These types of windows are usually constructed of factory assembled frames and sashes. The glass or glazing is normally constructed of multiple panels of glass with inert gasses between the layers of glass for insulating purposes. Additional seals are inserted around the sashes to seal out drafts. Springs or balances are installed to make it easier to open and close the sashes.

In general, we recommend coordinating the replacement of the window units with other exterior work, such as siding and roof replacements. The weather tightness of the building envelope often requires wraps, transitional flashing, and caulking that should be performed in coordination with each other. Warranties and advantages in 'economy of scale' can often result in lower overall replacement costs and results that are more reliable. Lastly, coordinated replacements offer the opportunity to correct initial construction defects and improve the effectiveness of details with improved construction techniques and materials.

Building Interiors. Building interiors are excluded from reserves. We have included an allowance for historical preservation.

Building Systems.

HVAC Systems. The heating furnace system in the reserve. The HVAC is in good working order. Detailed inspection and testing of these systems are beyond the scope of this study.

(Continued on next page)

BASEBALL FIELD

13920 Chillicothe Rd, Chagrin Falls, OH 44022



Entry Monument and Signage. The building features an entry monument. The monument is in good condition.



We recommend re-pointing and replacement of defective areas of the masonry as needed. The Association may want to consider applying a coating of Siloxane or other appropriate breathable sealants to mitigate water penetration and further degradation of the masonry work.

The monument/monuments is are made of wood/fiberboard/foam board and are in good/fair/poor condition, with damaged areas and weathering. To keep the monument fresh and appealing, we recommend replacement every 10 to 15 years.

Small miscellaneous signs are not considered in this study and should be replaced using other funds.

Tar and Chip. The parking areas and drive lanes include tar and chip pavements. Generally tar and chip provides an economical way to pave areas with light traffic. The tar and chip will eventually become a hardened surface from vehicle traffic.



Baseball Fence. The Bob Hall Memorial Field features a baseball fence. This includes outfield fence and a back stop.



RECYCLE AREA

Asphalt Pavement. The Township features a recycle area that includes asphalt pavement. In general, the Association's asphalt pavements are in poor condition.

The Township plans to add lighting, fencing, and some other features to the recycle area.



Typical defects that require replacement include the following:

- **Open Cracks.** There are multiple locations where open cracks are allowing water to penetrate to the asphalt base and the bearing soils beneath. Over time, water will erode the base and accelerate the deterioration of the asphalt pavement. If cracks extend to the base and bearing materials, remove the damaged areas, and replace defective materials. As a part of normal maintenance, clean and fill all other cracks.
- **Alligatoring.** There are multiple locations where the asphalt has developed a pattern of cracking 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 to 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.** The asphalt pavement is not properly graded, resulting in the ponding of water. Proper grading of the asphalt pavement will require replacing portions of the asphalt. It may also require resetting improperly sloped curb and gutter segments that are not conveying 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.
- **Potholes.** Potholes have formed as the result of full-depth pavement failure, including base materials. The repair will require removal of the asphalt and base materials, installation and compaction of new base materials, and asphalt resurfacing.
- **Depressions.** There are areas where the asphalt surface is depressed due to deformation in the surface or underlying layers. These depressions may continue to grow with exposure to traffic. Water ponding is evident in several of these areas. Repair of these areas will require the removal of the asphalt and base material and reinstallation, by compacting the new base material and resurfacing with asphalt.
- **Wheel Rutting.** Depressions along the wheel lines extend along portions of the roadway. Repair of these areas will require full-depth and full-width pavement replacement. Wheel rutting, if left unattended can adversely affect vehicle steering.
- **Shoving.** Occurring at locations of sharp braking or turning. The primary cause of this defect is from large truck traffic. If addressed early, surface milling and overlay using a stiffer topcoat of asphalt pavement shoving can be mitigated.
- **Tree Root Damage.** This is known as Heaving, there are locations where tree roots caused heaving in the pavement surface. The repair of these areas requires the removal of the asphalt and the tree roots, then replenish and re-compact the base material and resurface the asphalt. Root trimming can also be an effective way to control this defect.
- **Edge Cracking.** Sections of the asphalt pavement have developed 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.
- **Reflective Cracking.** The asphalt pavement has a significant number of reflective cracks. Reflective cracks occur when placing a new asphalt overlay over an existing cracked pavement. With time and movement, existing cracks will migrate through the new asphalt. Installing a bridging membrane or fabric at the time of overlay can control reflective cracking.

A more detailed summary of pavement distress can be found at <http://www.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.

In an effort to maintain the condition of the pavement throughout the community and ensure the longest life of the asphalt, we recommend the Association adopts 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 it will not be funded from Reserves.
- **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 from 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 used is based on recent contracts for a two-inch mill and overlay with repairs to 10% to 15% of the subgrade. This reflects the current local market for this work. Pavement surfaces that are deteriorated more than 2" of have multiple areas of full depth deterioration will cost additional amounts to repair.

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 are minimally effective. However, the newer coating materials, such as those from Total Asphalt Management, Asphalt Restoration Technologies, Inc., and others, are penetrating. They are engineered, so to speak, to 'remoisturize' 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 in the forms of cracking and potholes. Remoisturizing the pavement can return its flexibility and extend the life of the pavement.

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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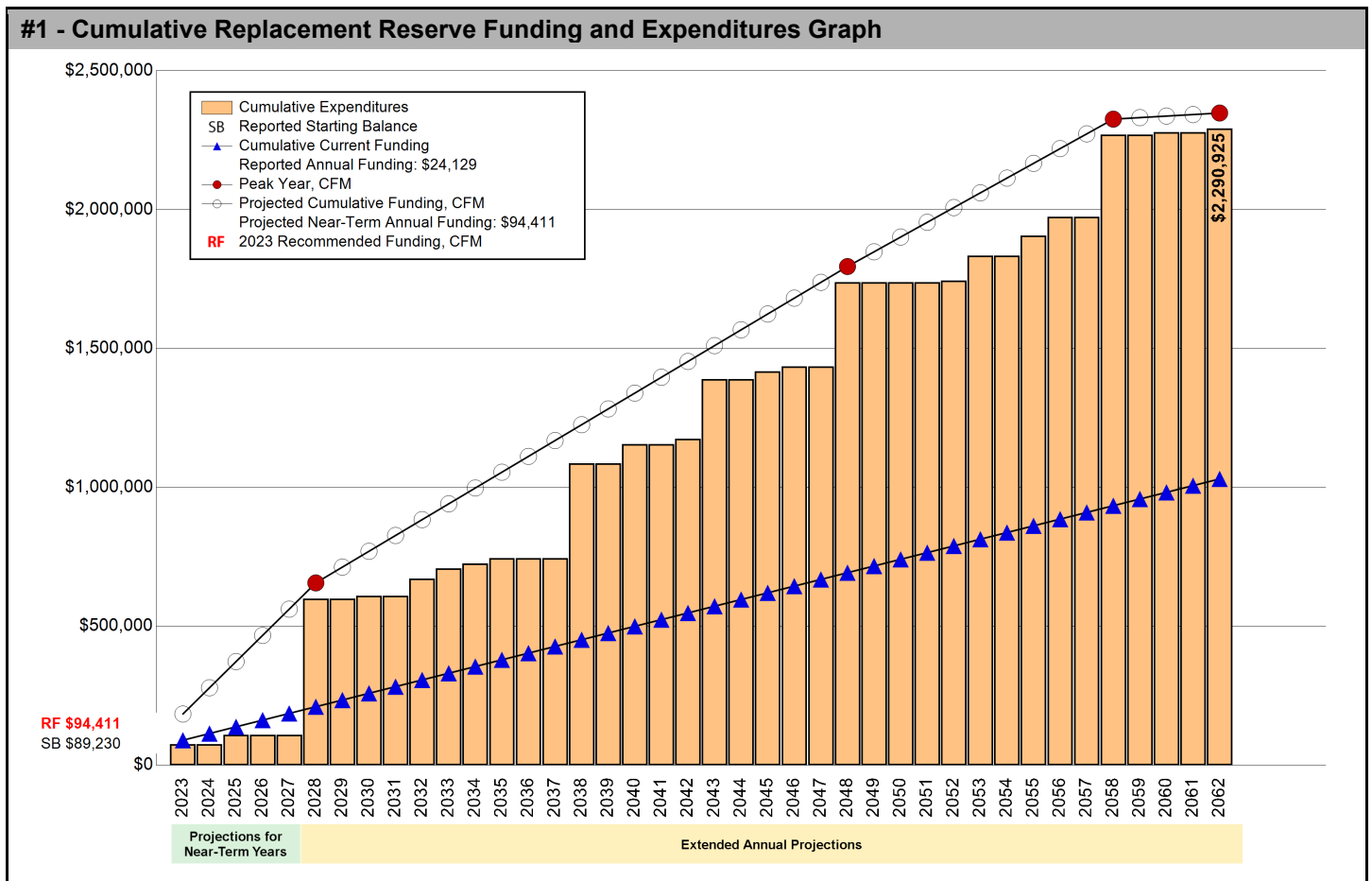
SECTION A - FINANCIAL ANALYSIS

The Police Dept Replacement Reserve Analysis uses the Cash Flow Method (CFM) to calculate Replacement Reserve funding for the periodic replacement of the 46 Projected Replacements identified in the Replacement Reserve Inventory.

\$94,411 RECOMMENDED REPLACEMENT RESERVE FUNDING FOR THE STUDY YEAR, 2023

We recommend the Township adopt a Replacement Reserve Funding Plan based on the annual funding recommendation above. Inflation adjusted funding for subsequent years is shown on Page A1.5.

Police Dept reports a Starting Balance of \$89,230 and Annual Funding totaling \$24,129, which is inadequate to fund projected replacements starting in 2028. See Page A1.3 for a more detailed evaluation.



REPLACEMENT RESERVE ANALYSIS - GENERAL INFORMATION

The Police Dept 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.

2023 | STUDY YEAR

The Township 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, 2023.

40 Years | STUDY PERIOD

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

\$89,230 | STARTING BALANCE

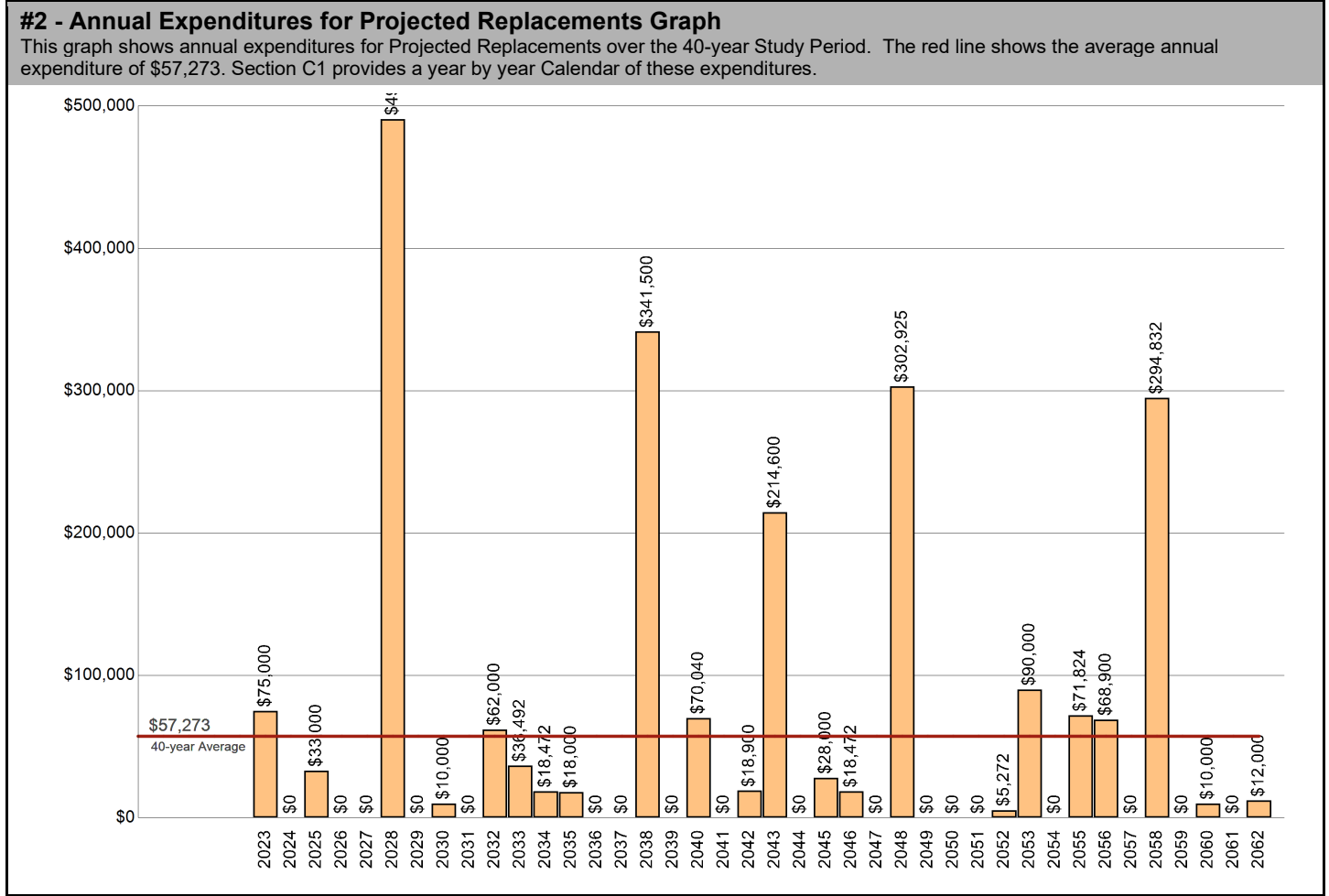
The Township reports Replacement Reserves on Deposit totaling \$89,230 at the start of the Study Year.

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).

\$2,290,925 | REPLACEMENT RESERVE INVENTORY - PROJECTED REPLACEMENTS

The Police Dept Replacement Reserve Inventory identifies 46 items that will require periodic replacement, that are to be funded from Replacement Reserves. We estimate the cost of these replacements will be \$2,290,925 over the 40-year Study Period. The Projected Replacements are divided into 3 major categories starting on Page B1.3. Pages B1.1-B1.2 provide detailed information on the Replacement Reserve Inventory.



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 A1.4 and A1.5. The Projected Replacements listed on Page C1.2 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 A1.5.

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 A1.5.

ANNUAL EXPENDITURES AND CURRENT FUNDING

The annual expenditures that comprise the \$2,290,925 of Projected Expenditures over the 40-year Study Period and the impact of the Township continuing to fund Replacement Reserves at the current level are detailed in Table 3.

#3 - Table of Annual Expenditures and Current Funding Data - Years 1 through 40										
Year	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Starting Balance	\$89,230									
Projected Replacements	(\$75,000)		(\$33,000)			(\$490,697)		(\$10,000)		(\$62,000)
Annual Deposit	\$24,129	\$24,129	\$24,129	\$24,129	\$24,129	\$24,129	\$24,129	\$24,129	\$24,129	\$24,129
End of Year Balance	\$38,359	\$62,488	\$53,617	\$77,746	\$101,875	(\$364,693)	(\$340,564)	(\$326,435)	(\$302,306)	(\$340,177)
Cumulative Expenditures	(\$75,000)	(\$75,000)	(\$108,000)	(\$108,000)	(\$108,000)	(\$598,697)	(\$598,697)	(\$608,697)	(\$608,697)	(\$670,697)
Cumulative Receipts	\$113,359	\$137,488	\$161,617	\$185,746	\$209,875	\$234,004	\$258,133	\$282,262	\$306,391	\$330,520
Year	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
Projected Replacements	(\$36,492)	(\$18,472)	(\$18,000)			(\$341,500)		(\$70,040)		(\$18,900)
Annual Deposit	\$24,129	\$24,129	\$24,129	\$24,129	\$24,129	\$24,129	\$24,129	\$24,129	\$24,129	\$24,129
End of Year Balance	(\$352,540)	(\$346,883)	(\$340,754)	(\$316,625)	(\$292,496)	(\$609,867)	(\$585,738)	(\$631,649)	(\$607,520)	(\$602,291)
Cumulative Expenditures	(\$707,189)	(\$725,661)	(\$743,661)	(\$743,661)	(\$743,661)	(\$1,085,161)	(\$1,085,161)	(\$1,155,201)	(\$1,155,201)	(\$1,174,101)
Cumulative Receipts	\$354,649	\$378,778	\$402,907	\$427,036	\$451,165	\$475,294	\$499,423	\$523,552	\$547,681	\$571,810
Year	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052
Projected Replacements	(\$214,600)		(\$28,000)	(\$18,472)		(\$302,925)				(\$5,272)
Annual Deposit	\$24,129	\$24,129	\$24,129	\$24,129	\$24,129	\$24,129	\$24,129	\$24,129	\$24,129	\$24,129
End of Year Balance	(\$792,762)	(\$768,633)	(\$772,504)	(\$766,847)	(\$742,718)	(\$1,021,514)	(\$997,385)	(\$973,256)	(\$949,127)	(\$930,270)
Cumulative Expenditures	(\$1,388,701)	(\$1,388,701)	(\$1,416,701)	(\$1,435,173)	(\$1,435,173)	(\$1,738,098)	(\$1,738,098)	(\$1,738,098)	(\$1,738,098)	(\$1,743,370)
Cumulative Receipts	\$595,939	\$620,068	\$644,197	\$668,326	\$692,455	\$716,584	\$740,713	\$764,842	\$788,971	\$813,100
Year	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062
Projected Replacements	(\$90,000)		(\$71,824)	(\$68,900)		(\$294,832)		(\$10,000)		(\$12,000)
Annual Deposit	\$24,129	\$24,129	\$24,129	\$24,129	\$24,129	\$24,129	\$24,129	\$24,129	\$24,129	\$24,129
End of Year Balance	(\$996,141)	(\$972,012)	(\$1,019,707)	(\$1,064,478)	(\$1,040,349)	(\$1,311,051)	(\$1,286,922)	(\$1,272,793)	(\$1,248,664)	(\$1,236,535)
Cumulative Expenditures	(\$1,833,370)	(\$1,833,370)	(\$1,905,194)	(\$1,974,094)	(\$1,974,094)	(\$2,268,925)	(\$2,268,925)	(\$2,278,925)	(\$2,278,925)	(\$2,290,925)
Cumulative Receipts	\$837,229	\$861,358	\$885,487	\$909,616	\$933,745	\$957,874	\$982,003	\$1,006,132	\$1,030,261	\$1,054,390

EVALUATION OF CURRENT FUNDING

The evaluation of Current Funding (Starting Balance of \$89,230 & annual funding of \$24,129), 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 46 Projected Replacements identified in the Replacement Reserve Inventory and that the Township will continue Annual Funding of \$24,129 throughout the 40-year Study Period.

Annual Funding of \$24,129 is approximately 26 percent of the \$94,411 recommended Annual Funding calculated by the Cash Flow Method for 2023, the Study Year.

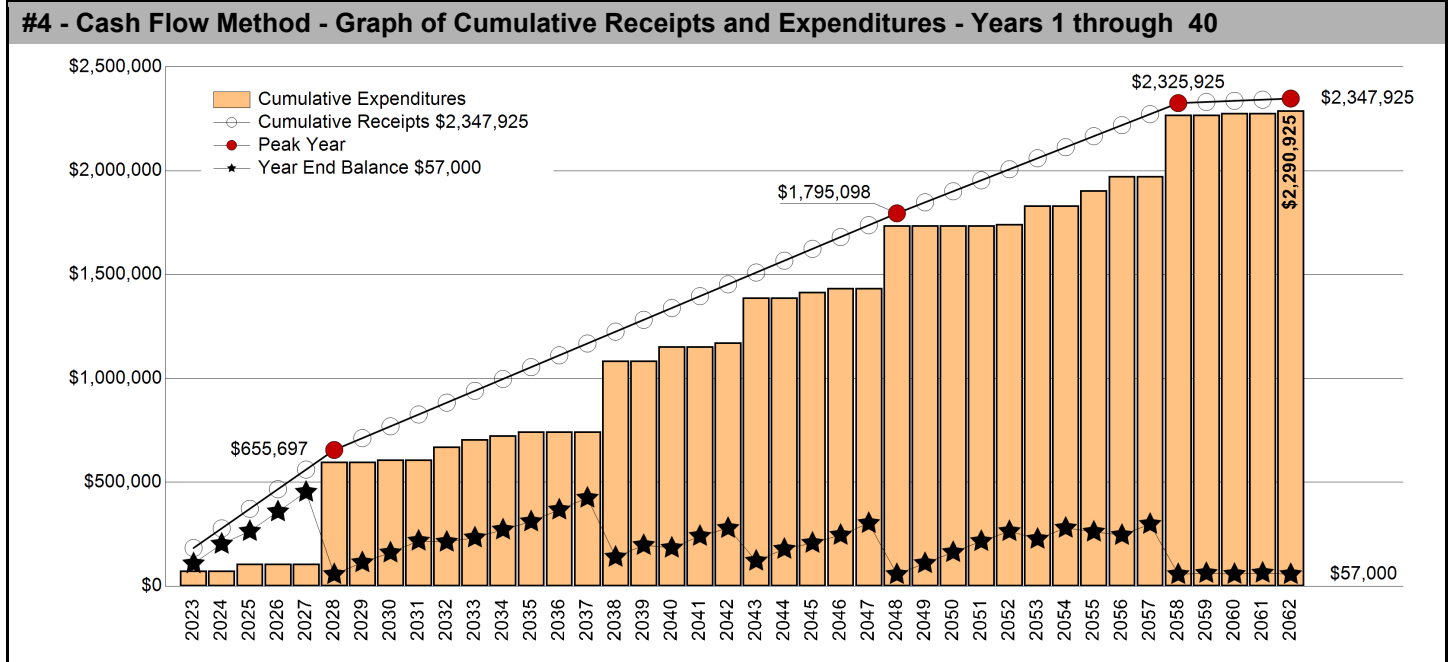
See the Executive Summary for the Current Funding Statement.

CASH FLOW METHOD FUNDING

\$94,411 RECOMMENDED REPLACEMENT RESERVE FUNDING FOR 2023

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 2028 with Replacement Reserves on Deposit dropping to the Minimum Balance after the completion of \$598,697 of replacements from 2023 to 2028. Recommended funding is projected to decline from \$94,411 in 2028 to \$56,970 in 2029. Peak Years are identified in Chart 4 and Table 5.
- Threshold (Minimum Balance).** The calculations assume a Minimum Balance of \$57,000 will always be held in reserve, which is calculated by rounding the 12-month 40-year average annual expenditure of \$57,273 as shown on Graph #2.
- Cash Flow Method Study Period.** Cash Flow Method calculates funding for \$2,290,925 of expenditures over the 40-year Study Period. It does not include funding for any projects beyond 2062 and in 2062, the end of year balance will always be the Minimum Balance.



Year	2023	2024	2025	2026	2027	1st Peak - 2028	2029	2030	2031	2032
Starting Balance	\$89,230									
Projected Replacements	(\$75,000)		(\$33,000)			(\$490,697)		(\$10,000)		(\$62,000)
Annual Deposit	\$94,411	\$94,411	\$94,411	\$94,411	\$94,411	\$94,411	\$56,970	\$56,970	\$56,970	\$56,970
End of Year Balance	\$108,641	\$203,052	\$264,463	\$358,875	\$453,286	\$57,000	\$113,970	\$160,940	\$217,910	\$212,880
Cumulative Expenditures	(\$75,000)	(\$75,000)	(\$108,000)	(\$108,000)	(\$108,000)	(\$598,697)	(\$598,697)	(\$608,697)	(\$608,697)	(\$670,697)
Cumulative Receipts	\$183,641	\$278,052	\$372,463	\$466,875	\$561,286	\$655,697	\$712,667	\$769,637	\$826,607	\$883,577
Year	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
Projected Replacements	(\$36,492)	(\$18,472)	(\$18,000)			(\$341,500)		(\$70,040)		(\$18,900)
Annual Deposit	\$56,970	\$56,970	\$56,970	\$56,970	\$56,970	\$56,970	\$56,970	\$56,970	\$56,970	\$56,970
End of Year Balance	\$233,358	\$271,856	\$310,826	\$367,796	\$424,766	\$140,236	\$197,206	\$184,137	\$241,107	\$279,177
Cumulative Expenditures	(\$707,189)	(\$725,661)	(\$743,661)	(\$743,661)	(\$743,661)	(\$1,085,161)	(\$1,085,161)	(\$1,155,201)	(\$1,155,201)	(\$1,174,101)
Cumulative Receipts	\$940,547	\$997,517	\$1,054,487	\$1,111,457	\$1,168,427	\$1,225,397	\$1,282,367	\$1,339,337	\$1,396,307	\$1,453,277
Year	2043	2044	2045	2046	2047	2nd Peak - 2048	2049	2050	2051	2052
Projected Replacements	(\$214,600)		(\$28,000)	(\$18,472)		(\$302,925)				(\$5,272)
Annual Deposit	\$56,970	\$56,970	\$56,970	\$56,970	\$56,970	\$56,970	\$53,083	\$53,083	\$53,083	\$53,083
End of Year Balance	\$121,547	\$178,517	\$207,487	\$245,985	\$302,955	\$57,000	\$110,083	\$163,166	\$216,248	\$264,059
Cumulative Expenditures	(\$1,388,701)	(\$1,388,701)	(\$1,416,701)	(\$1,435,173)	(\$1,435,173)	(\$1,738,098)	(\$1,738,098)	(\$1,738,098)	(\$1,738,098)	(\$1,743,101)
Cumulative Receipts	\$1,510,248	\$1,567,218	\$1,624,188	\$1,681,158	\$1,738,128	\$1,795,098	\$1,848,180	\$1,901,263	\$1,954,346	\$2,007,429
Year	2053	2054	2055	2056	2057	3rd Peak - 2058	2059	2060	2061	4th Peak - 2062
Projected Replacements	(\$90,000)		(\$71,824)	(\$68,900)		(\$294,832)		(\$10,000)		(\$12,000)
Annual Deposit	\$53,083	\$53,083	\$53,083	\$53,083	\$53,083	\$53,083	\$5,500	\$5,500	\$5,500	\$5,500
End of Year Balance	\$227,142	\$280,225	\$261,483	\$245,666	\$298,749	\$57,000	\$62,500	\$58,000	\$63,500	\$57,000
Cumulative Expenditures	(\$1,833,370)	(\$1,833,370)	(\$1,905,194)	(\$1,974,094)	(\$1,974,094)	(\$2,268,925)	(\$2,268,925)	(\$2,278,925)	(\$2,278,925)	(\$2,290,925)
Cumulative Receipts	\$2,060,512	\$2,113,594	\$2,166,677	\$2,219,760	\$2,272,843	\$2,325,925	\$2,331,425	\$2,336,925	\$2,342,425	\$2,347,925

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.

\$94,411 2023 - CASH FLOW METHOD RECOMMENDED FUNDING

The 2023 Study Year calculations have been made using current replacement costs (see Page B1.2), modified by the Analyst for any project specific conditions.

\$100,076 2024 - INFLATION ADJUSTED FUNDING

A new analysis calculates the 2024 funding based on three assumptions:

- Replacement Reserves on Deposit totaling \$108,641 on January 1, 2024.
- All 2023 Projected Replacements listed on Page C1.2 accomplished at a cost to Replacement Reserves less than \$75,000.
- Construction Cost Inflation of 6.00 percent in 2023.

The \$100,076 inflation adjusted funding in 2024 is a 6.00 percent increase over the non-inflation adjusted funding of \$94,411.

\$106,080 2025 - INFLATION ADJUSTED FUNDING

A new analysis calculates the 2025 funding based on three assumptions:

- Replacement Reserves on Deposit totaling \$189,272 on January 1, 2025.
- No Expenditures from Replacement Reserves in 2024.
- Construction Cost Inflation of 6.00 percent in 2024.

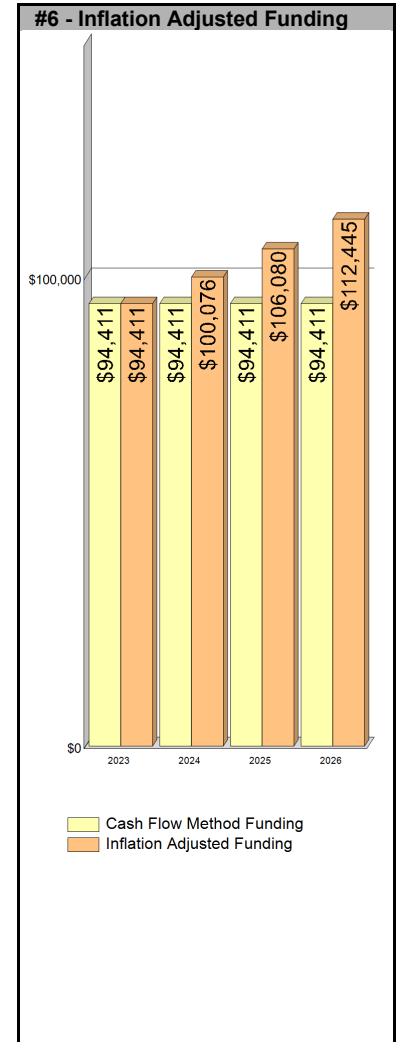
The \$106,080 inflation adjusted funding in 2025 is a 12.36 percent increase over the non-inflation adjusted funding of \$94,411.

\$112,445 2026 - INFLATION ADJUSTED FUNDING

A new analysis calculates the 2026 funding based on three assumptions:

- Replacement Reserves on Deposit totaling \$186,259 on January 1, 2026.
- All 2025 Projected Replacements listed on Page C1.2 accomplished at a cost to Replacement Reserves less than \$36,010.
- Construction Cost Inflation of 6.00 percent in 2025.

The \$112,445 inflation adjusted funding in 2026 is a 19.10 percent increase over the non-inflation adjusted funding of \$94,411.



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 2024, 2025 and 2026 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 2023, based on a 1.00 percent interest rate, we estimate the Township may earn \$989 on an average balance of \$98,936, \$1,490 on an average balance of \$148,957 in 2024, and \$1,878 on \$187,766 in 2025. The Township may elect to attribute 100 percent of the earned interest to Reserves, resulting in a reduction in the 2023 funding from \$94,411 to \$93,422 (a 1.04 percent reduction), \$100,076 to \$98,586 in 2024 (a 1.48 percent reduction), and \$106,080 to \$104,203 in 2025 (a 1.77 percent reduction).

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SECTION B - REPLACEMENT RESERVE INVENTORY

- **PROJECTED REPLACEMENTS.** Police Dept - Replacement Reserve Inventory identifies 46 items which 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 \$1,100,881. Cumulative Replacements totaling \$2,290,925 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.

- **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:

Tax Code. The United States Tax Code grants very 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.

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 Township policy on the administration of Replacement Reserves. If the Township has selected an alternative level, it will be noted in the Replacement Reserve Inventory - General Comments on Page B1.2.

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 Township.

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 Township. These types of items are generally not the responsibility of the Township and are excluded from the Replacement Reserve Inventory.

- **CATEGORIES.** The 46 items included in the Police Dept Replacement Reserve Inventory are divided into 3 major categories. Each category is printed on a separate page, beginning on page B1.3.
- **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 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 . 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 46 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 46 Projected Replacements specifically listed in the Replacement Reserve Inventory. The inclusion/exclusion of items from the Replacement Reserve Inventory is discussed on Page B1.1.

SITE ITEMS						NEL- Normal Economic Life (yrs)		
PROJECTED REPLACEMENTS						REL- Remaining Economic Life (yrs)		
ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST (\$)	NEL	REL	REPLACEMENT COST (\$)	
1	Asphalt pavement, mill and overlay	sf	21,088	\$2.36	18	17	\$49,768	
2	Pavement, rejuvenator seal coat	sf	21,088	\$0.25	6	5	\$5,272	
3	Concrete curb and gutter	ft	112	\$40.00	54	32	\$4,480	
4	Concrete flatwork	sf	1,112	\$12.00	60	32	\$13,344	
	Bollards						EXCLUDED	
5	Building exterior lighting (allowance) Ornamental exterior lighting "Police"	ls	1	\$5,000.00	15	5	\$5,000 EXCLUDED	
6	Lamp post	ea	8	\$3,500.00	30	15	\$28,000	
7	Lamp post head	ea	8	\$650.00	15	5	\$5,200	
8	Landscape bollard light	ea	9	\$950.00	15	5	\$8,550	
9	Block retaining wall, reset allowance	ls	1	\$1,000.00	10	5	\$1,000	
10	Block retaining wall, replacement	sf	280	\$75.00	54	32	\$21,000	
11	Privacy fencing	ft	325	\$45.00	20	5	\$14,625	
12	Flagpole (approx. 30') Flagpole lighting	ea	1	\$6,500.00	30	15	\$6,500 EXCLUDED	
13	Stormwater Management (allowance)	ls	1	\$2,500.00	30	15	\$2,500	
14	Oil separator (allowance)	ls	1	\$25,000.00	30	15	\$25,000	
Replacement Costs - Page Subtotal							\$190,239	

COMMENTS
<ul style="list-style-type: none"> Bollards - 12/08/22 - is excluded as a valuation exclusion that does not meet the minimum threshold for reserves. Ornamental exterior lighting "Police" - 12/08/22 - is excluded as a valuation exclusion that does not meet the minimum threshold for reserves. Flagpole lighting - 12/08/22 - is excluded as a valuation exclusion that does not meet the minimum threshold for reserves.

SITE ITEMS - (cont.)						NEL- Normal Economic Life (yrs)		
PROJECTED REPLACEMENTS						REL- Remaining Economic Life (yrs)		
ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST (\$)	NEL	REL	REPLACEMENT COST (\$)	
15	Domestic water (allowance)	ls	1	\$5,000.00	10	5	\$5,000	
16	Sanitary sewer (allowance)	ls	1	\$5,000.00	10	5	\$5,000	
Replacement Costs - Page Subtotal							\$10,000	

COMMENTS

EXTERIOR 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 (\$)
17	Built-up roofing (BUR), flat	sf	7,347	\$32.00	20	5	\$235,104
18	Gutters and downspouts	lf	92	\$13.00	20	5	\$1,196
	8" roof scuppers and downspouts						EXCLUDED
	Roof hatch						EXCLUDED
19	Brick veneer repoint (10% allowance)	sf	541	\$12.00	25	10	\$6,492
20	Caulking (allowance)	ls	1	\$5,000.00	5	5	\$5,000
21	Exterior door (allowance)	ls	1	\$12,000.00	20	5	\$12,000
22	Overhead door and opener	ea	4	\$26,400.00	15	5	\$105,600
23	Commercial, extruded aluminum double glaze Exterior building lights	sf	192	\$125.00	35	20	\$24,000 EXCLUDED
24	Overhead door, range	ea	5	\$15,000.00	15	none	\$75,000
Replacement Costs - Page Subtotal							\$464,392

COMMENTS
<ul style="list-style-type: none"> 8" roof scuppers and downspouts - 12/08/22 - is excluded as a valuation exclusion that does not meet the minimum threshold for reserves. Roof hatch - 12/08/22 - is excluded as a valuation exclusion that does not meet the minimum threshold for reserves. Exterior building lights - 02/06/2023 excluded as this was a duplicate item. Item #24: Overhead door, range - 12/08/22 - are located at the Road Department storage building where the shooting range is located.

BUILDING SYSTEMS						NEL- Normal Economic Life (yrs)		
PROJECTED REPLACEMENTS						REL- Remaining Economic Life (yrs)		
ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST (\$)	NEL	REL	REPLACEMENT COST (\$)	
25	Fire Alarm Control Panel, FACP	ea	1	\$10,500.00	20	5	\$10,500	
	Fire Alarm Control Panel, sub panel						EXCLUDED	
	Smoke detector						EXCLUDED	
	Fire strobe						EXCLUDED	
	Fire alarm pull						EXCLUDED	
26	Domestic water piping (allowance)	ls	1	\$5,000.00	10	5	\$5,000	
27	Water heater, 100 gal. commercial, w/circ.	ea	1	\$14,000.00	15	5	\$14,000	
28	Well pump	ea	1	\$8,500.00	10	5	\$8,500	
	Well clean-up service						EXCLUDED	
29	Well pressure tank	ea	1	\$7,500.00	12	11	\$7,500	
30	Well water softener	ea	1	\$5,700.00	12	11	\$5,700	
	Water testing						EXCLUDED	
31	Well replacement (or re-sleeve)	ea	1	\$15,000.00	25	10	\$15,000	
32	Package unit, RTU (4 ton/48,000 btu)	ea	2	\$16,000.00	24	9	\$32,000	
33	Package unit, RTU (5 ton/70,000 btu)	ea	1	\$18,000.00	24	9	\$18,000	
34	Package unit, RTU (2.5 ton/30,000 btu)	ea	1	\$12,000.00	24	9	\$12,000	
35	Garage heater, electric	ea	2	\$6,000.00	20	19	\$12,000	
36	Exhaust fan, 1/4 hp, rooftop	ea	3	\$2,300.00	14	5	\$6,900	
37	Emergency Generator (150 Kw)	ea	1	\$175,000.00	30	15	\$175,000	
38	Emergency Generator (allowance)	ea	1	\$10,000.00	10	10	\$10,000	
39	Electrical (allowance)	ea	1	\$5,000.00	15	2	\$5,000	
Replacement Costs - Page Subtotal							\$337,100	

COMMENTS
<ul style="list-style-type: none"> • Fire Alarm Control Panel, sub panel - 12/08/22 - is excluded as a valuation exclusion that does not meet the minimum threshold for reserves. • Smoke detector - 12/08/22 - is excluded as a valuation exclusion that does not meet the minimum threshold for reserves. • Fire strobe - 12/08/22 - is excluded as a valuation exclusion that does not meet the minimum threshold for reserves. • Fire alarm pull - 12/08/22 - is excluded as a valuation exclusion that does not meet the minimum threshold for reserves. • Well clean-up service - 12/08/22 - is excluded as a valuation exclusion that does not meet the minimum threshold for reserves. • Water testing - 12/08/22 - is excluded as a valuation exclusion that does not meet the minimum threshold for reserves.

BUILDING SYSTEMS - (cont.)						NEL- Normal Economic Life (yrs)		REPLACEMENT COST (\$)
PROJECTED REPLACEMENTS						REL- Remaining Economic Life (yrs)		
ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST (\$)	NEL	REL	REPLACEMENT COST (\$)	
40	Access Control System (ACS)	ea	1	\$17,500.00	15	5	\$17,500	
41	Security camera, wired	ea	15	\$650.00	15	5	\$9,750	
42	CCTV system	ea	1	\$10,000.00	15	5	\$10,000	
43	Radio antenna (allowance)	ls	1	\$5,000.00	15	7	\$5,000	
44	IT/Network (allowance)	ls	1	\$5,000.00	15	7	\$5,000	
45	Phone system (allowance)	ls	1	\$10,000.00	15	2	\$10,000	
46	Computer workstation	ea	15	\$1,200.00	10	2	\$18,000	
Replacement Costs - Page Subtotal								\$75,250

COMMENTS

VALUATION EXCLUSIONS							
Excluded Items							
ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	REPLACEMENT COST (\$)	UNIT REL	REL	REPLACEMENT COST (\$)
	Smoke detector						EXCLUDED
	Fire alarm pull						EXCLUDED
	Domestic water piping						EXCLUDED
	Water heater						EXCLUDED
	Well pump						EXCLUDED
	Well clean up service						EXCLUDED
	Pressure tank						EXCLUDED
	Water testing						EXCLUDED
	Access control System (ACS)						EXCLUDED
	Signage						EXCLUDED

VALUATION EXCLUSIONS
Comments
<ul style="list-style-type: none"> 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.

SECTION C - CALENDAR OF PROJECTED ANNUAL REPLACEMENTS

GENERAL STATEMENT. The 46 Projected Replacements in the Police Dept 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 C1.2.

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 Township.
- **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 on our time and manpower resources. Therefore, Miller Dodson 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 replacements 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 Miller - Dodson Associates nor the Reserve Analyst has any prior or existing relationship with this Township 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 Township 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 Township and the visual evaluations of the Analyst. It has been prepared for the sole use of the Township and is not for the purpose of performing an audit, quality/forensic analyses, or background checks of historical records.
- **PREVIOUS REPLACEMENTS.** Information provided to Miller - Dodson 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, 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	2023 - Study Year	\$	Item	2024 - YEAR 1	\$
24	Overhead door, range	\$75,000			
Total Scheduled Replacements		\$75,000	No Scheduled Replacements		

Item	2025 - YEAR 2	\$	Item	2026 - YEAR 3	\$
39	Electrical (allowance)	\$5,000			
45	Phone system (allowance)	\$10,000			
46	Computer workstation	\$18,000			
Total Scheduled Replacements		\$33,000	No Scheduled Replacements		

PROJECTED REPLACEMENTS

Item	2027 - YEAR 4	\$	Item	2028 - YEAR 5	\$
			2	Pavement, rejuvenator seal coat	\$5,272
			5	Building exterior lighting (allowance)	\$5,000
			7	Lamp post head	\$5,200
			8	Landscape bollard light	\$8,550
			9	Block retaining wall, reset allowance	\$1,000
			11	Privacy fencing	\$14,625
			15	Domestic water (allowance)	\$5,000
			16	Sanitary sewer (allowance)	\$5,000
			17	Built-up roofing (BUR), flat	\$235,104
			18	Gutters and downspouts	\$1,196
			20	Caulking (allowance)	\$5,000
			21	Exterior door (allowance)	\$12,000
			22	Overhead door and opener	\$105,600
			25	Fire Alarm Control Panel, FACP	\$10,500
			26	Domestic water piping (allowance)	\$5,000
			27	Water heater, 100 gal. commercial, w/circ.	\$14,000
			28	Well pump	\$8,500
			36	Exhaust fan, 1/4 hp, rooftop	\$6,900
			40	Access Control System (ACS)	\$17,500
			41	Security camera, wired	\$9,750
			42	CCTV system	\$10,000
No Scheduled Replacements			Total Scheduled Replacements		\$490,697

Item	2029 - YEAR 6	\$	Item	2030 - YEAR 7	\$
			43	Radio antenna (allowance)	\$5,000
			44	IT/Network (allowance)	\$5,000
No Scheduled Replacements			Total Scheduled Replacements		\$10,000

PROJECTED REPLACEMENTS

Item	2031 - YEAR 8	\$	Item	2032 - YEAR 9	\$
			32	Package unit, RTU (4 ton/48,000 btu)	\$32,000
			33	Package unit, RTU (5 ton/70,000 btu)	\$18,000
			34	Package unit, RTU (2.5 ton/30,000 btu)	\$12,000
No Scheduled Replacements			Total Scheduled Replacements		
			\$62,000		

Item	2033 - YEAR 10	\$	Item	2034 - YEAR 11	\$
19	Brick veneer repoint (10% allowance)	\$6,492	2	Pavement, rejuvenator seal coat	\$5,272
20	Caulking (allowance)	\$5,000	29	Well pressure tank	\$7,500
31	Well replacement (or re-sleeve)	\$15,000	30	Well water softener	\$5,700
38	Emergency Generator (allowance)	\$10,000			
Total Scheduled Replacements			Total Scheduled Replacements		
\$36,492			\$18,472		

PROJECTED REPLACEMENTS

Item	2035 - YEAR 12	\$	Item	2036 - YEAR 13	\$
46	Computer workstation	\$18,000			
Total Scheduled Replacements		\$18,000	No Scheduled Replacements		

Item	2037 - YEAR 14	\$	Item	2038 - YEAR 15	\$
			6	Lamp post	\$28,000
			9	Block retaining wall, reset allowance	\$1,000
			12	Flagpole (approx. 30')	\$6,500
			13	Stormwater Management (allowance)	\$2,500
			14	Oil separator (allowance)	\$25,000
			15	Domestic water (allowance)	\$5,000
			16	Sanitary sewer (allowance)	\$5,000
			20	Caulking (allowance)	\$5,000
			24	Overhead door, range	\$75,000
			26	Domestic water piping (allowance)	\$5,000
			28	Well pump	\$8,500
			37	Emergency Generator (150 Kw)	\$175,000
No Scheduled Replacements			Total Scheduled Replacements		\$341,500

PROJECTED REPLACEMENTS

Item	2039 - YEAR 16	\$	Item	2040 - YEAR 17	\$
			1	Asphalt pavement, mill and overlay	\$49,768
			2	Pavement, rejuvenator seal coat	\$5,272
			39	Electrical (allowance)	\$5,000
			45	Phone system (allowance)	\$10,000
No Scheduled Replacements			Total Scheduled Replacements		
			\$70,040		

Item	2041 - YEAR 18	\$	Item	2042 - YEAR 19	\$
			35	Garage heater, electric	\$12,000
			36	Exhaust fan, 1/4 hp, rooftop	\$6,900
No Scheduled Replacements			Total Scheduled Replacements		
			\$18,900		

PROJECTED REPLACEMENTS

Item	2043 - YEAR 20	\$	Item	2044 - YEAR 21	\$
5	Building exterior lighting (allowance)	\$5,000			
7	Lamp post head	\$5,200			
8	Landscape bollard light	\$8,550			
20	Caulking (allowance)	\$5,000			
22	Overhead door and opener	\$105,600			
23	Commercial, extruded aluminum double glaze window	\$24,000			
27	Water heater, 100 gal. commercial, w/circ.	\$14,000			
38	Emergency Generator (allowance)	\$10,000			
40	Access Control System (ACS)	\$17,500			
41	Security camera, wired	\$9,750			
42	CCTV system	\$10,000			
Total Scheduled Replacements			No Scheduled Replacements		
		\$214,600			

Item	2045 - YEAR 22	\$	Item	2046 - YEAR 23	\$
43	Radio antenna (allowance)	\$5,000	2	Pavement, rejuvenator seal coat	\$5,272
44	IT/Network (allowance)	\$5,000	29	Well pressure tank	\$7,500
46	Computer workstation	\$18,000	30	Well water softener	\$5,700
Total Scheduled Replacements			Total Scheduled Replacements		
		\$28,000			\$18,472

PROJECTED REPLACEMENTS

Item	2047 - YEAR 24	\$	Item	2048 - YEAR 25	\$
			9	Block retaining wall, reset allowance	\$1,000
			11	Privacy fencing	\$14,625
			15	Domestic water (allowance)	\$5,000
			16	Sanitary sewer (allowance)	\$5,000
			17	Built-up roofing (BUR), flat	\$235,104
			18	Gutters and downspouts	\$1,196
			20	Caulking (allowance)	\$5,000
			21	Exterior door (allowance)	\$12,000
			25	Fire Alarm Control Panel, FACP	\$10,500
			26	Domestic water piping (allowance)	\$5,000
			28	Well pump	\$8,500
No Scheduled Replacements			Total Scheduled Replacements		
			\$302,925		

Item	2049 - YEAR 26	\$	Item	2050 - YEAR 27	\$
No Scheduled Replacements			No Scheduled Replacements		

PROJECTED REPLACEMENTS

Item	2051 - YEAR 28	\$	Item	2052 - YEAR 29	\$
			2	Pavement, rejuvenator seal coat	\$5,272
No Scheduled Replacements			Total Scheduled Replacements		
			\$5,272		

Item	2053 - YEAR 30	\$	Item	2054 - YEAR 31	\$
20	Caulking (allowance)	\$5,000			
24	Overhead door, range	\$75,000			
38	Emergency Generator (allowance)	\$10,000			
Total Scheduled Replacements			No Scheduled Replacements		
\$90,000					

PROJECTED REPLACEMENTS

Item	2055 - YEAR 32	\$	Item	2056 - YEAR 33	\$
3	Concrete curb and gutter	\$4,480	32	Package unit, RTU (4 ton/48,000 btu)	\$32,000
4	Concrete flatwork	\$13,344	33	Package unit, RTU (5 ton/70,000 btu)	\$18,000
10	Block retaining wall, replacement	\$21,000	34	Package unit, RTU (2.5 ton/30,000 btu)	\$12,000
39	Electrical (allowance)	\$5,000	36	Exhaust fan, 1/4 hp, rooftop	\$6,900
45	Phone system (allowance)	\$10,000			
46	Computer workstation	\$18,000			
Total Scheduled Replacements		\$71,824	Total Scheduled Replacements		\$68,900

Item	2057 - YEAR 34	\$	Item	2058 - YEAR 35	\$
			1	Asphalt pavement, mill and overlay	\$49,768
			2	Pavement, rejuvenator seal coat	\$5,272
			5	Building exterior lighting (allowance)	\$5,000
			7	Lamp post head	\$5,200
			8	Landscape bollard light	\$8,550
			9	Block retaining wall, reset allowance	\$1,000
			15	Domestic water (allowance)	\$5,000
			16	Sanitary sewer (allowance)	\$5,000
			19	Brick veneer repoint (10% allowance)	\$6,492
			20	Caulking (allowance)	\$5,000
			22	Overhead door and opener	\$105,600
			26	Domestic water piping (allowance)	\$5,000
			27	Water heater, 100 gal. commercial, w/circ.	\$14,000
			28	Well pump	\$8,500
			29	Well pressure tank	\$7,500
			30	Well water softener	\$5,700
			31	Well replacement (or re-sleeve)	\$15,000
			40	Access Control System (ACS)	\$17,500
			41	Security camera, wired	\$9,750
			42	CCTV system	\$10,000
No Scheduled Replacements			Total Scheduled Replacements		\$294,832

PROJECTED REPLACEMENTS

Item	2059 - YEAR 36	\$	Item	2060 - YEAR 37	\$
			43	Radio antenna (allowance)	\$5,000
			44	IT/Network (allowance)	\$5,000
No Scheduled Replacements			Total Scheduled Replacements		
			\$10,000		

Item	2061 - YEAR 38	\$	Item	2062 - YEAR 39	\$
			35	Garage heater, electric	\$12,000
No Scheduled Replacements			Total Scheduled Replacements		
			\$12,000		

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SECTION D - CONDITION ASSESSMENT

General Comments. Miller+Dodson Associates conducted a Reserve Study at Police Station in September 2022. Police Station is in generally good condition for a township. A review of the Replacement Reserve Inventory will show that we are anticipating 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. Miller Dodson 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.

SITE ITEMS

Police Station.

14820 Chillicothe Rd, Novelty, OH 44072



Entry Monument and Signage. The building features an entry monument. The monument is in good condition.



We recommend re-pointing and replacement of defective areas of the masonry as needed. The Association may want to consider applying a coating of Siloxane or other appropriate breathable sealants to mitigate water penetration and further degradation of the masonry work.

Small miscellaneous signs are not considered in this study and should be replaced using other funds.

Parking Areas. The building features parking areas and drive lanes constructed of asphalt pavement. The pavements are new and in good condition.



Typical defects that require replacement include the following:

- **Open Cracks.** There are multiple locations where open cracks are allowing water to penetrate to the asphalt base and the bearing soils beneath. Over time, water will erode the base and accelerate the deterioration of the asphalt pavement. If cracks extend to the base and bearing materials, remove the damaged areas, and replace defective materials. As a part of normal maintenance, clean and fill all other cracks.
- **Alligatoring.** There are multiple locations where the asphalt has developed a pattern of cracking 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 to 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.** The asphalt pavement is not properly graded, resulting in the ponding of water. Proper grading of the asphalt pavement will require replacing portions of the asphalt. It may also require resetting improperly sloped curb and gutter segments that are not conveying 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.

- **Potholes.** Potholes have formed as the result of full-depth pavement failure, including base materials. The repair will require removal of the asphalt and base materials, installation and compaction of new base materials, and asphalt resurfacing.
- **Depressions.** There are areas where the asphalt surface is depressed due to deformation in the surface or underlying layers. These depressions may continue to grow with exposure to traffic. Water ponding is evident in several of these areas. Repair of these areas will require the removal of the asphalt and base material and reinstallation, by compacting the new base material and resurfacing with asphalt.
- **Wheel Rutting.** Depressions along the wheel lines extend along portions of the roadway. Repair of these areas will require full-depth and full-width pavement replacement. Wheel rutting, if left unattended can adversely affect vehicle steering.
- **Shoving.** Occurring at locations of sharp braking or turning. The primary cause of this defect is from large truck traffic. If addressed early, surface milling and overlay using a stiffer topcoat of asphalt pavement shoving can be mitigated.
- **Tree Root Damage.** This is known as Heaving, there are locations where tree roots caused heaving in the pavement surface. The repair of these areas requires the removal of the asphalt and the tree roots, then replenish and re-compact the base material and resurface the asphalt. Root trimming can also be an effective way to control this defect.
- **Edge Cracking.** Sections of the asphalt pavement have developed 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.
- **Reflective Cracking.** The asphalt pavement has a significant number of reflective cracks. Reflective cracks occur when placing a new asphalt overlay over an existing cracked pavement. With time and movement, existing cracks will migrate through the new asphalt. Installing a bridging membrane or fabric at the time of overlay can control reflective cracking.

A more detailed summary of pavement distress can be found at <http://www.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.

In an effort to maintain the condition of the pavement throughout the community and ensure the longest life of the asphalt, we recommend the Association adopts 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 it will not be funded from Reserves.
- **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 from 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 used is based on recent contracts for a two-inch mill and overlay with repairs to 10% to 15% of the subgrade. This reflects the current local market for this work. Pavement surfaces that are deteriorated more than 2" of have multiple areas of full depth deterioration will cost additional amounts to repair.

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 are minimally effective. However, the newer coating materials, such as those from Total Asphalt Management, Asphalt Restoration Technologies, Inc., and others, are penetrating. They are engineered, so to speak, to 'remoisturize' 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 in the forms of cracking and potholes. Remoisturizing the pavement can return its flexibility and extend the life of the pavement.

Concrete Work. The concrete work includes the community curb and gutter, sidewalks, leadwalks, stairs, stoops, and other flatwork. We have modeled for curb replacement when the asphalt pavement is overlaid. The overall condition of the concrete work is fair with areas of defects consistent with the age of the installation.



The standards we use for recommending replacement are as follows:

- Trip hazard, ½ inch height difference
- Severe cracking
- Severe spalling and scale
- Uneven riser heights on steps
- Steps with risers in excess of 8¼ inches
- Settlement and heaving
- Tree root damage

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.

Site Lighting. The building features site lighting that includes post lamps, ground mounted lights, bollards, and building lights. The lights were not on at the time of our site visit, but we understand they are in good operating condition.





This study assumes the replacement of the light fixtures every 15 to 20 years, and pole replacement every 30 to 40 years. When the light poles are replaced, we assume that the underground wiring will also be replaced.

When a whole-scale lighting replacement project is called for, we recommend consulting with a lighting design expert. Many municipalities have design codes, guidelines, and restrictions when it comes to exterior illumination.

Additionally, new technology such as LED and LIFI, among others, is considered.

Stormwater Management. We have included an allowance for stormwater management. This allowance is intended to address drainage issues, wet areas, inlets, structures, etc.



Well and Water Softener. The building features a groundwater well and septic system. We consider the system to include the well casing, well pump, and piping. These items are concealed underground and were not reviewed but we understand they are in good operating condition. The system also includes a water softener system which includes a water softener system, brine tank, and pressure tank. The water softener is reported to be in good condition.





Septic System. The building features a septic system. The system includes a box, pump, valve, and leach bed. The system was concealed underground and not reviewed but is reported to be in good condition.

Building Roofing. The building features a flat roofing system. The roofing consists of a Built-Up Roofing system (BUR). The roofing is in fair condition.



Flat roofing systems can have a variety of configurations that will greatly affect the cost of replacement including insulation, ballast, the height of the building, and the density of installed mechanical equipment. Flat roofing systems typically have a useful life of 15 to 25 years.

Annual inspections are recommended, with cleaning, repair, and mitigation of vegetation performed as needed. Access, inspection, and repair work should be performed by contractors and personnel with the appropriate access equipment who are experienced in the types of roofing used for the facility.

Gutters and Downspouts. The building features aluminum gutters and downspouts. The gutters and downspouts are in good condition.



A gutter and downspout system will remove rainwater from the area of the building's roof, siding, and foundation, protect the exterior surfaces from water damage. Gutters should run the full length of all drip edges of the building's roof. Even with full gutters, it is important to inspect the function of the gutters during heavy rain to identify any deficiencies. It may be necessary to periodically adjust the slope of sections, repair connections, replace hangers, and install shrouds to the gutter system. Downspouts should be securely attached to the side of the structure. Any broken straps should be replaced. The area of the outlet should be inspected to promote run-off in the desired direction. Long straight runs should have an elbow at the bottom. Splash blocks should be installed to fray the water out-letting from the downspout.

It is recommended that all gutters be cleaned at least twice each year. If there are a large number of trees located close to a building, consider installing a gutter debris shield that will let water into the gutters but will filter out leaves, twigs, and other debris.

It is recommended that gutters and downspouts be installed on all buildings. It is also recommended that the discharge from the downspouts be extended at least ten feet away from the foundations.

Masonry. The building is clad in brick masonry with mortar joints. The brick masonry is in good condition.



Brick masonry is used as the main exterior cladding of the building. As masonry weathers, the mortar joints will become damaged by water penetration. As additional water gains access to the joints, repeated freeze-thaw cycles gradually increase the damage to the mortar joints. If allowed to progress, even the masonry units such as brick can have their surfaces affected and masonry units can become loose.

In general, masonry is considered a long-life item and is therefore excluded from reserve funding. However, because weather and other conditions result in the slow deterioration of the mortar in masonry joints, we have included funding in this study for repointing. Repointing is the process of raking and cutting out damaged sections of mortar and replacing them with new mortar.

Periodic repointing and local replacement of damaged masonry units will limit the damage done by moisture penetration. For this study, we assume that 10% of the masonry will require repointing every 10 years after approximately 30 years.

Windows. The community maintains the windows of the facility. The windows are generally in good condition.



Window and door units play an integral part in a facility's overall comfort, efficiency, and energy use. The quality of the installed units and the care taken in their installation and maintenance are major factors in their effectiveness and useful life. These units can have a useful life of 20 to 35 years or more depending on their use and other factors mentioned above.

In general, we recommend coordinating the replacement of the window units with other exterior work, such as siding and roof replacements. The weather tightness of the building envelope often requires wraps, transitional flashing, and caulking that should be performed in coordination with each other. Warranties and advantages in 'economy of scale' can often result in lower overall replacement costs and results that are more reliable. Lastly, coordinated replacements offer the opportunity to correct initial construction defects and improve the effectiveness of details with improved construction techniques and materials.

Exterior Doors. The Community maintains the exterior doors of the building.



Pre-hung exterior doors provide a door, frame, and hinges that function as a unit. Doors can be wood, steel, aluminum, and fiberglass. Frames can also be wood, steel, and aluminum.

Doors should be maintained to the extent that the fully open and close, hinges swing easily, hardware latches and opens. With exterior doors it is necessary to maintain a weather seal, and prevent frames from rusting.

Overhead Doors. The building features overhead doors. The doors are in good working order.



Overhead doors should be maintained to the extent that they fully open and fully close. All tracks and rollers operate in a smooth continuous cycle free of binding and stops.

Safety features such as stops, return sensors, and a close tension should be checked periodically.

Automatic operators provide a one touch operation to open or close. These normally include the operator motor, track or roller, and controls. The openers are reported to be in good condition.

Building Interiors. Building interiors are excluded from reserves.

Building Systems.

HVAC Systems. The heating ventilation and air conditioning (HVAC) of the facility are provided by furnace/compressor split systems. The HVAC is in good working order. Detailed inspection and testing of these systems are beyond the scope of this study.



The Association maintains a number of HVAC systems that use one of the new generation refrigerants. Unlike the old R22 refrigerant, the new refrigerants are expected to be available throughout the period of this study. However, the operating pressure for new refrigerant systems is approximately twice as high as older systems. Many of the standard components have not been redesigned for these higher pressures, including the coils, which generally fail due to metal fatigue.

Even though manufacturers continue to predict 15 to 20-year life cycles for HVAC equipment that uses these new refrigerants, this is not proven by historical data. We, therefore, recommend anticipating a normal economic life of 15 years for all HVAC equipment that uses pressurized refrigerants of these types.

In addition, the Association maintains air handlers/furnaces throughout the facility, and these components can have a useful life of 20 to 40 years. With fan, motor, and coil replacements performed as needed, the casings of these systems can last significantly longer.

As is the case with most equipment, to achieve a maximum useful economic life, proper maintenance is essential. In some cases, proper and proactive maintenance can greatly extend the useful life of these components.

Domestic Hot Water. Domestic hot water is provided by a water heater tank which is in good condition.



Typically these types of systems have a service life of 12-15 years. This system should be serviced periodically to provide the most reliable service.

Fire Safety Systems. The facility includes a fire safety system to notify the occupants in the event of a fire. The system includes a fire alarm panel, smoke detectors, speakers, strobes, emergency pulls, sprinkler, and a pressure pump system.

Fire Alarm Control Panel (FACP). The FACP provides the function of central processing and notifying channel for emergencies. Every device in the building is programmed into the FACP. Furthermore, the FACP is initiate the alarm. Please note the type of alarm is determined by the system settings. The Association should review how the system is programmed with the system engineer.





The fire alarm panel is an electronic device that programs and receives signals from the devices of the system.

Building fire alarm systems have a service life of 15 to 25 years. While the panels may continue to operate past this point, changes in fire safety technology and building fire safety codes tend to render them obsolete. In addition, manufacturers only support their systems for a limited period, typically about 15 years. After this time, it may be increasingly difficult to obtain replacement parts and service.

When it becomes necessary to upgrade the fire alarm system, differences in the technologies and new code requirements are likely to require upgrades in lighting, sensors, alarms, and other system and sub-components.

Testing and Inspection. Local building and fire codes will require periodic inspections and tests of your systems. These requirements vary from county to county and state to state. Most fire safety systems are listed with the local fire marshal that has jurisdiction in your area. Annual inspections, 5-year testing, 10-year testing, and 20-year testing are not considered in reserves. Subsequent repairs, and annual maintenance work are not accounted for or included in this study.

Fire panel manufacturers typically have approved contractors that will provide service and support for their systems. The facility should have an ongoing contractual relationship with one of these such contractors.

Building Electrical Service. Electrical service enters the building via the vault which is maintained by the utility company. This includes the meter, feed lines, conduits, and buss ducts.

The system should be protected from water damage, overloading, and modifications to ensure safe reliable service. The utility service cabling and components are considered long-life installations, and unless otherwise noted, are excluded from this study.

Responsible facilities management will require maintenance of the equipment even when there are no system issues. Periodic inspection of the busses and tightening of all connections is recommended every three to five years. Insurance policies in some cases may have specific requirements regarding the tightening of electrical connections.



Replacement of these smaller components, unless otherwise identified, is considered incidental to refurbishment or is considered a Valuation Exclusion.

Electrical Switchgear. The electrical switchgear includes the ducts, switch boxes, disconnects, relays, fuses, and switches. The electrical switchgear dates to the original construction of the building. Electrical switchgear has a rated service life of 50 years or more. Electrical switchgear requires ongoing maintenance for proper operation and reliability.



The overall condition of the switchgear is good. We understand that replacement parts are still available for the equipment. As the switchgear continues to age, obtaining replacement parts can be expected to become more difficult. When parts no longer are available or when the condition of the switchgear deteriorates sufficiently, the Association will have to replace or upgrade the existing equipment. Therefore, we have included funding in the Reserve Analysis for distribution panel replacement on an incremental basis.

Electrical Distribution Panels. The building's electrical systems features a number of electrical distribution panels located throughout the facility. These panels separate the building's electrical power into separate identifiable circuits. All panels track back to the switchgear and have panel schedules identifying the circuits within the breaker panel. These panels date to the original construction of the building and have a rated service life of 50 years or more.



The overall condition of the distribution panels is good. As the distribution panel's age, obtaining replacement parts can be expected to become more difficult. When parts no longer are available, the Association will have to replace some of the existing panels. The replacement will have to be performed on an incremental basis, panel by panel. Therefore, we have included funding in the Reserve Analysis for distribution panel replacement on an incremental basis.

It is also recommended that outlets, sockets, switches, and minor fixtures be replaced at a maximum of every 30 years. These are not included in reserves.

Emergency Generator. The facility features an emergency generator. The system operates on stand-by until needed. The generator includes a natural gas engine, voltage generator, control panel, and an enclosure.



The generator power is distributed to Automatic Transfer Switch (ATS) which powers designated panels. These panels are typically emergency panels that service necessary building features and safety features such as lighting, fire alarm, and elevators. Generators should be exercised regularly. Regular maintenance is required to keep the system functional.

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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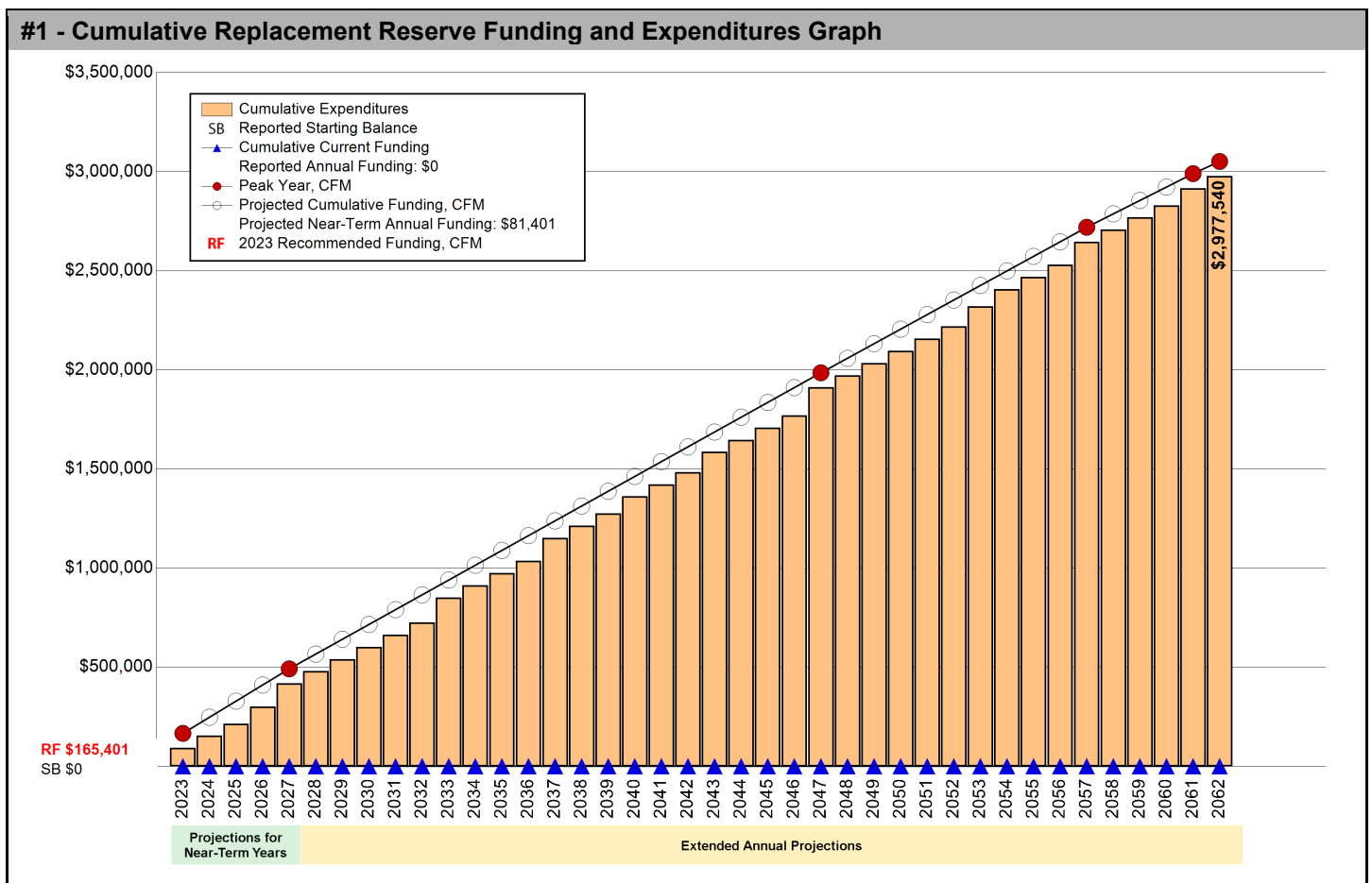
SECTION A - FINANCIAL ANALYSIS

The Police Dept Vehicles Replacement Reserve Analysis uses the Cash Flow Method (CFM) to calculate Replacement Reserve funding for the periodic replacement of the 11 Projected Replacements identified in the Replacement Reserve Inventory.

\$165,401 RECOMMENDED REPLACEMENT RESERVE FUNDING FOR THE STUDY YEAR, 2023

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 A2.5.

Police Dept Vehicles reports a Starting Balance of \$0 and Annual Funding totaling \$0, which is inadequate to fund projected replacements starting in 2023. See Page A2.3 for a more detailed evaluation.



REPLACEMENT RESERVE ANALYSIS - GENERAL INFORMATION

The Police Dept Vehicles 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.

2023 | 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, 2023.

40 Years | STUDY PERIOD

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

\$0 | STARTING BALANCE

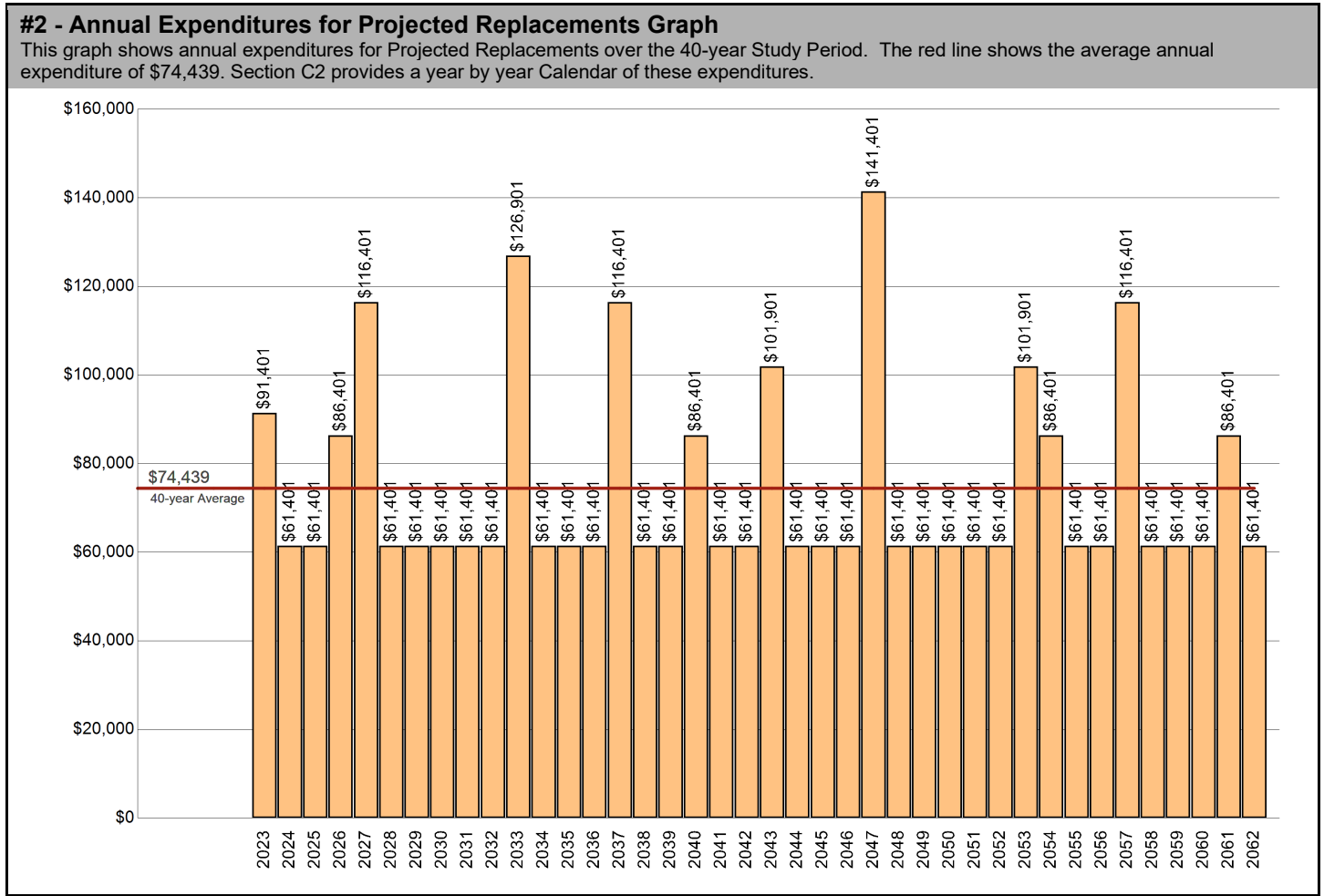
The Association reports Replacement Reserves on Deposit totaling \$0 at the start of the Study Year.

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).

\$2,977,540 | REPLACEMENT RESERVE INVENTORY - PROJECTED REPLACEMENTS

The Police Dept Vehicles Replacement Reserve Inventory identifies 11 items that will require periodic replacement, that are to be funded from Replacement Reserves. We estimate the cost of these replacements will be \$2,977,540 over the 40-year Study Period. The Projected Replacements are divided into 1 major categories starting on Page B2.3. Pages B2.1-B2.2 provide detailed information on the Replacement Reserve Inventory.



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 A2.4 and A2.5. The Projected Replacements listed on Page C2.2 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 A2.5.

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 A2.5.

ANNUAL EXPENDITURES AND CURRENT FUNDING

The annual expenditures that comprise the \$2,977,540 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 1 through 40										
Year	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Starting Balance										
Projected Replacements	(\$91,401)	(\$61,401)	(\$61,401)	(\$86,401)	(\$116,401)	(\$61,401)	(\$61,401)	(\$61,401)	(\$61,401)	(\$61,401)
Annual Deposit										
End of Year Balance	(\$91,401)	(\$152,802)	(\$214,203)	(\$300,604)	(\$417,005)	(\$478,406)	(\$539,807)	(\$601,208)	(\$662,609)	(\$724,010)
Cumulative Expenditures	(\$91,401)	(\$152,802)	(\$214,203)	(\$300,604)	(\$417,005)	(\$478,406)	(\$539,807)	(\$601,208)	(\$662,609)	(\$724,010)
Cumulative Receipts										
Year	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
Projected Replacements	(\$126,901)	(\$61,401)	(\$61,401)	(\$61,401)	(\$116,401)	(\$61,401)	(\$61,401)	(\$86,401)	(\$61,401)	(\$61,401)
Annual Deposit										
End of Year Balance	(\$850,911)	(\$912,312)	(\$973,713)	(\$1,035,114)	(\$1,151,515)	(\$1,212,916)	(\$1,274,317)	(\$1,360,718)	(\$1,422,119)	(\$1,483,520)
Cumulative Expenditures	(\$850,911)	(\$912,312)	(\$973,713)	(\$1,035,114)	(\$1,151,515)	(\$1,212,916)	(\$1,274,317)	(\$1,360,718)	(\$1,422,119)	(\$1,483,520)
Cumulative Receipts										
Year	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052
Projected Replacements	(\$101,901)	(\$61,401)	(\$61,401)	(\$61,401)	(\$141,401)	(\$61,401)	(\$61,401)	(\$61,401)	(\$61,401)	(\$61,401)
Annual Deposit										
End of Year Balance	(\$1,585,421)	(\$1,646,822)	(\$1,708,223)	(\$1,769,624)	(\$1,911,025)	(\$1,972,426)	(\$2,033,827)	(\$2,095,228)	(\$2,156,629)	(\$2,218,030)
Cumulative Expenditures	(\$1,585,421)	(\$1,646,822)	(\$1,708,223)	(\$1,769,624)	(\$1,911,025)	(\$1,972,426)	(\$2,033,827)	(\$2,095,228)	(\$2,156,629)	(\$2,218,030)
Cumulative Receipts										
Year	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062
Projected Replacements	(\$101,901)	(\$86,401)	(\$61,401)	(\$61,401)	(\$116,401)	(\$61,401)	(\$61,401)	(\$61,401)	(\$86,401)	(\$61,401)
Annual Deposit										
End of Year Balance	(\$2,319,931)	(\$2,406,332)	(\$2,467,733)	(\$2,529,134)	(\$2,645,535)	(\$2,706,936)	(\$2,768,337)	(\$2,829,738)	(\$2,916,139)	(\$2,977,540)
Cumulative Expenditures	(\$2,319,931)	(\$2,406,332)	(\$2,467,733)	(\$2,529,134)	(\$2,645,535)	(\$2,706,936)	(\$2,768,337)	(\$2,829,738)	(\$2,916,139)	(\$2,977,540)
Cumulative Receipts										

EVALUATION OF CURRENT FUNDING

The evaluation of Current Funding (Starting Balance of \$0 & annual funding of \$0), 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 11 Projected Replacements identified in the Replacement Reserve Inventory and that the Association will continue Annual Funding of \$0 throughout the 40-year Study Period.

Annual Funding of \$0 is approximately percent of the \$165,401 recommended Annual Funding calculated by the Cash Flow Method for 2023, the Study Year.

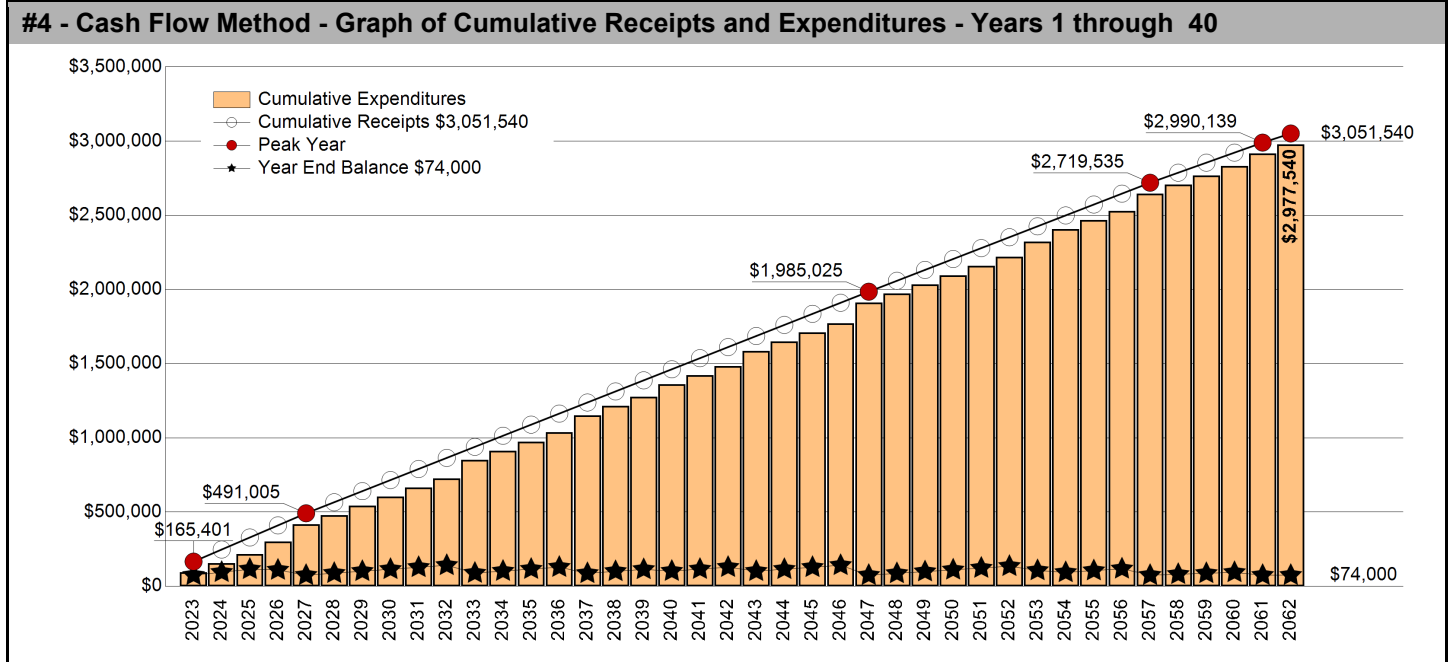
See the Executive Summary for the Current Funding Statement.

CASH FLOW METHOD FUNDING

\$165,401 RECOMMENDED REPLACEMENT RESERVE FUNDING FOR 2023

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 2023 with Replacement Reserves on Deposit dropping to the Minimum Balance after the completion of \$91,401 of replacements from 2023 to 2023. Recommended funding is projected to decline from \$165,401 in 2023 to \$81,401 in 2024. Peak Years are identified in Chart 4 and Table 5.
- Threshold (Minimum Balance).** The calculations assume a Minimum Balance of \$74,000 will always be held in reserve, which is calculated by rounding the 12-month 40-year average annual expenditure of \$74,439 as shown on Graph #2.
- Cash Flow Method Study Period.** Cash Flow Method calculates funding for \$2,977,540 of expenditures over the 40-year Study Period. It does not include funding for any projects beyond 2062 and in 2062, the end of year balance will always be the Minimum Balance.



Year	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
1st Peak - 2023										
Starting Balance										
Projected Replacements	(\$91,401)	(\$61,401)	(\$61,401)	(\$86,401)	(\$116,401)	(\$61,401)	(\$61,401)	(\$61,401)	(\$61,401)	(\$61,401)
Annual Deposit	\$165,401	\$81,401	\$81,401	\$81,401	\$81,401	\$74,701	\$74,701	\$74,701	\$74,701	\$74,701
End of Year Balance	\$74,000	\$94,000	\$114,000	\$109,000	\$74,000	\$87,300	\$100,600	\$113,900	\$127,200	\$140,500
Cumulative Expenditures	(\$91,401)	(\$152,802)	(\$214,203)	(\$300,604)	(\$417,005)	(\$478,406)	(\$539,807)	(\$601,208)	(\$662,609)	(\$724,010)
Cumulative Receipts	\$165,401	\$246,802	\$328,203	\$409,604	\$491,005	\$565,706	\$640,407	\$715,108	\$789,809	\$864,510
Year	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
Projected Replacements	(\$126,901)	(\$61,401)	(\$61,401)	(\$61,401)	(\$116,401)	(\$61,401)	(\$61,401)	(\$86,401)	(\$61,401)	(\$61,401)
Annual Deposit	\$74,701	\$74,701	\$74,701	\$74,701	\$74,701	\$74,701	\$74,701	\$74,701	\$74,701	\$74,701
End of Year Balance	\$88,300	\$101,600	\$114,900	\$128,200	\$86,500	\$99,800	\$113,100	\$101,400	\$114,700	\$128,000
Cumulative Expenditures	(\$850,911)	(\$912,312)	(\$973,713)	(\$1,035,114)	(\$1,151,515)	(\$1,212,916)	(\$1,274,317)	(\$1,360,718)	(\$1,422,119)	(\$1,483,520)
Cumulative Receipts	\$939,211	\$1,013,912	\$1,088,613	\$1,163,314	\$1,238,015	\$1,312,716	\$1,387,417	\$1,462,118	\$1,536,819	\$1,611,520
Year	2043	2044	2045	2046	3rd Peak - 2047	2048	2049	2050	2051	2052
Projected Replacements	(\$101,901)	(\$61,401)	(\$61,401)	(\$61,401)	(\$116,401)	(\$61,401)	(\$61,401)	(\$61,401)	(\$61,401)	(\$61,401)
Annual Deposit	\$74,701	\$74,701	\$74,701	\$74,701	\$74,701	\$73,451	\$73,451	\$73,451	\$73,451	\$73,451
End of Year Balance	\$100,800	\$114,100	\$127,400	\$140,700	\$74,000	\$86,050	\$98,100	\$110,150	\$122,200	\$134,250
Cumulative Expenditures	(\$1,585,421)	(\$1,646,822)	(\$1,708,223)	(\$1,769,624)	(\$1,911,025)	(\$1,972,426)	(\$2,033,827)	(\$2,095,228)	(\$2,156,629)	(\$2,218,030)
Cumulative Receipts	\$1,686,221	\$1,760,922	\$1,835,623	\$1,910,324	\$1,985,025	\$2,058,476	\$2,131,927	\$2,205,378	\$2,278,829	\$2,352,280
Year	2053	2054	2055	2056	4th Peak - 2057	2058	2059	2060	5th Peak - 2061	6th Peak - 2062
Projected Replacements	(\$101,901)	(\$86,401)	(\$61,401)	(\$61,401)	(\$116,401)	(\$61,401)	(\$61,401)	(\$61,401)	(\$86,401)	(\$61,401)
Annual Deposit	\$73,451	\$73,451	\$73,451	\$73,451	\$73,451	\$67,651	\$67,651	\$67,651	\$67,651	\$61,401
End of Year Balance	\$105,800	\$92,850	\$104,900	\$116,950	\$74,000	\$80,250	\$86,500	\$92,750	\$74,000	\$74,000
Cumulative Expenditures	(\$2,319,931)	(\$2,406,332)	(\$2,467,733)	(\$2,529,134)	(\$2,645,535)	(\$2,706,936)	(\$2,768,337)	(\$2,829,738)	(\$2,916,139)	(\$2,977,540)
Cumulative Receipts	\$2,425,731	\$2,499,182	\$2,572,633	\$2,646,084	\$2,719,535	\$2,787,186	\$2,854,837	\$2,922,488	\$2,990,139	\$3,051,540

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.

\$165,401 2023 - CASH FLOW METHOD RECOMMENDED FUNDING

The 2023 Study Year calculations have been made using current replacement costs (see Page B2.2), modified by the Analyst for any project specific conditions.

\$86,285 2024 - INFLATION ADJUSTED FUNDING

A new analysis calculates the 2024 funding based on three assumptions:

- Replacement Reserves on Deposit totaling \$74,000 on January 1, 2024.
- All 2023 Projected Replacements listed on Page C2.2 accomplished at a cost to Replacement Reserves less than \$91,401.
- Construction Cost Inflation of 6.00 percent in 2023.

The \$86,285 inflation adjusted funding in 2024 is a 6.00 percent increase over the non-inflation adjusted funding of \$81,401.

\$91,462 2025 - INFLATION ADJUSTED FUNDING

A new analysis calculates the 2025 funding based on three assumptions:

- Replacement Reserves on Deposit totaling \$74,000 on January 1, 2025.
- All 2024 Projected Replacements listed on Page C2.2 accomplished at a cost to Replacement Reserves less than \$49,185.
- Construction Cost Inflation of 6.00 percent in 2024.

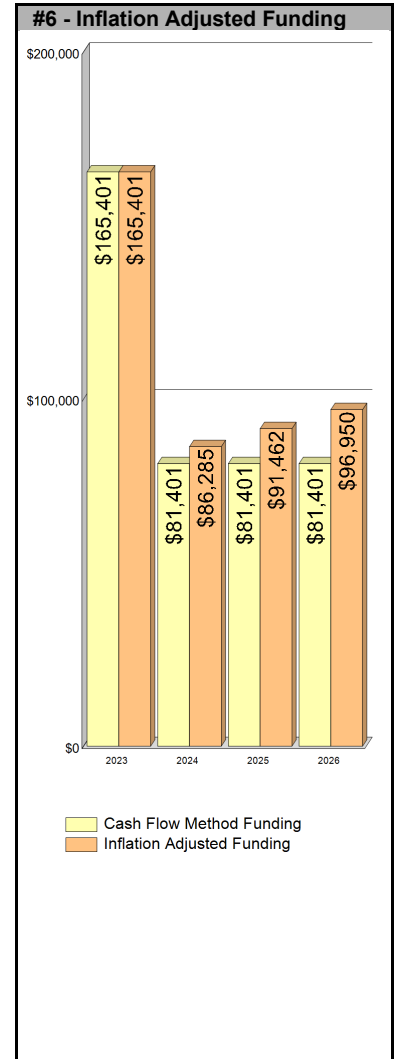
The \$91,462 inflation adjusted funding in 2025 is a 12.36 percent increase over the non-inflation adjusted funding of \$81,401.

\$96,950 2026 - INFLATION ADJUSTED FUNDING

A new analysis calculates the 2026 funding based on three assumptions:

- Replacement Reserves on Deposit totaling \$74,000 on January 1, 2026.
- All 2025 Projected Replacements listed on Page C2.2 accomplished at a cost to Replacement Reserves less than \$68,990.
- Construction Cost Inflation of 6.00 percent in 2025.

The \$96,950 inflation adjusted funding in 2026 is a 19.10 percent increase over the non-inflation adjusted funding of \$81,401.



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 2024, 2025 and 2026 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 2023, based on a 1.00 percent interest rate, we estimate the Association may earn \$370 on an average balance of \$37,000, \$740 on an average balance of \$74,000 in 2024, and \$740 on \$74,000 in 2025. The Association may elect to attribute 100 percent of the earned interest to Reserves, resulting in a reduction in the 2023 funding from \$165,401 to \$165,031 (a 0.22 percent reduction), \$86,285 to \$85,545 in 2024 (a 0.85 percent reduction), and \$91,462 to \$90,722 in 2025 (a 0.80 percent reduction).

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SECTION B - REPLACEMENT RESERVE INVENTORY

- **PROJECTED REPLACEMENTS.** Police Dept Vehicles - Replacement Reserve Inventory identifies 11 items which 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 \$413,906. Cumulative Replacements totaling \$2,977,540 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.

- **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:

Tax Code. The United States Tax Code grants very 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.

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 B2.2.

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 11 items included in the Police Dept Vehicles Replacement Reserve Inventory are divided into 1 major categories. Each category is printed on a separate page, beginning on page B2.3.
- **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 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 . 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 11 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 11 Projected Replacements specifically listed in the Replacement Reserve Inventory. The inclusion/exclusion of items from the Replacement Reserve Inventory is discussed on Page B2.1.

VEHICLES 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	Police cruiser 1	ea	1	\$46,401.00	6	1	\$46,401	
2	Police cruiser 2	ea	1	\$46,401.00	6	5	\$46,401	
3	Police cruiser 3	ea	1	\$46,401.00	6	4	\$46,401	
4	Police cruiser 4	ea	1	\$46,401.00	6	2	\$46,401	
5	Police cruiser 5	ea	1	\$46,401.00	6	none	\$46,401	
6	Police cruiser 6	ea	1	\$46,401.00	6	3	\$46,401	
7	In car video system	ls	1	\$55,000.00	10	4	\$55,000	
8	Toughbook MDT	ls	1	\$25,000.00	7	3	\$25,000	
9	Vehicle upfitting	ea	1	\$15,000.00	1	none	\$15,000	
10	Mobile radios	ls	1	\$30,000.00	10	none	\$30,000	
11	Radar	ea	5	\$2,100.00	10	10	\$10,500	
Replacement Costs - Page Subtotal							\$413,906	

COMMENTS
<ul style="list-style-type: none"> 02/13/2023 revised vehicles to schedule 1 replacement each year. 12/08/22 revised cost of cruisers and upfitting per comments provided. Pricing reflects current bid estimate. Current bid estimate may reflect the supply chain issues, economic factors, demand issues, and microprocessor (chip) shortages. Going forward cruisers will be purchased in Q3 of the prior year. Item #11: Radar - 12/08/22 revised REL per comments provided.

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SECTION C - CALENDAR OF PROJECTED ANNUAL REPLACEMENTS

GENERAL STATEMENT. The 11 Projected Replacements in the Police Dept Vehicles 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 C2.2.

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 on our time and manpower resources. Therefore, Miller Dodson 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 replacements 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 Miller - Dodson 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 Miller - Dodson 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, 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	2023 - Study Year	\$	Item	2024 - YEAR 1	\$
5	Police cruiser 5	\$46,401	1	Police cruiser 1	\$46,401
9	Vehicle upfitting	\$15,000	9	Vehicle upfitting	\$15,000
10	Mobile radios	\$30,000			
Total Scheduled Replacements		\$91,401	Total Scheduled Replacements		\$61,401

Item	2025 - YEAR 2	\$	Item	2026 - YEAR 3	\$
4	Police cruiser 4	\$46,401	6	Police cruiser 6	\$46,401
9	Vehicle upfitting	\$15,000	8	Toughbook MDT	\$25,000
			9	Vehicle upfitting	\$15,000
Total Scheduled Replacements		\$61,401	Total Scheduled Replacements		\$86,401

Item	2027 - YEAR 4	\$	Item	2028 - YEAR 5	\$
3	Police cruiser 3	\$46,401	2	Police cruiser 2	\$46,401
7	In car video system	\$55,000	9	Vehicle upfitting	\$15,000
9	Vehicle upfitting	\$15,000			
Total Scheduled Replacements		\$116,401	Total Scheduled Replacements		\$61,401

Item	2029 - YEAR 6	\$	Item	2030 - YEAR 7	\$
5	Police cruiser 5	\$46,401	1	Police cruiser 1	\$46,401
9	Vehicle upfitting	\$15,000	9	Vehicle upfitting	\$15,000
Total Scheduled Replacements		\$61,401	Total Scheduled Replacements		\$61,401

Item	2031 - YEAR 8	\$	Item	2032 - YEAR 9	\$
4	Police cruiser 4	\$46,401	6	Police cruiser 6	\$46,401
9	Vehicle upfitting	\$15,000	9	Vehicle upfitting	\$15,000
Total Scheduled Replacements		\$61,401	Total Scheduled Replacements		\$61,401

PROJECTED REPLACEMENTS

Item	2033 - YEAR 10	\$	Item	2034 - YEAR 11	\$
3	Police cruiser 3	\$46,401	2	Police cruiser 2	\$46,401
8	Toughbook MDT	\$25,000	9	Vehicle upfitting	\$15,000
9	Vehicle upfitting	\$15,000			
10	Mobile radios	\$30,000			
11	Radar	\$10,500			
Total Scheduled Replacements		\$126,901	Total Scheduled Replacements		\$61,401

Item	2035 - YEAR 12	\$	Item	2036 - YEAR 13	\$
5	Police cruiser 5	\$46,401	1	Police cruiser 1	\$46,401
9	Vehicle upfitting	\$15,000	9	Vehicle upfitting	\$15,000
Total Scheduled Replacements		\$61,401	Total Scheduled Replacements		\$61,401

Item	2037 - YEAR 14	\$	Item	2038 - YEAR 15	\$
4	Police cruiser 4	\$46,401	6	Police cruiser 6	\$46,401
7	In car video system	\$55,000	9	Vehicle upfitting	\$15,000
9	Vehicle upfitting	\$15,000			
Total Scheduled Replacements		\$116,401	Total Scheduled Replacements		\$61,401

Item	2039 - YEAR 16	\$	Item	2040 - YEAR 17	\$
3	Police cruiser 3	\$46,401	2	Police cruiser 2	\$46,401
9	Vehicle upfitting	\$15,000	8	Toughbook MDT	\$25,000
			9	Vehicle upfitting	\$15,000
Total Scheduled Replacements		\$61,401	Total Scheduled Replacements		\$86,401

Item	2041 - YEAR 18	\$	Item	2042 - YEAR 19	\$
5	Police cruiser 5	\$46,401	1	Police cruiser 1	\$46,401
9	Vehicle upfitting	\$15,000	9	Vehicle upfitting	\$15,000
Total Scheduled Replacements		\$61,401	Total Scheduled Replacements		\$61,401

PROJECTED REPLACEMENTS

Item	2043 - YEAR 20	\$	Item	2044 - YEAR 21	\$
4	Police cruiser 4	\$46,401	6	Police cruiser 6	\$46,401
9	Vehicle upfitting	\$15,000	9	Vehicle upfitting	\$15,000
10	Mobile radios	\$30,000			
11	Radar	\$10,500			
Total Scheduled Replacements		\$101,901	Total Scheduled Replacements		\$61,401

Item	2045 - YEAR 22	\$	Item	2046 - YEAR 23	\$
3	Police cruiser 3	\$46,401	2	Police cruiser 2	\$46,401
9	Vehicle upfitting	\$15,000	9	Vehicle upfitting	\$15,000
Total Scheduled Replacements		\$61,401	Total Scheduled Replacements		\$61,401

Item	2047 - YEAR 24	\$	Item	2048 - YEAR 25	\$
5	Police cruiser 5	\$46,401	1	Police cruiser 1	\$46,401
7	In car video system	\$55,000	9	Vehicle upfitting	\$15,000
8	Toughbook MDT	\$25,000			
9	Vehicle upfitting	\$15,000			
Total Scheduled Replacements		\$141,401	Total Scheduled Replacements		\$61,401

Item	2049 - YEAR 26	\$	Item	2050 - YEAR 27	\$
4	Police cruiser 4	\$46,401	6	Police cruiser 6	\$46,401
9	Vehicle upfitting	\$15,000	9	Vehicle upfitting	\$15,000
Total Scheduled Replacements		\$61,401	Total Scheduled Replacements		\$61,401

Item	2051 - YEAR 28	\$	Item	2052 - YEAR 29	\$
3	Police cruiser 3	\$46,401	2	Police cruiser 2	\$46,401
9	Vehicle upfitting	\$15,000	9	Vehicle upfitting	\$15,000
Total Scheduled Replacements		\$61,401	Total Scheduled Replacements		\$61,401

PROJECTED REPLACEMENTS

Item	2053 - YEAR 30	\$	Item	2054 - YEAR 31	\$
5	Police cruiser 5	\$46,401	1	Police cruiser 1	\$46,401
9	Vehicle upfitting	\$15,000	8	Toughbook MDT	\$25,000
10	Mobile radios	\$30,000	9	Vehicle upfitting	\$15,000
11	Radar	\$10,500			
Total Scheduled Replacements		\$101,901	Total Scheduled Replacements		\$86,401

Item	2055 - YEAR 32	\$	Item	2056 - YEAR 33	\$
4	Police cruiser 4	\$46,401	6	Police cruiser 6	\$46,401
9	Vehicle upfitting	\$15,000	9	Vehicle upfitting	\$15,000
Total Scheduled Replacements		\$61,401	Total Scheduled Replacements		\$61,401

Item	2057 - YEAR 34	\$	Item	2058 - YEAR 35	\$
3	Police cruiser 3	\$46,401	2	Police cruiser 2	\$46,401
7	In car video system	\$55,000	9	Vehicle upfitting	\$15,000
9	Vehicle upfitting	\$15,000			
Total Scheduled Replacements		\$116,401	Total Scheduled Replacements		\$61,401

Item	2059 - YEAR 36	\$	Item	2060 - YEAR 37	\$
5	Police cruiser 5	\$46,401	1	Police cruiser 1	\$46,401
9	Vehicle upfitting	\$15,000	9	Vehicle upfitting	\$15,000
Total Scheduled Replacements		\$61,401	Total Scheduled Replacements		\$61,401

Item	2061 - YEAR 38	\$	Item	2062 - YEAR 39	\$
4	Police cruiser 4	\$46,401	6	Police cruiser 6	\$46,401
8	Toughbook MDT	\$25,000	9	Vehicle upfitting	\$15,000
9	Vehicle upfitting	\$15,000			
Total Scheduled Replacements		\$86,401	Total Scheduled Replacements		\$61,401

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SECTION D - CONDITION ASSESSMENT

General Comments. Miller+Dodson Associates conducted a Reserve Study at Police Station Vehicles in September 2022. Police Station Vehicles is in generally good condition for a township. A review of the Replacement Reserve Inventory will show that we are anticipating 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. Miller Dodson 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.

VEHICLES

Vehicles. The Township features various vehicles to support Police Station activities.





The vehicles were not evaluated as part of this study. Vehicles are included in the inventory as indicated by the Township. The vehicles are replaced on a rotating schedule.

We have included computers, accessories, and fit out as new vehicles are rotated in.

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

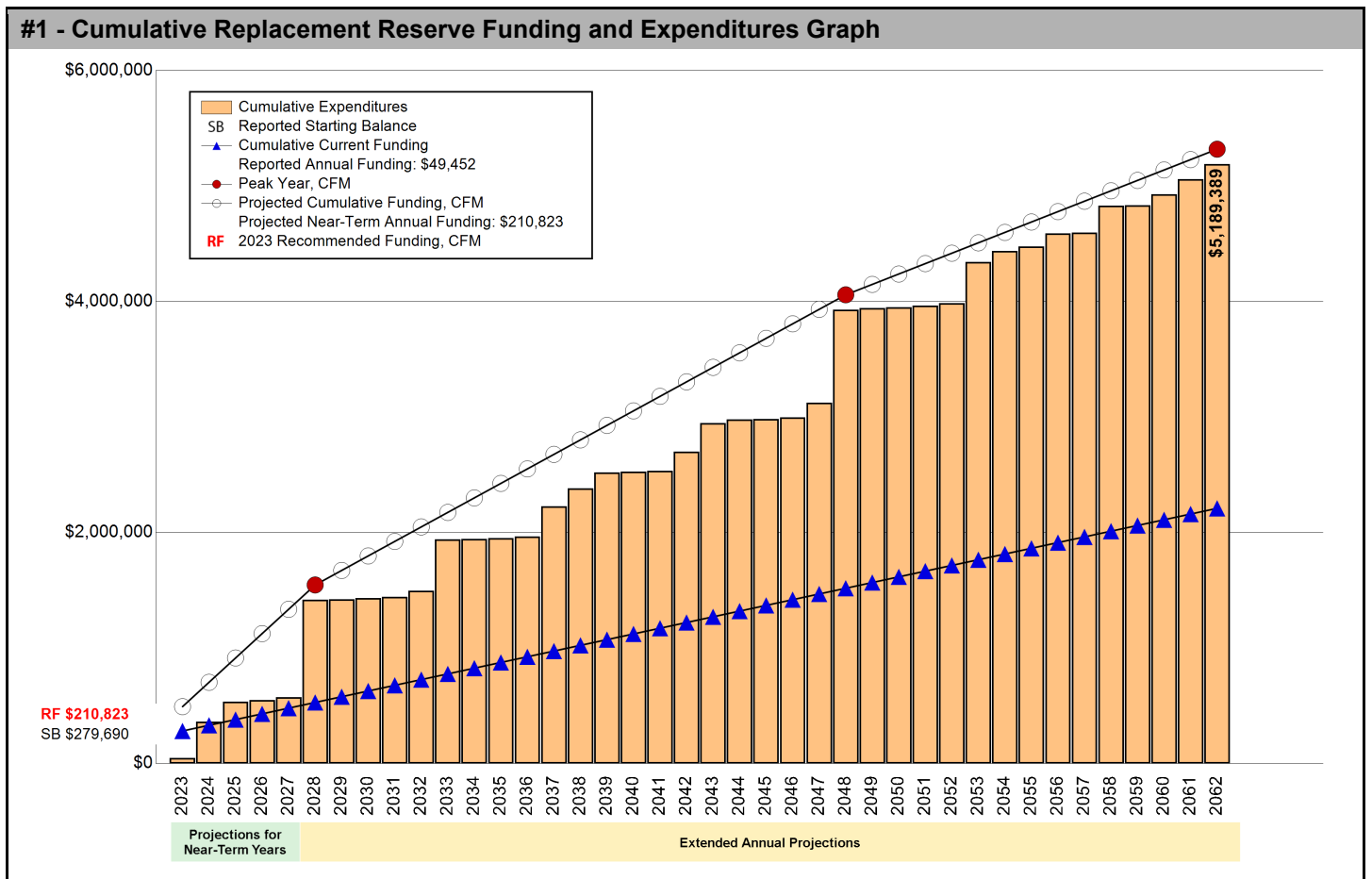
SECTION A - FINANCIAL ANALYSIS

The Fire Station Replacement Reserve Analysis uses the Cash Flow Method (CFM) to calculate Replacement Reserve funding for the periodic replacement of the 60 Projected Replacements identified in the Replacement Reserve Inventory.

\$210,823 RECOMMENDED REPLACEMENT RESERVE FUNDING FOR THE STUDY YEAR, 2023

We recommend the Township adopt a Replacement Reserve Funding Plan based on the annual funding recommendation above. Inflation adjusted funding for subsequent years is shown on Page A3.5.

Fire Station reports a Starting Balance of \$279,690 and Annual Funding totaling \$49,452, which is inadequate to fund projected replacements starting in 2024. See Page A3.3 for a more detailed evaluation.



REPLACEMENT RESERVE ANALYSIS - GENERAL INFORMATION

The Fire Station 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.

2023 | STUDY YEAR

The Township 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, 2023.

40 Years | STUDY PERIOD

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

\$279,690 | STARTING BALANCE

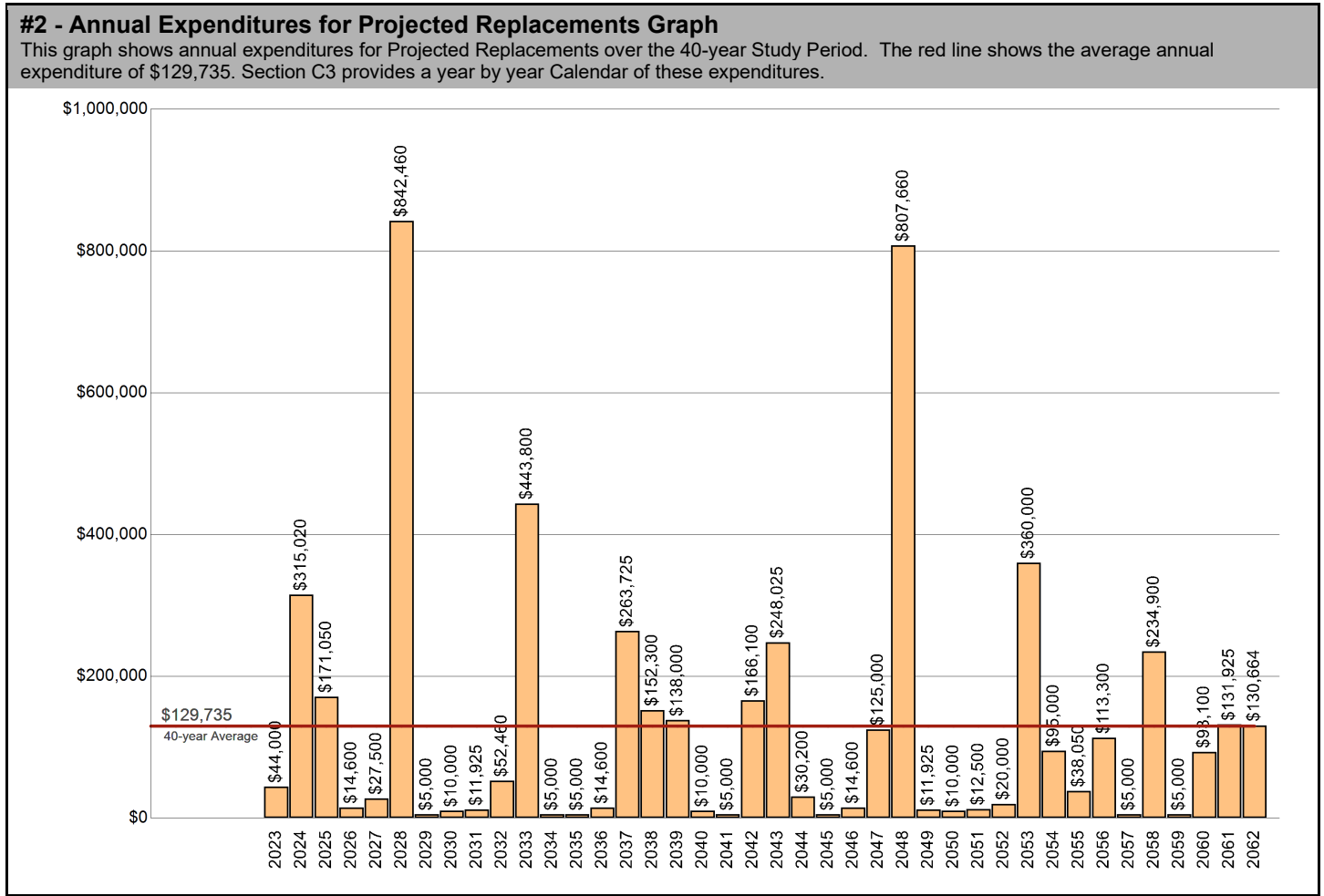
The Township reports Replacement Reserves on Deposit totaling \$279,690 at the start of the Study Year.

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).

\$5,189,389 | REPLACEMENT RESERVE INVENTORY - PROJECTED REPLACEMENTS

The Fire Station Replacement Reserve Inventory identifies 60 items that will require periodic replacement, that are to be funded from Replacement Reserves. We estimate the cost of these replacements will be \$5,189,389 over the 40-year Study Period. The Projected Replacements are divided into 3 major categories starting on Page B3.3. Pages B3.1-B3.2 provide detailed information on the Replacement Reserve Inventory.



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 A3.4 and A3.5. The Projected Replacements listed on Page C3.2 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 A3.5.

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 A3.5.

ANNUAL EXPENDITURES AND CURRENT FUNDING

The annual expenditures that comprise the \$5,189,389 of Projected Expenditures over the 40-year Study Period and the impact of the Township continuing to fund Replacement Reserves at the current level are detailed in Table 3.

#3 - Table of Annual Expenditures and Current Funding Data - Years 1 through 40										
Year	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Starting Balance	\$279,690									
Projected Replacements	(\$44,000)	(\$315,020)	(\$171,050)	(\$14,600)	(\$27,500)	(\$842,460)	(\$5,000)	(\$10,000)	(\$11,925)	(\$52,460)
Annual Deposit	\$49,452	\$49,452	\$49,452	\$49,452	\$49,452	\$49,452	\$49,452	\$49,452	\$49,452	\$49,452
End of Year Balance	\$285,142	\$19,574	(\$102,024)	(\$67,172)	(\$45,220)	(\$838,228)	(\$793,776)	(\$754,324)	(\$716,797)	(\$719,805)
Cumulative Expenditures	(\$44,000)	(\$359,020)	(\$530,070)	(\$544,670)	(\$572,170)	(\$1,414,630)	(\$1,419,630)	(\$1,429,630)	(\$1,441,555)	(\$1,494,015)
Cumulative Receipts	\$329,142	\$378,594	\$428,046	\$477,498	\$526,950	\$576,402	\$625,854	\$675,306	\$724,758	\$774,210
Year	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
Projected Replacements	(\$443,800)	(\$5,000)	(\$5,000)	(\$14,600)	(\$263,725)	(\$152,300)	(\$138,000)	(\$10,000)	(\$5,000)	(\$166,100)
Annual Deposit	\$49,452	\$49,452	\$49,452	\$49,452	\$49,452	\$49,452	\$49,452	\$49,452	\$49,452	\$49,452
End of Year Balance	(\$1,114,153)	(\$1,069,701)	(\$1,025,249)	(\$990,397)	(\$1,204,670)	(\$1,307,518)	(\$1,396,066)	(\$1,356,614)	(\$1,312,162)	(\$1,428,810)
Cumulative Expenditures	(\$1,937,815)	(\$1,942,815)	(\$1,947,815)	(\$1,962,415)	(\$2,226,140)	(\$2,378,440)	(\$2,516,440)	(\$2,526,440)	(\$2,531,440)	(\$2,697,540)
Cumulative Receipts	\$823,662	\$873,114	\$922,566	\$972,018	\$1,021,470	\$1,070,922	\$1,120,374	\$1,169,826	\$1,219,278	\$1,268,730
Year	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052
Projected Replacements	(\$248,025)	(\$30,200)	(\$5,000)	(\$14,600)	(\$125,000)	(\$807,660)	(\$11,925)	(\$10,000)	(\$12,500)	(\$20,000)
Annual Deposit	\$49,452	\$49,452	\$49,452	\$49,452	\$49,452	\$49,452	\$49,452	\$49,452	\$49,452	\$49,452
End of Year Balance	(\$1,627,383)	(\$1,608,131)	(\$1,563,679)	(\$1,528,827)	(\$1,604,375)	(\$2,362,583)	(\$2,325,056)	(\$2,285,604)	(\$2,248,652)	(\$2,219,200)
Cumulative Expenditures	(\$2,945,565)	(\$2,975,765)	(\$2,980,765)	(\$2,995,365)	(\$3,120,365)	(\$3,928,025)	(\$3,939,950)	(\$3,949,950)	(\$3,962,450)	(\$3,982,450)
Cumulative Receipts	\$1,318,182	\$1,367,634	\$1,417,086	\$1,466,538	\$1,515,990	\$1,565,442	\$1,614,894	\$1,664,346	\$1,713,798	\$1,763,250
Year	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062
Projected Replacements	(\$360,000)	(\$95,000)	(\$38,050)	(\$113,300)	(\$5,000)	(\$234,900)	(\$5,000)	(\$93,100)	(\$131,925)	(\$130,664)
Annual Deposit	\$49,452	\$49,452	\$49,452	\$49,452	\$49,452	\$49,452	\$49,452	\$49,452	\$49,452	\$49,452
End of Year Balance	(\$2,529,748)	(\$2,575,296)	(\$2,563,894)	(\$2,627,742)	(\$2,583,290)	(\$2,768,738)	(\$2,724,286)	(\$2,767,934)	(\$2,850,407)	(\$2,931,619)
Cumulative Expenditures	(\$4,342,450)	(\$4,437,450)	(\$4,475,500)	(\$4,588,800)	(\$4,593,800)	(\$4,828,700)	(\$4,833,700)	(\$4,926,800)	(\$5,058,725)	(\$5,189,389)
Cumulative Receipts	\$1,812,702	\$1,862,154	\$1,911,606	\$1,961,058	\$2,010,510	\$2,059,962	\$2,109,414	\$2,158,866	\$2,208,318	\$2,257,770

EVALUATION OF CURRENT FUNDING

The evaluation of Current Funding (Starting Balance of \$279,690 & annual funding of \$49,452), 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 60 Projected Replacements identified in the Replacement Reserve Inventory and that the Township will continue Annual Funding of \$49,452 throughout the 40-year Study Period.

Annual Funding of \$49,452 is approximately 23 percent of the \$210,823 recommended Annual Funding calculated by the Cash Flow Method for 2023, the Study Year.

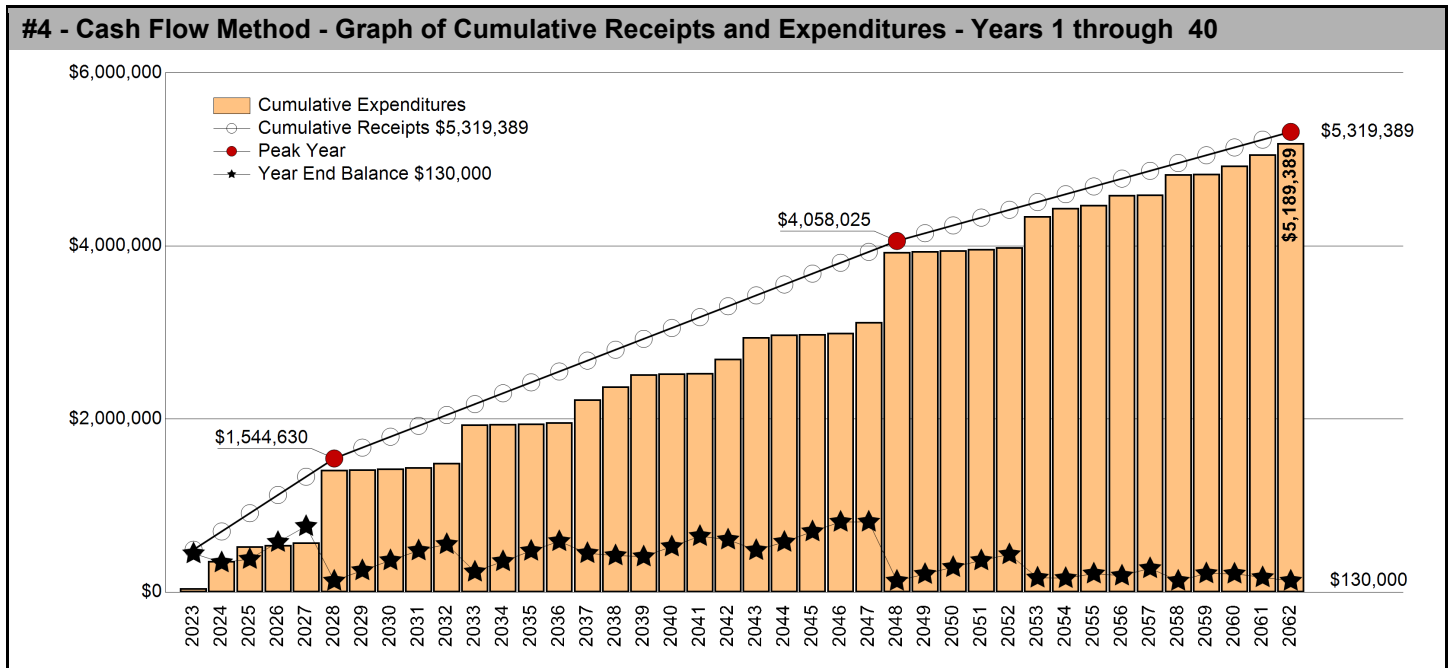
See the Executive Summary for the Current Funding Statement.

CASH FLOW METHOD FUNDING

\$210,823 RECOMMENDED REPLACEMENT RESERVE FUNDING FOR 2023

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 2028 with Replacement Reserves on Deposit dropping to the Minimum Balance after the completion of \$1,414,630 of replacements from 2023 to 2028. Recommended funding is projected to decline from \$210,823 in 2028 to \$125,670 in 2029. Peak Years are identified in Chart 4 and Table 5.
- Threshold (Minimum Balance).** The calculations assume a Minimum Balance of \$130,000 will always be held in reserve, which is calculated by rounding the 12-month 40-year average annual expenditure of \$129,735 as shown on Graph #2.
- Cash Flow Method Study Period.** Cash Flow Method calculates funding for \$5,189,389 of expenditures over the 40-year Study Period. It does not include funding for any projects beyond 2062 and in 2062, the end of year balance will always be the Minimum Balance.



#5 - Cash Flow Method - Table of Receipts & Expenditures - Years 1 through 40

Year	2023	2024	2025	2026	2027	1st Peak - 2028	2029	2030	2031	2032
Starting Balance	\$279,690									
Projected Replacements	(\$44,000)	(\$315,020)	(\$171,050)	(\$14,600)	(\$27,500)	(\$842,460)	(\$5,000)	(\$10,000)	(\$11,925)	(\$52,460)
Annual Deposit	\$210,823	\$210,823	\$210,823	\$210,823	\$210,823	\$210,823	\$125,670	\$125,670	\$125,670	\$125,670
End of Year Balance	\$446,513	\$342,317	\$382,090	\$578,313	\$761,637	\$130,000	\$250,670	\$366,339	\$480,084	\$553,294
Cumulative Expenditures	(\$44,000)	(\$359,020)	(\$530,070)	(\$544,670)	(\$572,170)	(\$1,414,630)	(\$1,419,630)	(\$1,429,630)	(\$1,441,555)	(\$1,494,015)
Cumulative Receipts	\$490,513	\$701,337	\$912,160	\$1,122,983	\$1,333,807	\$1,544,630	\$1,670,300	\$1,795,969	\$1,921,639	\$2,047,309
Year	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
Projected Replacements	(\$443,800)	(\$5,000)	(\$5,000)	(\$14,600)	(\$263,725)	(\$152,300)	(\$138,000)	(\$10,000)	(\$5,000)	(\$166,100)
Annual Deposit	\$125,670	\$125,670	\$125,670	\$125,670	\$125,670	\$125,670	\$125,670	\$125,670	\$125,670	\$125,670
End of Year Balance	\$235,164	\$355,833	\$476,503	\$587,573	\$449,518	\$422,887	\$410,557	\$526,227	\$646,897	\$606,466
Cumulative Expenditures	(\$1,937,815)	(\$1,942,815)	(\$1,947,815)	(\$1,962,415)	(\$2,226,140)	(\$2,378,440)	(\$2,516,440)	(\$2,526,440)	(\$2,531,440)	(\$2,697,540)
Cumulative Receipts	\$2,172,979	\$2,298,648	\$2,424,318	\$2,549,988	\$2,675,658	\$2,801,327	\$2,926,997	\$3,052,667	\$3,178,337	\$3,304,006
Year	2043	2044	2045	2046	2047	2nd Peak - 2048	2049	2050	2051	2052
Projected Replacements	(\$248,025)	(\$30,200)	(\$5,000)	(\$14,600)	(\$125,000)	(\$807,660)	(\$11,925)	(\$10,000)	(\$12,500)	(\$20,000)
Annual Deposit	\$125,670	\$125,670	\$125,670	\$125,670	\$125,670	\$125,670	\$90,097	\$90,097	\$90,097	\$90,097
End of Year Balance	\$484,111	\$579,581	\$700,251	\$811,320	\$811,990	\$130,000	\$208,172	\$288,270	\$365,867	\$435,965
Cumulative Expenditures	(\$2,945,565)	(\$2,975,765)	(\$2,980,765)	(\$2,995,365)	(\$3,120,365)	(\$3,928,025)	(\$3,939,950)	(\$3,949,950)	(\$3,962,450)	(\$3,982,450)
Cumulative Receipts	\$3,429,676	\$3,555,346	\$3,681,016	\$3,806,685	\$3,932,355	\$4,058,025	\$4,148,122	\$4,238,220	\$4,328,317	\$4,418,415
Year	2053	2054	2055	2056	2057	2058	2059	2060	2061	3rd Peak - 2062
Projected Replacements	(\$360,000)	(\$95,000)	(\$38,050)	(\$113,300)	(\$5,000)	(\$234,900)	(\$5,000)	(\$93,100)	(\$131,925)	(\$130,664)
Annual Deposit	\$90,097	\$90,097	\$90,097	\$90,097	\$90,097	\$90,097	\$90,097	\$90,097	\$90,097	\$90,097
End of Year Balance	\$166,062	\$161,160	\$213,207	\$190,004	\$275,102	\$130,299	\$215,397	\$212,394	\$170,567	\$130,000
Cumulative Expenditures	(\$4,342,450)	(\$4,437,450)	(\$4,475,500)	(\$4,588,800)	(\$4,593,800)	(\$4,828,700)	(\$4,833,700)	(\$4,926,800)	(\$5,058,725)	(\$5,189,389)
Cumulative Receipts	\$4,508,512	\$4,598,610	\$4,688,707	\$4,778,804	\$4,868,902	\$4,958,999	\$5,049,097	\$5,139,194	\$5,229,292	\$5,319,389

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.

\$210,823 2023 - CASH FLOW METHOD RECOMMENDED FUNDING

The 2023 Study Year calculations have been made using current replacement costs (see Page B3.2), modified by the Analyst for any project specific conditions.

\$223,473 2024 - INFLATION ADJUSTED FUNDING

A new analysis calculates the 2024 funding based on three assumptions:

- Replacement Reserves on Deposit totaling \$446,513 on January 1, 2024.
- All 2023 Projected Replacements listed on Page C3.2 accomplished at a cost to Replacement Reserves less than \$44,000.
- Construction Cost Inflation of 6.00 percent in 2023.

The \$223,473 inflation adjusted funding in 2024 is a 6.00 percent increase over the non-inflation adjusted funding of \$210,823.

\$236,881 2025 - INFLATION ADJUSTED FUNDING

A new analysis calculates the 2025 funding based on three assumptions:

- Replacement Reserves on Deposit totaling \$214,642 on January 1, 2025.
- All 2024 Projected Replacements listed on Page C3.2 accomplished at a cost to Replacement Reserves less than \$311,131.
- Construction Cost Inflation of 6.00 percent in 2024.

The \$236,881 inflation adjusted funding in 2025 is a 12.36 percent increase over the non-inflation adjusted funding of \$210,823.

\$251,094 2026 - INFLATION ADJUSTED FUNDING

A new analysis calculates the 2026 funding based on three assumptions:

- Replacement Reserves on Deposit totaling \$341,467 on January 1, 2026.
- All 2025 Projected Replacements listed on Page C3.2 accomplished at a cost to Replacement Reserves less than \$184,080.
- Construction Cost Inflation of 6.00 percent in 2025.

The \$251,094 inflation adjusted funding in 2026 is a 19.10 percent increase over the non-inflation adjusted funding of \$210,823.

Year Four and Beyond

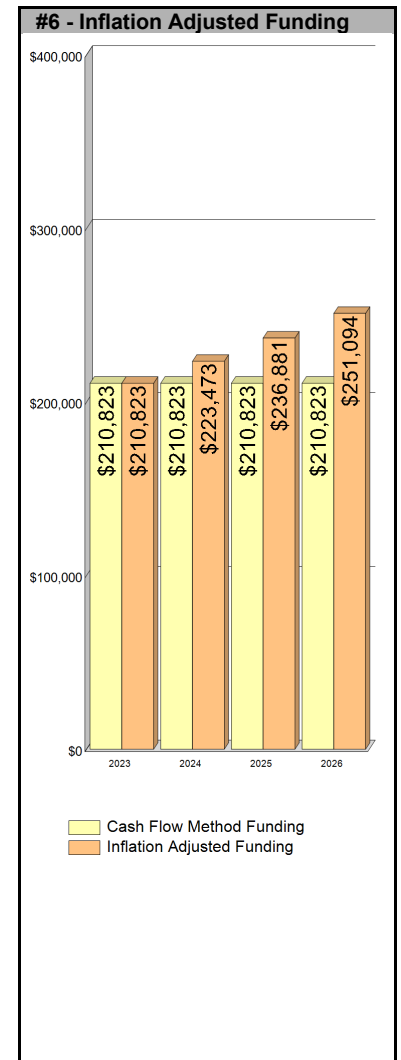
The inflation-adjusted funding calculations outlined above are not intended to be a substitute for periodic evaluation of common elements by an experienced Reserve Analyst. Industry Standards, lender requirements, and many state and local statutes require a Replacement Reserve Study to be professionally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

Inflation Adjustment

Prior to approving a budget based upon the 2024, 2025 and 2026 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 2023, based on a 1.00 percent interest rate, we estimate the Township may earn \$3,631 on an average balance of \$363,102, \$3,306 on an average balance of \$330,578 in 2024, and \$2,781 on \$278,055 in 2025. The Township may elect to attribute 100 percent of the earned interest to Reserves, resulting in a reduction in the 2023 funding from \$210,823 to \$207,192 (a 1.72 percent reduction), \$223,473 to \$220,167 in 2024 (a 1.47 percent reduction), and \$236,881 to \$234,101 in 2025 (a 1.17 percent reduction).



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SECTION B - REPLACEMENT RESERVE INVENTORY

- **PROJECTED REPLACEMENTS.** Fire Station - Replacement Reserve Inventory identifies 60 items which 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 \$2,926,174. Cumulative Replacements totaling \$5,189,389 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.

- **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:

Tax Code. The United States Tax Code grants very 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.

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 Township policy on the administration of Replacement Reserves. If the Township has selected an alternative level, it will be noted in the Replacement Reserve Inventory - General Comments on Page B3.2.

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 Township.

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 Township. These types of items are generally not the responsibility of the Township and are excluded from the Replacement Reserve Inventory.

- **CATEGORIES.** The 60 items included in the Fire Station Replacement Reserve Inventory are divided into 3 major categories. Each category is printed on a separate page, beginning on page B3.3.
- **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 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 . 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 60 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 60 Projected Replacements specifically listed in the Replacement Reserve Inventory. The inclusion/exclusion of items from the Replacement Reserve Inventory is discussed on Page B3.1.

SITE ITEMS				NEL- Normal Economic Life (yrs)		REL- Remaining Economic Life (yrs)	
PROJECTED REPLACEMENTS							
ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST (\$)	NEL	REL	REPLACEMENT COST (\$)
1	Asphalt pavement, mill and overlay (heavy duty)	sf	27,700	\$3.00	18	19	\$83,100
2	Pavement, rejuvenator seal coat	sf	27,700	\$0.25	6	2	\$6,925
3	Concrete Drive Apron (Heavy duty)	sf	2,380	\$24.00	60	1	\$57,120
4	Concrete Drive-off (Heavy duty), front	sf	3,000	\$24.00	30	1	\$72,000
5	Concrete Drive-off (Heavy duty), rear	sf	3,000	\$24.00	30	5	\$72,000
6	Concrete Drive-off (Heavy duty), new	sf	6,600	\$24.00	60	1	\$158,400
7	Concrete flatwork	sf	8,242	\$12.00	60	39	\$98,904
8	Bollards (front)	ea	10	\$450.00	20	1	\$4,500
9	Bollards (back)	ea	10	\$450.00	20	5	\$4,500
	Building exterior lighting (recessed)						EXCLUDED
	Building exterior lighting (lg. downlight) LED						EXCLUDED
10	Lamp post	ea	6	\$3,500.00	30	9	\$21,000
11	Lamp post head	ea	6	\$650.00	15	20	\$3,900
12	Inductive (red) light (LED Aircraft light)	ea	6	\$450.00	15	20	\$2,700
	Signage lighting						EXCLUDED
13	Graphic sign	sf	64	\$450.00	10	5	\$28,800
14	Flagpole (approx. 30')	ea	1	\$6,500.00	20	20	\$6,500
	Flagpole lighting						EXCLUDED
15	Stormwater Management (allowance)	ls	1	\$18,000.00	30	5	\$18,000
Replacement Costs - Page Subtotal							\$638,349

COMMENTS
<ul style="list-style-type: none"> • Additional funds for heavy duty pavements are included to address issues with asphalt pavement and concrete where the weight of the vehicles is a factor in the premature deterioration of the pavements and possible the sub grade materials. • Building exterior lighting (recessed) - 12/08/22 - is excluded as a valuation exclusion that does not meet the minimum threshold for reserves. • Building exterior lighting (lg. downlight) LED - 12/08/22 - is excluded as a valuation exclusion that does not meet the minimum threshold for reserves. • Signage lighting - 12/08/22 - is excluded as a valuation exclusion that does not meet the minimum threshold for reserves. • Flagpole lighting - 12/08/22 - is excluded as a valuation exclusion that does not meet the minimum threshold for reserves.

SITE ITEMS - (cont.) 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 (\$)	
16	Storm drain repair (front concrete pad)	ls	1	\$18,000.00	30	1	\$18,000	
17	Station oil separator	ls	1	\$15,000.00	50	30	\$15,000	
18	Enlarge detention basin	cy	700	\$95.00	50	50	\$66,500	
19	Domestic water well (allowance)	ls	1	\$15,000.00	10	none	\$15,000	
20	Sanitary sewer (allowance)	ls	1	\$15,000.00	10	10	\$15,000	
Replacement Costs - Page Subtotal							\$129,500	

COMMENTS
<ul style="list-style-type: none"> Additional funds for heavy duty pavements are included to address issues with asphalt pavement and concrete where the weight of the vehicles is a factor in the premature deterioration of the pavements and possible the sub grade materials.

EXTERIOR 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 (\$)	
21	Built-up roofing (BUR), flat	sf	15,580	\$32.00	20	5	\$498,560	
22	Gutters and downspouts	lf	200	\$13.00	20	5	\$2,600	
23	8" roof scuppers and downspouts	lf	320	\$18.00	30	9	\$5,760	
24	Brick veneer repoint (10% allowance)	sf	1,100	\$12.00	25	25	\$13,200	
25	Caulking (allowance)	ls	1	\$6,000.00	5	5	\$6,000	
26	Exterior door (allowance)	ea	6	\$12,000.00	10	10	\$72,000	
27	Overhead door, replace, ph. 1	ea	5	\$41,160.00	30	10	\$205,800	
28	Overhead door, replace, ph. 2	ea	5	\$41,160.00	30	14	\$205,800	
29	Overhead door, repair (10% allowance)	ls	1	\$5,000.00	1	none	\$5,000	
30	Windows (4' x 10')	ea	5	\$5,000.00	35	14	\$25,000	
31	Windows (4' x 6')	ea	7	\$3,000.00	35	14	\$21,000	
32	General exterior repair (allowance)	ls	1	\$5,000.00	10	7	\$5,000	
Replacement Costs - Page Subtotal							\$1,065,720	

COMMENTS

BUILDING SYSTEMS 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 (\$)	
33	Fire Alarm Control Annunciator Panel (FACP)	ea	1	\$10,500.00	20	5	\$10,500	
	Fire Alarm Control Panel, sub panel						EXCLUDED	
	Smoke detector						EXCLUDED	
	Fire strobe						EXCLUDED	
	Fire alarm pull						EXCLUDED	
	Fire sprinkler control system						EXCLUDED	
	Fire sprinkler pump						EXCLUDED	
34	Domestic water piping (allowance)	ls	1	\$5,000.00	10	5	\$5,000	
35	Water heater, 100 gal. commercial, w/circ.	ea	1	\$14,000.00	15	none	\$14,000	
	Domestic water pressure pump						EXCLUDED	
36	Well pump	ea	1	\$8,500.00	10	5	\$8,500	
	Well clean-up service						EXCLUDED	
37	Well pressure tank	ea	2	\$7,500.00	12	9	\$15,000	
38	Well water softener	ea	1	\$5,700.00	12	9	\$5,700	
	Water testing						EXCLUDED	
39	Well replacement	ea	1	\$15,000.00	25	4	\$15,000	
40	175k btu boiler	ea	4	\$28,000.00	14	2	\$112,000	
41	Boiler tank & recirculate pumps	ea	2	\$10,500.00	14	2	\$21,000	
42	Ductless A/C, wall Mounted, 12k btu	ea	3	\$2,500.00	24	4	\$7,500	
43	Carrier "Aero"air handler, cfm	ea	3	\$25,000.00	14	10	\$75,000	
44	Condensing unit (15 ton)	ea	1	\$45,000.00	14	10	\$45,000	
	Drying cabinet (circul-air)						EXCLUDED	
Replacement Costs - Page Subtotal							\$334,200	

COMMENTS
<ul style="list-style-type: none"> • Example of replacement of HVAC with would include rooftop units. For a 1 story building 15,000 sf requires 1 7.5 -ton unit per 2,000 sf. So 8 units installed at a cost of \$15,000 each or \$120,000 every 15-20 years. \$6,000 per year. Radiant heat in truck bays would remain. An HVAC engineer should evaluate the feasibility and cost. • Fire Alarm Control Panel, sub panel - 12/08/22 - is excluded as a valuation exclusion that does not meet the minimum threshold for reserves. • Smoke detector - 12/08/22 - is excluded as a valuation exclusion that does not meet the minimum threshold for reserves. • Fire strobe - 12/08/22 - is excluded as a valuation exclusion that does not meet the minimum threshold for reserves. • Fire alarm pull - 12/08/22 - is excluded as a valuation exclusion that does not meet the minimum threshold for reserves. • Fire sprinkler control system - 12/08/22 - is excluded as a valuation exclusion that does not meet the minimum threshold for reserves. • Fire sprinkler pump - 12/08/22 - is excluded as a valuation exclusion that does not meet the minimum threshold for reserves. • Domestic water pressure pump - 12/08/22 - is excluded as a valuation exclusion that does not meet the minimum threshold for reserves. • Well clean-up service - 12/08/22 - is excluded as a valuation exclusion that does not meet the minimum threshold for reserves.

BUILDING SYSTEMS - (cont.) 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 (\$)	
	Drying cabinet, extractor						EXCLUDED	
	CO alarm system w/ variable blower						EXCLUDED	
45	HVAC controls	ea	1	\$20,000.00	20	20	\$20,000	
46	Diesel exhaust system (allowance)	ea	1	\$30,000.00	15	15	\$30,000	
47	Truck bay epoxy coating	sf	9,500	\$2.75	30	2	\$26,125	
	Electric heater						EXCLUDED	
48	Garage radiant heat system	ft	600	\$120.00	14	5	\$72,000	
	Exhaust fan, 1 hp						EXCLUDED	
	Exhaust fan, 2 hp						EXCLUDED	
49	Exhaust fan, 1/4 hp (allowance)	ea	4	\$1,500.00	14	5	\$6,000	
50	Exhaust hood and fan	ea	2	\$10,000.00	20	5	\$20,000	
51	Emergency Generator (175 Kw)	ea	1	\$200,000.00	30	25	\$200,000	
52	Emergency Generator (rebuild)	ea	1	\$80,000.00	15	5	\$80,000	
53	Electrical (allowance)	ea	1	\$10,000.00	20	20	\$10,000	
54	Electrical, LV panel lost light sensor	ea	1	\$10,000.00	15	none	\$10,000	
55	Breathing air compressor	ea	1	\$30,000.00	15	15	\$30,000	
56	IT Infrastructure and LAN server (allowance)	ls	1	\$10,000.00	15	15	\$10,000	
57	Computer workstation	ea	8	\$1,200.00	10	3	\$9,600	
Replacement Costs - Page Subtotal							\$523,725	

COMMENTS
<ul style="list-style-type: none"> • Example of replacement of HVAC with would include rooftop units. For a 1 story building 15,000 sf requires 1 7.5 -ton unit per 2,000 sf. So 8 units installed at a cost of \$15,000 each or \$120,000 every 15-20 years. \$6,000 per year. Radiant heat in truck bays would remain. An HVAC engineer should evaluate the feasibility and cost. • Drying cabinet, extractor - 12/08/22 - is excluded as a valuation exclusion that does not meet the minimum threshold for reserves. • CO alarm system w/ variable blower - 12/08/22 - is excluded as a valuation exclusion that does not meet the minimum threshold for reserves. • Electric heater - 12/08/22 - is excluded as a valuation exclusion that does not meet the minimum threshold for reserves. • Exhaust fan, 1 hp - 12/08/22 - is excluded as a valuation exclusion that does not meet the minimum threshold for reserves. • Exhaust fan, 2 hp - 12/08/22 - is excluded as a valuation exclusion that does not meet the minimum threshold for reserves.

BUILDING SYSTEMS - (cont.) 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 (\$)	
58	Access Control System (ACS) Security camera CCTV system	ea	1	\$5,000.00	15	15	\$5,000 EXCLUDED EXCLUDED	
59	Radio antenna (allowance)	ls	1	\$5,000.00	15	10	\$5,000	
60	Lightening system (allowance)	ls	1	\$5,000.00	15	5	\$5,000	
Replacement Costs - Page Subtotal							\$15,000	

COMMENTS
<ul style="list-style-type: none"> • Example of replacement of HVAC with would include rooftop units. For a 1 story building 15,000 sf requires 1 7.5 -ton unit per 2,000 sf. So 8 units installed at a cost of \$15,000 each or \$120,000 every 15-20 years. \$6,000 per year. Radiant heat in truck bays would remain. An HVAC engineer should evaluate the feasibility and cost. • Security camera - 12/08/22 - is excluded as a valuation exclusion that does not meet the minimum threshold for reserves. • CCTV system - 12/08/22 - is excluded as a valuation exclusion that does not meet the minimum threshold for reserves.

VALUATION EXCLUSIONS							
Excluded Items							
ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST (\$)	NEL	REL	REPLACEMENT COST (\$)
	Smoke detector						EXCLUDED
	Fire alarm pull						EXCLUDED
	Domestic water piping						EXCLUDED
	Water heater						EXCLUDED
	Well pump						EXCLUDED
	Well clean up service						EXCLUDED
	Pressure tank						EXCLUDED
	Water testing						EXCLUDED
	Access control System (ACS)						EXCLUDED
	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.

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SECTION C - CALENDAR OF PROJECTED ANNUAL REPLACEMENTS

GENERAL STATEMENT. The 60 Projected Replacements in the Fire Station 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 C3.2.

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 Township.
- **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 on our time and manpower resources. Therefore, Miller Dodson 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 replacements 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 Miller - Dodson Associates nor the Reserve Analyst has any prior or existing relationship with this Township 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 Township 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 Township and the visual evaluations of the Analyst. It has been prepared for the sole use of the Township and is not for the purpose of performing an audit, quality/forensic analyses, or background checks of historical records.
- **PREVIOUS REPLACEMENTS.** Information provided to Miller - Dodson 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, 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	2023 - Study Year	\$	Item	2024 - YEAR 1	\$
19	Domestic water well (allowance)	\$15,000	3	Concrete Drive Apron (Heavy duty)	\$57,120
29	Overhead door, repair (10% allowance)	\$5,000	4	Concrete Drive-off (Heavy duty), front	\$72,000
35	Water heater, 100 gal. commercial, w/circ.	\$14,000	6	Concrete Drive-off (Heavy duty), new	\$158,400
54	Electrical, LV panel lost light sensor	\$10,000	8	Bollards (front)	\$4,500
			16	Storm drain repair (front concrete pad)	\$18,000
			29	Overhead door, repair (10% allowance)	\$5,000
Total Scheduled Replacements		\$44,000	Total Scheduled Replacements		\$315,020

Item	2025 - YEAR 2	\$	Item	2026 - YEAR 3	\$
2	Pavement, rejuvenator seal coat	\$6,925	29	Overhead door, repair (10% allowance)	\$5,000
29	Overhead door, repair (10% allowance)	\$5,000	57	Computer workstation	\$9,600
40	175k btu boiler	\$112,000			
41	Boiler tank & recirculate pumps	\$21,000			
47	Truck bay epoxy coating	\$26,125			
Total Scheduled Replacements		\$171,050	Total Scheduled Replacements		\$14,600

Item	2027 - YEAR 4	\$	Item	2028 - YEAR 5	\$
29	Overhead door, repair (10% allowance)	\$5,000	5	Concrete Drive-off (Heavy duty), rear	\$72,000
39	Well replacement	\$15,000	9	Bollards (back)	\$4,500
42	Ductless A/C, wall Mounted, 12k btu	\$7,500	13	Graphic sign	\$28,800
			15	Stormwater Management (allowance)	\$18,000
			21	Built-up roofing (BUR), flat	\$498,560
			22	Gutters and downspouts	\$2,600
			25	Caulking (allowance)	\$6,000
			29	Overhead door, repair (10% allowance)	\$5,000
			33	Fire Alarm Control Annunciator Panel (FACP)	\$10,500
			34	Domestic water piping (allowance)	\$5,000
			36	Well pump	\$8,500
			48	Garage radiant heat system	\$72,000
			49	Exhaust fan, 1/4 hp (allowance)	\$6,000
			50	Exhaust hood and fan	\$20,000
			52	Emergency Generator (rebuild)	\$80,000
			60	Lightening system (allowance)	\$5,000
Total Scheduled Replacements		\$27,500	Total Scheduled Replacements		\$842,460

PROJECTED REPLACEMENTS

Item	2029 - YEAR 6	\$	Item	2030 - YEAR 7	\$
29	Overhead door, repair (10% allowance)	\$5,000	29	Overhead door, repair (10% allowance)	\$5,000
			32	General exterior repair (allowance)	\$5,000
Total Scheduled Replacements		\$5,000	Total Scheduled Replacements		\$10,000

Item	2031 - YEAR 8	\$	Item	2032 - YEAR 9	\$
2	Pavement, rejuvenator seal coat	\$6,925	10	Lamp post	\$21,000
29	Overhead door, repair (10% allowance)	\$5,000	23	8" roof scuppers and downspouts	\$5,760
			29	Overhead door, repair (10% allowance)	\$5,000
			37	Well pressure tank	\$15,000
			38	Well water softener	\$5,700
Total Scheduled Replacements		\$11,925	Total Scheduled Replacements		\$52,460

Item	2033 - YEAR 10	\$	Item	2034 - YEAR 11	\$
19	Domestic water well (allowance)	\$15,000	29	Overhead door, repair (10% allowance)	\$5,000
20	Sanitary sewer (allowance)	\$15,000			
25	Caulking (allowance)	\$6,000			
26	Exterior door (allowance)	\$72,000			
27	Overhead door, replace, ph. 1	\$205,800			
29	Overhead door, repair (10% allowance)	\$5,000			
43	Carrier "Aero"air handler, cfm	\$75,000			
44	Condensing unit (15 ton)	\$45,000			
59	Radio antenna (allowance)	\$5,000			
Total Scheduled Replacements		\$443,800	Total Scheduled Replacements		\$5,000

PROJECTED REPLACEMENTS

2035 - YEAR 12			2036 - YEAR 13		
Item		\$	Item		\$
29	Overhead door, repair (10% allowance)	\$5,000	29	Overhead door, repair (10% allowance)	\$5,000
			57	Computer workstation	\$9,600
Total Scheduled Replacements		\$5,000	Total Scheduled Replacements		\$14,600

2037 - YEAR 14			2038 - YEAR 15		
Item		\$	Item		\$
2	Pavement, rejuvenator seal coat	\$6,925	13	Graphic sign	\$28,800
28	Overhead door, replace, ph. 2	\$205,800	25	Caulking (allowance)	\$6,000
29	Overhead door, repair (10% allowance)	\$5,000	29	Overhead door, repair (10% allowance)	\$5,000
30	Windows (4' x 10')	\$25,000	34	Domestic water piping (allowance)	\$5,000
31	Windows (4' x 6')	\$21,000	35	Water heater, 100 gal. commercial, w/circ.	\$14,000
			36	Well pump	\$8,500
			46	Diesel exhaust system (allowance)	\$30,000
			54	Electrical, LV panel lost light sensor	\$10,000
			55	Breathing air compressor	\$30,000
			56	IT Infrastructure and LAN server (allowance)	\$10,000
			58	Access Control System (ACS)	\$5,000
Total Scheduled Replacements		\$263,725	Total Scheduled Replacements		\$152,300

2039 - YEAR 16			2040 - YEAR 17		
Item		\$	Item		\$
29	Overhead door, repair (10% allowance)	\$5,000	29	Overhead door, repair (10% allowance)	\$5,000
40	175k btu boiler	\$112,000	32	General exterior repair (allowance)	\$5,000
41	Boiler tank & recirculate pumps	\$21,000			
Total Scheduled Replacements		\$138,000	Total Scheduled Replacements		\$10,000

PROJECTED REPLACEMENTS

Item	2041 - YEAR 18	\$	Item	2042 - YEAR 19	\$
29	Overhead door, repair (10% allowance)	\$5,000	1	Asphalt pavement, mill and overlay (heavy duty)	\$83,100
			29	Overhead door, repair (10% allowance)	\$5,000
			48	Garage radiant heat system	\$72,000
			49	Exhaust fan, 1/4 hp (allowance)	\$6,000
Total Scheduled Replacements		\$5,000	Total Scheduled Replacements		\$166,100

Item	2043 - YEAR 20	\$	Item	2044 - YEAR 21	\$
2	Pavement, rejuvenator seal coat	\$6,925	8	Bollards (front)	\$4,500
11	Lamp post head	\$3,900	29	Overhead door, repair (10% allowance)	\$5,000
12	Inductive (red) light (LED Aircraft light)	\$2,700	37	Well pressure tank	\$15,000
14	Flagpole (approx. 30')	\$6,500	38	Well water softener	\$5,700
19	Domestic water well (allowance)	\$15,000			
20	Sanitary sewer (allowance)	\$15,000			
25	Caulking (allowance)	\$6,000			
26	Exterior door (allowance)	\$72,000			
29	Overhead door, repair (10% allowance)	\$5,000			
45	HVAC controls	\$20,000			
52	Emergency Generator (rebuild)	\$80,000			
53	Electrical (allowance)	\$10,000			
60	Lightening system (allowance)	\$5,000			
Total Scheduled Replacements		\$248,025	Total Scheduled Replacements		\$30,200

Item	2045 - YEAR 22	\$	Item	2046 - YEAR 23	\$
29	Overhead door, repair (10% allowance)	\$5,000	29	Overhead door, repair (10% allowance)	\$5,000
			57	Computer workstation	\$9,600
Total Scheduled Replacements		\$5,000	Total Scheduled Replacements		\$14,600

PROJECTED REPLACEMENTS

Item	2047 - YEAR 24	\$
29	Overhead door, repair (10% allowance)	\$5,000
43	Carrier "Aero"air handler, cfm	\$75,000
44	Condensing unit (15 ton)	\$45,000
Total Scheduled Replacements		\$125,000

Item	2048 - YEAR 25	\$
9	Bollards (back)	\$4,500
13	Graphic sign	\$28,800
21	Built-up roofing (BUR), flat	\$498,560
22	Gutters and downspouts	\$2,600
24	Brick veneer repoint (10% allowance)	\$13,200
25	Caulking (allowance)	\$6,000
29	Overhead door, repair (10% allowance)	\$5,000
33	Fire Alarm Control Annunciator Panel (FACP)	\$10,500
34	Domestic water piping (allowance)	\$5,000
36	Well pump	\$8,500
50	Exhaust hood and fan	\$20,000
51	Emergency Generator (175 Kw)	\$200,000
59	Radio antenna (allowance)	\$5,000
Total Scheduled Replacements		\$807,660

Item	2049 - YEAR 26	\$
2	Pavement, rejuvenator seal coat	\$6,925
29	Overhead door, repair (10% allowance)	\$5,000
Total Scheduled Replacements		\$11,925

Item	2050 - YEAR 27	\$
29	Overhead door, repair (10% allowance)	\$5,000
32	General exterior repair (allowance)	\$5,000
Total Scheduled Replacements		\$10,000

Item	2051 - YEAR 28	\$
29	Overhead door, repair (10% allowance)	\$5,000
42	Ductless A/C, wall Mounted, 12k btu	\$7,500
Total Scheduled Replacements		\$12,500

Item	2052 - YEAR 29	\$
29	Overhead door, repair (10% allowance)	\$5,000
39	Well replacement	\$15,000
Total Scheduled Replacements		\$20,000

PROJECTED REPLACEMENTS

Item	2053 - YEAR 30	\$	Item	2054 - YEAR 31	\$
17	Station oil separator	\$15,000	4	Concrete Drive-off (Heavy duty), front	\$72,000
19	Domestic water well (allowance)	\$15,000	16	Storm drain repair (front concrete pad)	\$18,000
20	Sanitary sewer (allowance)	\$15,000	29	Overhead door, repair (10% allowance)	\$5,000
25	Caulking (allowance)	\$6,000			
26	Exterior door (allowance)	\$72,000			
29	Overhead door, repair (10% allowance)	\$5,000			
35	Water heater, 100 gal. commercial, w/circ.	\$14,000			
40	175k btu boiler	\$112,000			
41	Boiler tank & recirculate pumps	\$21,000			
46	Diesel exhaust system (allowance)	\$30,000			
54	Electrical, LV panel lost light sensor	\$10,000			
55	Breathing air compressor	\$30,000			
56	IT Infrastructure and LAN server (allowance)	\$10,000			
58	Access Control System (ACS)	\$5,000			
Total Scheduled Replacements		\$360,000	Total Scheduled Replacements		\$95,000

Item	2055 - YEAR 32	\$	Item	2056 - YEAR 33	\$
2	Pavement, rejuvenator seal coat	\$6,925	29	Overhead door, repair (10% allowance)	\$5,000
29	Overhead door, repair (10% allowance)	\$5,000	37	Well pressure tank	\$15,000
47	Truck bay epoxy coating	\$26,125	38	Well water softener	\$5,700
			48	Garage radiant heat system	\$72,000
			49	Exhaust fan, 1/4 hp (allowance)	\$6,000
			57	Computer workstation	\$9,600
Total Scheduled Replacements		\$38,050	Total Scheduled Replacements		\$113,300

Item	2057 - YEAR 34	\$	Item	2058 - YEAR 35	\$
29	Overhead door, repair (10% allowance)	\$5,000	5	Concrete Drive-off (Heavy duty), rear	\$72,000
			11	Lamp post head	\$3,900
			12	Inductive (red) light (LED Aircraft light)	\$2,700
			13	Graphic sign	\$28,800
			15	Stormwater Management (allowance)	\$18,000
			25	Caulking (allowance)	\$6,000
			29	Overhead door, repair (10% allowance)	\$5,000
			34	Domestic water piping (allowance)	\$5,000
			36	Well pump	\$8,500
			52	Emergency Generator (rebuild)	\$80,000
			60	Lightening system (allowance)	\$5,000
Total Scheduled Replacements		\$5,000	Total Scheduled Replacements		\$234,900

PROJECTED REPLACEMENTS

Item	2059 - YEAR 36	\$	Item	2060 - YEAR 37	\$
29	Overhead door, repair (10% allowance)	\$5,000	1	Asphalt pavement, mill and overlay (heavy duty)	\$83,100
			29	Overhead door, repair (10% allowance)	\$5,000
			32	General exterior repair (allowance)	\$5,000
Total Scheduled Replacements		\$5,000	Total Scheduled Replacements		\$93,100

Item	2061 - YEAR 38	\$	Item	2062 - YEAR 39	\$
2	Pavement, rejuvenator seal coat	\$6,925	7	Concrete flatwork	\$98,904
29	Overhead door, repair (10% allowance)	\$5,000	10	Lamp post	\$21,000
43	Carrier "Aero"air handler, cfm	\$75,000	23	8" roof scuppers and downspouts	\$5,760
44	Condensing unit (15 ton)	\$45,000	29	Overhead door, repair (10% allowance)	\$5,000
Total Scheduled Replacements		\$131,925	Total Scheduled Replacements		\$130,664

Item	2063 (beyond study period)	\$	Item	2064 (beyond study period)	\$
14	Flagpole (approx. 30')	\$6,500	8	Bollards (front)	\$4,500
19	Domestic water well (allowance)	\$15,000	29	Overhead door, repair (10% allowance)	\$5,000
20	Sanitary sewer (allowance)	\$15,000			
25	Caulking (allowance)	\$6,000			
26	Exterior door (allowance)	\$72,000			
27	Overhead door, replace, ph. 1	\$205,800			
29	Overhead door, repair (10% allowance)	\$5,000			
45	HVAC controls	\$20,000			
53	Electrical (allowance)	\$10,000			
59	Radio antenna (allowance)	\$5,000			
Total Scheduled Replacements		\$360,300	Total Scheduled Replacements		\$9,500

SECTION D - CONDITION ASSESSMENT

General Comments. Miller+Dodson Associates conducted a Reserve Study at Fire Station in September 2022. Fire Station is in generally good condition for a township. A review of the Replacement Reserve Inventory will show that we are anticipating 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. Miller Dodson 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.

SITE ITEMS

Fire Station.

14810 Chillicothe Rd, Novelty, OH 44072



Entry Monument and Signage. The building features an entry monument. The monument is in good condition.

We recommend re-pointing and replacement of defective areas of the masonry as needed. The Association may want to consider applying a coating of Siloxane or other appropriate breathable sealants to mitigate water penetration and further degradation of the masonry work.

The monument/monuments is are made of wood/fiberboard/foam board and are in good/fair/poor condition, with damaged areas and weathering. To keep the monument fresh and appealing, we recommend replacement every 10 to 15 years.

Small miscellaneous signs are not considered in this study and should be replaced using other funds.



Parking Areas. The building features parking areas and drive lanes constructed of asphalt pavement. The pavements are in good condition.



Typical defects that require replacement include the following:

- **Open Cracks.** There are multiple locations where open cracks are allowing water to penetrate to the asphalt base and the bearing soils beneath. Over time, water will erode the base and accelerate the deterioration of the asphalt pavement. If cracks extend to the base and bearing materials, remove the damaged areas, and replace defective materials. As a part of normal maintenance, clean and fill all other cracks.
- **Alligatoring.** There are multiple locations where the asphalt has developed a pattern of cracking 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 to 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.** The asphalt pavement is not properly graded, resulting in the ponding of water. Proper grading of the asphalt pavement will require replacing portions of the asphalt. It may also require resetting improperly sloped curb and gutter segments that are not conveying 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.
- **Potholes.** Potholes have formed as the result of full-depth pavement failure, including base materials. The repair will require removal of the asphalt and base materials, installation and compaction of new base materials, and asphalt resurfacing.
- **Depressions.** There are areas where the asphalt surface is depressed due to deformation in the surface or underlying layers. These depressions may continue to grow with exposure to traffic. Water ponding is evident in several of these areas. Repair of these areas will require the removal of the asphalt and base material and reinstallation, by compacting the new base material and resurfacing with asphalt.
- **Wheel Rutting.** Depressions along the wheel lines extend along portions of the roadway. Repair of these areas will require full-depth and full-width pavement replacement. Wheel rutting, if left unattended can adversely affect vehicle steering.
- **Shoving.** Occurring at locations of sharp braking or turning. The primary cause of this defect is from large truck traffic. If addressed early, surface milling and overlay using a stiffer topcoat of asphalt pavement shoving can be mitigated.
- **Tree Root Damage.** This is known as Heaving, there are locations where tree roots caused heaving in the pavement surface. The repair of these areas requires the removal of the asphalt and the tree roots, then replenish and recompact the base material and resurface the asphalt. Root trimming can also be an effective way to control this defect.
- **Edge Cracking.** Sections of the asphalt pavement have developed 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.
- **Reflective Cracking.** The asphalt pavement has a significant number of reflective cracks. Reflective cracks occur when placing a new asphalt overlay over an existing cracked pavement. With time and movement, existing cracks will migrate through the new asphalt. Installing a bridging membrane or fabric at the time of overlay can control reflective cracking.

A more detailed summary of pavement distress can be found at <http://www.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.

In an effort to maintain the condition of the pavement throughout the community and ensure the longest life of the asphalt, we recommend the Association adopts 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 it will not be funded from Reserves.
- **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 from 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 used is based on recent contracts for a two-inch mill and overlay with repairs to 10% to 15% of the subgrade. This reflects the current local market for this work. Pavement surfaces that are deteriorated more than 2" of have multiple areas of full depth deterioration will cost additional amounts to repair.

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 are minimally effective. However, the newer coating materials, such as those from Total Asphalt Management, Asphalt Restoration Technologies, Inc., and others, are penetrating. They are engineered, so to speak, to 'remoisturize' 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 in the forms of cracking and potholes. Remoisturizing the pavement can return its flexibility and extend the life of the pavement.

Concrete Work. The concrete work includes the community curb and gutter, sidewalks, leadwalks, stairs, stoops, and other flatwork. We have modeled for curb replacement when the asphalt pavement is overlaid. The overall condition of the concrete work is fair with areas of defects consistent with the age of the installation.



The standards we use for recommending replacement are as follows:

- Trip hazard, ½ inch height difference
- Severe cracking
- Severe spalling and scale
- Uneven riser heights on steps
- Steps with risers in excess of 8¼ inches
- Settlement and heaving
- Tree root damage

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.

Site Lighting. The building features site lighting that includes post lamps, ground mounted lights, and building lights. The lights were not on at the time of our site visit, but we understand they are in good operating condition.



This study assumes replacement of the light fixtures every 15 to 20 years, and pole replacement every 30 to 40 years. When the light poles are replaced, we assume that the underground wiring will also be replaced.

When a whole-scale lighting replacement project is called for, we recommend consulting with a lighting design expert. Many municipalities have design codes, guidelines, and restrictions when it comes to exterior illumination.

Additionally, new technology such as LED and LIFI, among others, is considered.

Stormwater Management. We have included an allowance for stormwater management. This allowance is intended to address drainage issues, wet areas, inlets, structures, etc.



We noted that the drop inlet located in front of the building near the road was not graded properly and is likely to not function properly.

We have included funding to expand the detention basin at the rear of the property.

Well and Water Softener. The building features a groundwater well and septic system. We consider the system to include the well casing, well pump, and piping. These items are concealed underground and were not reviewed but we understand they are in good operating condition. The system also includes a water softener system which includes a water softener system, brine tank, and pressure tank. The water softener is reported to be in good condition.



Septic System. The building features a septic system. The system includes a box, pump, valve, and leach bed. The system was concealed underground and not reviewed but is reported to be in good condition.

Building Roofing. The building features a flat roofing system. The roofing consists of a Built-Up Roofing system (BUR). The roofing is in fair condition.



Asphalt shingle roofs can have a useful life of 20 to 50 years depending on the weight and quality of the shingle. Weathered, curled, and missing shingles are all indications that the shingles may be nearing the end of their useful life.

Slate shingle roofing can have an extended useful life of 100 years or more. Failures with slate roofs are primarily from the use of improper fasteners, damage from improper access to the roof, and physical damage, primarily from hail. The metalwork including flashings and valleys will need to be replaced, and we assume that this work will be required every 30 years.

Metal roofing can be a standing seam, rolled seam, or shingle with a normal economic life of 50 to 100 years. In some cases, recoating or repainting can extend the useful life of a metal roof.

Flat roofing systems can have a variety of configurations that will greatly affect the cost of replacement including insulation, ballast, the height of the building, and the density of installed mechanical equipment. Flat roofing systems typically have a useful life of 15 to 25 years.

Access to the roof was not provided at the time of inspection. The roofing was observed from the ground level.

Annual inspections are recommended, with cleaning, repair, and mitigation of vegetation performed as needed. Access, inspection, and repair work should be performed by contractors and personnel with the appropriate access equipment who are experienced in the types of roofing used for the facility.

Gutters and Downspouts. The building features aluminum gutters and downspouts. The gutters and downspouts are in good condition.



A gutter and downspout system will remove rainwater from the area of the building's roof, siding, and foundation, protect the exterior surfaces from water damage. Gutters should run the full length of all drip edges of the building's roof. Even with full gutters, it is important to inspect the function of the gutters during heavy rain to identify any deficiencies. It may be necessary to periodically adjust the slope of sections, repair connections, replace hangers, and install shrouds to the gutter system. Downspouts should be securely attached to the side of the structure. Any broken straps should be replaced. The area of the outlet should be inspected to promote run-off in the desired direction. Long straight runs should have an elbow at the bottom. Splash blocks should be installed to fray the water out-letting from the downspout.

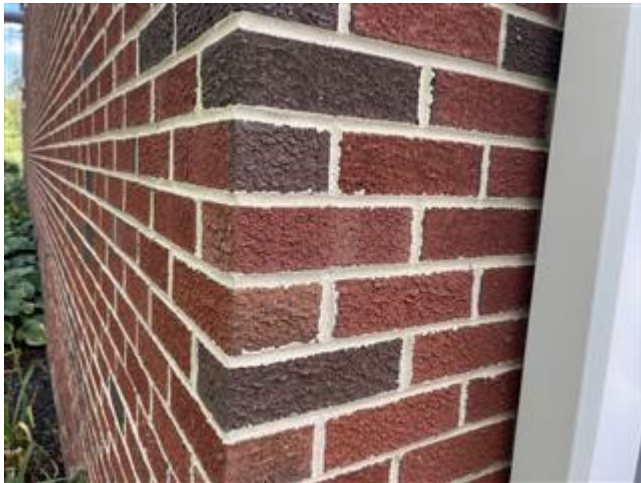
It is recommended that all gutters be cleaned at least twice each year. If there are a large number of trees located close to a building, consider installing a gutter debris shield that will let water into the gutters but will filter out leaves, twigs, and other debris.

It is recommended that gutters and downspouts be installed on all buildings. It is also recommended that the discharge from the downspouts be extended at least ten feet away from the foundations.

Masonry. The building is clad in brick masonry with mortar joints. The brick masonry is in good condition.

Manufactured stone veneer has been installed on the facility's exterior. Typically, these surfaces are improperly installed, and we recommend assessing the installation at this community based on a comparison against The Masonry Veneer Manufacturers Association's, Installation Guidelines. In addition, the Masonry Veneer Manufacturers Association may be able to provide additional information related to the maintenance and care of these materials.

Similar to other masonry components, we recommend repointing. Because weather and other conditions result in the slow deterioration of the mortar in the joints, we have included funding in the Reserve Analysis for repointing.



Brick masonry is used as the main exterior cladding of the building. As masonry weathers, the mortar joints will become damaged by water penetration. As additional water gains access to the joints, repeated freeze-thaw cycles gradually increase the damage to the mortar joints. If allowed to progress, even the masonry units such as brick can have their surfaces affected and masonry units can become loose.

In general, masonry is considered a long-life item and is therefore excluded from reserve funding. However, because weather and other conditions result in the slow deterioration of the mortar in masonry joints, we have included funding in this study for repointing. Repointing is the process of raking and cutting out damaged sections of mortar and replacing them with new mortar.

Periodic repointing and local replacement of damaged masonry units will limit the damage done by moisture penetration. For this study, we assume that 10% of the masonry will require repointing every 10 years after approximately 30 years.

Windows. The community maintains the windows of the facility. The windows are generally in good condition.

Window and door units play an integral part in a facility's overall comfort, efficiency, and energy use. The quality of the installed units and the care taken in their installation and maintenance are major factors in their effectiveness and useful life. These units can have a useful life of 20 to 35 years or more depending on their use and other factors mentioned above.

In general, we recommend coordinating the replacement of the window units with other exterior work, such as siding and roof replacements. The weather tightness of the building envelope often requires wraps, transitional flashing, and caulking that should be performed in coordination with each other. Warranties and advantages in 'economy of scale' can often result in lower overall replacement costs and results that are more reliable. Lastly, coordinated replacements offer

the opportunity to correct initial construction defects and improve the effectiveness of details with improved construction techniques and materials.



Exterior Doors. The Community maintains the exterior doors of the community building.



Pre-hung exterior doors provide a door, frame, and hinges that function as a unit. Doors can be wood, steel, aluminum, and fiberglass. Frames can also be wood, steel, and aluminum.

Doors should be maintained to the extent that the fully open and close, hinges swing easily, hardware latches and opens. With exterior doors it is necessary to maintain a weather seal, and prevent frames from rusting.

Overhead Doors. The building features overhead doors. The doors are in good working order.



Overhead doors should be maintained to the extent that they fully open and fully close. All tracks and rollers operate in a smooth continuous cycle free of binding and stops.

Safety features such as stops, return sensors, and a close tension should be checked periodically.

Automatic operators provide a one touch operation to open or close. These normally include the operator motors, track or roller, and controls. The openers are reported to be in good condition.

Building Interiors. Building interiors are excluded from reserves.

Building Systems.

HVAC Systems. The heating ventilation and air conditioning (HVAC) of the facility are provided by furnace/compressor split systems. The HVAC is in good working order. Detailed inspection and testing of these systems are beyond the scope of this study.



The Association maintains a number of HVAC systems that use the refrigerant known as R22. This refrigerant will be phased out of production by the year 2020 and was generally phased out of use in new systems in 2010.

See the EPA, HCFC Phase-out Schedule on our website at <http://mdareserves.com/resources/links/building-system>. Since most of the community's AC systems rely on the old R22 refrigerant, we assume that the HVAC replacement will include upgrading to the new refrigerant, which is likely to require the replacement of the entire system, including the compressor, coil, and line-set.

The Association maintains a number of HVAC systems that use one of the new generation refrigerants. Unlike the old R22 refrigerant, the new refrigerants are expected to be available throughout the period of this study. However, the operating pressure for new refrigerant systems is approximately twice as high as older systems. Many of the standard components have not been redesigned for these higher pressures, including the coils, which generally fail due to metal fatigue.

Even though manufacturers continue to predict 15 to 20-year life cycles for HVAC equipment that uses these new refrigerants, this is not proven by historical data. We, therefore, recommend anticipating a normal economic life of 15 years for all HVAC equipment that uses pressurized refrigerants of these types.

In addition, the Association maintains air handlers/furnaces throughout the facility, and these components can have a useful life of 20 to 40 years. With fan, motor, and coil replacements performed as needed, the casings of these systems can last significantly longer.

As is the case with most equipment, to achieve a maximum useful economic life, proper maintenance is essential. In some cases, proper and proactive maintenance can greatly extend the useful life of these components.

Boilers. The facility features multiple hot water boilers for heating.



Domestic Hot Water. Domestic hot water is provided by a water heater tank which is in good condition.



Typically these types of systems have a service life of 12-15 years. This system should be serviced periodically to provide the most reliable service.

Fire Safety Systems. The facility includes a fire safety system to notify the occupants in the event of a fire. The system includes a fire alarm panel, smoke detectors, speakers, strobes, emergency pulls, sprinkler, and a pressure pump system. Furthermore, the system includes an interface with the elevators and an automatic dialer. The system does not automatically dial the fire department or 911.

Fire Alarm Control Panel (FACP). The FACP provides the function of central processing and notifying channels for emergencies. Every device in the building is programmed into the FACP. Furthermore, the FACP initiates the alarm. Please note the type of alarm is determined by the system settings. The Township should review how the system is programmed with the system engineer.

The fire alarm panel is an electronic device that programs and receives signals from the devices of the system.

Building fire alarm systems have a service life of 15 to 25 years. While the panels may continue to operate past this point, changes in fire safety technology and building fire safety codes tend to render them obsolete. In addition, manufacturers only support their systems for a limited period, typically about 15 years. After this time, it may be increasingly difficult to obtain replacement parts and services.

When it becomes necessary to upgrade the fire alarm system, differences in the technologies and new code requirements are likely to require upgrades in lighting, sensors, alarms, and other system and sub-components.

Fire Sprinkler. Sprinkler pipe systems have a wide variety of configurations and requirements depending on their age, condition, and jurisdictional location. Specific county and municipal codes can make a significant difference in what your facility's specific requirements may be.

For wet and dry pipe systems, we have assumed that these are long-life components and will not require whole-scale replacement. It is imperative however for these pipes to be properly drained or for the water to be properly conditioned. Other components such as heads, gauges, and valves are assumed normal maintenance items and are therefore excluded from the study.

Full replacement of the sprinkler system is not included in this study. As a preliminary estimate, we have provided an allowance for the periodic repair and replacement of system components. Estimate of sprinkler allowance is based on square footage, height of the building, number of risers, length of the corridors, and the location of the sprinkler heads.

Testing and Inspection. Local building and fire codes will require periodic inspections and tests of your systems. These requirements vary from county to county and state to state. Most fire safety systems are listed with the local fire marshal that has jurisdiction in your area. Annual inspections, 5-year testing, 10-year testing, and 20-year testing are not considered in reserves. Subsequent repairs and annual maintenance work are not accounted for or included in this study.

Fire panel manufacturers typically have approved contractors that will provide service and support for their systems. The facility should have an ongoing contractual relationship with one of these such contractors.

Building Electrical Service. Electrical service enters the building via the vault which is maintained by the utility company. This includes the meter, feed lines, conduits, and buss ducts.

The system should be protected from water damage, overloading, and modifications to ensure safe reliable service. The utility service cabling and components are considered long-life installations, and unless otherwise noted, are excluded from this study.

Responsible facilities management will require maintenance of the equipment even when there are no system issues. Periodic inspection of the busses and tightening of all connections is recommended every three to five years. Insurance policies in some cases may have specific requirements regarding the tightening of electrical connections.

Replacement of these smaller components, unless otherwise identified, is considered incidental to refurbishment or is considered a Valuation Exclusion.

Electrical Switchgear. The electrical switchgear includes the ducts, switch boxes, disconnects, relays, fuses, and switches. The electrical switchgear dates to the original construction of the building. Electrical switchgear has a rated service life of 50 years or more. Electrical switchgear requires ongoing maintenance for proper operation and reliability.



The overall condition of the switchgear is good. We understand that replacement parts are still available for the equipment. As the switchgear continues to age, obtaining replacement parts can be expected to become more difficult. When parts no longer are available or when the condition of the switchgear deteriorates sufficiently, the Association will have to replace or upgrade the existing equipment. Therefore, we have included funding in the Reserve Analysis for distribution panel replacement on an incremental basis.

Electrical Distribution Panels. The building's electrical systems features a number of electrical distribution panels located throughout the facility. These panels separate the building's electrical power into separate identifiable circuits. All panels track back to the switchgear and have panel schedules identifying the circuits within the breaker panel. These panels date to the original construction of the building and have a rated service life of 50 years or more.



The overall condition of the distribution panels is good. As the distribution panel's age, obtaining replacement parts can be expected to become more difficult. When parts no longer are available, the Association will have to replace some of the existing panels. The replacement will have to be performed on an incremental basis, panel by panel. Therefore, we have included funding in the Reserve Analysis for distribution panel replacement on an incremental basis.



It is also recommended that outlets, sockets, switches, and minor fixtures be replaced at a maximum of every 30 years. These are not included in reserves.

Overhead Doors. The building features overhead doors. The doors are in good working order.



Overhead doors should be maintained to the extent that they fully open and fully close. All tracks and rollers operate in a smooth continuous cycle free of binding and stops.

Safety features such as stops, return sensors, a close tension should be checked periodically. Automatic operators provide a one touch operation to open or close. These normally include operator motors, track or roller, and controls. The openers are reported to be in good condition.

Emergency Generator. The facility features an emergency generator. The system operates on stand-by until needed. The generator includes a diesel engine, a fuel tank, voltage generator, control panel, and an enclosure.





The generator power is distributed to Automatic Transfer Switch (ATS) which powers designated panels. These panels are typically emergency panels that service necessary building features and safety features such as lighting, fire alarm, and elevators. Generators should be exercised regularly. Regular maintenance is required to keep the system functional.

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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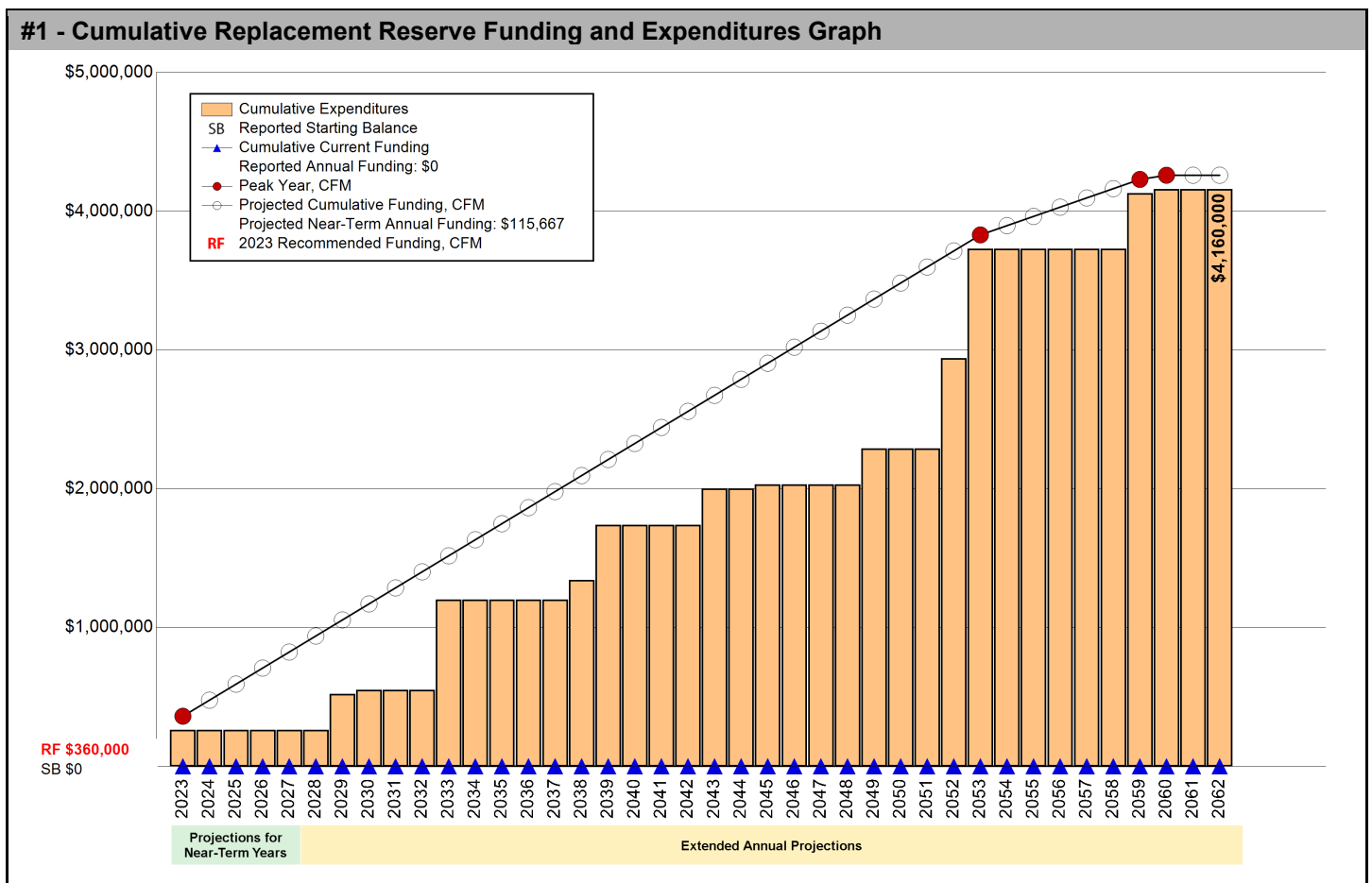
SECTION A - FINANCIAL ANALYSIS

The Fire Station Vehicles Replacement Reserve Analysis uses the Cash Flow Method (CFM) to calculate Replacement Reserve funding for the periodic replacement of the 9 Projected Replacements identified in the Replacement Reserve Inventory.

\$360,000 RECOMMENDED REPLACEMENT RESERVE FUNDING FOR THE STUDY YEAR, 2023

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 A4.5.

Fire Station Vehicles reports a Starting Balance of \$0 and Annual Funding totaling \$0, which is inadequate to fund projected replacements starting in 2023. See Page A4.3 for a more detailed evaluation.



REPLACEMENT RESERVE ANALYSIS - GENERAL INFORMATION

The Fire Station Vehicles 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.

2023 | 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, 2023.

40 Years | STUDY PERIOD

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

\$0 | STARTING BALANCE

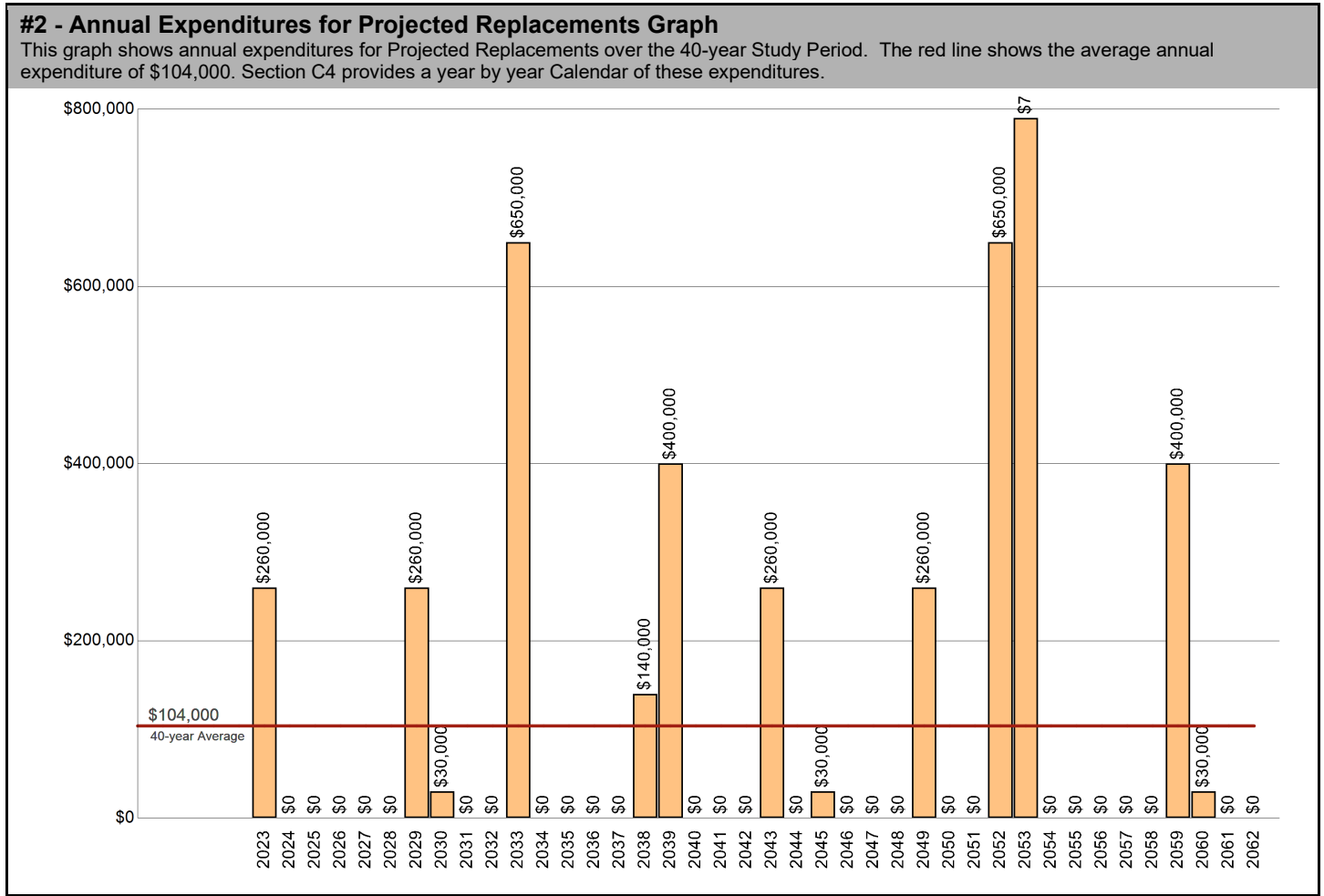
The Association reports Replacement Reserves on Deposit totaling \$0 at the start of the Study Year.

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).

\$4,160,000 | REPLACEMENT RESERVE INVENTORY - PROJECTED REPLACEMENTS

The Fire Station Vehicles Replacement Reserve Inventory identifies 9 items that will require periodic replacement, that are to be funded from Replacement Reserves. We estimate the cost of these replacements will be \$4,160,000 over the 40-year Study Period. The Projected Replacements are divided into 1 major categories starting on Page B4.3. Pages B4.1-B4.2 provide detailed information on the Replacement Reserve Inventory.



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 A4.4 and A4.5. The Projected Replacements listed on Page C4.2 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 A4.5.

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 A4.5.

ANNUAL EXPENDITURES AND CURRENT FUNDING

The annual expenditures that comprise the \$4,160,000 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 1 through 40										
Year	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Starting Balance										
Projected Replacements	(\$260,000)						(\$260,000)	(\$30,000)		
Annual Deposit										
End of Year Balance	(\$260,000)	(\$260,000)	(\$260,000)	(\$260,000)	(\$260,000)	(\$260,000)	(\$520,000)	(\$550,000)	(\$550,000)	(\$550,000)
Cumulative Expenditures	(\$260,000)	(\$260,000)	(\$260,000)	(\$260,000)	(\$260,000)	(\$260,000)	(\$520,000)	(\$550,000)	(\$550,000)	(\$550,000)
Cumulative Receipts										
Year	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
Projected Replacements	(\$650,000)					(\$140,000)	(\$400,000)			
Annual Deposit										
End of Year Balance	(\$1,200,000)	(\$1,200,000)	(\$1,200,000)	(\$1,200,000)	(\$1,200,000)	(\$1,340,000)	(\$1,740,000)	(\$1,740,000)	(\$1,740,000)	(\$1,740,000)
Cumulative Expenditures	(\$1,200,000)	(\$1,200,000)	(\$1,200,000)	(\$1,200,000)	(\$1,200,000)	(\$1,340,000)	(\$1,740,000)	(\$1,740,000)	(\$1,740,000)	(\$1,740,000)
Cumulative Receipts										
Year	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052
Projected Replacements	(\$260,000)		(\$30,000)				(\$260,000)			(\$650,000)
Annual Deposit										
End of Year Balance	(\$2,000,000)	(\$2,000,000)	(\$2,030,000)	(\$2,030,000)	(\$2,030,000)	(\$2,030,000)	(\$2,290,000)	(\$2,290,000)	(\$2,290,000)	(\$2,940,000)
Cumulative Expenditures	(\$2,000,000)	(\$2,000,000)	(\$2,030,000)	(\$2,030,000)	(\$2,030,000)	(\$2,030,000)	(\$2,290,000)	(\$2,290,000)	(\$2,290,000)	(\$2,940,000)
Cumulative Receipts										
Year	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062
Projected Replacements	(\$790,000)						(\$400,000)	(\$30,000)		
Annual Deposit										
End of Year Balance	(\$3,730,000)	(\$3,730,000)	(\$3,730,000)	(\$3,730,000)	(\$3,730,000)	(\$3,730,000)	(\$4,130,000)	(\$4,160,000)	(\$4,160,000)	(\$4,160,000)
Cumulative Expenditures	(\$3,730,000)	(\$3,730,000)	(\$3,730,000)	(\$3,730,000)	(\$3,730,000)	(\$3,730,000)	(\$4,130,000)	(\$4,160,000)	(\$4,160,000)	(\$4,160,000)
Cumulative Receipts										

EVALUATION OF CURRENT FUNDING

The evaluation of Current Funding (Starting Balance of \$0 & annual funding of \$0), 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 9 Projected Replacements identified in the Replacement Reserve Inventory and that the Association will continue Annual Funding of \$0 throughout the 40-year Study Period.

Annual Funding of \$0 is approximately percent of the \$360,000 recommended Annual Funding calculated by the Cash Flow Method for 2023, the Study Year.

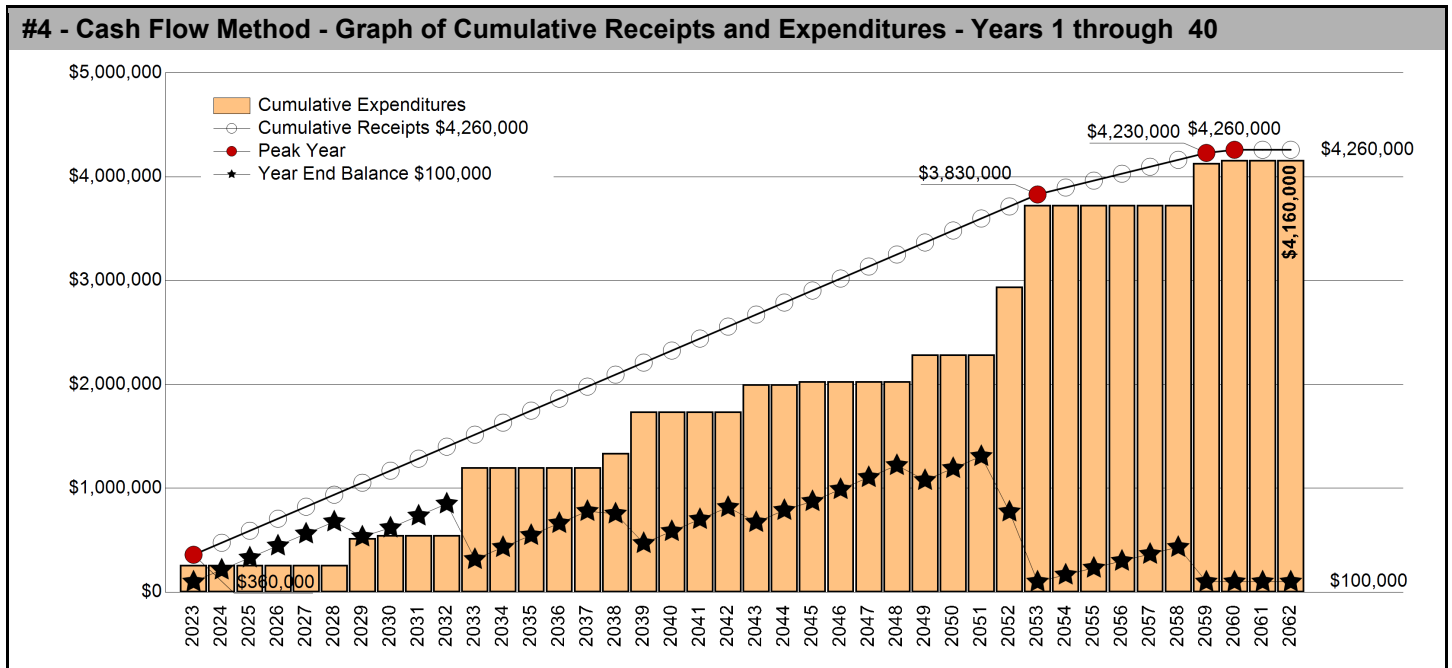
See the Executive Summary for the Current Funding Statement.

CASH FLOW METHOD FUNDING

\$360,000 RECOMMENDED REPLACEMENT RESERVE FUNDING FOR 2023

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 2023 with Replacement Reserves on Deposit dropping to the Minimum Balance after the completion of \$260,000 of replacements from 2023 to 2023. Recommended funding is projected to decline from \$360,000 in 2023 to \$115,667 in 2024. Peak Years are identified in Chart 4 and Table 5.
- Threshold (Minimum Balance).** The calculations assume a Minimum Balance of \$100,000 will always be held in reserve, which is calculated by rounding the 12-month 40-year average annual expenditure of \$104,000 as shown on Graph #2.
- Cash Flow Method Study Period.** Cash Flow Method calculates funding for \$4,160,000 of expenditures over the 40-year Study Period. It does not include funding for any projects beyond 2062 and in 2062, the end of year balance will always be the Minimum Balance.



Year	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Starting Balance										
Projected Replacements	(\$260,000)							(\$260,000)	(\$30,000)	
Annual Deposit	\$360,000	\$115,667	\$115,667	\$115,667	\$115,667	\$115,667	\$115,667	\$115,667	\$115,667	\$115,667
End of Year Balance	\$100,000	\$215,667	\$331,333	\$447,000	\$562,667	\$678,333	\$794,000	\$909,667	\$1,025,333	\$1,141,000
Cumulative Expenditures	(\$260,000)	(\$260,000)	(\$260,000)	(\$260,000)	(\$260,000)	(\$260,000)	(\$520,000)	(\$550,000)	(\$550,000)	(\$550,000)
Cumulative Receipts	\$360,000	\$475,667	\$591,333	\$707,000	\$822,667	\$938,333	\$1,054,000	\$1,169,667	\$1,285,333	\$1,401,000
Year	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
Projected Replacements	(\$650,000)					(\$140,000)	(\$400,000)			
Annual Deposit	\$115,667	\$115,667	\$115,667	\$115,667	\$115,667	\$115,667	\$115,667	\$115,667	\$115,667	\$115,667
End of Year Balance	\$316,667	\$432,333	\$548,000	\$663,667	\$779,333	\$895,000	\$1,010,667	\$1,126,333	\$1,242,000	\$1,357,667
Cumulative Expenditures	(\$1,200,000)	(\$1,200,000)	(\$1,200,000)	(\$1,200,000)	(\$1,200,000)	(\$1,340,000)	(\$1,740,000)	(\$1,740,000)	(\$1,740,000)	(\$1,740,000)
Cumulative Receipts	\$1,516,667	\$1,632,333	\$1,748,000	\$1,863,667	\$1,979,333	\$2,095,000	\$2,210,667	\$2,326,333	\$2,442,000	\$2,557,667
Year	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052
Projected Replacements	(\$260,000)		(\$30,000)				(\$260,000)			(\$650,000)
Annual Deposit	\$115,667	\$115,667	\$115,667	\$115,667	\$115,667	\$115,667	\$115,667	\$115,667	\$115,667	\$115,667
End of Year Balance	\$673,333	\$789,000	\$874,667	\$990,333	\$1,106,000	\$1,221,667	\$1,337,333	\$1,453,000	\$1,568,667	\$1,684,333
Cumulative Expenditures	(\$2,000,000)	(\$2,000,000)	(\$2,030,000)	(\$2,030,000)	(\$2,030,000)	(\$2,030,000)	(\$2,290,000)	(\$2,290,000)	(\$2,290,000)	(\$2,940,000)
Cumulative Receipts	\$2,673,333	\$2,789,000	\$2,904,667	\$3,020,333	\$3,136,000	\$3,251,667	\$3,367,333	\$3,483,000	\$3,598,667	\$3,714,333
Year	2053	2054	2055	2056	2057	2058	3rd Peak - 2059	4th Peak - 2060	2061	2062
Projected Replacements	(\$790,000)						(\$400,000)	(\$30,000)		
Annual Deposit	\$115,667	\$66,667	\$66,667	\$66,667	\$66,667	\$66,667	\$66,667	\$30,000	\$100,000	\$100,000
End of Year Balance	\$100,000	\$166,667	\$233,333	\$300,000	\$366,667	\$433,333	\$500,000	\$566,667	\$633,333	\$700,000
Cumulative Expenditures	(\$3,730,000)	(\$3,730,000)	(\$3,730,000)	(\$3,730,000)	(\$3,730,000)	(\$3,730,000)	(\$4,130,000)	(\$4,160,000)	(\$4,160,000)	(\$4,160,000)
Cumulative Receipts	\$3,830,000	\$3,896,667	\$3,963,333	\$4,030,000	\$4,096,667	\$4,163,333	\$4,230,000	\$4,260,000	\$4,260,000	\$4,260,000

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.

\$360,000 2023 - CASH FLOW METHOD RECOMMENDED FUNDING

The 2023 Study Year calculations have been made using current replacement costs (see Page B4.2), modified by the Analyst for any project specific conditions.

\$122,607 2024 - INFLATION ADJUSTED FUNDING

A new analysis calculates the 2024 funding based on three assumptions:

- Replacement Reserves on Deposit totaling \$100,000 on January 1, 2024.
- All 2023 Projected Replacements listed on Page C4.2 accomplished at a cost to Replacement Reserves less than \$260,000.
- Construction Cost Inflation of 6.00 percent in 2023.

The \$122,607 inflation adjusted funding in 2024 is a 6.00 percent increase over the non-inflation adjusted funding of \$115,667.

\$129,963 2025 - INFLATION ADJUSTED FUNDING

A new analysis calculates the 2025 funding based on three assumptions:

- Replacement Reserves on Deposit totaling \$125,740 on January 1, 2025.
- No Expenditures from Replacement Reserves in 2024.
- Construction Cost Inflation of 6.00 percent in 2024.

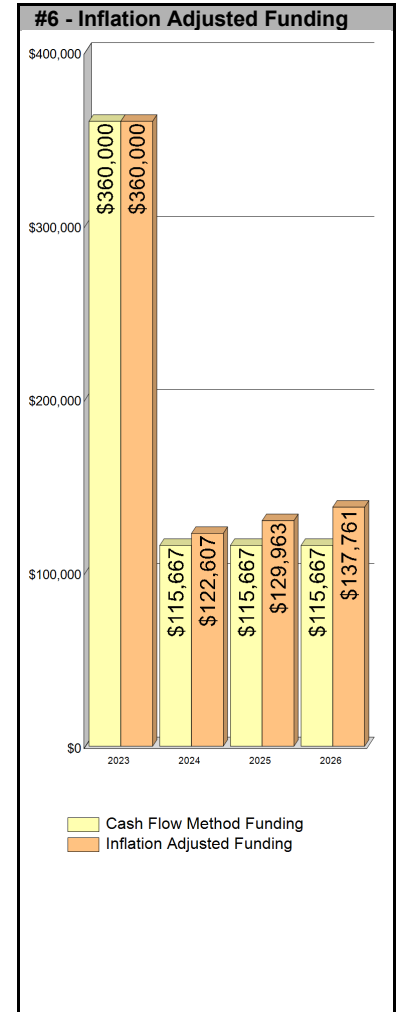
The \$129,963 inflation adjusted funding in 2025 is a 12.36 percent increase over the non-inflation adjusted funding of \$115,667.

\$137,761 2026 - INFLATION ADJUSTED FUNDING

A new analysis calculates the 2026 funding based on three assumptions:

- Replacement Reserves on Deposit totaling \$137,674 on January 1, 2026.
- No Expenditures from Replacement Reserves in 2025.
- Construction Cost Inflation of 6.00 percent in 2025.

The \$137,761 inflation adjusted funding in 2026 is a 19.10 percent increase over the non-inflation adjusted funding of \$115,667.



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 2024, 2025 and 2026 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 2023, based on a 1.00 percent interest rate, we estimate the Association may earn \$500 on an average balance of \$50,000, \$1,129 on an average balance of \$112,870 in 2024, and \$1,317 on \$131,707 in 2025. The Association may elect to attribute 100 percent of the earned interest to Reserves, resulting in a reduction in the 2023 funding from \$360,000 to \$359,500 (a 0.13 percent reduction), \$122,607 to \$121,478 in 2024 (a 0.92 percent reduction), and \$129,963 to \$128,646 in 2025 (a 1.01 percent reduction).

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SECTION B - REPLACEMENT RESERVE INVENTORY

- **PROJECTED REPLACEMENTS.** Fire Station Vehicles - Replacement Reserve Inventory identifies 9 items which 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 \$2,916,000. Cumulative Replacements totaling \$4,160,000 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.

- **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:

Tax Code. The United States Tax Code grants very 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.

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 B4.2.

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 9 items included in the Fire Station Vehicles Replacement Reserve Inventory are divided into 1 major categories. Each category is printed on a separate page, beginning on page B4.3.
- **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 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 . 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 9 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 9 Projected Replacements specifically listed in the Replacement Reserve Inventory. The inclusion/exclusion of items from the Replacement Reserve Inventory is discussed on Page B4.1.

VEHICLES 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	Pierce Quantum, pumper, 200 gpm, 1,000 gal tank,	ea	1	\$650,000.00	30	29	\$650,000
2	Pierce Quantum, pumper, 200 gpm, 1,000 gal tank,	ea	1	\$650,000.00	20	10	\$650,000
	Pierce Lance, 2,000 gpm, 1,000 gal. tank, 4323						EXCLUDED
3	Peterbuilt 367/Pierce tanker, 3,000 gal tank, 4336	ea	1	\$400,000.00	20	16	\$400,000
4	International 4300, w/ Braun ambulance box, 4351	ea	1	\$260,000.00	20	none	\$260,000
	Freightliner FL-70, Braun ambulance						EXCLUDED
5	Chevy C4500 Braun ambulance, 4359	ea	1	\$260,000.00	20	6	\$260,000
	Dodge 2500 pick-up wildfire response unit						EXCLUDED
	Mule-rescue Polaris ranger						EXCLUDED
	Mule-wildfire Polaris Ranger 1000XP						EXCLUDED
	Ford Expedition paramedic response vehicle						EXCLUDED
6	Ford Expedition paramedic response vehicle	ea	1	\$55,000.00	15	15	\$55,000
	Ford Expedition fire prevention vehicle						EXCLUDED
7	Jaws of life	ea	1	\$25,000.00	15	15	\$25,000
8	Life pack 15 w/ monitor	ea	3	\$10,000.00	15	7	\$30,000
9	Ambulance cots w/ load system	ea	2	\$30,000.00	15	15	\$60,000
	Diesel exhaust system						EXCLUDED
Replacement Costs - Page Subtotal							\$2,390,000

COMMENTS
<ul style="list-style-type: none"> Item #1: Pierce Quantum, pumper, 200 gpm, 1,000 gal tank, 4321 - 4321 Pierce Quantum pumper. 02/13/2023 - NEL/REL based on comments received 01/06/23. Item #2: Pierce Quantum, pumper, 200 gpm, 1,000 gal tank, 4322 - 4322 Pierce Quantum pumper. 02/13/2023 - REL based on comments received 01/06/23. Pierce Lance, 2,000 gpm, 1,000 gal. tank, 4323 - replaced with 4322 Pierce Quantum pumper. Item #3: Peterbuilt 367/Pierce tanker, 3,000 gal tank, 4336 - Peterbuilt 367/Pierce tanker, 3,000 gal tank, 4336. 02/13/2023 - REL based on comments received 01/06/23. Item #4: International 4300, w/ Braun ambulance box, 4351 - International 4300, w/ Braun ambulance box, 4351 Freightliner FL-70, Braun ambulance - 12/08/22 - is excluded per the comments provided. Item #5: Chevy C4500 Braun ambulance, 4359 - 4359 Pierce Quantum pumper. Dodge 2500 pick-up wildfire response unit - 12/08/22 - is excluded per the comments provided. Mule-rescue Polaris ranger - 12/08/22 - is excluded per the comments provided. Mule-wildfire Polaris Ranger 1000XP - 12/08/22 - is excluded per the comments provided. Ford Expedition paramedic response vehicle - 12/08/22 - is excluded per the comments provided.

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SECTION C - CALENDAR OF PROJECTED ANNUAL REPLACEMENTS

GENERAL STATEMENT. The 9 Projected Replacements in the Fire Station Vehicles 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 C4.2.

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 on our time and manpower resources. Therefore, Miller Dodson 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 replacements 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 Miller - Dodson 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 Miller - Dodson 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, 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	2023 - Study Year	\$	Item	2024 - YEAR 1	\$
4	International 4300, w/ Braun ambulance box, 4351	\$260,000			
Total Scheduled Replacements		\$260,000	No Scheduled Replacements		

Item	2025 - YEAR 2	\$	Item	2026 - YEAR 3	\$
No Scheduled Replacements			No Scheduled Replacements		

Item	2027 - YEAR 4	\$	Item	2028 - YEAR 5	\$
No Scheduled Replacements			No Scheduled Replacements		

Item	2029 - YEAR 6	\$	Item	2030 - YEAR 7	\$
5	Chevy C4500 Braun ambulance, 4359	\$260,000	8	Life pack 15 w/ monitor	\$30,000
Total Scheduled Replacements		\$260,000	Total Scheduled Replacements \$30,000		

Item	2031 - YEAR 8	\$	Item	2032 - YEAR 9	\$
No Scheduled Replacements			No Scheduled Replacements		

PROJECTED REPLACEMENTS

Item	2033 - YEAR 10	\$	Item	2034 - YEAR 11	\$
2	Pierce Quantum, pumper, 200 gpm, 1,000 gal tank,	\$650,000			
Total Scheduled Replacements		\$650,000	No Scheduled Replacements		

Item	2035 - YEAR 12	\$	Item	2036 - YEAR 13	\$
No Scheduled Replacements			No Scheduled Replacements		

Item	2037 - YEAR 14	\$	Item	2038 - YEAR 15	\$
No Scheduled Replacements			6	Ford Expedition paramedic response vehicle	\$55,000
			7	Jaws of life	\$25,000
			9	Ambulance cots w/ load system	\$60,000
No Scheduled Replacements			Total Scheduled Replacements		\$140,000

Item	2039 - YEAR 16	\$	Item	2040 - YEAR 17	\$
3	Peterbilt 367/Pierce tanker, 3,000 gal tank, 4336	\$400,000			
Total Scheduled Replacements		\$400,000	No Scheduled Replacements		

Item	2041 - YEAR 18	\$	Item	2042 - YEAR 19	\$
No Scheduled Replacements			No Scheduled Replacements		

PROJECTED REPLACEMENTS

2043 - YEAR 20			2044 - YEAR 21		
Item		\$	Item		\$
4	International 4300, w/ Braun ambulance box, 4351	\$260,000			
Total Scheduled Replacements		\$260,000	No Scheduled Replacements		
2045 - YEAR 22			2046 - YEAR 23		
Item		\$	Item		\$
8	Life pack 15 w/ monitor	\$30,000			
Total Scheduled Replacements		\$30,000	No Scheduled Replacements		
2047 - YEAR 24			2048 - YEAR 25		
Item		\$	Item		\$
No Scheduled Replacements			No Scheduled Replacements		
2049 - YEAR 26			2050 - YEAR 27		
Item		\$	Item		\$
5	Chevy C4500 Braun ambulance, 4359	\$260,000			
Total Scheduled Replacements		\$260,000	No Scheduled Replacements		
2051 - YEAR 28			2052 - YEAR 29		
Item		\$	Item		\$
No Scheduled Replacements			1	Pierce Quantum, pumper, 200 gpm, 1,000 gal tank,	\$650,000
No Scheduled Replacements			Total Scheduled Replacements		\$650,000

PROJECTED REPLACEMENTS

Item	2053 - YEAR 30	\$	Item	2054 - YEAR 31	\$
2	Pierce Quantum, pumper, 200 gpm, 1,000 gal tank,	\$650,000			
6	Ford Expedition paramedic response vehicle	\$55,000			
7	Jaws of life	\$25,000			
9	Ambulance cots w/ load system	\$60,000			
Total Scheduled Replacements		\$790,000	No Scheduled Replacements		

Item	2055 - YEAR 32	\$	Item	2056 - YEAR 33	\$
No Scheduled Replacements			No Scheduled Replacements		

Item	2057 - YEAR 34	\$	Item	2058 - YEAR 35	\$
No Scheduled Replacements			No Scheduled Replacements		

Item	2059 - YEAR 36	\$	Item	2060 - YEAR 37	\$
3	Peterbilt 367/Pierce tanker, 3,000 gal tank, 4336	\$400,000	8	Life pack 15 w/ monitor	\$30,000
Total Scheduled Replacements		\$400,000	Total Scheduled Replacements		\$30,000

Item	2061 - YEAR 38	\$	Item	2062 - YEAR 39	\$
No Scheduled Replacements			No Scheduled Replacements		

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SECTION D - CONDITION ASSESSMENT

General Comments. Miller+Dodson Associates conducted a Reserve Study at Fire Station Vehicles in September 2022. Fire Station Vehicles is in generally good condition for a township. A review of the Replacement Reserve Inventory will show that we are anticipating 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. Miller Dodson 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.

VEHICLES

Vehicles. The Township features various vehicles to support Fire Station activities.





The vehicles were not evaluated as part of this study. Vehicles are included in the inventory as indicated by the Township. The vehicles are replaced on a rotating schedule.

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

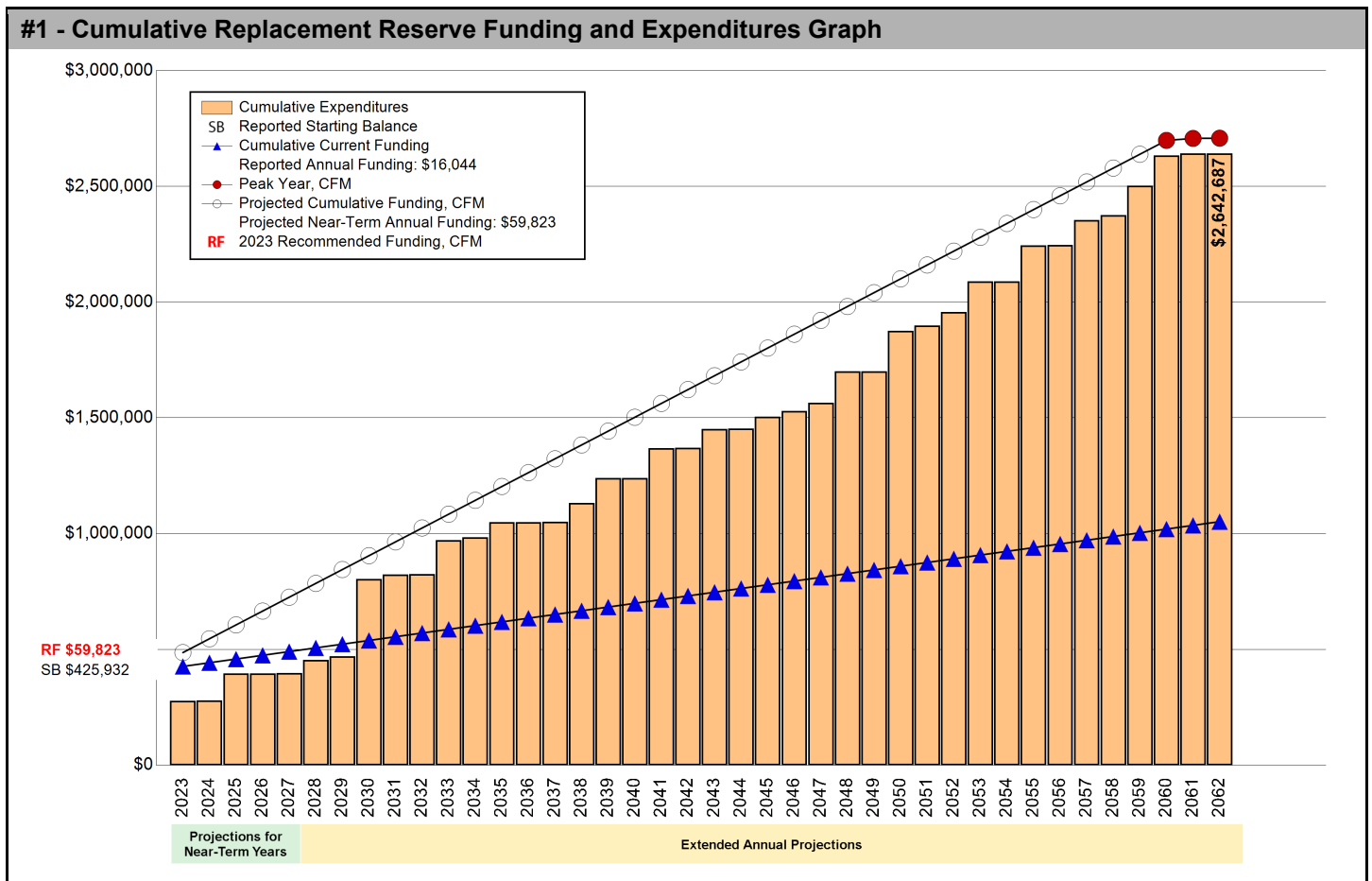
SECTION A - FINANCIAL ANALYSIS

The Road Dept Replacement Reserve Analysis uses the Cash Flow Method (CFM) to calculate Replacement Reserve funding for the periodic replacement of the 46 Projected Replacements identified in the Replacement Reserve Inventory.

\$59,823 RECOMMENDED REPLACEMENT RESERVE FUNDING FOR THE STUDY YEAR, 2023

We recommend the Township adopt a Replacement Reserve Funding Plan based on the annual funding recommendation above. Inflation adjusted funding for subsequent years is shown on Page A5.5.

Road Dept reports a Starting Balance of \$425,932 and Annual Funding totaling \$16,044, which is inadequate to fund projected replacements starting in 2030. See Page A5.3 for a more detailed evaluation.



REPLACEMENT RESERVE ANALYSIS - GENERAL INFORMATION

The Road Dept 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.

2023 | STUDY YEAR

The Township 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, 2023.

40 Years | STUDY PERIOD

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

\$425,932 | STARTING BALANCE

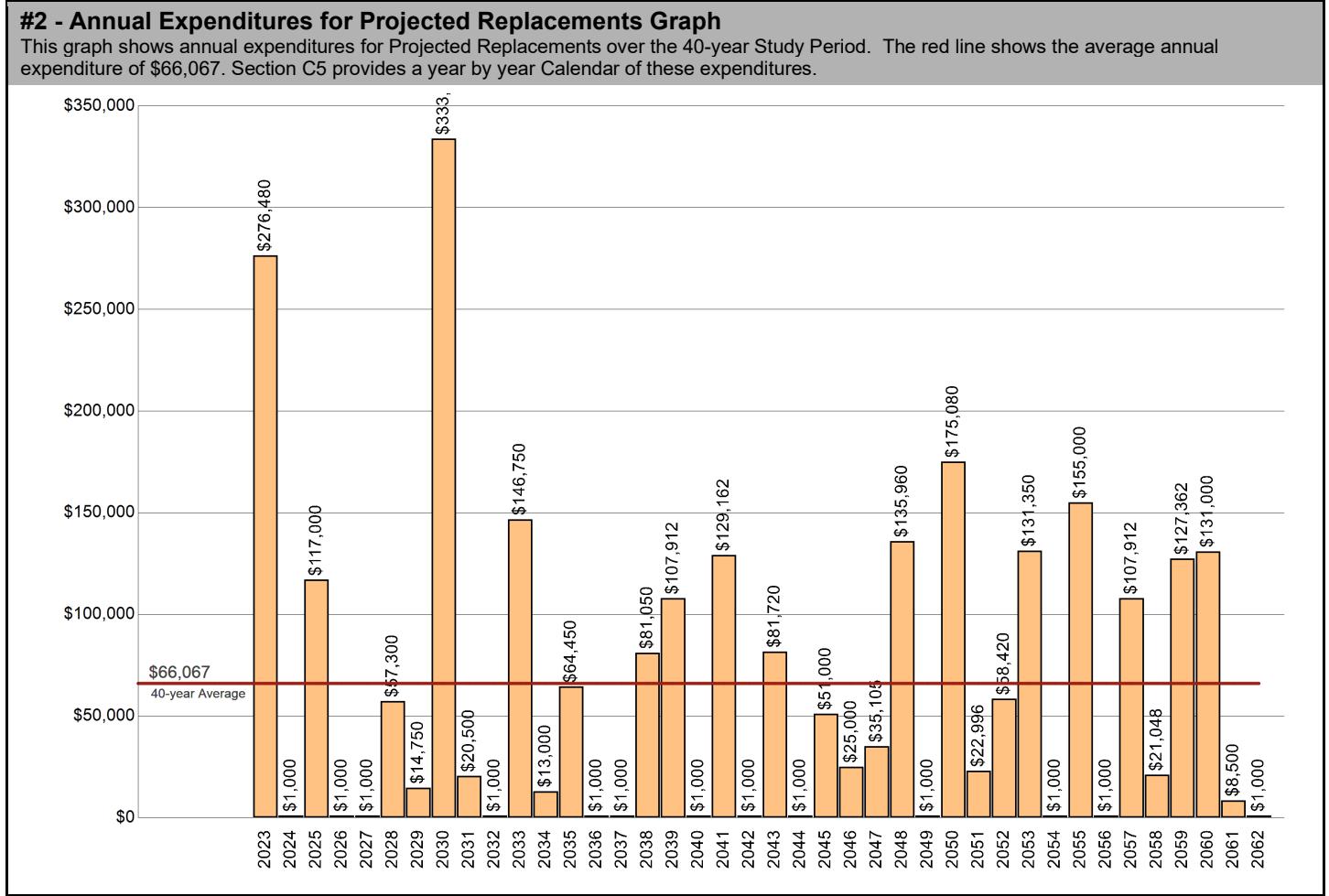
The Township reports Replacement Reserves on Deposit totaling \$425,932 at the start of the Study Year.

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).

\$2,642,687 | REPLACEMENT RESERVE INVENTORY - PROJECTED REPLACEMENTS

The Road Dept Replacement Reserve Inventory identifies 46 items that will require periodic replacement, that are to be funded from Replacement Reserves. We estimate the cost of these replacements will be \$2,642,687 over the 40-year Study Period. The Projected Replacements are divided into 3 major categories starting on Page B5.3. Pages B5.1-B5.2 provide detailed information on the Replacement Reserve Inventory.



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 A5.4 and A5.5. The Projected Replacements listed on Page C5.2 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 A5.5.

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 A5.5.

ANNUAL EXPENDITURES AND CURRENT FUNDING

The annual expenditures that comprise the \$2,642,687 of Projected Expenditures over the 40-year Study Period and the impact of the Township continuing to fund Replacement Reserves at the current level are detailed in Table 3.

#3 - Table of Annual Expenditures and Current Funding Data - Years 1 through 40										
Year	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Starting Balance	\$425,932									
Projected Replacements	(\$276,480)	(\$1,000)	(\$117,000)	(\$1,000)	(\$1,000)	(\$57,300)	(\$14,750)	(\$333,880)	(\$20,500)	(\$1,000)
Annual Deposit	\$16,044	\$16,044	\$16,044	\$16,044	\$16,044	\$16,044	\$16,044	\$16,044	\$16,044	\$16,044
End of Year Balance	\$165,496	\$180,540	\$79,584	\$94,628	\$109,672	\$68,416	\$69,710	(\$248,126)	(\$252,582)	(\$237,538)
Cumulative Expenditures	(\$276,480)	(\$277,480)	(\$394,480)	(\$395,480)	(\$396,480)	(\$453,780)	(\$468,530)	(\$802,410)	(\$822,910)	(\$823,910)
Cumulative Receipts	\$441,976	\$458,020	\$474,064	\$490,108	\$506,152	\$522,196	\$538,240	\$554,284	\$570,328	\$586,372
Year	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
Projected Replacements	(\$146,750)	(\$13,000)	(\$64,450)	(\$1,000)	(\$1,000)	(\$81,050)	(\$107,912)	(\$1,000)	(\$129,162)	(\$1,000)
Annual Deposit	\$16,044	\$16,044	\$16,044	\$16,044	\$16,044	\$16,044	\$16,044	\$16,044	\$16,044	\$16,044
End of Year Balance	(\$368,244)	(\$365,200)	(\$413,606)	(\$398,562)	(\$383,518)	(\$448,524)	(\$540,392)	(\$525,348)	(\$638,466)	(\$623,422)
Cumulative Expenditures	(\$970,660)	(\$983,660)	(\$1,048,110)	(\$1,049,110)	(\$1,050,110)	(\$1,131,160)	(\$1,239,072)	(\$1,240,072)	(\$1,369,234)	(\$1,370,234)
Cumulative Receipts	\$602,416	\$618,460	\$634,504	\$650,548	\$666,592	\$682,636	\$698,680	\$714,724	\$730,768	\$746,812
Year	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052
Projected Replacements	(\$81,720)	(\$1,000)	(\$51,000)	(\$25,000)	(\$35,105)	(\$135,960)	(\$1,000)	(\$175,080)	(\$22,996)	(\$58,420)
Annual Deposit	\$16,044	\$16,044	\$16,044	\$16,044	\$16,044	\$16,044	\$16,044	\$16,044	\$16,044	\$16,044
End of Year Balance	(\$689,098)	(\$674,054)	(\$709,010)	(\$717,966)	(\$737,027)	(\$856,943)	(\$841,899)	(\$1,000,935)	(\$1,007,887)	(\$1,050,263)
Cumulative Expenditures	(\$1,451,954)	(\$1,452,954)	(\$1,503,954)	(\$1,528,954)	(\$1,564,059)	(\$1,700,019)	(\$1,701,019)	(\$1,876,099)	(\$1,899,095)	(\$1,957,515)
Cumulative Receipts	\$762,856	\$778,900	\$794,944	\$810,988	\$827,032	\$843,076	\$859,120	\$875,164	\$891,208	\$907,252
Year	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062
Projected Replacements	(\$131,350)	(\$1,000)	(\$155,000)	(\$1,000)	(\$107,912)	(\$21,048)	(\$127,362)	(\$131,000)	(\$8,500)	(\$1,000)
Annual Deposit	\$16,044	\$16,044	\$16,044	\$16,044	\$16,044	\$16,044	\$16,044	\$16,044	\$16,044	\$16,044
End of Year Balance	(\$1,165,569)	(\$1,150,525)	(\$1,289,481)	(\$1,274,437)	(\$1,366,305)	(\$1,371,309)	(\$1,482,627)	(\$1,597,583)	(\$1,590,039)	(\$1,574,995)
Cumulative Expenditures	(\$2,088,865)	(\$2,089,865)	(\$2,244,865)	(\$2,245,865)	(\$2,353,777)	(\$2,374,825)	(\$2,502,187)	(\$2,633,187)	(\$2,641,687)	(\$2,642,687)
Cumulative Receipts	\$923,296	\$939,340	\$955,384	\$971,428	\$987,472	\$1,003,516	\$1,019,560	\$1,035,604	\$1,051,648	\$1,067,692

EVALUATION OF CURRENT FUNDING

The evaluation of Current Funding (Starting Balance of \$425,932 & annual funding of \$16,044), 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 46 Projected Replacements identified in the Replacement Reserve Inventory and that the Township will continue Annual Funding of \$16,044 throughout the 40-year Study Period.

Annual Funding of \$16,044 is approximately 27 percent of the \$59,823 recommended Annual Funding calculated by the Cash Flow Method for 2023, the Study Year.

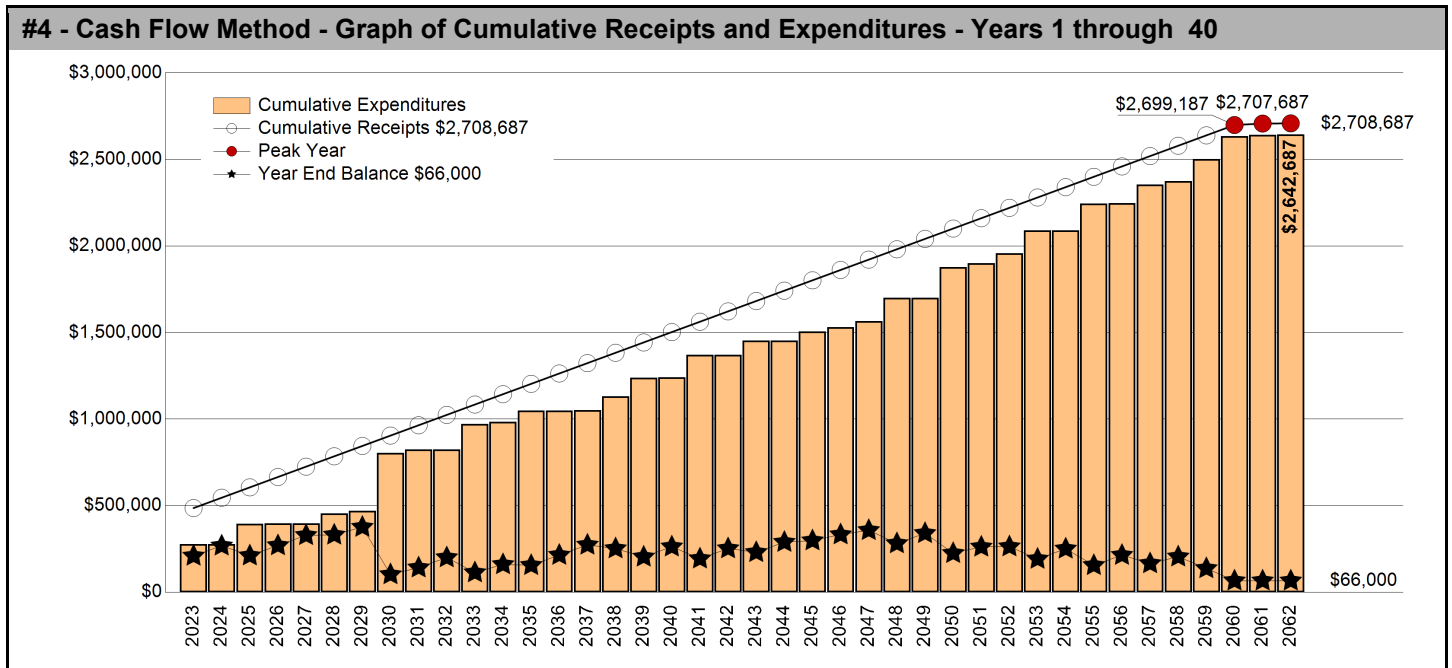
See the Executive Summary for the Current Funding Statement.

CASH FLOW METHOD FUNDING

\$59,823 RECOMMENDED REPLACEMENT RESERVE FUNDING FOR 2023

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 2060 with Replacement Reserves on Deposit dropping to the Minimum Balance after the completion of \$2,633,187 of replacements from 2023 to 2060. Recommended funding is anticipated to decline in 2061. Peak Years are identified in Chart 4 and Table 5.
- Threshold (Minimum Balance).** The calculations assume a Minimum Balance of \$66,000 will always be held in reserve, which is calculated by rounding the 12-month 40-year average annual expenditure of \$66,067 as shown on Graph #2.
- Cash Flow Method Study Period.** Cash Flow Method calculates funding for \$2,642,687 of expenditures over the 40-year Study Period. It does not include funding for any projects beyond 2062 and in 2062, the end of year balance will always be the Minimum Balance.



#5 - Cash Flow Method - Table of Receipts & Expenditures - Years 1 through 40

Year	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Starting Balance	\$425,932									
Projected Replacements	(\$276,480)	(\$1,000)	(\$117,000)	(\$1,000)	(\$1,000)	(\$57,300)	(\$14,750)	(\$333,880)	(\$20,500)	(\$1,000)
Annual Deposit	\$59,823	\$59,823	\$59,823	\$59,823	\$59,823	\$59,823	\$59,823	\$59,823	\$59,823	\$59,823
End of Year Balance	\$209,275	\$268,097	\$210,920	\$269,742	\$328,565	\$331,087	\$376,160	\$102,102	\$141,425	\$200,247
Cumulative Expenditures	(\$276,480)	(\$277,480)	(\$394,480)	(\$395,480)	(\$396,480)	(\$453,780)	(\$468,530)	(\$802,410)	(\$822,910)	(\$823,910)
Cumulative Receipts	\$485,755	\$545,577	\$605,400	\$665,222	\$725,045	\$784,867	\$844,690	\$904,512	\$964,335	\$1,024,157
Year	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
Projected Replacements	(\$146,750)	(\$13,000)	(\$64,450)	(\$1,000)	(\$1,000)	(\$81,050)	(\$107,912)	(\$1,000)	(\$129,162)	(\$1,000)
Annual Deposit	\$59,823	\$59,823	\$59,823	\$59,823	\$59,823	\$59,823	\$59,823	\$59,823	\$59,823	\$59,823
End of Year Balance	\$113,320	\$160,142	\$155,515	\$214,337	\$273,160	\$251,932	\$203,843	\$262,665	\$193,326	\$252,148
Cumulative Expenditures	(\$970,660)	(\$983,660)	(\$1,048,110)	(\$1,049,110)	(\$1,050,110)	(\$1,131,160)	(\$1,239,072)	(\$1,240,072)	(\$1,369,234)	(\$1,370,234)
Cumulative Receipts	\$1,083,980	\$1,143,802	\$1,203,625	\$1,263,447	\$1,323,270	\$1,383,092	\$1,442,915	\$1,502,737	\$1,562,560	\$1,622,382
Year	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052
Projected Replacements	(\$81,720)	(\$1,000)	(\$51,000)	(\$25,000)	(\$35,105)	(\$135,960)	(\$1,000)	(\$175,080)	(\$22,996)	(\$58,420)
Annual Deposit	\$59,823	\$59,823	\$59,823	\$59,823	\$59,823	\$59,823	\$59,823	\$59,823	\$59,823	\$59,823
End of Year Balance	\$230,251	\$289,073	\$297,896	\$332,718	\$357,436	\$281,932	\$340,121	\$224,863	\$261,690	\$263,092
Cumulative Expenditures	(\$1,451,954)	(\$1,452,954)	(\$1,503,954)	(\$1,528,954)	(\$1,564,059)	(\$1,701,019)	(\$1,701,019)	(\$1,876,099)	(\$1,899,095)	(\$1,957,515)
Cumulative Receipts	\$1,682,205	\$1,742,027	\$1,801,850	\$1,861,672	\$1,921,495	\$1,981,317	\$2,041,140	\$2,100,962	\$2,160,785	\$2,220,607
Year	2053	2054	2055	2056	2057	2058	2059	1st Peak - 2060	2nd Peak - 2061	3rd Peak - 2062
Projected Replacements	(\$131,350)	(\$1,000)	(\$155,000)	(\$1,000)	(\$107,912)	(\$21,048)	(\$127,362)	(\$131,000)	(\$8,500)	(\$1,000)
Annual Deposit	\$59,823	\$59,823	\$59,823	\$59,823	\$59,823	\$59,823	\$59,823	\$59,823	\$59,823	\$1,000
End of Year Balance	\$191,565	\$250,387	\$155,210	\$214,032	\$165,943	\$204,717	\$137,178	\$66,000	\$66,000	\$66,000
Cumulative Expenditures	(\$2,088,865)	(\$2,089,865)	(\$2,244,865)	(\$2,245,865)	(\$2,353,777)	(\$2,374,825)	(\$2,502,187)	(\$2,633,187)	(\$2,641,687)	(\$2,642,687)
Cumulative Receipts	\$2,280,430	\$2,340,252	\$2,400,075	\$2,459,897	\$2,519,720	\$2,579,542	\$2,639,365	\$2,699,187	\$2,707,687	\$2,708,687

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.

\$59,823 2023 - CASH FLOW METHOD RECOMMENDED FUNDING

The 2023 Study Year calculations have been made using current replacement costs (see Page B5.2), modified by the Analyst for any project specific conditions.

\$63,412 2024 - INFLATION ADJUSTED FUNDING

A new analysis calculates the 2024 funding based on three assumptions:

- Replacement Reserves on Deposit totaling \$209,275 on January 1, 2024.
- All 2023 Projected Replacements listed on Page C5.2 accomplished at a cost to Replacement Reserves less than \$276,480.
- Construction Cost Inflation of 6.00 percent in 2023.

The \$63,412 inflation adjusted funding in 2024 is a 6.00 percent increase over the non-inflation adjusted funding of \$59,823.

\$67,217 2025 - INFLATION ADJUSTED FUNDING

A new analysis calculates the 2025 funding based on three assumptions:

- Replacement Reserves on Deposit totaling \$481,396 on January 1, 2025.
- No Expenditures from Replacement Reserves in 2024.
- Construction Cost Inflation of 6.00 percent in 2024.

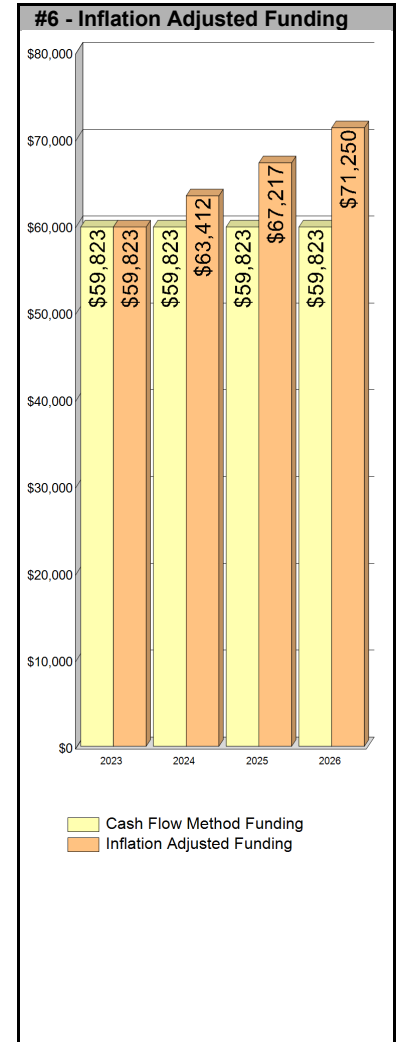
The \$67,217 inflation adjusted funding in 2025 is a 12.36 percent increase over the non-inflation adjusted funding of \$59,823.

\$71,250 2026 - INFLATION ADJUSTED FUNDING

A new analysis calculates the 2026 funding based on three assumptions:

- Replacement Reserves on Deposit totaling \$355,876 on January 1, 2026.
- All 2025 Projected Replacements listed on Page C5.2 accomplished at a cost to Replacement Reserves less than \$131,080.
- Construction Cost Inflation of 6.00 percent in 2025.

The \$71,250 inflation adjusted funding in 2026 is a 19.10 percent increase over the non-inflation adjusted funding of \$59,823.



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 2024, 2025 and 2026 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 2023, based on a 1.00 percent interest rate, we estimate the Township may earn \$3,176 on an average balance of \$317,603, \$3,453 on an average balance of \$345,335 in 2024, and \$4,186 on \$418,636 in 2025. The Township may elect to attribute 100 percent of the earned interest to Reserves, resulting in a reduction in the 2023 funding from \$59,823 to \$56,646 (a 5.30 percent reduction), \$63,412 to \$59,958 in 2024 (a 5.44 percent reduction), and \$67,217 to \$63,030 in 2025 (a 6.22 percent reduction).

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SECTION B - REPLACEMENT RESERVE INVENTORY

- **PROJECTED REPLACEMENTS.** Road Dept - Replacement Reserve Inventory identifies 46 items which 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 \$1,426,903. Cumulative Replacements totaling \$2,642,687 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.

- **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:

Tax Code. The United States Tax Code grants very 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.

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 Township policy on the administration of Replacement Reserves. If the Township has selected an alternative level, it will be noted in the Replacement Reserve Inventory - General Comments on Page B5.2.

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 Township.

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 Township. These types of items are generally not the responsibility of the Township and are excluded from the Replacement Reserve Inventory.

- **CATEGORIES.** The 46 items included in the Road Dept Replacement Reserve Inventory are divided into 3 major categories. Each category is printed on a separate page, beginning on page B5.3.
- **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 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 . 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 46 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 46 Projected Replacements specifically listed in the Replacement Reserve Inventory. The inclusion/exclusion of items from the Replacement Reserve Inventory is discussed on Page B5.1.

SITE ITEMS						NEL- Normal Economic Life (yrs)			
PROJECTED REPLACEMENTS						REL- Remaining Economic Life (yrs)			
ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST (\$)	NEL	REL		REPLACEMENT COST (\$)	
1	Asphalt pavement, mill and overlay	sf	53,456	\$2.00	18	16		\$106,912	
2	Asphalt pavement, mill and overlay	sf	53,456	\$2.00	18	none		\$106,912	
3	Pavement, rejuvenator seal coat	sf	55,000	\$0.25	6	none		\$13,750	
	Gravel path, replenish								EXCLUDED
4	Concrete pad at fuel island (heavy duty)	sf	1,200	\$24.00	60	7		\$28,800	
5	Concrete flatwork (allowance)	ls	1	\$5,000.00	10	5		\$5,000	
6	Bollards	ea	26	\$450.00	20	10		\$11,700	
7	Building exterior lighting	ea	3	\$450.00	15	none		\$1,350	
8	Wood post signage	ea	1	\$250.00	20	none		\$250	
9	Stormwater Management (allowance)	ls	1	\$5,000.00	30	none		\$5,000	
10	Salt hut, replacement	ea	1	\$12,000.00	20	8		\$12,000	
11	Salt hut, canopy	sf	650	\$9.00	10	none		\$5,850	
12	Radio tower	ea	1	\$55,000.00	30	7		\$55,000	
13	Fuel tank system, 2 500 gal. w/ pumps	ea	1	\$75,000.00	30	7		\$75,000	
Replacement Costs - Page Subtotal								\$427,524	

COMMENTS
<ul style="list-style-type: none"> Gravel path, replenish - 02/13/2023 excluded based on comments provided.

EXTERIOR 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 (\$)	
14	Roofing, Main Bldg., replace with metal	sf	3,800	\$13.50	50	5	\$51,300	
15	Modified bitumen flat roofing, Main Bldg.	sf	5,440	\$32.00	20	7	\$174,080	
16	Gutters and downspouts, Main Bldg.	lf	120	\$13.00	20	none	\$1,560	
17	Sky light plastic bubble stationary, Main Bldg.	sf	96	\$100.00	20	none	\$9,600	
18	Roofing, replace with metal, storage	sf	2,400	\$13.50	50	48	\$32,400	
19	Roofing, replace with metal, storage	sf	6,200	\$13.50	50	48	\$83,700	
20	Gutters and downspouts, storage	lf	192	\$13.00	30	28	\$2,496	
21	Exterior door (allowance)	ls	1	\$7,500.00	10	8	\$7,500	
22	Soffit, vinyl, storage	sf	320	\$9.00	25	none	\$2,880	
23	Soffit, vinyl, Main Bldg.	sf	320	\$9.00	25	none	\$2,880	
24	Siding, metal, Main Bldg.	sf	6,380	\$9.00	40	29	\$57,420	
25	Siding, metal, storage	sf	4,940	\$9.00	40	20	\$44,460	
26	Overhead door, Main Bldg.	ea	8	\$8,000.00	15	none	\$64,000	
27	Overhead door, Storage Overhead door, range	ea	4	\$27,300.00	15	10	\$109,200 EXCLUDED	
28	Window, glass block	ea	5	\$120.00	35	none	\$600	
29	Windows (3' x 6')	ea	2	\$1,224.00	35	none	\$2,448	
Replacement Costs - Page Subtotal							\$646,524	

COMMENTS
<ul style="list-style-type: none"> Item #24: Siding, metal, Main Bldg. - 02/13/2023 revised quantity based on re-measurement. Item #25: Siding, metal, storage - 02/13/2023 revised NEL/REL based on comments provided. Overhead door, range - 12/08/22 excluded per comments provided these items should be in Police Dept as this is a shared building.

BUILDING SYSTEMS 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 (\$)
30	Fire Alarm Control Annunciator Panel (FACP) +	ea	1	\$4,000.00	25	24	\$4,000
31	Smoke detector	ea	5	\$250.00	25	24	\$1,250
32	Fire alarm pull	ea	3	\$135.00	25	24	\$405
33	Water heater, 40 gal., residential	ea	1	\$2,200.00	15	none	\$2,200
34	Well pump	ea	1	\$8,500.00	10	none	\$8,500
35	Well clean-up service	ea	1	\$3,000.00	10	none	\$3,000
36	Well pressure tank	ea	1	\$7,500.00	10	none	\$7,500
37	Well water softener	ea	1	\$5,700.00	12	none	\$5,700
38	Water testing	ea	1	\$1,000.00	1	none	\$1,000
39	Well replacement	ea	1	\$15,000.00	25	none	\$15,000
	Leach field, does not exist						EXCLUDED
	Septic pump, does not exist						EXCLUDED
	Control box, does not exist						EXCLUDED
	2000 gal. septic tank, does not exist						EXCLUDED
	Water pipe and diverter box, does not exist						EXCLUDED
	Pump box structure, does not exist						EXCLUDED
	Annual check and report, does not exist						EXCLUDED
40	Heat pump, furnace (48,000 btu)	ea	2	\$6,000.00	24	23	\$12,000
41	Heat pump, compressor (4 ton)	ea	2	\$6,000.00	12	11	\$12,000
42	Garage radiant heat system	ft	600	\$10.00	20	2	\$6,000
43	Air handler (33,000 btu)	ea	1	\$9,000.00	24	none	\$9,000
Replacement Costs - Page Subtotal							\$87,555

COMMENTS
<ul style="list-style-type: none"> Item #30: Fire Alarm Control Annunciator Panel (FACP) + system - 02/13/2023 revised REL because this was completed in December of 2022. Item #31: Smoke detector - 02/13/2023 revised REL because this was completed in December of 2022. Item #32: Fire alarm pull - 02/13/2023 revised REL because this was completed in December of 2022. Leach field, does not exist - 12/08/22 - is excluded per the comments provided. Please note a system is located underground on the North side of the property. Septic pump, does not exist - 12/08/22 - is excluded per the comments provided. Please note a system is located underground on the North side of the property. Control box, does not exist - 12/08/22 - is excluded per the comments provided. Please note a system is located underground on the North side of the property. 2000 gal. septic tank, does not exist - 12/08/22 - is excluded per the comments provided. Please note a system is located underground on the North side of the property. Water pipe and diverter box, does not exist - 12/08/22 - is excluded per the comments provided. Please note a system is located underground on the North side of the property. Pump box structure, does not exist - 12/08/22 - is excluded per the comments provided. Please note a system is located

BUILDING SYSTEMS - (cont.) 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 (\$)
44	Emergency Generator (100 Kw)	ea	1	\$110,000.00	30	2	\$110,000
45	Emergency Generator (rebuild)	ea	1	\$44,000.00	10	12	\$44,000
46	Electrical (allowance)	ea	1	\$7,500.00	15	none	\$7,500
Replacement Costs - Page Subtotal							\$161,500

COMMENTS
<ul style="list-style-type: none"> Item #45: Emergency Generator (rebuild) - 02/06/2023 - revised REL per comments provided. This rebuild will occur on the replacement generator after 10 years of service.

VALUATION EXCLUSIONS							
Excluded Items							
ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	REPLACEMENT COST (\$)	UNIT REL	REL	REPLACEMENT COST (\$)
	Smoke detector						EXCLUDED
	Fire alarm pull						EXCLUDED
	Domestic water piping						EXCLUDED
	Water heater						EXCLUDED
	Well pump						EXCLUDED
	Well clean up service						EXCLUDED
	Pressure tank						EXCLUDED
	Water testing						EXCLUDED
	Access control System (ACS)						EXCLUDED
	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.

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SECTION C - CALENDAR OF PROJECTED ANNUAL REPLACEMENTS

GENERAL STATEMENT. The 46 Projected Replacements in the Road Dept 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 C5.2.

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 Township.
- **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 on our time and manpower resources. Therefore, Miller Dodson 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 replacements 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 Miller - Dodson Associates nor the Reserve Analyst has any prior or existing relationship with this Township 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 Township 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 Township and the visual evaluations of the Analyst. It has been prepared for the sole use of the Township and is not for the purpose of performing an audit, quality/forensic analyses, or background checks of historical records.
- **PREVIOUS REPLACEMENTS.** Information provided to Miller - Dodson 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, 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

2023 - Study Year			2024 - YEAR 1		
Item		\$	Item		\$
2	Asphalt pavement, mill and overlay	\$106,912	38	Water testing	\$1,000
3	Pavement, rejuvenator seal coat	\$13,750			
7	Building exterior lighting	\$1,350			
8	Wood post signage	\$250			
9	Stormwater Management (allowance)	\$5,000			
11	Salt hut, canopy	\$5,850			
16	Gutters and downspouts, Main Bldg.	\$1,560			
17	Sky light plastic bubble stationary, Main Bldg.	\$9,600			
22	Soffit, vinyl, storage	\$2,880			
23	Soffit, vinyl, Main Bldg.	\$2,880			
26	Overhead door, Main Bldg.	\$64,000			
28	Window, glass block	\$600			
29	Windows (3' x 6')	\$2,448			
33	Water heater, 40 gal., residential	\$2,200			
34	Well pump	\$8,500			
35	Well clean-up service	\$3,000			
36	Well pressure tank	\$7,500			
37	Well water softener	\$5,700			
38	Water testing	\$1,000			
39	Well replacement	\$15,000			
43	Air handler (33,000 btu)	\$9,000			
46	Electrical (allowance)	\$7,500			
Total Scheduled Replacements		\$276,480	Total Scheduled Replacements		\$1,000

2025 - YEAR 2			2026 - YEAR 3		
Item		\$	Item		\$
38	Water testing	\$1,000	38	Water testing	\$1,000
42	Garage radiant heat system	\$6,000			
44	Emergency Generator (100 Kw)	\$110,000			
Total Scheduled Replacements		\$117,000	Total Scheduled Replacements		\$1,000

PROJECTED REPLACEMENTS

Item	2027 - YEAR 4	\$	Item	2028 - YEAR 5	\$
38	Water testing	\$1,000	5	Concrete flatwork (allowance)	\$5,000
			14	Roofing, Main Bldg., replace with metal	\$51,300
			38	Water testing	\$1,000
Total Scheduled Replacements		\$1,000	Total Scheduled Replacements		\$57,300

Item	2029 - YEAR 6	\$	Item	2030 - YEAR 7	\$
3	Pavement, rejuvenator seal coat	\$13,750	4	Concrete pad at fuel island (heavy duty)	\$28,800
38	Water testing	\$1,000	12	Radio tower	\$55,000
			13	Fuel tank system, 2 500 gal. w/ pumps	\$75,000
			15	Modified bitumen flat roofing, Main Bldg.	\$174,080
			38	Water testing	\$1,000
Total Scheduled Replacements		\$14,750	Total Scheduled Replacements		\$333,880

PROJECTED REPLACEMENTS

2031 - YEAR 8			2032 - YEAR 9		
Item		\$	Item		\$
10	Salt hut, replacement	\$12,000	38	Water testing	\$1,000
21	Exterior door (allowance)	\$7,500			
38	Water testing	\$1,000			
Total Scheduled Replacements		\$20,500	Total Scheduled Replacements		\$1,000

2033 - YEAR 10			2034 - YEAR 11		
Item		\$	Item		\$
6	Bollards	\$11,700	38	Water testing	\$1,000
11	Salt hut, canopy	\$5,850	41	Heat pump, compressor (4 ton)	\$12,000
27	Overhead door, Storage	\$109,200			
34	Well pump	\$8,500			
35	Well clean-up service	\$3,000			
36	Well pressure tank	\$7,500			
38	Water testing	\$1,000			
Total Scheduled Replacements		\$146,750	Total Scheduled Replacements		\$13,000

PROJECTED REPLACEMENTS

Item	2035 - YEAR 12	\$	Item	2036 - YEAR 13	\$
3	Pavement, rejuvenator seal coat	\$13,750	38	Water testing	\$1,000
37	Well water softener	\$5,700			
38	Water testing	\$1,000			
45	Emergency Generator (rebuild)	\$44,000			
Total Scheduled Replacements		\$64,450	Total Scheduled Replacements		\$1,000

Item	2037 - YEAR 14	\$	Item	2038 - YEAR 15	\$
38	Water testing	\$1,000	5	Concrete flatwork (allowance)	\$5,000
			7	Building exterior lighting	\$1,350
			26	Overhead door, Main Bldg.	\$64,000
			33	Water heater, 40 gal., residential	\$2,200
			38	Water testing	\$1,000
			46	Electrical (allowance)	\$7,500
Total Scheduled Replacements		\$1,000	Total Scheduled Replacements		\$81,050

PROJECTED REPLACEMENTS

2039 - YEAR 16			2040 - YEAR 17		
Item		\$	Item		\$
1	Asphalt pavement, mill and overlay	\$106,912	38	Water testing	\$1,000
38	Water testing	\$1,000			
Total Scheduled Replacements		\$107,912	Total Scheduled Replacements		\$1,000

2041 - YEAR 18			2042 - YEAR 19		
Item		\$	Item		\$
2	Asphalt pavement, mill and overlay	\$106,912	38	Water testing	\$1,000
3	Pavement, rejuvenator seal coat	\$13,750			
21	Exterior door (allowance)	\$7,500			
38	Water testing	\$1,000			
Total Scheduled Replacements		\$129,162	Total Scheduled Replacements		\$1,000

PROJECTED REPLACEMENTS

Item	2043 - YEAR 20	\$	Item	2044 - YEAR 21	\$
8	Wood post signage	\$250	38	Water testing	\$1,000
11	Salt hut, canopy	\$5,850			
16	Gutters and downspouts, Main Bldg.	\$1,560			
17	Sky light plastic bubble stationary, Main Bldg.	\$9,600			
25	Siding, metal, storage	\$44,460			
34	Well pump	\$8,500			
35	Well clean-up service	\$3,000			
36	Well pressure tank	\$7,500			
38	Water testing	\$1,000			
Total Scheduled Replacements		\$81,720	Total Scheduled Replacements		\$1,000

Item	2045 - YEAR 22	\$	Item	2046 - YEAR 23	\$
38	Water testing	\$1,000	38	Water testing	\$1,000
42	Garage radiant heat system	\$6,000	40	Heat pump, furnace (48,000 btu)	\$12,000
45	Emergency Generator (rebuild)	\$44,000	41	Heat pump, compressor (4 ton)	\$12,000
Total Scheduled Replacements		\$51,000	Total Scheduled Replacements		\$25,000

PROJECTED REPLACEMENTS

Item	2047 - YEAR 24	\$	Item	2048 - YEAR 25	\$
3	Pavement, rejuvenator seal coat	\$13,750	5	Concrete flatwork (allowance)	\$5,000
30	Fire Alarm Control Annunciator Panel (FACP) + system	\$4,000	22	Soffit, vinyl, storage	\$2,880
31	Smoke detector	\$1,250	23	Soffit, vinyl, Main Bldg.	\$2,880
32	Fire alarm pull	\$405	27	Overhead door, Storage	\$109,200
37	Well water softener	\$5,700	38	Water testing	\$1,000
38	Water testing	\$1,000	39	Well replacement	\$15,000
43	Air handler (33,000 btu)	\$9,000			
Total Scheduled Replacements		\$35,105	Total Scheduled Replacements		\$135,960

Item	2049 - YEAR 26	\$	Item	2050 - YEAR 27	\$
38	Water testing	\$1,000	15	Modified bitumen flat roofing, Main Bldg.	\$174,080
			38	Water testing	\$1,000
Total Scheduled Replacements		\$1,000	Total Scheduled Replacements		\$175,080

PROJECTED REPLACEMENTS

Item	2051 - YEAR 28	\$	Item	2052 - YEAR 29	\$
10	Salt hut, replacement	\$12,000	24	Siding, metal, Main Bldg.	\$57,420
20	Gutters and downspouts, storage	\$2,496	38	Water testing	\$1,000
21	Exterior door (allowance)	\$7,500			
38	Water testing	\$1,000			
Total Scheduled Replacements		\$22,996	Total Scheduled Replacements		\$58,420

Item	2053 - YEAR 30	\$	Item	2054 - YEAR 31	\$
3	Pavement, rejuvenator seal coat	\$13,750	38	Water testing	\$1,000
6	Bollards	\$11,700			
7	Building exterior lighting	\$1,350			
9	Stormwater Management (allowance)	\$5,000			
11	Salt hut, canopy	\$5,850			
26	Overhead door, Main Bldg.	\$64,000			
33	Water heater, 40 gal., residential	\$2,200			
34	Well pump	\$8,500			
35	Well clean-up service	\$3,000			
36	Well pressure tank	\$7,500			
38	Water testing	\$1,000			
46	Electrical (allowance)	\$7,500			
Total Scheduled Replacements		\$131,350	Total Scheduled Replacements		\$1,000

PROJECTED REPLACEMENTS

Item	2055 - YEAR 32	\$	Item	2056 - YEAR 33	\$
38	Water testing	\$1,000	38	Water testing	\$1,000
44	Emergency Generator (100 Kw)	\$110,000			
45	Emergency Generator (rebuild)	\$44,000			
Total Scheduled Replacements		\$155,000	Total Scheduled Replacements		\$1,000

Item	2057 - YEAR 34	\$	Item	2058 - YEAR 35	\$
1	Asphalt pavement, mill and overlay	\$106,912	5	Concrete flatwork (allowance)	\$5,000
38	Water testing	\$1,000	28	Window, glass block	\$600
			29	Windows (3' x 6')	\$2,448
			38	Water testing	\$1,000
			41	Heat pump, compressor (4 ton)	\$12,000
Total Scheduled Replacements		\$107,912	Total Scheduled Replacements		\$21,048

PROJECTED REPLACEMENTS

2059 - YEAR 36			2060 - YEAR 37		
Item		\$	Item		\$
2	Asphalt pavement, mill and overlay	\$106,912	12	Radio tower	\$55,000
3	Pavement, rejuvenator seal coat	\$13,750	13	Fuel tank system, 2 500 gal. w/ pumps	\$75,000
37	Well water softener	\$5,700	38	Water testing	\$1,000
38	Water testing	\$1,000			
Total Scheduled Replacements		\$127,362	Total Scheduled Replacements		\$131,000

2061 - YEAR 38			2062 - YEAR 39		
Item		\$	Item		\$
21	Exterior door (allowance)	\$7,500	38	Water testing	\$1,000
38	Water testing	\$1,000			
Total Scheduled Replacements		\$8,500	Total Scheduled Replacements		\$1,000

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SECTION D - CONDITION ASSESSMENT

General Comments. Miller+Dodson Associates conducted a Reserve Study at Road Dept in September 2022. Road Dept is in generally good condition for a township. A review of the Replacement Reserve Inventory will show that we are anticipating 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. Miller Dodson 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.

SITE ITEMS

Road Department.

15625 Chillicothe Rd, Chagrin Falls, OH 44022



Parking Areas. The building features parking areas and drives lanes constructed of asphalt pavement. The pavements are in good condition.



Typical defects that require replacement include the following:

- **Open Cracks.** There are multiple locations where open cracks are allowing water to penetrate to the asphalt base and the bearing soils beneath. Over time, water will erode the base and accelerate the deterioration of the asphalt pavement. If cracks extend to the base and bearing materials, remove the damaged areas, and replace defective materials. As a part of normal maintenance, clean and fill all other cracks.
- **Alligatoring.** There are multiple locations where the asphalt has developed a pattern of cracking 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 to 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.** The asphalt pavement is not properly graded, resulting in the ponding of water. Proper grading of the asphalt pavement will require replacing portions of the asphalt. It may also require resetting improperly sloped curb and gutter segments that are not conveying 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.
- **Potholes.** Potholes have formed as the result of full-depth pavement failure, including base materials. The repair will require removal of the asphalt and base materials, installation and compaction of new base materials, and asphalt resurfacing.
- **Depressions.** There are areas where the asphalt surface is depressed due to deformation in the surface or underlying layers. These depressions may continue to grow with exposure to traffic. Water ponding is evident in several of these areas. Repair of these areas will require the removal of the asphalt and base material and reinstallation, by compacting the new base material and resurfacing with asphalt.

- **Wheel Rutting.** Depressions along the wheel lines extend along portions of the roadway. Repair of these areas will require full-depth and full-width pavement replacement. Wheel rutting, if left unattended can adversely affect vehicle steering.
- **Shoving.** Occurring at locations of sharp braking or turning. The primary cause of this defect is from large truck traffic. If addressed early, surface milling and overlay using a stiffer topcoat of asphalt pavement shoving can be mitigated.
- **Tree Root Damage.** This is known as Heaving, there are locations where tree roots caused heaving in the pavement surface. The repair of these areas requires the removal of the asphalt and the tree roots, then replenish and re-compact the base material and resurface the asphalt. Root trimming can also be an effective way to control this defect.
- **Edge Cracking.** Sections of the asphalt pavement have developed 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.
- **Reflective Cracking.** The asphalt pavement has a significant number of reflective cracks. Reflective cracks occur when placing a new asphalt overlay over an existing cracked pavement. With time and movement, existing cracks will migrate through the new asphalt. Installing a bridging membrane or fabric at the time of overlay can control reflective cracking.

A more detailed summary of pavement distress can be found at <http://www.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.

In an effort to maintain the condition of the pavement throughout the community and ensure the longest life of the asphalt, we recommend the Association adopts 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 it will not be funded from Reserves.
- **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 from 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 used is based on recent contracts for a two-inch mill and overlay with repairs to 10% to 15% of the subgrade. This reflects the current local market for this work. Pavement surfaces that are deteriorated more than 2" of have multiple areas of full depth deterioration will cost additional amounts to repair.

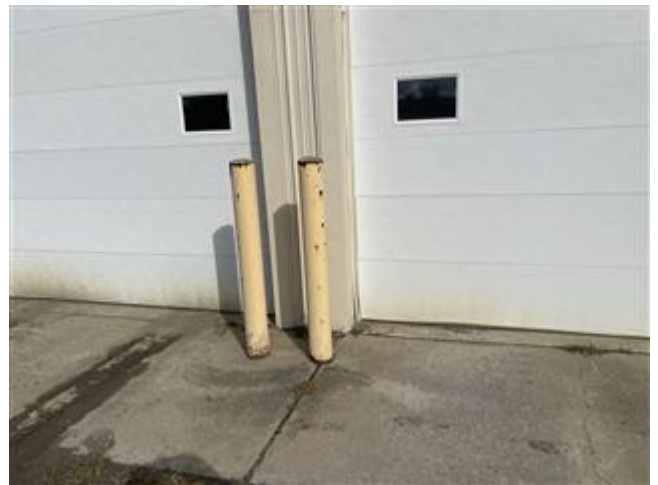
For seal coating, several different products are available. The older, more traditional seal coating product is paint. They coat the surface of the asphalt and are minimally effective. However, the newer coating materials, such as those from Total Asphalt Management, Asphalt Restoration Technologies, Inc., and others, are penetrating. They are engineered, so to speak, to 'remoisturize' 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 in the forms of cracking and potholes. Remoisturizing the pavement can return its flexibility and extend its life of the pavement.

(Continued on next page)

Gravel. The parking areas and drive lanes include gravel. Gravel replenishment is a maintenance item and is excluded from reserves.



Concrete Work. The concrete work includes the Sidewalks, leadwalks, stairs, stoops, and other flatwork. The overall condition of the concrete work is fair with areas of defects consistent with the age of the installation.



The standards we use for recommending replacement are as follows:

- Trip hazard, ½ inch height difference
- Severe cracking
- Severe spalling and scale
- Uneven riser heights on steps
- Steps with risers in excess of 8¼ inches
- Settlement and heaving
- Tree root damage

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.

Stormwater Management. We have included an allowance for stormwater management. This allowance is intended to address drainage issues, wet areas, inlets, structures, etc.



Well and Water Softener. The building features a groundwater well and septic system. We consider the system to include the good casing, well pump, and piping. These items are concealed underground and were not reviewed but we understand they are in good operating condition. The system also includes a water softener system which includes a water softener system, brine tank, and pressure tank. The water softener is reported to be in good condition.



Septic System. The building features a septic system. The system includes a box, pump, valve, and leach bed. The system was concealed underground and not reviewed but is reported to be in good condition.



Building Roofing. The building features a pitched structure that is roofed in asphalt shingles. The roofing is in good condition.

The building features a pitched structure that is roofed in metal roofing. The roofing is new and in good condition.

The building features a flat roofing system. The roofing consists of a Built-Up Roofing system (BUR). The roofing is in fair condition.



Asphalt shingle roofs can have a useful life of 20 to 50 years depending on the weight and quality of the shingle. Weathered, curled, and missing shingles are all indications that the shingles may be nearing the end of their useful life.

Slate shingle roofing can have an extended useful life of 100 years or more. Failures with slate roofs are primarily from the use of improper fasteners, damage from improper access to the roof, and physical damage, primarily from hail. The metalwork including flashings and valleys will need to be replaced, and we assume that this work will be required every 30 years.

Metal roofing can be a standing seam, rolled seam, or shingle with a normal economic life of 50 to 100 years. In some cases, recoating or repainting can extend the useful life of a metal roof.

Flat roofing systems can have a variety of configurations that will greatly affect the cost of replacement including insulation, ballast, the height of the building, and the density of installed mechanical equipment. Flat roofing systems typically have a useful life of 15 to 25 years.

Access to the roof was not provided at the time of inspection. The roofing was observed from the ground level.

Annual inspections are recommended, with cleaning, repair, and mitigation of vegetation performed as needed. Access, inspection, and repair work should be performed by contractors and personnel with the appropriate access equipment who are experienced in the types of roofing used for the facility.

Gutters and Downspouts. The building features aluminum gutters and downspouts. The gutters and downspouts are in good condition.



A gutter and downspout system will remove rainwater from the area of the building's roof, siding, and foundation, and protect the exterior surfaces from water damage. Gutters should run the full length of all drip edges of the building's roof. Even with full gutters, it is important to inspect the function of the gutters during heavy rain to identify any deficiencies. It may be necessary to periodically adjust the slope of sections, repair connections, replace hangers, and install shrouds to the gutter system. Downspouts should be securely attached to the side of the structure. Any broken straps should be replaced. The area of the outlet should be inspected to promote run-off in the desired direction. Long straight runs should have an elbow at the bottom. Splash blocks should be installed to fray the water out-letting from the downspout.

It is recommended that all gutters be cleaned at least twice each year. If there are a large number of trees located close to a building, consider installing a gutter debris shield that will let water into the gutters but will filter out leaves, twigs, and other debris.

It is recommended that gutters and downspouts be installed on all buildings. It is also recommended that the discharge from the downspouts be extended at least ten feet away from the foundations.

Siding and Trim. The building is sided in metal. The building exterior is in good condition. We have estimated that these exteriors will be replaced with cement fiber boards.



Soffit, Fascia, and trim. Wooden exterior materials are typically repaired as needed during normal painting cycles. Painting cycles for wooden exteriors vary between five and ten years depending on the grade of wood and the quality of the materials and finish work. In this study, we have modeled for an incremental wood material replacement to coincide with the painting cycle of the facility. As an alternative to high-maintenance materials, the Association may want to consider replacements using low maintenance synthetic or cementitious materials. These materials are constructed from wood fiber, wax, PVC, and resins that extruded to create boards that resemble wood; perform better in exterior

applications; and are aesthetically superior to materials that warp, sag, and rot. Often times wood trim is constructed of paint grade moldings that require routine maintenance and painting. Many of these types of materials have a history of problems and premature failure.

Periodic inspection of trim, wrap, and sheathing should be conducted. The Association may discover that concealed damage is present at the underlying sheathing and building structure. Structural repairs and latent damage are not accounted for in this study.

Cement fiber exterior siding and trim are pressed from a mold using cellulose fibers, Portland cement, and sand. The result is a siding system that is strong, durable, and long-lasting material. Cement fiber or cementitious materials typically have an extended useful life and require repainting and recaulking every 10 to 15 years. Following the manufacturer's recommendations for cleaning, painting, and caulking, we expect cementitious products to have a useful life of 40 years or more.

Windows. The community maintains the windows of the facility. The windows are generally in good condition.



Window and door units play an integral part in a facility's overall comfort, efficiency, and energy use. The quality of the installed units and the care taken in their installation and maintenance are major factors in their effectiveness and useful life. These units can have a useful life of 20 to 35 years or more depending on their use and other factors mentioned above.

Vinyl double hung and casement windows. These types of windows are usually constructed of factory assembled frames and sashes. The glass or glazing is normally constructed of multiple panels of glass with inert gasses between the layers of glass for insulating purposes. Additional seals are inserted around the sashes to seal out drafts. Springs or balances are installed to make it easier to open and close the sashes.

Wood double hung and casement windows. These types of windows are usually constructed of factory assembled frames and sashes. The glass or glazing is normally constructed of multiple panels of glass with inert gasses between the layers of glass for insulating purposes. Additional seals are inserted around the sashes to seal out drafts. Springs or balances are installed to make it easier to open and close the sashes.

Aluminum double hung and casement windows. These types of windows are usually constructed of factory assembled frames and sashes. The glass or glazing is normally constructed of multiple panels of glass with inert gasses between the layers of glass for insulating purposes. Additional seals are inserted around the sashes to seal out drafts. Springs or balances are installed to make it easier to open and close the sashes.

In general, we recommend coordinating the replacement of the window units with other exterior work, such as siding and roof replacements. The weather tightness of the building envelope often requires wraps, transitional flashing, and caulking that should be performed in coordination with each other. Warranties and advantages in 'economy of scale' can often result in lower overall replacement costs and results that are more reliable. Lastly, coordinated replacements offer the opportunity to correct initial construction defects and improve the effectiveness of details with improved construction techniques and materials.

Exterior Doors. The Community maintains the exterior doors of the community building.



Pre-hung exterior doors provide a door, frame, and hinges that function as a unit. Doors can be wood, steel, aluminum, and fiberglass. Frames can also be wood, steel, and aluminum.

Doors should be maintained to the extent that they fully open and close, hinges swing easily, hardware latches and opens. With exterior doors, it is necessary to maintain a weather seal and prevent frames from rusting.

Overhead Doors. The building features overhead doors. The doors are in good working order.



Overhead doors should be maintained to the extent that they fully open and fully close. All tracks and rollers operate in a smooth continuous cycle free of binding and stops.

Safety features such as stops, return sensors, and close tension should be checked periodically. Automatic operators provide a one touch operation to open or close. These normally include the operator motor, track or roller, and controls. The openers are reported to be in good condition.

Building Interiors. Building interiors are excluded from reserves.

Building Systems.

HVAC Systems. The heating ventilation and air conditioning (HVAC) of the facility are provided by furnace/compressor split systems. The HVAC is in good working order. Detailed inspection and testing of these systems are beyond the scope of this study.



The Association maintains a number of HVAC systems that use the refrigerant known as R22. This refrigerant will be phased out of production by the year 2020 and was generally phased out of use in new systems in 2010.

See the EPA, HCFC Phase-out Schedule on our website at <http://mdareserves.com/resources/links/building-system>. Since most of the community's AC systems rely on the old R22 refrigerant, we assume that the HVAC replacement will include upgrading to the new refrigerant, which is likely to require the replacement of the entire system, including the compressor, coil, and line-set.

The Association maintains a number of HVAC systems that use one of the new generation refrigerants. Unlike the old R22 refrigerant, the new refrigerants are expected to be available throughout the period of this study. However, the operating pressure for new refrigerant systems is approximately twice as high as older systems. Many of the standard components have not been redesigned for these higher pressures, including the coils, which generally fail due to metal fatigue.

Even though manufacturers continue to predict 15 to 20-year life cycles for HVAC equipment that uses these new refrigerants, this is not proven by historical data. We, therefore, recommend anticipating a normal economic life of 15 years for all HVAC equipment that uses pressurized refrigerants of these types.

In addition, the Association maintains air handlers/furnaces throughout the facility, and these components can have a useful life of 20 to 40 years. With fan, motor, and coil replacements performed as needed, the casings of these systems can last significantly longer.

As is the case with most equipment, to achieve a maximum useful economic life, proper maintenance is essential. In some cases, proper and proactive maintenance can greatly extend the useful life of these components.

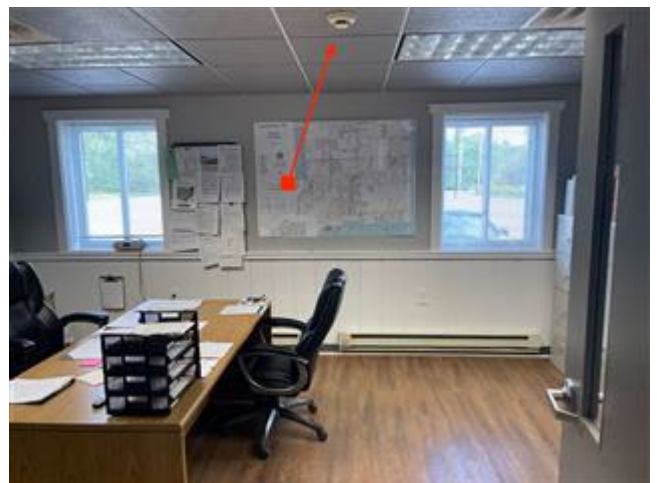
Domestic Hot Water. Domestic hot water is provided by a water heater tank which is in good condition.



Typically these types of systems have a service life of 12-15 years. This system should be serviced periodically to provide the most reliable service.

Fire Safety Systems. The facility includes a fire safety system to notify the occupants in the event of a fire. The system includes a fire alarm panel, smoke detectors, speakers, strobes, emergency pulls, sprinkler, and a pressure pump system. Furthermore, the system includes an interface with the elevators and an automatic dialer. The system does not automatically dial the fire department or 911.

Fire Alarm Control Panel (FACP). The FACP provides the function of central processing and notifying channel for emergencies. Every device in the building is programmed into the FACP. Furthermore, the FACP initiates the alarm. Please note the type of alarm is determined by the system settings. The Association should review how the system is programmed with the system engineer.



The fire alarm panel is an electronic device that programs and receives signals from the devices of the system.

Building fire alarm systems have a service life of 15 to 25 years. While the panels may continue to operate past this point, changes in fire safety technology and building fire safety codes tend to render them obsolete. In addition, manufacturers only support their systems for a limited period, typically about 15 years. After this time, it may be increasingly difficult to obtain replacement parts and services.

When it becomes necessary to upgrade the fire alarm system, differences in the technologies and new code requirements are likely to require upgrades in lighting, sensors, alarms, and other system and sub-components.

Testing and Inspection. Local building and fire codes will require periodic inspections and tests of your systems. These requirements vary from county to county and state to state. Most fire safety systems are listed with the local fire marshal that has jurisdiction in your area. Annual inspections, 5-year testing, 10-year testing, and 20-year testing are not considered in reserves. Subsequent repairs and annual maintenance work are not accounted for or included in this study.

Fire panel manufacturers typically have approved contractors that will provide service and support for their systems. The facility should have an ongoing contractual relationship with one of these such contractors.

Fire Safety Systems. The facility includes a fire safety system to notify the occupants in the event of a fire. The system includes a fire alarm panel, smoke detectors, speakers, strobes, emergency pulls, sprinkler, and a pressure pump system. Furthermore, the system includes an interface with the elevators and an automatic dialer. The system does not automatically dial the fire department or 911.

Electrical Distribution Panels. The building's electrical systems feature a number of electrical distribution panels located throughout the facility. These panels separate the building's electrical power into separate identifiable circuits. All panels track back to the switchgear and have panel schedules identifying the circuits within the breaker panel. These panels date to the original construction of the building and have a rated service life of 50 years or more.



The overall condition of the distribution panels is good. As the distribution panel's age, obtaining replacement parts can be expected to become more difficult. When parts no longer are available, the Association will have to replace some of

the existing panels. The replacement will have to be performed on an incremental basis, panel by panel. Therefore, we have included funding in the Reserve Analysis for distribution panel replacement on an incremental basis.

It is also recommended that outlets, sockets, switches, and minor fixtures be replaced at a maximum of every 30 years. These are not included in reserves.

Emergency Generator. The facility features an emergency generator. The system operates on standby until needed. The generator includes a natural gas engine, voltage generator, control panel, and an enclosure.



The generator power is distributed to Automatic Transfer Switch (ATS) which powers designated panels. These panels are typically emergency panels that service necessary building features and safety features such as lighting, fire alarm, and elevators. Generators should be exercised regularly. Regular maintenance is required to keep the system functional.

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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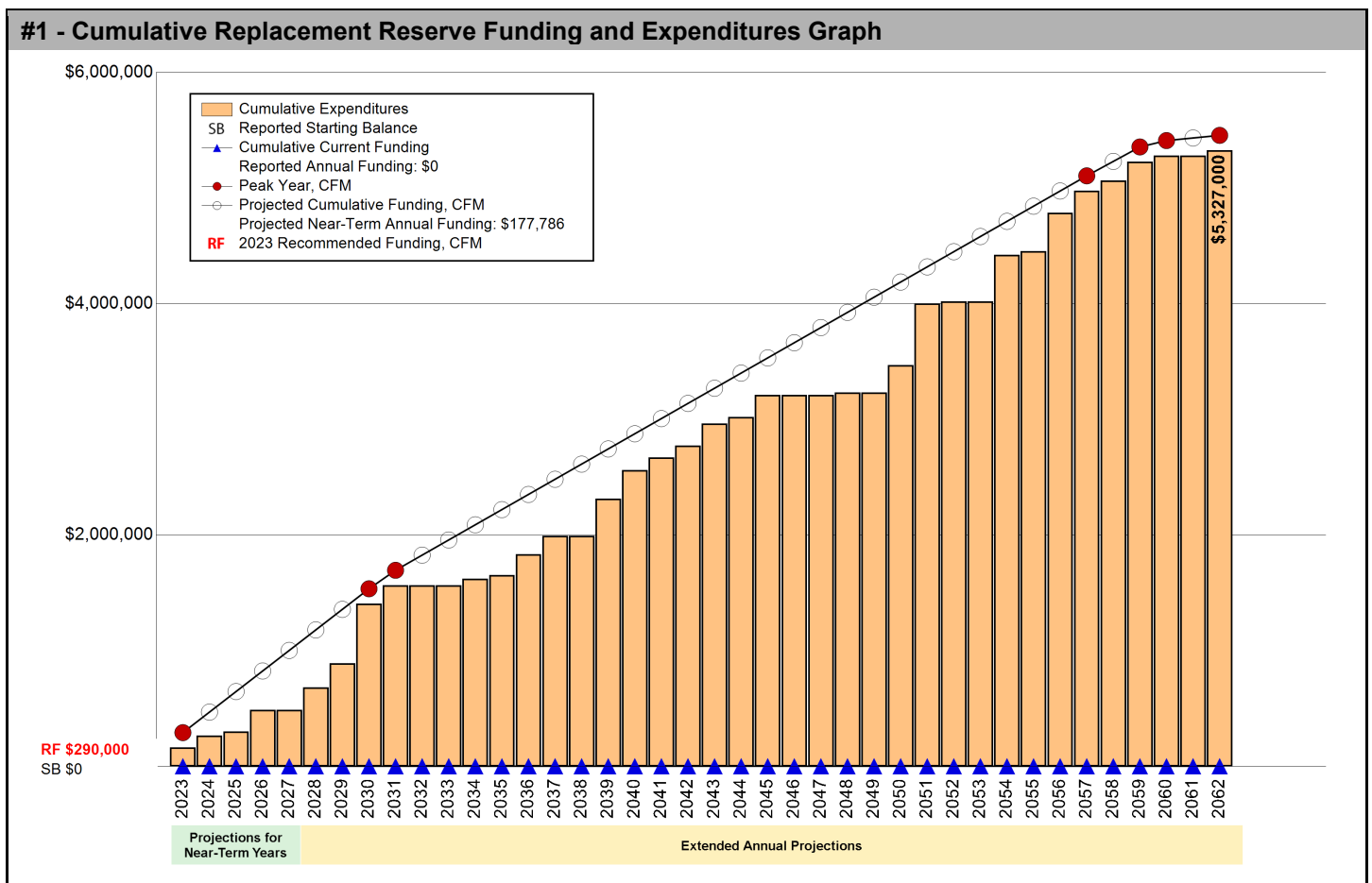
SECTION A - FINANCIAL ANALYSIS

The Road Dept Vehicles Replacement Reserve Analysis uses the Cash Flow Method (CFM) to calculate Replacement Reserve funding for the periodic replacement of the 19 Projected Replacements identified in the Replacement Reserve Inventory.

\$290,000 RECOMMENDED REPLACEMENT RESERVE FUNDING FOR THE STUDY YEAR, 2023

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 A6.5.

Road Dept Vehicles reports a Starting Balance of \$0 and Annual Funding totaling \$0, which is inadequate to fund projected replacements starting in 2023. See Page A6.3 for a more detailed evaluation.



REPLACEMENT RESERVE ANALYSIS - GENERAL INFORMATION

The Road Dept Vehicles 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.

2023 | 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, 2023.

40 Years | STUDY PERIOD

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

\$0 | STARTING BALANCE

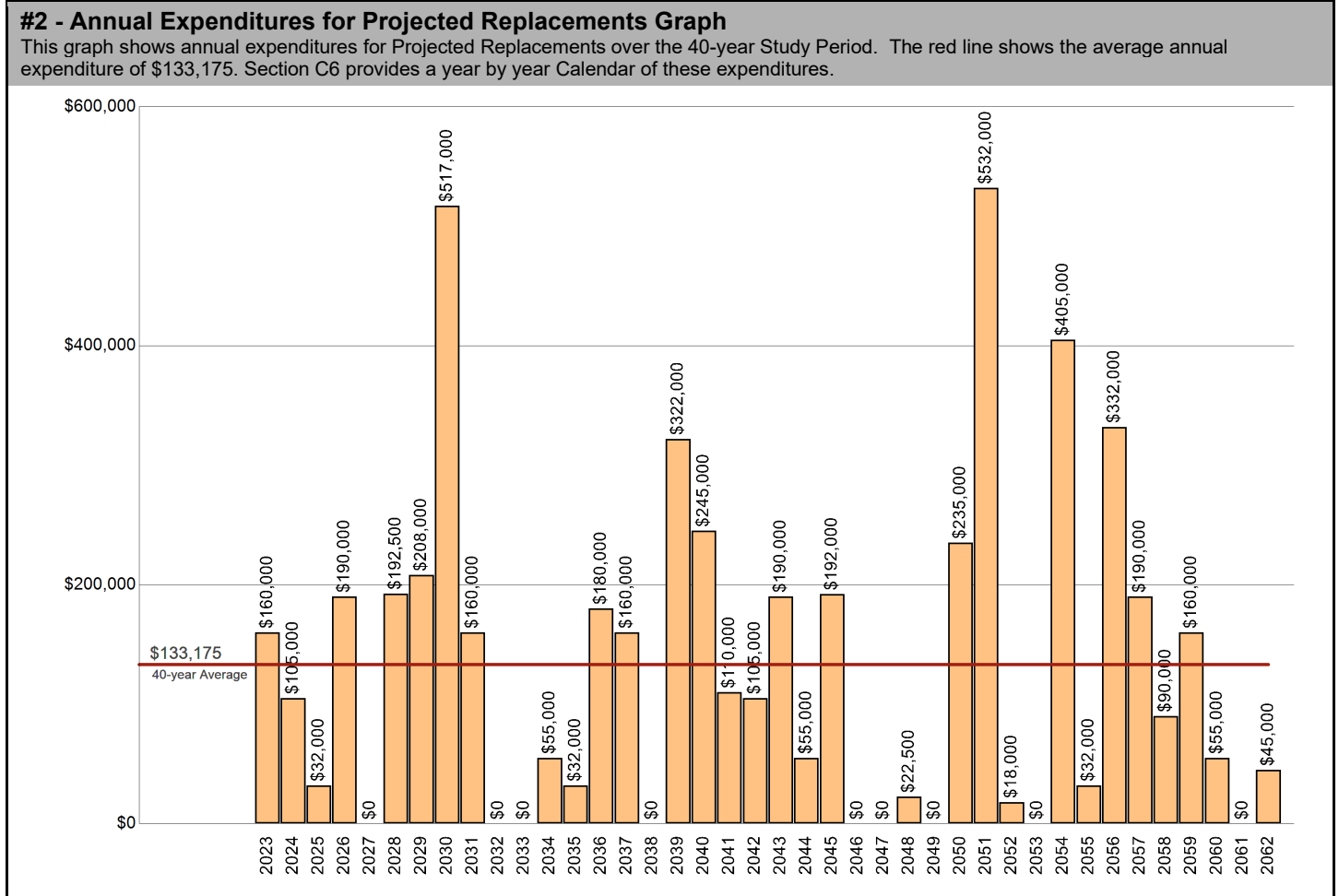
The Association reports Replacement Reserves on Deposit totaling \$0 at the start of the Study Year.

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).

\$5,327,000 | REPLACEMENT RESERVE INVENTORY - PROJECTED REPLACEMENTS

The Road Dept Vehicles Replacement Reserve Inventory identifies 19 items that will require periodic replacement, that are to be funded from Replacement Reserves. We estimate the cost of these replacements will be \$5,327,000 over the 40-year Study Period. The Projected Replacements are divided into 1 major categories starting on Page B6.3. Pages B6.1-B6.2 provide detailed information on the Replacement Reserve Inventory.



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 A6.4 and A6.5. The Projected Replacements listed on Page C6.2 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 A6.5.

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 A6.5.

ANNUAL EXPENDITURES AND CURRENT FUNDING

The annual expenditures that comprise the \$5,327,000 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 1 through 40										
Year	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Starting Balance										
Projected Replacements	(\$160,000)	(\$105,000)	(\$32,000)	(\$190,000)		(\$192,500)	(\$208,000)	(\$517,000)	(\$160,000)	
Annual Deposit										
End of Year Balance	(\$160,000)	(\$265,000)	(\$297,000)	(\$487,000)	(\$487,000)	(\$679,500)	(\$887,500)	(\$1,404,500)	(\$1,564,500)	(\$1,564,500)
Cumulative Expenditures	(\$160,000)	(\$265,000)	(\$297,000)	(\$487,000)	(\$487,000)	(\$679,500)	(\$887,500)	(\$1,404,500)	(\$1,564,500)	(\$1,564,500)
Cumulative Receipts										
Year	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
Projected Replacements		(\$55,000)	(\$32,000)	(\$180,000)	(\$160,000)		(\$322,000)	(\$245,000)	(\$110,000)	(\$105,000)
Annual Deposit										
End of Year Balance	(\$1,564,500)	(\$1,619,500)	(\$1,651,500)	(\$1,831,500)	(\$1,991,500)	(\$1,991,500)	(\$2,313,500)	(\$2,558,500)	(\$2,668,500)	(\$2,773,500)
Cumulative Expenditures	(\$1,564,500)	(\$1,619,500)	(\$1,651,500)	(\$1,831,500)	(\$1,991,500)	(\$1,991,500)	(\$2,313,500)	(\$2,558,500)	(\$2,668,500)	(\$2,773,500)
Cumulative Receipts										
Year	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052
Projected Replacements	(\$190,000)	(\$55,000)	(\$192,000)			(\$22,500)		(\$235,000)	(\$532,000)	(\$18,000)
Annual Deposit										
End of Year Balance	(\$2,963,500)	(\$3,018,500)	(\$3,210,500)	(\$3,210,500)	(\$3,210,500)	(\$3,233,000)	(\$3,233,000)	(\$3,468,000)	(\$4,000,000)	(\$4,018,000)
Cumulative Expenditures	(\$2,963,500)	(\$3,018,500)	(\$3,210,500)	(\$3,210,500)	(\$3,210,500)	(\$3,233,000)	(\$3,233,000)	(\$3,468,000)	(\$4,000,000)	(\$4,018,000)
Cumulative Receipts										
Year	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062
Projected Replacements		(\$405,000)	(\$32,000)	(\$332,000)	(\$190,000)	(\$90,000)	(\$160,000)	(\$55,000)		(\$45,000)
Annual Deposit										
End of Year Balance	(\$4,018,000)	(\$4,423,000)	(\$4,455,000)	(\$4,787,000)	(\$4,977,000)	(\$5,067,000)	(\$5,227,000)	(\$5,282,000)	(\$5,282,000)	(\$5,327,000)
Cumulative Expenditures	(\$4,018,000)	(\$4,423,000)	(\$4,455,000)	(\$4,787,000)	(\$4,977,000)	(\$5,067,000)	(\$5,227,000)	(\$5,282,000)	(\$5,282,000)	(\$5,327,000)
Cumulative Receipts										

EVALUATION OF CURRENT FUNDING

The evaluation of Current Funding (Starting Balance of \$0 & annual funding of \$0), 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 19 Projected Replacements identified in the Replacement Reserve Inventory and that the Association will continue Annual Funding of \$0 throughout the 40-year Study Period.

Annual Funding of \$0 is approximately percent of the \$290,000 recommended Annual Funding calculated by the Cash Flow Method for 2023, the Study Year.

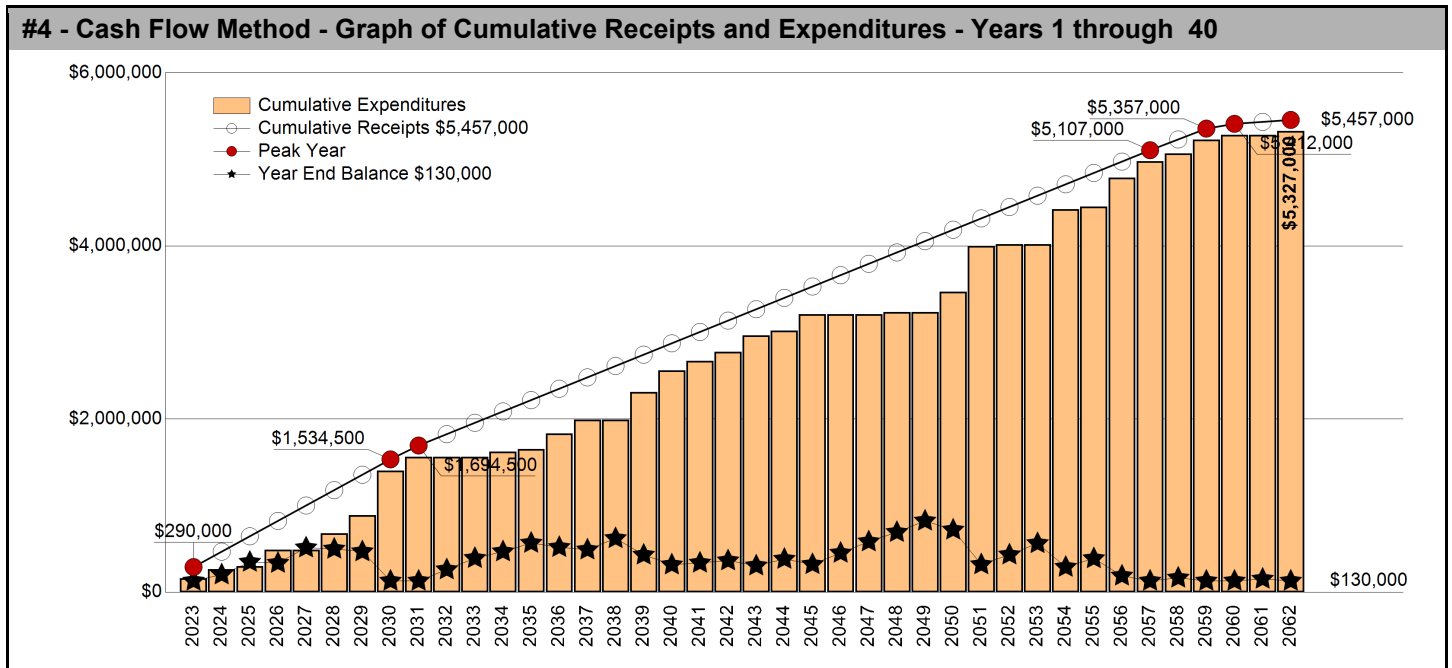
See the Executive Summary for the Current Funding Statement.

CASH FLOW METHOD FUNDING

\$290,000 RECOMMENDED REPLACEMENT RESERVE FUNDING FOR 2023

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 2023 with Replacement Reserves on Deposit dropping to the Minimum Balance after the completion of \$160,000 of replacements from 2023 to 2023. Recommended funding is projected to decline from \$290,000 in 2023 to \$177,786 in 2024. Peak Years are identified in Chart 4 and Table 5.
- Threshold (Minimum Balance).** The calculations assume a Minimum Balance of \$130,000 will always be held in reserve, which is calculated by rounding the 12-month 40-year average annual expenditure of \$133,175 as shown on Graph #2.
- Cash Flow Method Study Period.** Cash Flow Method calculates funding for \$5,327,000 of expenditures over the 40-year Study Period. It does not include funding for any projects beyond 2062 and in 2062, the end of year balance will always be the Minimum Balance.



Year	1st Peak - 2023	2024	2025	2026	2027	2028	2029	2nd Peak - 2030	3rd Peak - 2031	2032
Starting Balance										
Projected Replacements	(\$160,000)	(\$105,000)	(\$32,000)	(\$190,000)		(\$192,500)	(\$208,000)	(\$517,000)	(\$160,000)	
Annual Deposit	\$290,000	\$177,786	\$177,786	\$177,786	\$177,786	\$177,786	\$177,786	\$177,786	\$160,000	\$131,250
End of Year Balance	\$130,000	\$202,786	\$348,571	\$336,357	\$514,143	\$499,429	\$469,214	\$130,000	\$130,000	\$261,250
Cumulative Expenditures	(\$160,000)	(\$265,000)	(\$297,000)	(\$487,000)	(\$487,000)	(\$679,500)	(\$887,500)	(\$1,404,500)	(\$1,564,500)	(\$1,564,500)
Cumulative Receipts	\$290,000	\$467,786	\$645,571	\$823,357	\$1,001,143	\$1,178,929	\$1,356,714	\$1,534,500	\$1,694,500	\$1,825,750
Year	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
Projected Replacements		(\$55,000)	(\$32,000)	(\$180,000)	(\$160,000)		(\$322,000)	(\$245,000)	(\$110,000)	(\$105,000)
Annual Deposit	\$131,250	\$131,250	\$131,250	\$131,250	\$131,250	\$131,250	\$131,250	\$131,250	\$131,250	\$131,250
End of Year Balance	\$392,500	\$468,750	\$568,000	\$519,250	\$490,500	\$621,750	\$431,000	\$317,250	\$338,500	\$364,750
Cumulative Expenditures	(\$1,564,500)	(\$1,619,500)	(\$1,651,500)	(\$1,831,500)	(\$1,991,500)	(\$1,991,500)	(\$2,313,500)	(\$2,558,500)	(\$2,668,500)	(\$2,773,500)
Cumulative Receipts	\$1,957,000	\$2,088,250	\$2,219,500	\$2,350,750	\$2,482,000	\$2,613,250	\$2,744,500	\$2,875,750	\$3,007,000	\$3,138,250
Year	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052
Projected Replacements	(\$190,000)	(\$55,000)	(\$192,000)			(\$22,500)		(\$235,000)	(\$532,000)	(\$18,000)
Annual Deposit	\$131,250	\$131,250	\$131,250	\$131,250	\$131,250	\$131,250	\$131,250	\$131,250	\$131,250	\$131,250
End of Year Balance	\$306,000	\$382,250	\$321,500	\$452,750	\$584,000	\$692,750	\$824,000	\$720,250	\$319,500	\$432,750
Cumulative Expenditures	(\$2,963,500)	(\$3,018,500)	(\$3,210,500)	(\$3,210,500)	(\$3,210,500)	(\$3,233,000)	(\$3,233,000)	(\$3,468,000)	(\$4,000,000)	(\$4,018,000)
Cumulative Receipts	\$3,269,500	\$3,400,750	\$3,532,000	\$3,663,250	\$3,794,500	\$3,925,750	\$4,057,000	\$4,188,250	\$4,319,500	\$4,450,750
Year	2053	2054	2055	2056	4th Peak - 2057	2058	5th Peak - 2059	6th Peak - 2060	2061	7th Peak - 2062
Projected Replacements		(\$405,000)	(\$32,000)	(\$332,000)	(\$190,000)	(\$90,000)	(\$160,000)	(\$55,000)		(\$45,000)
Annual Deposit	\$131,250	\$131,250	\$131,250	\$131,250	\$131,250	\$125,000	\$125,000	\$55,000	\$22,500	\$22,500
End of Year Balance	\$564,000	\$290,250	\$389,500	\$188,750	\$130,000	\$165,000	\$130,000	\$130,000	\$152,500	\$130,000
Cumulative Expenditures	(\$4,018,000)	(\$4,423,000)	(\$4,455,000)	(\$4,787,000)	(\$4,977,000)	(\$5,067,000)	(\$5,227,000)	(\$5,282,000)	(\$5,282,000)	(\$5,327,000)
Cumulative Receipts	\$4,582,000	\$4,713,250	\$4,844,500	\$4,975,750	\$5,107,000	\$5,232,000	\$5,357,000	\$5,412,000	\$5,434,500	\$5,457,000

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.

\$290,000 2023 - CASH FLOW METHOD RECOMMENDED FUNDING

The 2023 Study Year calculations have been made using current replacement costs (see Page B6.2), modified by the Analyst for any project specific conditions.

\$188,453 2024 - INFLATION ADJUSTED FUNDING

A new analysis calculates the 2024 funding based on three assumptions:

- Replacement Reserves on Deposit totaling \$130,000 on January 1, 2024.
- All 2023 Projected Replacements listed on Page C6.2 accomplished at a cost to Replacement Reserves less than \$160,000.
- Construction Cost Inflation of 6.00 percent in 2023.

The \$188,453 inflation adjusted funding in 2024 is a 6.00 percent increase over the non-inflation adjusted funding of \$177,786.

\$199,760 2025 - INFLATION ADJUSTED FUNDING

A new analysis calculates the 2025 funding based on three assumptions:

- Replacement Reserves on Deposit totaling \$130,000 on January 1, 2025.
- All 2024 Projected Replacements listed on Page C6.2 accomplished at a cost to Replacement Reserves less than \$111,300.
- Construction Cost Inflation of 6.00 percent in 2024.

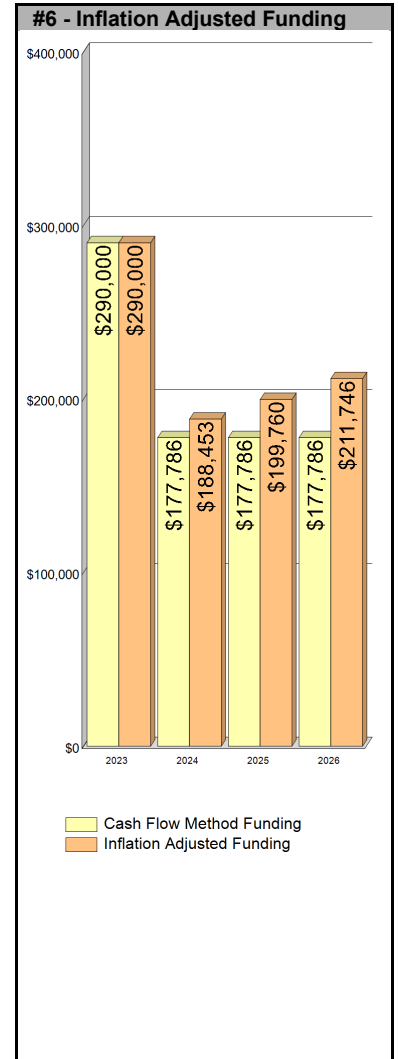
The \$199,760 inflation adjusted funding in 2025 is a 12.36 percent increase over the non-inflation adjusted funding of \$177,786.

\$211,746 2026 - INFLATION ADJUSTED FUNDING

A new analysis calculates the 2026 funding based on three assumptions:

- Replacement Reserves on Deposit totaling \$199,102 on January 1, 2026.
- All 2025 Projected Replacements listed on Page C6.2 accomplished at a cost to Replacement Reserves less than \$35,955.
- Construction Cost Inflation of 6.00 percent in 2025.

The \$211,746 inflation adjusted funding in 2026 is a 19.10 percent increase over the non-inflation adjusted funding of \$177,786.



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 2024, 2025 and 2026 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 2023, based on a 1.00 percent interest rate, we estimate the Association may earn \$650 on an average balance of \$65,000, \$1,300 on an average balance of \$130,000 in 2024, and \$1,646 on \$164,551 in 2025. The Association may elect to attribute 100 percent of the earned interest to Reserves, resulting in a reduction in the 2023 funding from \$290,000 to \$289,350 (a 0.22 percent reduction), \$188,453 to \$187,153 in 2024 (a 0.68 percent reduction), and \$199,760 to \$198,115 in 2025 (a 0.82 percent reduction).

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SECTION B - REPLACEMENT RESERVE INVENTORY

- **PROJECTED REPLACEMENTS.** Road Dept Vehicles - Replacement Reserve Inventory identifies 19 items which 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 \$2,701,500. Cumulative Replacements totaling \$5,327,000 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.

- **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:

Tax Code. The United States Tax Code grants very 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.

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 B6.2.

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 19 items included in the Road Dept Vehicles Replacement Reserve Inventory are divided into 1 major categories. Each category is printed on a separate page, beginning on page B6.3.
- **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 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 . 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 19 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 19 Projected Replacements specifically listed in the Replacement Reserve Inventory. The inclusion/exclusion of items from the Replacement Reserve Inventory is discussed on Page B6.1.

VEHICLES 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	#41 Mack Dump	ea	1	\$190,000.00	14	6	\$190,000	
2	#45 Mack Dump	ea	1	\$190,000.00	14	3	\$190,000	
3	#50 Sterling Dump	ea	1	\$160,000.00	14	none	\$160,000	
	#48 Sterling Dump						EXCLUDED	
4	#47 Kenworth Dump	ea	1	\$180,000.00	14	13	\$180,000	
	#46 Mack Dump						EXCLUDED	
5	#66 Kenworth Dump	ea	1	\$160,000.00	14	8	\$160,000	
	#42 Kenworth Dump						EXCLUDED	
6	#40 Ford 1 ton Dump (no plow)	ea	1	\$50,000.00	15	1	\$50,000	
7	2020 Ford crew cab	ea	1	\$55,000.00	10	7	\$55,000	
8	2011 Ford Pick-up w/plow	ea	1	\$55,000.00	10	1	\$55,000	
	#33 Ford crew cab pick-up						EXCLUDED	
9	#01 Honda Ridgeline	ea	1	\$32,000.00	10	2	\$32,000	
10	Freightliner/Gradall	ea	1	\$272,000.00	17	16	\$272,000	
11	Bomag Asphalt Roller	ea	1	\$372,000.00	21	7	\$372,000	
12	Komatsu Loader	ea	1	\$18,000.00	23	6	\$18,000	
	Gradall, backup						EXCLUDED	
13	New Holland Roadside Mower	ea	1	\$110,000.00	13	5	\$110,000	
14	New Holland skid steer	ea	1	\$90,000.00	28	7	\$90,000	
15	Komatsu mini excavator	ea	1	\$60,000.00	14	5	\$60,000	
16	Bandit Brush Chipper	ea	1	\$45,000.00	20	19	\$45,000	
Replacement Costs - Page Subtotal							\$2,039,000	

COMMENTS
<ul style="list-style-type: none"> Item #1: #41 Mack Dump - 02/13/2023 - revised cost based on comments received 01/06/23. Item #2: #45 Mack Dump - 02/13/2023 - revised cost based on comments received 01/06/23. #48 Sterling Dump - 02/06/2023 excluded as this is a back-up truck and will not be replaced. #46 Mack Dump - 02/13/2023 - excluded based on comments received 01/06/23. #42 Kenworth Dump - 02/06/2023 excluded as this is a back-up truck and will not be replaced. #33 Ford crew cab pick-up - 02/13/2023 - excluded based on comments received 01/06/23. Item #9: #01 Honda Ridgeline - 02/13/2023 - revised REL on comments received 01/06/23. Gradall, backup - 12/08/22 - is excluded per the comments provided.

VEHICLES					NEL- Normal Economic Life (yrs)		
PROJECTED REPLACEMENTS					REL- Remaining Economic Life (yrs)		
ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST (\$)	NEL	REL	REPLACEMENT COST (\$)
17	Welder #1	ea	1	\$7,500.00	20	5	\$7,500
18	Welder #2	ea	1	\$7,500.00	20	5	\$7,500
19	Air compressor	ea	1	\$7,500.00	20	5	\$7,500
Replacement Costs - Page Subtotal							\$22,500

COMMENTS

SECTION C - CALENDAR OF PROJECTED ANNUAL REPLACEMENTS

GENERAL STATEMENT. The 19 Projected Replacements in the Road Dept Vehicles 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 C6.2.

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 on our time and manpower resources. Therefore, Miller Dodson 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 replacements 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 Miller - Dodson 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 Miller - Dodson 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, 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	2023 - Study Year	\$	Item	2024 - YEAR 1	\$
3	#50 Sterling Dump	\$160,000	6	#40 Ford 1 ton Dump (no plow)	\$50,000
			8	2011 Ford Pick-up w/plow	\$55,000
Total Scheduled Replacements		\$160,000	Total Scheduled Replacements		\$105,000

Item	2025 - YEAR 2	\$	Item	2026 - YEAR 3	\$
9	#01 Honda Ridgeline	\$32,000	2	#45 Mack Dump	\$190,000
Total Scheduled Replacements		\$32,000	Total Scheduled Replacements		\$190,000

Item	2027 - YEAR 4	\$	Item	2028 - YEAR 5	\$
No Scheduled Replacements			13	New Holland Roadside Mower	\$110,000
			15	Komatsu mini excavator	\$60,000
			17	Welder #1	\$7,500
			18	Welder #2	\$7,500
			19	Air compressor	\$7,500
			Total Scheduled Replacements		\$192,500

Item	2029 - YEAR 6	\$	Item	2030 - YEAR 7	\$
1	#41 Mack Dump	\$190,000	7	2020 Ford crew cab	\$55,000
12	Komatsu Loader	\$18,000	11	Bomag Asphalt Roller	\$372,000
			14	New Holland skid steer	\$90,000
Total Scheduled Replacements		\$208,000	Total Scheduled Replacements		\$517,000

Item	2031 - YEAR 8	\$	Item	2032 - YEAR 9	\$
5	#66 Kenworth Dump	\$160,000	No Scheduled Replacements		
Total Scheduled Replacements		\$160,000			

PROJECTED REPLACEMENTS

Item	2033 - YEAR 10	\$	Item	2034 - YEAR 11	\$
			8	2011 Ford Pick-up w/plow	\$55,000
No Scheduled Replacements			Total Scheduled Replacements		
			\$55,000		

Item	2035 - YEAR 12	\$	Item	2036 - YEAR 13	\$
9	#01 Honda Ridgeline	\$32,000	4	#47 Kenworth Dump	\$180,000
Total Scheduled Replacements			Total Scheduled Replacements		
\$32,000			\$180,000		

Item	2037 - YEAR 14	\$	Item	2038 - YEAR 15	\$
3	#50 Sterling Dump	\$160,000			
Total Scheduled Replacements			No Scheduled Replacements		
\$160,000					

Item	2039 - YEAR 16	\$	Item	2040 - YEAR 17	\$
6	#40 Ford 1 ton Dump (no plow)	\$50,000	2	#45 Mack Dump	\$190,000
10	Freightliner/Gradall	\$272,000	7	2020 Ford crew cab	\$55,000
Total Scheduled Replacements			Total Scheduled Replacements		
\$322,000			\$245,000		

Item	2041 - YEAR 18	\$	Item	2042 - YEAR 19	\$
13	New Holland Roadside Mower	\$110,000	15	Komatsu mini excavator	\$60,000
			16	Bandit Brush Chipper	\$45,000
Total Scheduled Replacements			Total Scheduled Replacements		
\$110,000			\$105,000		

PROJECTED REPLACEMENTS

Item	2043 - YEAR 20	\$	Item	2044 - YEAR 21	\$
1	#41 Mack Dump	\$190,000	8	2011 Ford Pick-up w/plow	\$55,000
Total Scheduled Replacements		\$190,000	Total Scheduled Replacements		\$55,000

Item	2045 - YEAR 22	\$	Item	2046 - YEAR 23	\$
5	#66 Kenworth Dump	\$160,000			
9	#01 Honda Ridgeline	\$32,000			
Total Scheduled Replacements		\$192,000	No Scheduled Replacements		

Item	2047 - YEAR 24	\$	Item	2048 - YEAR 25	\$
No Scheduled Replacements			17	Welder #1	\$7,500
			18	Welder #2	\$7,500
			19	Air compressor	\$7,500
			Total Scheduled Replacements		\$22,500

Item	2049 - YEAR 26	\$	Item	2050 - YEAR 27	\$
No Scheduled Replacements			4	#47 Kenworth Dump	\$180,000
			7	2020 Ford crew cab	\$55,000
			Total Scheduled Replacements		\$235,000

Item	2051 - YEAR 28	\$	Item	2052 - YEAR 29	\$
3	#50 Sterling Dump	\$160,000	12	Komatsu Loader	\$18,000
11	Bomag Asphalt Roller	\$372,000			
Total Scheduled Replacements		\$532,000	Total Scheduled Replacements		\$18,000

PROJECTED REPLACEMENTS

Item	2053 - YEAR 30	\$	Item	2054 - YEAR 31	\$
			2	#45 Mack Dump	\$190,000
			6	#40 Ford 1 ton Dump (no plow)	\$50,000
			8	2011 Ford Pick-up w/plow	\$55,000
			13	New Holland Roadside Mower	\$110,000
No Scheduled Replacements			Total Scheduled Replacements		
			\$405,000		

Item	2055 - YEAR 32	\$	Item	2056 - YEAR 33	\$
9	#01 Honda Ridgeline	\$32,000	10	Freightliner/Gradall	\$272,000
			15	Komatsu mini excavator	\$60,000
Total Scheduled Replacements			Total Scheduled Replacements		
\$32,000			\$332,000		

Item	2057 - YEAR 34	\$	Item	2058 - YEAR 35	\$
1	#41 Mack Dump	\$190,000	14	New Holland skid steer	\$90,000
Total Scheduled Replacements			Total Scheduled Replacements		
\$190,000			\$90,000		

Item	2059 - YEAR 36	\$	Item	2060 - YEAR 37	\$
5	#66 Kenworth Dump	\$160,000	7	2020 Ford crew cab	\$55,000
Total Scheduled Replacements			Total Scheduled Replacements		
\$160,000			\$55,000		

Item	2061 - YEAR 38	\$	Item	2062 - YEAR 39	\$
No Scheduled Replacements			16	Bandit Brush Chipper	\$45,000
			Total Scheduled Replacements		
			\$45,000		

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SECTION D - CONDITION ASSESSMENT

General Comments. Miller+Dodson Associates conducted a Reserve Study at Road Dept Vehicles in January 1900. Road Dept Vehicles is in generally ???? condition for a township. A review of the Replacement Reserve Inventory will show that we are anticipating 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. Miller Dodson 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.

VEHICLES

Vehicles. The Township features various vehicles to support road department activities.





The vehicles were not evaluated as part of this study. Vehicles are included in the inventory as indicated by the Township. The vehicles are replaced on a rotating schedule.

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

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 town house 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, estimates 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, home owners 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 home 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 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 which 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 are 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 and the Component 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.

Component Method. The Component Method of calculating Reserve Funding needs is based upon an older mathematical model. Instead of calculating total funding based on yearly funding requirements, the Component method treats each component as its own "line item" budget that can only be used for that component. As a result, the Component Method is typically more conservative requiring greater Annual Reserve Funding levels.

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. It is important that the Reserve Analyst 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 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.

Annual Deposit if Reserves Were Fully Funded. Shown on the Summary Sheet A1 in the Component Method summary, this would be the amount of the Annual Deposit needed if the Reserves Currently on Deposit were equal to the Total Current Objective.

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

Component Analysis. See Component 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 and 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 as 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 CALonline.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 numbers 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 to 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				

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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/40SodajTW1q>

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



<https://youtu.be/pYSMZ013VjQ>

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?



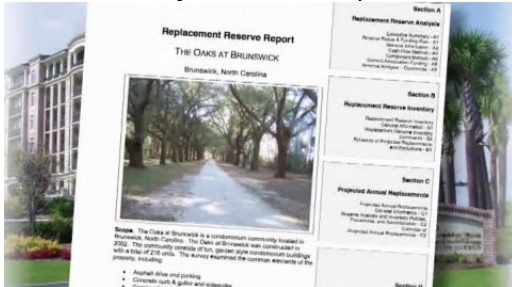
<https://youtu.be/aARD1B1Oa3o>

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



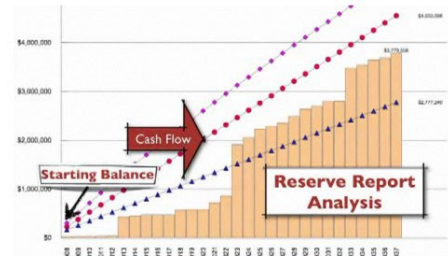
<https://youtu.be/diZfM1IyJYU>

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?



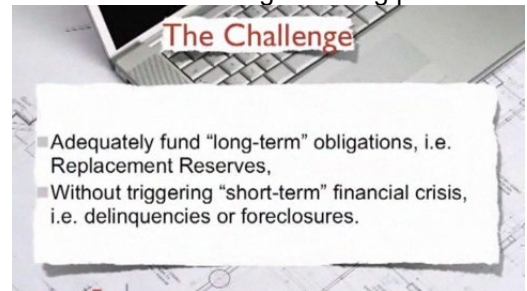
<https://youtu.be/SePdWVDvHWI>

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



<https://youtu.be/W8CDLwRlv68>

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



<https://youtu.be/hIxV9X1tlcA>