Reserve Study

for

MALVERN OF MADISON

Prepared by

The Malvern of Madison, Inc.

Reserve Study Committee

February 14, 2019

TABLE OF CONTENTS

INTRODUCTION

A reserve study should be considered a "dynamic" document. In other words, it's a document that must be periodically revisited to confirm or modify as necessary the information it contains.

One of the purposes of a reserve study is to predict remaining life expectancy and replacement costs for our improvements – the roof on the clubhouse for example. Life expectancy can be based on an average of life expectancies for similar roofs. But perhaps our roof is subject to environmental conditions not typically associated with the average roof. So maybe its remaining life will be shorter or longer than originally predicted.

The same is true for cost. Predictions can be made based on some combination of the previous replacement cost, nationally published costs, current material costs, etc. But no one really knows how much a replacement roof, for example, will cost until the job is actually bid out. Even then there might be some additional costs that couldn't be predicted until the shingles were removed.

Other factors include inflation and the price of oil. In the early 1980s inflation was above 10%. For individual years 2008 through 2018, it's annually averaged as high as 3.8% and as low as -0.4%. Using a factor too high could result in higher than necessary annual assessments for current residents. Using a factor too low could result in the need for future loans or special assessments.

Similarly, oil prices can have significant fluctuations depending on world events. Since we maintain our streets, oil price fluctuations can have a significant impact on predicted future costs associated with repaving our streets.

So, the "dynamic" nature of this study means that periodic reviews and updates are required to validate the information contained herein. These reviews and updates should occur no less than annually at minimum and perhaps more often as new information and conditions may warrant.

RESERVE STUDY COMMITTEE

During the October 21, 2017 Regular Membership Meeting, a reserve study committee was formed with the charge of researching and preparing an in-house reserve study. The committee was chaired by Ed Johnson. Board members on the committee were Fred Bourque, Rick Collins, T. J. Wright, and Rodney Taylor (ex officio). Contributors on the committee were Grover Dean, Don Nicholson, and Mike Owens.

Purpose of a Reserve Study

A reserve study is a helpful tool that can be used as a reference to determine adequate funding levels to meet current and future reserve component expenditures. The study has two parts: a *physical analysis* and a *financial analysis*.

The *physical analysis* includes a listing of the component inventory, a condition assessment of each component based on visual inspection, and the anticipated remaining useful life and projected repair and/or replacement costs of each item.

The *financial analysis* offers recommendations for current and future reserve contribution rates, which will guide members to a path on proper funding of their reserve account.

Requirement for a Reserve Study

In 2002, the following statute was passed requiring Homeowner Associations in the Commonwealth of Virginia to establish reserves for capital components:

> *§ 55-514.1. Reserves for capital components.*
>
> *A. Except to the extent otherwise provided in the declaration and unless the declaration imposes more stringent requirements, the board of directors shall:*
>
> *1. Conduct at least once every five years a study to determine the necessity and amount of reserves required to repair, replace and restore the capital components;*
>
> *2. Review the results of that study at least annually to determine if reserves are sufficient; and*
>
> *3. Make any adjustments the board of directors deems necessary to maintain reserves, as appropriate.*
>
> *B. To the extent that the reserve study conducted in accordance with this section indicates a need to budget for reserves, the association budget shall include, without limitation:*
>
> *1. The current estimated replacement cost, estimated remaining life and estimated useful life of the capital components;*
>
> *2. As of the beginning of the fiscal year for which the budget is prepared, the current amount of accumulated cash reserves set aside, to repair, replace or restore capital components and the amount of the expected contribution to the reserve fund for that year; and*
>
> *3. A general statement describing the procedures used for the estimation and accumulation of cash reserves pursuant to this section and the extent to which the association is funding its reserve obligations consistent with the study currently in effect.*

Description of Malvern of Madison

Malvern of Madison is a residential subdivision of single-family homes located in Madison County, Virginia containing a total of 234 privately owned lots.

The development was begun in the very early 1970s by a developer who envisioned a rustic recreational community complete with tree-lined private roadways, two lakes, a riding stable, 10 miles of riding trails, clubhouse and community center, two tennis courts, swimming pool, beaches, and boating center.

As sales of lots began the developer completed the clubhouse and community center, 1 of the 2 lakes, the swimming pool and stable. Unfortunately, though, after only a few years the developer was unable to attract enough buyers to sustain adding additional amenities and, in fact, subsequently relinquished his control of unsold lots to the bank that held the loans.

Suffice it to say that the early lot owners through a concerted effort, patience, negotiation, and hard work, turned Malvern into what it has become today. Starting in 1975 they negotiated agreements whereby many roads that were not yet begun would be cleared and graded, including construction of a permanent all-weather crossing over Dark Run.

Then, over the next 30 years, the residents managed completion of the roadway infrastructure until finally in 2006, the last roads in Malvern were paved. Along the way some of the originally envisioned amenities had to be abandoned due to lack of funds and interest. For example, the riding trails were not built because there was little interest for residents to have horses. The stable lot was sold to a private owner in 2000 to generate funds for road improvements. The tennis courts were not built. The second lake was never started. In 1991, the residents began paying a special assessment of $125 per lot for completion of the roadway system. This special assessment stayed through 2008. In 2010, the easement for the second lake and bridle trails were vacated.

Fortunately, what has survived through the many years since 1975 is the community spirit to volunteer time, services, and talents to minimize expenses for work that many other communities would otherwise elect to pay for through higher yearly assessments. These efforts have allowed Malvern to remain a self-managed homeowner association, with modest annual dues and user fees, since its beginnings.

Previous Reserve Planning

The Board of Directors focused on the Virginia statute starting in 2007. At this time Malvern had about $40,000 in cash and owed over $210,000 for repayment of road and dam loans.

The methodology was to list the various common components in Malvern. Then professional advice was sought to determine approximate costs for maintenance and repairs. It was also recognized that reserve funds must be established once our final loan was paid off in 2011.

All the information was then compiled into what was called the 5-year plan. This plan was presented to the membership on April 26, 2008 where the minutes state, “a 5-year plan is required by the State of VA to show that any HOA has a financial plan for future costs that will be sustained by membership dues, not by loans.”

On October 18, 2008, the 5-year plan was used to justify to the membership the need to raise regular dues from $300 to $525 per lot per year and to rescind a $125 special assessment that had been in place since 1992.

Since 2008, the 5-year plan has been reviewed and modified on a yearly basis prior to membership approval of the budget for the upcoming year.

In 2012, the Board formed and charged a Reserve Study Committee to prepare a formal Study on which to base assessments. The Study was completed and presented to the Board and membership in April 2013.

RESERVE FUNDING

Operational expenses and reserve funding are paid from annual regular dues assessed to each lot owner. In 2015, regular dues increased to $550 per lot per year. This amount multiplied by a total of 234 lots generates $128,700 per year. Other income sources increase total typical income to approximately $137,000 per year. This income is offset, however, by persistent economic difficulties experienced by some residents, which has resulted in non-payment of dues, resulting in lost revenue of approximately $2,900 per year. So, for the foreseeable future, it is felt prudent to expect total income to be $134,000.

This reserve study shows the need for periodic dues increases. Knowing this allows for what hopefully will be scheduled and modest increases without the requirement for special assessments.

In order to maintain an adequate reserve fund balance, this study proposes dues increases of $25 per lot beginning in 2020 and then every 4 years thereafter. One-half of each dues increase is to be allocated to increasing the annual deposit to the reserve fund.

RESERVE COMPONENTS IN MALVERN

A *reserve component* is a commonly owned item which requires a reserve balance for maintenance, repair and replacement. Malvern's *reserve components* are as follows:

1. Roads: approximately 8.5 miles including lake access off Ashlawn, plus clubhouse parking area, twin box culvert and approximately 50 iron or corrugated metal pipe culverts, roadside ditches, gravel shoulders, and guardrail
2. Lake including 2 docks, spillway and dam
3. Clubhouse
4. Pool
5. Playground equipment
6. Mailbox structure and mailbox clusters
7. Newspaper boxes
8. Entrance sign
9. Road signs and community signs
10. Common grounds

Roads: all roadways in Malvern have been paved since 2006. Many of the roadways were paved in 2000 others in 2004 and remaining roads in 2006. Pavement width varies between 12 feet on several side roads to a maximum of 20 feet on main roadways. Shoulder width is minimal along most roads as are ditches. There is no curb and gutter in the subdivision.

Roads were constructed without a design standard, so pavement, base and sub-base depths were known only through anecdotal memories of long-term residents. This changed in 2017 when an

engineering company was hired to evaluate our roads. They core sampled 60 locations, measuring both asphalt and gravel thickness. The full report can be found on the Malvern website.

Road maintenance since 2006 has taken several forms: patchwork, crack sealing or resurfacing.

Patchwork repairs generally cover only a small area where the pavement failure is evidenced by a pothole, fatigue crack (commonly referred to as alligator cracks) or rutting. Fixing these areas generally requires removing the old paving, applying a tack coat and then patching with 2 inches of asphalt.

Cracks that aren't too wide can be sealed with a hot pour crack filler material to prevent water penetration.

Resurfacing covers larger lengths of roadway and involves removing and then patching heavily damaged areas of failure, cutting out about a foot of pavement at both ends of the total length of repair so as to provide a smooth transition back to old pavement and finally, overlaying the total length of repair with 2 inches of asphalt, which when compacted (rolled) has a thickness of about 1 ½ inches. The width of resurfacing is, at minimum, half the full pavement width, or, ideally, the full pavement width. This type of repair is a better long-term solution compared with random patching, but at a higher cost.

Beginning in 2020 and then every 4 years thereafter, resurfacing will be implemented. Main roads will be targeted in the beginning with side roads being done in later years. Withdrawal of a portion of Malvern's reserve fund, along with current year operational road funds and, where possible, retained earnings will be combined to maximize the economy of scale of the resurfacing operation.

During interim years, annual operational road funds will be budgeted for patchwork, crack filling and, where possible, resurfacing, albeit to a much lesser extent.

Twin concrete box culverts: these are located where Dark Run flows under Covered Bridge Drive. The culverts were installed in 1981 at a cost of about $90,000. An engineering report prepared in 1977 shows the culverts to have been designed to pass the 25-year storm. This means larger storms could overtop the roadway surface and in fact was the case during the flash flood that hit Madison County in 1995. The culverts performed as expected and without damage. However, the roadway surface was affected such that repairs needed to be made once the storm had passed and contractors were again available. Fortunately, the quick-thinking reactions of a few residents allowed that limited access remained open until the subsequent repairs were scheduled and completed.

It is expected that the culverts have an estimated remaining life greater than 30 years and so this component is not included as requiring reserve funds.

Dating back at least to 1990, there has been a concern, particularly by members living south of the box culverts, that there is no contingency plan in place of alternate access should there be a catastrophic failure of the roadway over the culverts. Previous Boards have attempted to resolve this issue but without success. In October 2018, the membership directed the Board to research whether the State or County abandoned right-of-way across private property between Malvern's end of Aroda Road and the end of State highway maintenance for Sparks Lane, Route 726. This and other potential routes continue to be investigated by the current Board.

Culverts: there are about 50 other smaller culverts crossing under roadways throughout Malvern. This does not include driveway culverts which are a responsibility of the corresponding owner. Most culverts

are between 15- and 24-inch diameter or the equivalent elliptical pipe size. A 36-inch culvert on Liberty Lane was replaced in 2009 for a total cost of about $16,000. A smaller pipe was replaced on Sylvan Lane where it intersects with Malvern Drive in 2011.

These culverts should be periodically inspected but repair or replacement costs would typically fall into the annual road maintenance allotment.

Guardrail: located on both sides of Covered Bridge where it crosses over Dark Run. A small section that had been damaged in 2012 has been repaired. Approximately 140 lineal feet of guardrail was added to the east side of Covered Bridge as it approaches the Dark Run in an attempt to prevent cars from sliding into the woods when snow or ice is present. This additional guardrail was added in May 2012 at a cost of $5,000.

Lake: this is a private lake for Malvern residents and their guests only. Construction began in 1971 and was completed in 1972. Original design plans can't be found.

A major dam repair was performed in 2005 at a cost of approximately $160,000. Malvern secured funds for the repair with a loan from a local bank. This loan was paid off in 2011.

The dam was recertified by Virginia Department of Conservation and Recreation (DCR) as of September 30, 2011. The classification of the dam is a low hazard dam. A 6-year permit was issued at that time.

Malvern requested the permit be renewed in 2017. We were subsequently informed by DCR that approval required installation of a device to permit draining of the lake within a reasonable period of time. Research indicates a siphon as a practical device to retrofit an existing lake. The cost is expected to be about $30,000 plus engineering costs. Malvern requested an extension of the permit to budget, engineer, and install a siphon. DCR extended the permit until September 2020.

The expected lifespan of the dam is indefinite and reserve funds need not accumulate for this purpose. It is assumed the DCR classification of a low hazard dam will remain on subsequent recertifications. Should the dam classification change it will be necessary to allot funds to upgrade the dam and spillway to meet higher standards.

Lifespan is predicated on vigilant maintenance. Inspection of the embankment and spillway should occur no less than monthly. Spillway blockages and rodent damage should be addressed immediately. Trees and brush must not be allowed to grow in or near the embankment. The embankment should be mowed at least twice per year. Inspections need to confirm that leaks are not occurring. Inspections should occur prior to predicted storm events and immediate steps taken to remedy any blockage that could prevent free outflow of water through the spillway. Likewise, inspections should occur immediately after a large storm event or earthquake to evaluate whether damage has occurred.

Docks: the lake has 2 wooden docks. The northern dock is accessed via an easement off of Ashlawn Drive. The southern dock is accessed via the clubhouse property. Replacement of the wooden decking on the northern dock occurred in 2013 and ladders on both docks were installed then too. Replacement of the wooden decking on the south dock is tentatively scheduled to occur in 2019.

It appears from old pictures that the docks have been in place since 1972. No original design plans or specifications have been found. The dock structure is a wooden deck built on steel trusses, held by steel beams resting on steel piers driven into the lake bottom. The expected lifespan for steel pier pilings can

be as much as 85 years or more. The steel on the pipe appears to have a thickness of ¼ inch and is showing normal signs of corrosion and pitting at the splash line. This is where most corrosion is expected to take place. The pits don't appear to be even one-half through the wall. This level of corrosion wouldn't even be of concern if the metal was used in a high-load situation. The trusses underneath show corrosion, but only what is expected.

Replacement cost would be $50 or more per square foot. The north dock is approximately 885 square feet; the south dock is approximately 266 square feet. So, in 2018 dollars the replacement costs total $64,000 for both docks. It is currently unnecessary to set aside reserve funds for replacement as the estimated remaining life exceeds the 30-year timespan of this study.

Clubhouse: the clubhouse complex comprises the clubhouse proper and a utilities building (formerly the garage). The age of the two structures is unknown, but they are reported to have been built in the early 1950s. The clubhouse building contains two bedrooms that can sleep six, a living room capable of accommodating most membership meetings, a large dining area, a large eat-in kitchen, an office used for informal meetings and storage of corporate records, three restrooms, a deck off the main bedroom, and front and rear covered stone patios. The utilities building contains a large meeting room referred to as the Activity Center, a storage room, a spare room that is sometimes used for small meetings, and a restroom that can be accessed via an exterior door and that is accessible with a pool key.

The exterior of the clubhouse was changed to vinyl siding beginning in 2001 and completed in 2004. Materials were purchased in 2001 for about $5,600 (from minutes). The project began using volunteers in 2001 and was finally completed by a contractor in 2004 at an additional cost of about $6,500. The roof was also replaced in 2004 at a cost of $13,000. Gutters and downspouts were replaced in 2005 for a cost of $2,100. Windows on the main clubhouse building were replaced as funds allowed between 2002 and 2006. Sliding doors off the dining area and living room were replaced in 2011. Safety upgrades were performed on the electrical system by a contractor in 2017 at a cost of $14,000. At the same time, the clubhouse was refreshed with new laminate floors, new millwork, drywall repair/replacement, new powder room fixtures, and new paint. This work was performed by a different contractor, at a cost of $28,000. Some of the furnishings (e.g., draperies, bedspreads, artwork) were donated by club members.

It is expected the lifespan of the roof is 20 years and the siding is 30 years. The building structure is expected to have an indefinite lifespan.

Utility service is a comprehensive residential system, including the following components: a well located in the pool house with underground pipes to the Activity Center and clubhouse; underground electrical lines from the power pole to a main service panel located in the Activity Center; underground lines back to the pool house; electrical connections to subpanels in the clubhouse office; telephone service in the clubhouse limited to use for emergency purposes and other local calling; and a gravity septic system for sewage disposal. At one time there was a Comcast cable service to the clubhouse, but that service was discontinued in 2017 due to its high cost.

The well pump was replaced in 2011 after 23 years of service. The pump is at a depth of 340 feet and is rated at 7 gallons per minute. The well services both the clubhouse and the pool. During the summer months when the pool is open, clubhouse and pool water usage needs must be coordinated so that the clubhouse maintains adequate pressure. When the pool is being filled, there is no water for the clubhouse and pool restroom.

There have been approximately 60 rental days per year plus and an additional 20 days of community usage for meetings and functions. With the renovations completed in 2017, it is anticipated that clubhouse rentals will exceed historical usage, but probably not higher than 120 days per year. (We had 100 days in 2018.) The Pool Restroom accessed from the exterior of the Activity Center building is used daily during the summer months by members and their guests using the pool, and it is used year-round by members and their children and guests who use the playground. (A pool key is required to unlock the pool restroom.) These facts are mentioned to show where the sole source of waste water (toilets and sinks) is generated and that it is mostly limited in volume. There are no visual indications of septic field failure. It is anticipated the septic field piping and distribution system are expected to have an indefinite lifespan. The septic tank was last pumped in 2005.

The heating, air conditioning and ventilating system is all electric using a heat pump. The system was installed in 2010. The oil furnace that had been used for heating was removed, oil from the underground tank was removed, and the tank was abandoned in place. Ductwork in the attic was also replaced. The total cost was about $18,000. The lifespan of the new system is expected to be 18 years.

New 28-ounce carpeting with a felt pad was installed in the living and dining rooms 2012 for a cost of approximately $4,200. Those floors were replaced with new laminate flooring in 2017; the felt pad was reused.

Housekeeping is provided by a paid resident.

Pool: the pool is intended for use by community members in good standing and their invited guests. The pool is typically open from Memorial Day Weekend until a week or so after Labor Day. The pool is not rented for private parties. Pool usage is not a part of clubhouse rental.

Available records indicate the pool was built in 1971. This means it was installed as one of the planned amenities by a contractor for the original Developer. The pool is generally rectangular with dimensions of approximately 22 feet by 55.5. The perimeter is 143 feet. The pool depth varies from 3 feet to 8 feet. The approximate volume of the pool is 55,000 gallons.

The pool is surrounded by concrete decking. There are wooden steps leading to an upper open composite deck atop the pool house. The pool house was refurbished in 2017 by a contractor at a cost of $30,000. The work included installation of new decking over the existing concrete roof, a new staircase and steps to access the roof deck, refurbishing of the deck's wooden railing on the pool side, and modifications to the roof drainage. The pool house contains the well pump, as well as the pool pump, filter, and chlorinator. The room is also used as a storage area.

The perimeter of the pool is surrounded by an 8-foot-high chain link fence. Access is through a keyed gate. Club members who wish to use the pool may purchase a gate key. There is a second gate for maintenance access that is secured with a chain and padlock. Both gates are chained and padlocked during non-summer months.

Daily general maintenance, cleaning, and chlorination has typically been provided by a paid resident.

Tile work and replastering of the inside of the pool was performed in 2009 by Aqua-Clean Pool Service, Inc. Additional work at that time included replacing the anti-entrapment drains, replacing the 4 skimmers, refilling the pool and purchasing several pieces of furniture. This work was done for a cost of about $22,000. It is expected the resurfacing has a lifespan of 15 years.

A new pool cover was purchased in 2010 for about $3,000 from Payne Pools & Spas. The pool pump was replaced in June 2012. That pump was too small for the size of the pool and failed in 2017. It was replaced by Payne Pools at a cost of $2,500. The new pump is expected to last at least 10 years. These items are expenses from the operations budget.

Playground: the playground area is located near the pool and across the parking lot from the clubhouse. Old playground equipment was removed in 2012 and replaced with commercial grade equipment made by Miracle Recreation Equipment Company, model 718-S069, for a total installed cost of about $25,200. Lifespan for the new equipment is expected to be greater than 30 years with proper maintenance. The previous swing set and spring “chickens” were relocated in the playground area. Installation of the equipment was performed by members of the community. The playground area is mulched to the recommended depth of 9 inches on a periodic basis by club members. The cost for the mulch is included in the operations budget.

Mailbox structure and clusters: the mailbox clusters reside under a roofed wooden structure installed by volunteers for around $7,000 in 1999. Some of the metal mailbox clusters were purchased in 1991. The remaining clusters were purchased in 1999. The current understanding is that the mailbox clusters are owned and maintained by the Post Office. It is expected that the building can be maintained within the annual maintenance funds for buildings and grounds.

Newspaper boxes: these are located near the mailbox structure. There are currently 3 boxes which were built by a Malvern resident as needed. This same Malvern resident administers the boxes. These boxes can be maintained or replaced on an as-needed basis using the annual maintenance funds for buildings and grounds.

Entrance sign: this is the monument sign located at the entrance to Malvern. It consists of a wooden sign, between stone pillars in a raised dirt and pea gravel island that is held in place by concrete blocks that do not require mortar. The sign is illuminated by lights located in the island. The sign and its components can be maintained on an as-needed basis using the annual maintenance funds for buildings and grounds.

Road signs and interior community signs: Road signs consist of street signs, stop signs, speed limit signs, and keep right signs. The stop and speed limit signs were all replaced in 2008. There are a total of 24 stop signs measuring 30 inches by 30 inches and a total of 12 speed limit signs measuring 24 inches by 30 inches. Each sign is held in place using 4 by 4-inch pressure treated wooden posts. The total cost for signs, hardware, posts and concrete was approximately $1,900. There are 2 keep right signs purchased in 2010 for a total installed cost of approximately $150. Installation of the stop, speed and keep right signs was performed by volunteers.

The signs should give many years of service. Eventually the signs will need to be replaced when the luminosity has degraded to a point where the signs are difficult to see at night. Additionally, the posts may need to be replaced and unfortunately vandalism would be another cause for replacement.

Other signs include a no trespassing sign at the entrance, signs displaying pool and lake rules, no trespassing signs, and no dumping signs.

Annual operational budgets are sufficient to replace signs as needed.

Common grounds: the clubhouse in located on a 6.7 acre parcel. There is a median along a portion of Malvern Drive. Most of the median is privately owned by adjacent owners. However, the median is treated as common area for maintenance. There is a 0.697 acre parcel along the east side of Covered Bridge near Dark Run which is mowed during the summer months. There is an unmaintained 0.346 acre parcel at the end of Carriage Lane. These areas will mostly involve mowing and landscaping in selected areas, which funds will be budgeted periodically from annual operations.

INFLATION RATE:

From 2008 through 2018, the cumulative rate of inflation was 16.6%. This information is from the website, https://www.usinflationcalculator.com/. This reserve study used an annual inflation rate of 2.5%

It will be important that periodic reviews of the reserve study address inflation since it can have such a significant impact on future costs.

ASSUMPTIONS:

Estimating useful life and remaining useful life of any component is a guess. Consulting with contractors and other specialists could result in better estimates.

A component could fail sooner or later than the time it is scheduled to be repaired or replaced. A component failing sooner could burden the reserve fund balance.

The twin box culverts at Dark Run, the Dam and the clubhouse structure are predicted to have an indefinite lifespan with proper maintenance. Should any of these components fail there will be no funds set aside for their repair or replacement.

An operational budget threshold of $5,000 exists, meaning components costing less than $5,000 will be paid from annual operation funds and not from reserve funds.

EXPLANATION OF TABLES:

Table 1 shows future replacement cost based on the predicted inflation factor applied to the current replacement cost and the estimated remaining life of the corresponding component subtotal. Note in table 2 that pool is listed twice. This is because the pool will need to be addressed 2 times over the next 30 years.

Table 2 shows the impact that the annual contributions and expenditures will have on the total amount remaining in the reserve fund. The goal of table 2 is to not allow the reserve fund total to approach 0 or go into the negative.

Table 1 – Component and Maintenance Summary

Inflation factor	2.50%			
Component	**Useful life**	**Remaining life**	**Current $**	**Future $**
Pool (from 2009)	15	6	$29,000	$33,600
Pool (from 2009)	30	21	$29,000	$48,700
HVAC (from 2011)	18	11	$23,200	$30,400
Roof (from 2004)	20	6	$17,400	$20,200
Siding (from 2004)	30	16	$17,400	$25,800

Road Resurfacing

Year	Funds	# SY	$/SY	Total Cost	Roads Addressed
2020	$265,000	18,156	$14.00	$254,184	Malvern Drive, Covered Bridge to Liberty
2024	$185,000	13,212	$15.45	$204,125	Ashlawn, Covered Bridge - Liberty to end
2028	$185,000	9,999	$17.05	$170,483	Old Forge, Liberty, Clubhouse parking
2032	$185,000	9,830	$18.82		To be determined
2036	$185,000	8,900	$20.78		To be determined
2040	$185,000	8,060	$22.94		To be determined
2044	$185,000	7,306	$25.32		To be determined
2048	$185,000	6,621	$27.94		To be determined

Table 2 – 30-year Reserve Fund Summary

Year	Year #	Annual Contribution	Annual Expenditures	Reserve Fund Balance	Task
				$222,400	**Beginning balance**
2019	1	$32,520		$254,920	
2020	2	$35,450	($145,000)	$145,370	Roads
2021	3	$35,450		$180,820	
2022	4	$35,450		$216,270	
2023	5	$35,450		$251,720	
2024	6	$38,375	($178,800)	$111,295	Roads, replastering, clubhouse roof
2025	7	$38,375		$149,670	
2026	8	$38,375		$188,045	
2027	9	$38,375		$226,420	
2028	10	$41,300	($125,000)	$142,720	Roads
2029	11	$41,300	($30,400)	$153,620	Clubhouse HVAC
2030	12	$41,300		$194,920	
2031	13	$41,300		$236,220	
2032	14	$44,225	($125,000)	$155,445	Roads
2033	15	$44,225		$199,670	
2034	16	$44,225	($25,800)	$218,095	Clubhouse siding
2035	17	$44,225		$262,320	
2036	18	$47,150	($125,000)	$184,470	Roads
2037	19	$47,150		$231,620	
2038	20	$47,150		$278,770	
2039	21	$47,150	($48,700)	$277,220	Replastering
2040	22	$50,075	($125,000)	$202,295	Roads
2041	23	$50,075		$252,370	
2042	24	$50,075		$302,445	
2043	25	$50,075		$352,520	
2044	26	$53,000	($125,000)	$280,520	Roads
2045	27	$53,000		$333,520	
2046	28	$53,000		$386,520	
2047	29	$53,000		$439,520	
2048	30	$55,925	($125,000)	$370,445	Roads