



RESERVE DATA ANALYST

The Knolls

Star Valley, AZ

Level I Full Reserve Study (With Site-Visit)

Fiscal Year: 2022

Report#: 16940

Report Date: January 10, 2022

Version: Draft3

Reserve Data Analyst, Inc.

www.reservedataanalyst.com

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The Knolls Introduction

Thank you for utilizing the services of Reserve Data Analyst for your reserve study. We strive to create a comprehensive report that can be utilized for your budgeting needs. If there are any questions, concerns, corrections, or revisions needed please do not hesitate to call or email us. While this study does have some explanations of the methodology used, we have kept it to a minimum for brevity. More detailed explanations of methodology & concepts are explained in our Reserve Study Guidebook available at the following link:



www.reservedataanalyst.com/guidebook

The recommendations for the allocation rates of the different funding models are only for the beginning year of this reserve study; all future years are projections which are educated guesses and have numerous assumptions (e.g., inflation, proper maintenance, proper installation, known reserve account balances, etc.) built into the models. The further out in time a reader of the study goes, the less reliable the projections are likely to be. Note that therefore the recommendations for the first fiscal year in the study are based on current cost and current useful life estimates levels as opposed to future cost and future useful life projections.

From year to year the recommendations of the reserve analyst will typically change (sometimes significantly) based on variables such as what projects have been done, what projects has been deferred, changes to the allocation rate, changes to the starting balance, changes to the component list, actual inflation rate figure (versus projections), maintenance or lack of maintenance of components, etc. Annual updates to the study help to incorporate change to these variables as they occur so changes to the recommendations are less significant than if updates are done infrequently.

There are a couple of tips to consider that will help you both navigate this study and understand the different sections within the study:

- ❏ **Study Navigation** - To navigate this study more easily, we recommend printing out the Table of Contents page at the beginning of the study and the Component Index pages at the rear of the study. We have found it easiest for most readers to have the PDF of this study open on their computer while referring to the printed-out Table of Contents and Component Index pages.

Within this reserve study you will find:

- ❏ A list of common questions that a typical reader of our reserve study will have, as well as links to additional information on the topics: (*Reserve Study Knowledge Base*)
- ❏ A list of the site and building components that are reportedly the Client's responsibility along with their respective costs and quantity: (*The Component List*)
- ❏ A timeline of the estimated dates that we recommend funds be allocated to the repair/replacement project. (*Projected Expenditures Report*)
- ❏ Various funding models with different goals in mind. (*Summary and Projections for each Funding Model*)

The Knolls Executive Summary

Name	The Knolls
Location	Star Valley, AZ
Contributing Members	83
Base Year / Age	January 1, 1993
Fiscal Year Ends	December 31, 2022

Level of Service	Level I Full Reserve Study (With Site-Visit)
Prepared for Fiscal Year	2022
Last On-Site Inspection Date	January 10, 2022
Inflation Rate for Projections	3.00%
*Interest Rate for Projections	0.50%
*Tax Rate on Interest Earned	30.0%
Funding Plan Method	Inflation Adjusted Pooled Cash Flow Method

Reserve Account Summary

Current Percent Funded <small>(as of January 1, 2022)</small> <div style="font-size: 2em; font-weight: bold; text-align: center;">3.1%</div> <div style="display: flex; justify-content: space-around; font-size: 0.8em; margin-top: 5px;"> 0-30% Low 30-70% Fair 70-100% Good </div>	Fiscal Year Beginning Fully Funded Balance	\$174,929
	*Estimated FY Start Balance	\$5,437
	Total Reserve Account Surplus or (Deficit)	(\$169,492)
	Avg. Surplus or (Deficit) Per Contributing Member	(\$2,042)
	*Current Annual Reserve Allocation Rate	\$8,330 per year
	*Approved Special Assessments	None in fiscal year 2022.
	*Approved Loans	None in fiscal year 2022.

5-Year Summary - Annual Reserve Allocation Rates & Year End % Funded

	100% Funding Model		Recommended Funding Model		Baseline Funding Model		**Current Funding Model		
2022	\$193,091	100%	\$27,350	3%	\$21,224	0%	\$8,330	-8%	2022
2023	\$24,862	100%	\$28,170	15%	\$21,861	9%	\$8,580	-5%	2023
2024	\$25,608	100%	\$29,016	23%	\$22,517	13%	\$8,837	-6%	2024
2025	\$26,376	100%	\$29,886	28%	\$23,192	16%	\$9,102	-9%	2025
2026	\$27,168	100%	\$30,783	36%	\$23,888	22%	\$9,375	-7%	2026
		<i>Account is at least 100% funded each year.</i>		<i>Achieve 100% funded within the timeframe of this study.</i>		<i>Reserve account above \$0 within timeframe of study.</i>		<i>Current allocation rate has been supplied by the Client.</i>	

* Data supplied by the Client, assumed to be correct and not independently verified.

**Any negative percent funded shown is for visual representation of deficiency.

The Knolls

Reserve Study Knowledge Base

What is a Reserve Study?

A reserve study is a budgeting tool that can be utilized to make more informed budgeting decisions regarding a reserve account, it is an independent assessment of the adequacy of the reserve account balance and allocation rate utilizing a mathematical formula known as the “Percent Funded” calculation.

The Reserve Analyst develops funding models that:

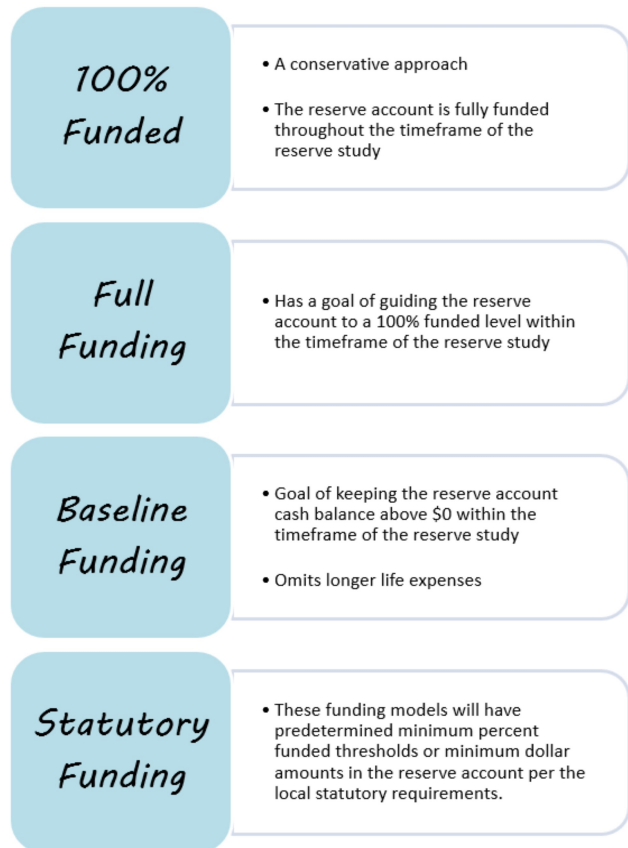
- Distribute the costs as fairly as possible over time
- Have stable budgets over time (i.e., limiting large fluctuations from one year to the next)
- Limit the risk for reliance on emergency financing or having to defer overdue projects

A Reserve Study is an independent assessment of the reserve account and is not the Budget

The reserve study is not the budget, and it should not be revised to just reflect the budgeting decisions of the Client. An example of this is to push off overdue projects that the Client may not have the funds to complete. The reserve study should reflect the replacement dates of the components utilizing average useful lives and average costs for these projects; the useful lives can be updated to reflect actual on-site conditions as the components age. Should the Client decide to defer projects that appear to be overdue this is simply a budgeting decision that carries its own risk.

How Much Should We Reserve?

There is no right or wrong answer to the question of “How Much Should We Reserve?” as the reserve contributions in all the funding models in this study are based on different funding goals. It is more appropriate to consider the risk levels associated with different funding models as each Client has different risk tolerances and challenges in enacting whatever funding model is most appropriate to them. In our opinion any funding model that projects the reserve account balance to dip to zero would not be appropriate or fiscally responsible as future emergency financing or deferring projects are typically the outcome. Below are some of the more common funding models utilized:



The Knolls Reserve Study Knowledge Base

About Percent Funded

Percent funded is a calculation of how much is in the reserve account versus an ideal amount known as the Fully Funded Balance. The different risk levels associated with the levels of funding are explained in more depth below.



The below video link explains the Percent Funded calculation in more detail:

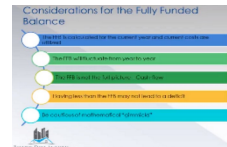


www.reservedataanalyst.com/pf

About the Fully Funded Balance

The Fully Funded balance is a mathematical calculation that represents the accrued deterioration of a component or a group of components at a specific point in time. It is an answer to the question of "How much should be in a reserve account at a specific point in time?" When the reserve account balance is the same as the Fully Funded Balance the reserve account is considered Fully Funded (100% Funded) at that specific point in time.

The below video link provides a more in-depth explanation of the Fully Funded balance:



www.reservedataanalyst.com/ffb

Calculating Inflation in the Reserve Study

Inflationary factors impact the project costs over time and are the main driving force that must be overcome with diligent and steadfast budgeting towards reserves. Due to the compounding impact of inflation on costs, in a relatively short period of time, a reserve account can become severely underfunded if it is not considered in the budgeting scenarios. Follow the below link to learn more about how we calculate inflationary factors (escalation of the prices) in the reserve study and some of the tools we use in the process:



www.reservedataanalyst.com/inf

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Reserve Study Knowledge Base

Component Useful Life Estimates

The useful life of components in the reserve study are predominantly based on our experiences with many different types of organizations and their respective repair and replacement cycles with building and site components. In addition to our own experiences working with many organizations over the years there is ample data available online regarding useful life estimates of building and site components. It is important to note that the estimates in the reserve study are based on averages and are not specific to any one property. Follow the below link to view some of the various useful life tables that we utilize:



www.reservedataanalyst.com/ul

Determining Component Project Costs

We utilize many sources for determining what is an appropriate component project cost in the reserve study. These can include:

- Client invoices, bids, estimates
- Our in-house database that is based on the collection of many Client invoices, bids, and estimates
- Cost manuals that, when used correctly, are very accurate for average cost figures

It's important to understand that unless we are provided actual project costs based on a client invoice/bid or estimate we utilize average costs figures that are not specific to any one Client. In the bidding process you will find that there is a ...

... large difference in price from one vendor to the next for a variety of reasons. We aim to be in the middle of these estimates unless we have Client data to incorporate into the reserve study. Future costs (projections) for the component expenses are simply inflated from current cost based on the inflation assumption in the reserve study. It is important to remember that our current recommendations are based on current project costs and not the inflated number that is utilized in the projections portion of the reserve study. The below link goes into this topic in more detail:



www.reservedataanalyst.com/cost

National Reserve Study Standards

There are two recognized organizations that dictate national reserve study standards in the industry. The Community Association's Institute and the Association of Professional Reserve Analysts award designations to those reserve study professionals that meet education & work experience, adhere to the minimum report requirements, complete ongoing continuing education courses, and abide by ethical considerations in the field. The standards for both organizations can be viewed at the links below:



www.reservedataanalyst.com/CAI



www.reservedataanalyst.com/APRA

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Reserve Study Knowledge Base

What Components to Include in the Study?

Reserve expenses for components are major expenses which must be budgeted for in advance to provide the necessary funds in time for their occurrence. Reserve expenses are reasonably predictable both in terms of frequency and cost. They are expenses that when incurred would have a significant impact on the smooth operation of the budgetary process from one year to the next if they were not reserved for in advance.

A common concern when beginning this process is what components are to be included and funded for in the Reserve Study. Nationally recognized CAI Reserve Study Standards as well as APRA Standards of Practice dictate that the reserve components need to meet the following criteria:

- It's not already covered in the Operating Budget
- The component has a limited life expectancy
- The component has a reasonably defined remaining useful life
- As required by local statutes

When to Complete Reserve Projects?

Components should be replaced when they are no longer functioning as designed. This is best determined by your component specific Vendor who can inspect and give their best professional advice on the condition assessment and timeframe on when/what needs to be done. Note that this reserve study is ***not*** a "to do list"; it is a budgeting document with recommendations for when we suggest having the funds allocated towards the projects ...

... If something fails earlier than projected than replace it, if it lasts longer (as determined by your component specific Vendor) then take their advice as they are the professionals in their specific field. Projects should be completed when they need to be completed regardless of our projections in the study. Note that this does not mean it would be appropriate to delay projects simply because funds are not available though as that is a budgeting decision not based on component specific Vendor recommendations. A common issue we see is the delay of projects simply because there is a lack of reserve funds available, only to have a much larger and more expensive project later due to collateral damage (e.g. not replacing a roof in a timely manner, which then leaks and causes siding damage).

Ongoing Component Maintenance

While this reserve study has been developed to disclose and inform the Client of the predictable larger long-term project costs related to site and building components, there is also a need to complete regular inspections and repairs to virtually all components on much shorter cycles. These costs would typically be covered in the annual and ongoing Operating Budget.

Virtually all the components should receive regular cycles of inspection and repairs by a qualified Vendor. Failure to complete ongoing maintenance typically leads to shorter useful lives and higher costs later. RSMeans provides a free link to common building and site component items to inspect at various corresponding time frames.



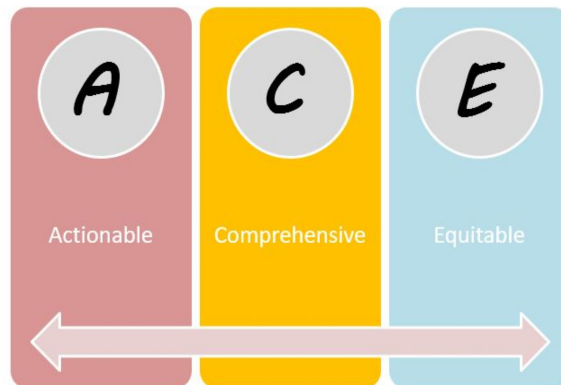
www.reservedataanalyst.com/RSmeans

The Knolls

Reserve Study Knowledge Base

You Have a Reserve Study Now What?... Goal Setting

Adequately budgeting for reserves is often one of the more difficult tasks our clients face. Reserve component projects are infrequent and often years down the line, making it very easy to just “deal with it later”. We have found those that are most successful with reserve budgeting goals typically follow some simple rules.



1. Actionable

Is your goal possible within the constraints & limitations of very important but often overlooked factors related to statutory requirements and the governing documents? What may seem very “Reasonable” to the Board may very well be illegal or against the governing documents.

2. Comprehensive

Your goal should be clear and specific, otherwise you won't be able to focus your efforts or feel truly motivated to achieve it. When drafting your goal, try to answer the four "W" questions - What do we want to accomplish? Why is this goal important? Who is involved? When is this goal set to occur?

3. Equitable

Your goal should be reasonable and attainable to be successful. In other words, it should stretch your abilities but remain possible. When you set an achievable goal, you may be able to identify previously overlooked opportunities or resources that can bring you closer to it. This often means that transitioning to a more stable financial track will take years of smaller goals being obtained. Severely underfunded reserve accounts typically develop after many years or decades; it's usually not reasonable for the answers to come quick or easily.



Beware setting reserve budgeting goals that someone else has the ultimate control over (e.g., future Boards). For example, “We’ll plan to start raising the reserve allocation rate in 3 years”. This simply puts the responsibility on someone else and is just another way to “deal with it later”. A future Board may have other ideas entirely or could be dealing with an economic downturn during which times raising the allocation rate is extremely difficult.

The Knolls Plat Map



The Knolls Reserve Analyst Comments

Comments on Fully Funded Balance Calculations (Fully Funded Balance Calculation Page)

The Fully Funded balance calculations for each component (age & useful life) have been adjusted if a component has been superseded by another component, received a positive or negative life adjustment, or been phased over a period. These adjustments are needed so that the fully funded balance mathematical calculation for each component is accurate and appropriately contributes to the total fully balance calculation (located on the executive summary & projection pages) for all components in this reserve study.

Excluded Components

Unless noted otherwise the below components have been excluded from funding in this reserve study. Note that the inclusion of any of these items later via a revision or update to this study will impact the funding strategies developed by the Reserve Analyst.

Not Client's Responsibility

The below components are reportedly not the Client's responsibility per their interpretation of their governing documents. Note that the Reserve Analyst does not interpret governing documents and have excluded items based on the Client's request and their interpretation of their own governing documents. If there is ambiguity or questions as to what specific wording means in the governing documents, we recommend consulting with a qualified and experienced attorney.

1. Utility Main Lines - City
2. Utility Lateral Lines - City
3. Fire Hydrants - City
4. House Number Signage - Lot Owner's Responsibility
5. Culverts at Private Driveways - Lot Owner's Responsibility
6. Emergency Access Road - County
7. Emergency Access Road Gates - County

Operating Account Expenses

The below components are reportedly paid from the Operating Account and have not been included in this reserve study.

1. Asphalt Crack Sealing - Complete annually as needed.
2. Drip Irrigation at Entry Sign/Monument (minimal square footage)
3. Landscaping at Entry Signage/Monument (minimal square footage)

**The Knolls
The Component List**

Report Date January 10, 2022
 Beginning Fiscal Year January 01, 2022
 Account Number 16940

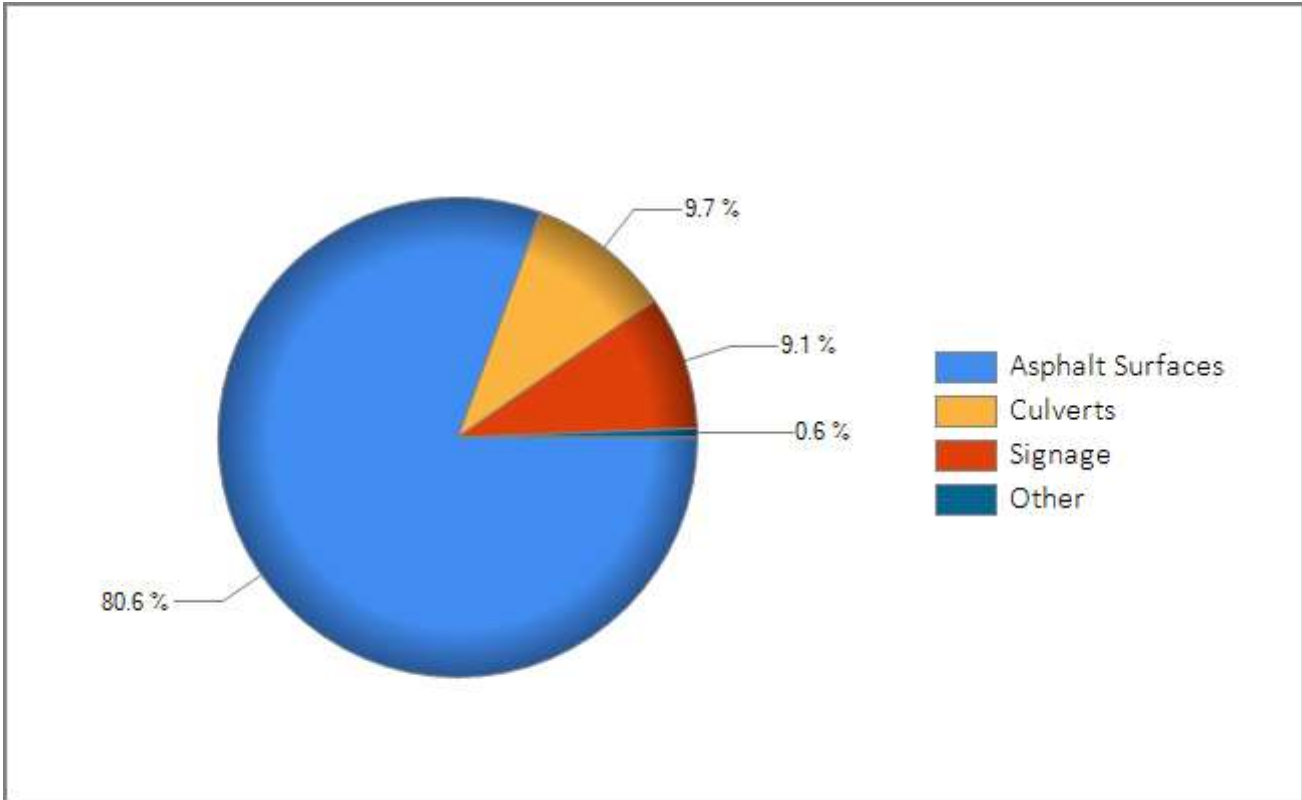
Version Number Draft3

ID	Description	Aprox. Year In Service	Replacement Year	Useful Life	Adjustment	Remaining Life	Units	Unit Cost & % Replace	Current Cost
1027	Asphalt (Tract D) - Seal Coat & Repairs	2018	2027	10	-3	5	7,902 sf	0.40	3,161
1025	Asphalt (Tract E/all areas) - Seal Coa...	2018	2030	10	2	8	9,024 sf	0.40	3,610
1046	Asphalt (Tract F) - Seal Coat & Repairs	2018	2024	5	1	2	5,310 sf	0.40	2,124
1030	Asphalt (Tract G) - Seal Coat & Repairs	2018	2023	5	0	1	11,169 sf	0.40	4,468
1033	Asphalt (Tract H) - Seal Coat & Repairs	2018	2024	5	1	2	6,732 sf	0.40	2,693
1047	Asphalt (Tract I) - Seal Coat & Repairs	2018	2024	5	1	2	4,864 sf	0.40	1,946
1028	Asphalt (Tract M) - Seal Coat & Repa...	2018	2026	5	3	4	7,776 sf	0.40	3,110
1045	Asphalt (Tract N) - Seal Coat & Repairs	2018	2024	5	1	2	6,528 sf	0.40	2,611
1029	Asphalt (Tract O) - Seal Coat & Repairs	2018	2026	5	3	4	6,222 sf	0.40	2,489
1031	Asphalt (Tract P) - Seal Coat & Repairs	2018	2022	5	-3	0	12,107 sf	0.40	4,843
1048	Asphalt (Tract S) - Seal Coat & Repairs	2018	2024	5	1	2	3,792 sf	0.40	1,517
1036	Asphalt (Tract T) - Seal Coat & Repairs	2018	2022	5	-3	0	7,157 sf	0.40	2,863
1001	Asphalt (Tract D) - Overlay & Seal Coat	2002	2022	20	0	0	7,902 sf	2.50	19,755
1008	Asphalt (Tract E/2005) - Overlay & Se...	2005	2025	20	0	3	5,808 sf	2.50	14,520
1037	Asphalt (Tract E/2014) - Overlay & Se...	2014	2035	20	1	13	3,216 sf	2.50	8,040
1039	Asphalt (Tract F) - Overlay & Seal Coat	2014	2034	20	0	12	5,310 sf	2.50	13,275
1015	Asphalt (Tract G) - Overlay & Seal Coat	2018	2038	20	0	16	11,169 sf	2.50	27,923
1010	Asphalt (Tract H) - Overlay & Seal Coat	2009	2029	20	0	7	6,732 sf	2.50	16,830
1016	Asphalt (Tract H/2002) - Overlay & S...	2022	2042	20	0	20	3,485 sf	2.50	8,713
1032	Asphalt (Tract H/2022) - Seal Coat & ...	2022	2027	5	0	5	3,485 sf	0.40	1,394
1049	Asphalt (Tract I) - Overlay & Seal Coat	2009	2029	20	0	7	4,864 sf	2.50	12,160
1011	Asphalt (Tract M) - Overlay & Seal Coat	2011	2031	20	0	9	7,776 sf	2.50	19,440
1040	Asphalt (Tract N) - Overlay & Seal Coat	2014	2034	20	0	12	6,528 sf	2.50	16,320
1014	Asphalt (Tract O) - Overlay & Seal Coat	2016	2036	20	0	14	6,222 sf	2.50	15,555
1034	Asphalt (Tract P) - Overlay & Seal Coat	2012	2032	20	0	10	12,107 sf	2.50	30,268
1050	Asphalt (Tract S) - Overlay & Seal Coat	2009	2029	20	0	7	3,792 sf	2.50	9,480
1035	Asphalt (Tract T) - Overlay & Seal Coat	2012	2032	20	0	10	7,157 sf	2.50	17,893
1007	Concrete Surfaces (mailboxes) - Repl...	1993	2033	40	0	11	90 sf	15.25	1,373
1004	Culverts (Tract D) - Replace	2002	2042	40	0	20	36 lf	60.00	2,160
1018	Culverts (Tract F) - Replace	2018	2058	40	0	36	50 lf	60.00	3,000
1021	Culverts (Tract I) - Replace	2009	2049	40	0	27	41 lf	60.00	2,460
1024	Culverts (Tract M) - Replace	2014	2054	40	0	32	41 lf	60.00	2,460
1023	Culverts (Tract N) - Replace	2016	2056	40	0	34	41 lf	60.00	2,460
1022	Culverts (Tract O) - Replace	2009	2049	40	0	27	41 lf	60.00	2,460
1017	Culverts (Tract P) - Replace	2012	2052	40	0	30	188 lf	70.00	13,160
1019	Culverts (Tract S) - Replace	2009	2049	40	0	27	41 lf	60.00	2,460
1020	Culverts (Tract T) - Replace	2012	2052	40	0	30	27 lf	60.00	1,620
1005	Lights (landscape) - Replace	2013	2033	20	0	11	4 ea	150.00	600
1006	Signage (entry monument) - Replace	1993	2028	35	0	6	2 ea	15,000.00	30,000

Total Asset Summary:

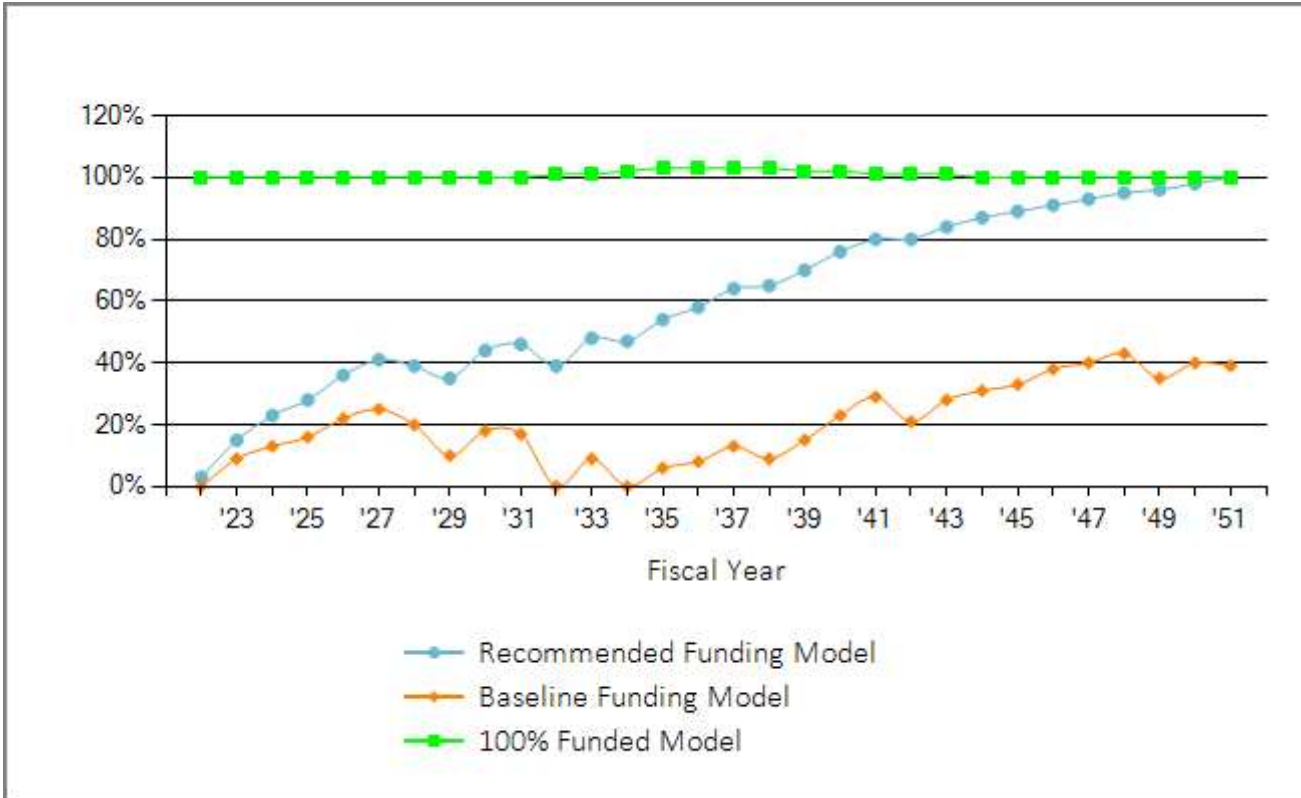
\$331,210

**The Knolls
Current Cost by Category Chart**



The above chart illustrates the current cost breakdown percentage of the Component Categories in this reserve study (highest percentage components listed at top). Special attention should be given to those component categories which take up a bulk of the % of the current cost as these may require significant planning to adequately budget for their replacement. These large expenses may be well into the future during "Peak Year" cycles. Refer to the Cash Flow Projections and the Annual Expenditure Report for the projected timeline of expected expenditures.

The Knolls Projected Percent Funded Chart



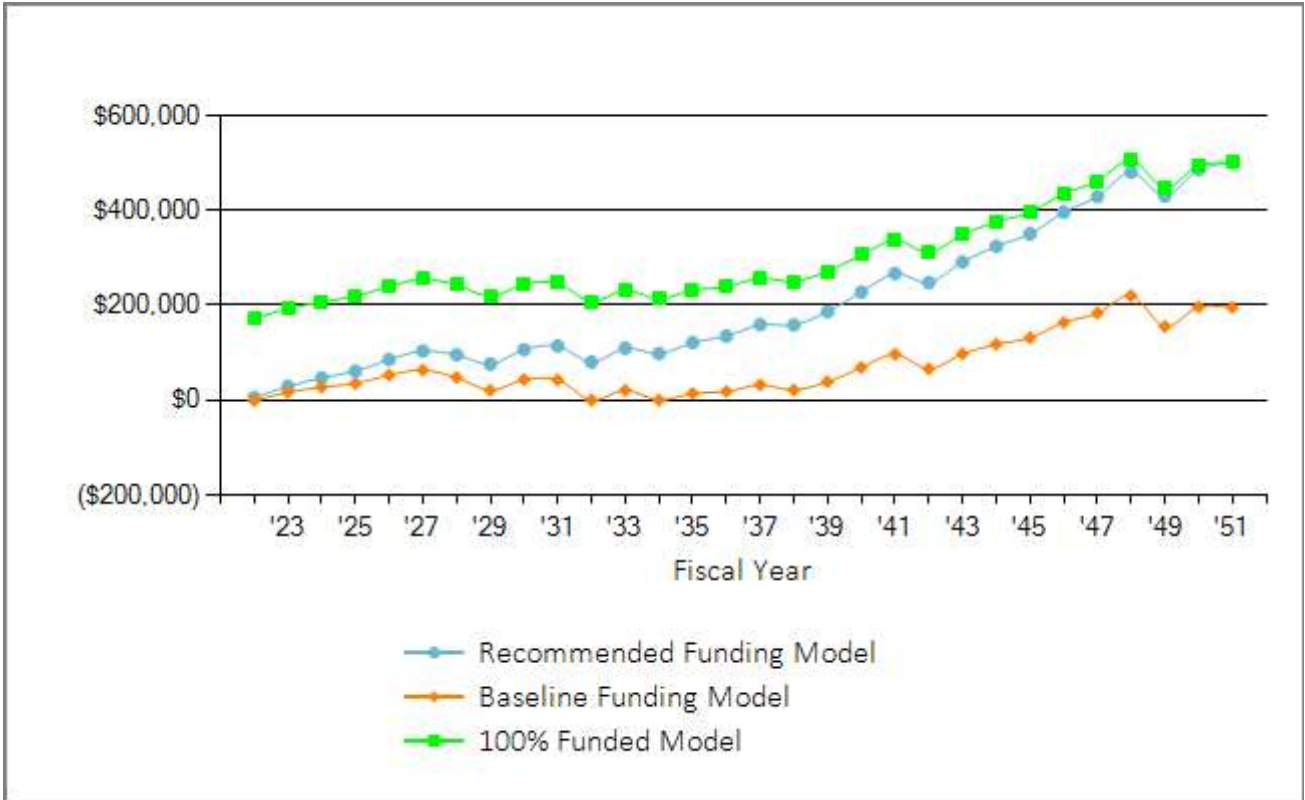
The above chart compares the funding models by the percentage funded levels over the timeframe of this reserve study, as calculated at the end of each fiscal year.

The Recommended Funding Model increase the Client's reserve account Percent Funded Level to 100% funding within the timeframe of this study. Once this 100% funded level is reached it is a good indicator that the Client is on track to meet its future obligations with minimal risk of reliance on emergency financing or having to defer projects that come due. Note that the Recommended Model is not necessarily a low risk, no risk or ideal model to follow. It simply has a goal of guiding the reserve account to a 100% funded level within the timeframe of the reserve study.

The Baseline Funding Model has a goal of only keeping the reserve account cash positive within the timeframe of the reserve study (i.e., at some point within the timeframe of the reserve study the reserve account is depleted to near \$0). This model carries significant risk for reliance on emergency financing and/or having to defer projects due to the common occurrence of components failing earlier than projected or costs increasing more rapidly than projected.

The 100% Funded Model has a goal of keeping the reserve account to a minimum of 100% Funded in each year of the reserve study. This model minimizes risk for reliance on emergency financing and places the reserve account onto a low-risk path for budgeting for future reserve expenditures.

The Knolls Projected Reserve Account Balance Chart



The chart above compares the annual year-end balance of the reserve account for the respective funding models over the 30 years covered in this reserve study. Projected reserve account balances will see large fluctuations from year to year due to projects occurring in any given year.

The Knolls
100% Funding - Summary

Report Date	January 10, 2022
Account Number	16940
Version	Draft3
Budget Year Beginning	January 1, 2022
Budget Year Ending	December 31, 2022
Total Units	83

<i>Report Parameters</i>	
Inflation	3.00%
Annual Contribution Increase	3.00%
Interest Rate on Reserve Deposit	0.35%
Tax Rate Included in Interest Rate	
2022 Beginning Balance	\$5,437

This funding model has a goal of being a minimum of 100% funded, annually, over the timeframe of this reserve study. Allocation rates will fluctuate based on the expenditures projected in any given year. The initial year has a much higher allocation rate than subsequent years as the reserve account is currently underfunded and requires a significant cash injection in the initial fiscal year to elevate the reserve account to a 100% Funded track.

The following page provides the 30-year projections for this funding model.

<i>Full Funding Model 30 Year Summary of Calculations</i>	
Required Annual Contribution	\$193,090.77
Average Net Annual Interest Earned	\$598.73
Total Annual Allocation to Reserves	\$193,689.51

The Knolls
100% Funding - Year End Projections

Beginning Balance: \$5,437

Year	Asset Cost	Inflation Rate	Reserve Allocation	Allocation % Change	Net Interest	Projected Expenditures	Year End Acct. Balance	Year End FFB	Year End % Funded
2022	331,210	3.0%	193,091		599	27,461	171,666	171,666	100%
2023	341,146	3.0%	24,862	-87.12%	672	4,602	192,598	192,443	100%
2024	351,380	3.0%	25,608	3.00%	723	11,554	207,376	207,018	100%
2025	361,922	3.0%	26,376	3.00%	763	15,866	218,649	218,209	100%
2026	372,779	3.0%	27,168	3.00%	838	6,302	240,353	240,353	100%
2027	383,963	3.0%	27,942	2.84%	889	14,213	254,971	254,971	100%
2028	395,482	3.0%	28,276	1.19%	847	41,156	242,937	242,937	100%
2029	407,346	3.0%	28,257	-0.06%	763	53,137	218,821	218,284	100%
2030	419,567	3.0%	29,105	3.00%	852	4,573	244,205	244,146	100%
2031	432,154	3.0%	29,978	3.00%	859	28,612	246,431	246,409	100%
2032	445,118	3.0%	31,083	3.68%	723	70,844	207,392	205,973	101%
2033	458,472	3.0%	32,015	3.00%	807	8,915	231,300	228,229	101%
2034	472,226	3.0%	32,976	3.00%	747	50,971	214,051	209,496	102%
2035	486,393	3.0%	33,965	3.00%	808	17,108	231,716	225,917	103%
2036	500,984	3.0%	34,984	3.00%	835	28,233	239,302	232,689	103%
2037	516,014	3.0%	36,033	3.00%	897	19,101	257,131	250,447	103%
2038	531,494	3.0%	37,114	3.00%	873	44,807	250,311	243,174	103%
2039	547,439	3.0%	38,228	3.00%	947	18,000	271,485	265,042	102%
2040	563,862	3.0%	39,375	3.00%	1,067	6,145	305,781	300,137	102%
2041	580,778	3.0%	40,556	3.00%	1,178	9,818	337,697	333,956	101%
2042	598,202	3.0%	41,773	3.00%	1,086	69,234	311,322	308,638	101%
2043	616,148	3.0%	44,886	7.45%	1,218	8,311	349,115	347,247	101%
2044	634,632	3.0%	46,233	3.00%	1,311	20,867	375,791	374,004	100%
2045	653,671	3.0%	47,620	3.00%	1,382	28,656	396,136	394,675	100%
2046	673,281	3.0%	49,049	3.00%	1,518	11,382	435,321	434,277	100%
2047	693,479	3.0%	50,520	3.00%	1,611	25,671	461,782	460,855	100%
2048	714,284	3.0%	52,036	3.00%	1,765	9,635	505,947	505,947	100%
2049	735,712	3.0%	52,456	0.80%	1,561	112,364	447,600	446,733	100%
2050	757,784	3.0%	54,030	3.00%	1,727	8,259	495,098	495,062	100%
2051	780,517	3.0%	55,651	3.00%	1,747	51,677	500,819	500,819	100%

The Knolls
Recommended Funding - Summary

Report Date	January 10, 2022
Account Number	16940
Version	Draft3
Budget Year Beginning	January 1, 2022
Budget Year Ending	December 31, 2022
Total Units	83

Report Parameters	
Inflation	3.00%
Annual Contribution Increase	3.00%
Interest Rate on Reserve Deposit	0.35%
Tax Rate Included in Interest Rate	
2022 Beginning Balance	\$5,437

We have developed a funding plan which will help steer the reserve account into a high funded range within the 30-year timeframe of this reserve study. This Recommended Funding Model requires the Client to allocate the recommended allocation amount into the reserve account with annual increases thereafter.

This Recommended Funding Plan Considers 4 Basic Principles:

1. There are adequate reserves when needed.
2. The budget should remain stable but increasing to offset inflationary factors.
3. The costs are fairly distributed over time.
4. The funding plan must allow the Client to be fiscally responsible.

Note that the Recommended Model is not necessarily a low risk, no risk or ideal model to follow (especially if the reserve account is currently significantly underfunded). It simply has a goal of having the reserve account reach 100% funded by the end of a 30-year period. In this reserve study the model's initial years remain in a "Low" funded range with a high risk for reliance on special assessments and or loans should something occur that is not projected (e.g., very high inflation of project costs, components failing earlier than projected, etc.). An "ideal" model to follow would be the 100% funded model as this model has the reserve account funded to a 100% funded level each year of the study and there would be low risk for reliance on special assessments and/or loans even if unexpected occurrences came to fruition.

The following page provides the 30-year projections for this funding model.

Recommended Funding Model Summary of Calculations	
Required Annual Contribution	\$27,350.00
Average Net Annual Interest Earned	<u>\$18.64</u>
Total Annual Allocation to Reserves	\$27,368.64

The Knolls
Recommended Funding - Year End Projections

Beginning Balance: \$5,437

Year	Asset Cost	Inflation Rate	Reserve Allocation	Allocation % Change	Net Interest	Projected Expenditures	Year End Acct. Balance	Year End FFB	Year End % Funded
2022	331,210	3.0%	27,350		19	27,461	5,345	171,666	3%
2023	341,146	3.0%	28,171	3.00%	101	4,602	29,015	192,443	15%
2024	351,380	3.0%	29,016	3.00%	163	11,554	46,640	207,018	23%
2025	361,922	3.0%	29,886	3.00%	212	15,866	60,872	218,209	28%
2026	372,779	3.0%	30,783	3.00%	299	6,302	85,651	240,353	36%
2027	383,963	3.0%	31,706	3.00%	361	14,213	103,505	254,971	41%
2028	395,482	3.0%	32,657	3.00%	333	41,156	95,339	242,937	39%
2029	407,346	3.0%	33,637	3.00%	265	53,137	76,104	218,284	35%
2030	419,567	3.0%	34,646	3.00%	372	4,573	106,550	244,146	44%
2031	432,154	3.0%	35,686	3.00%	398	28,612	114,021	246,409	46%
2032	445,118	3.0%	36,756	3.00%	280	70,844	80,212	205,973	39%
2033	458,472	3.0%	37,859	3.00%	382	8,915	109,539	228,229	48%
2034	472,226	3.0%	38,995	3.00%	341	50,971	97,903	209,496	47%
2035	486,393	3.0%	40,164	3.00%	423	17,108	121,383	225,917	54%
2036	500,984	3.0%	41,369	3.00%	471	28,233	134,990	232,689	58%
2037	516,014	3.0%	42,610	3.00%	555	19,101	159,054	250,447	64%
2038	531,494	3.0%	43,889	3.00%	553	44,807	158,689	243,174	65%
2039	547,439	3.0%	45,205	3.00%	651	18,000	186,545	265,042	70%
2040	563,862	3.0%	46,562	3.00%	794	6,145	227,756	300,137	76%
2041	580,778	3.0%	47,958	3.00%	931	9,818	266,826	333,956	80%
2042	598,202	3.0%	49,397	3.00%	864	69,234	247,854	308,638	80%
2043	616,148	3.0%	50,879	3.00%	1,016	8,311	291,439	347,247	84%
2044	634,632	3.0%	52,405	3.00%	1,130	20,867	324,107	374,004	87%
2045	653,671	3.0%	53,978	3.00%	1,223	28,656	350,652	394,675	89%
2046	673,281	3.0%	55,597	3.00%	1,382	11,382	396,248	434,277	91%
2047	693,479	3.0%	57,265	3.00%	1,497	25,671	429,340	460,855	93%
2048	714,284	3.0%	58,983	3.00%	1,675	9,635	480,364	505,947	95%
2049	735,712	3.0%	60,752	3.00%	1,501	112,364	430,252	446,733	96%
2050	757,784	3.0%	62,575	3.00%	1,696	8,259	486,264	495,062	98%
2051	780,517	3.0%	64,452	3.00%	1,747	51,677	500,787	500,819	100%

**The Knolls
Baseline Funding - Summary**

Report Date	January 10, 2022
Account Number	16940
Version	Draft3
Budget Year Beginning	January 1, 2022
Budget Year Ending	December 31, 2022
Total Units	83

Report Parameters	
Inflation	3.00%
Annual Contribution Increase	3.00%
Interest Rate on Reserve Deposit	0.35%
Tax Rate Included in Interest Rate	
2022 Beginning Balance	\$5,437

The Baseline Funding Model is considered a bare minimum approach which has a goal of keeping the reserve account balance above \$0 within the 30-year timeframe of this reserve study and *does not* take into consideration projected expenses that fall outside of the 30-year timeframe of the reserve study (i.e. longer life components are simply ignored).

This funding model carries a higher risk for reliance on emergency financing specifically in years when large component expenses occur earlier than projected or costs see significant increases. Additionally, in the future when longer life components come into the 30-year timeframe of future reserve studies their projected expenditures will have a significant impact on the allocation requirements to keep the reserve account cash positive going forward.

Should the Client have an interest in not funding longer life component projects (i.e., projects that are set to occur after the 30 year projections in this study) at this time then we suggest setting a goal of at least funding to the Baseline Funding Model which has the goal of only staying cash positive for the 30 year time-frame of the projections in this study.

The following page provides the 30-year projections for this funding model.

Baseline Threshold Funding Model Summary of Calculations	
Required Annual Contribution	\$21,224.36
Average Net Annual Interest Earned	\$0.00
Total Annual Allocation to Reserves	\$21,224.36

The Knolls
Baseline Funding - Year End Projections

Beginning Balance: \$5,437

Year	Asset Cost	Inflation Rate	Reserve Allocation	Allocation % Change	Net Interest	Projected Expenditures	Year End Acct. Balance	Year End FFB	Year End % Funded
2022	331,210	3.0%	21,224			27,461	-799	171,666	
2023	341,146	3.0%	21,861	3.00%	58	4,602	16,518	192,443	9%
2024	351,380	3.0%	22,517	3.00%	96	11,554	27,577	207,018	13%
2025	361,922	3.0%	23,192	3.00%	122	15,866	35,025	218,209	16%
2026	372,779	3.0%	23,888	3.00%	184	6,302	52,796	240,353	22%
2027	383,963	3.0%	24,605	3.00%	221	14,213	63,409	254,971	25%
2028	395,482	3.0%	25,343	3.00%	167	41,156	47,762	242,937	20%
2029	407,346	3.0%	26,103	3.00%	73	53,137	20,801	218,284	10%
2030	419,567	3.0%	26,886	3.00%	151	4,573	43,266	244,146	18%
2031	432,154	3.0%	27,693	3.00%	148	28,612	42,495	246,409	17%
2032	445,118	3.0%	28,524	3.00%	1	70,844	175	205,973	0%
2033	458,472	3.0%	29,379	3.00%	72	8,915	20,712	228,229	9%
2034	472,226	3.0%	30,261	3.00%		50,971	2	209,496	0%
2035	486,393	3.0%	31,169	3.00%	49	17,108	14,112	225,917	6%
2036	500,984	3.0%	32,104	3.00%	63	28,233	18,045	232,689	8%
2037	516,014	3.0%	33,067	3.00%	112	19,101	32,123	250,447	13%
2038	531,494	3.0%	34,059	3.00%	75	44,807	21,449	243,174	9%
2039	547,439	3.0%	35,081	3.00%	135	18,000	38,664	265,042	15%
2040	563,862	3.0%	36,133	3.00%	240	6,145	68,893	300,137	23%
2041	580,778	3.0%	37,217	3.00%	337	9,818	96,629	333,956	29%
2042	598,202	3.0%	38,334	3.00%	230	69,234	65,958	308,638	21%
2043	616,148	3.0%	39,484	3.00%	340	8,311	97,471	347,247	28%
2044	634,632	3.0%	40,668	3.00%	410	20,867	117,682	374,004	31%
2045	653,671	3.0%	41,888	3.00%	458	28,656	131,372	394,675	33%
2046	673,281	3.0%	43,145	3.00%	571	11,382	163,706	434,277	38%
2047	693,479	3.0%	44,439	3.00%	639	25,671	183,113	460,855	40%
2048	714,284	3.0%	45,772	3.00%	767	9,635	220,018	505,947	43%
2049	735,712	3.0%	47,145	3.00%	542	112,364	155,341	446,733	35%
2050	757,784	3.0%	48,560	3.00%	685	8,259	196,327	495,062	40%
2051	780,517	3.0%	50,017	3.00%	681	51,677	195,348	500,819	39%

The Knolls
Current Funding - Summary

Report Date	January 10, 2022
Account Number	16940
Version	Draft3
Budget Year Beginning	January 1, 2022
Budget Year Ending	December 31, 2022
Total Units	83

Report Parameters	
Inflation	3.00%
Annual Contribution Increase	3.00%
Interest Rate on Reserve Deposit	0.35%
Tax Rate Included in Interest Rate	
2022 Beginning Balance	\$5,437

The Current Funding Model is based on the reserve allocation data supplied by the Client; it has not been independently verified and is assumed to be correct.

The following page provides the 30-year projections for this funding model. It is assumed the reserve allocation rate will have annual increases to offset inflationary factors.

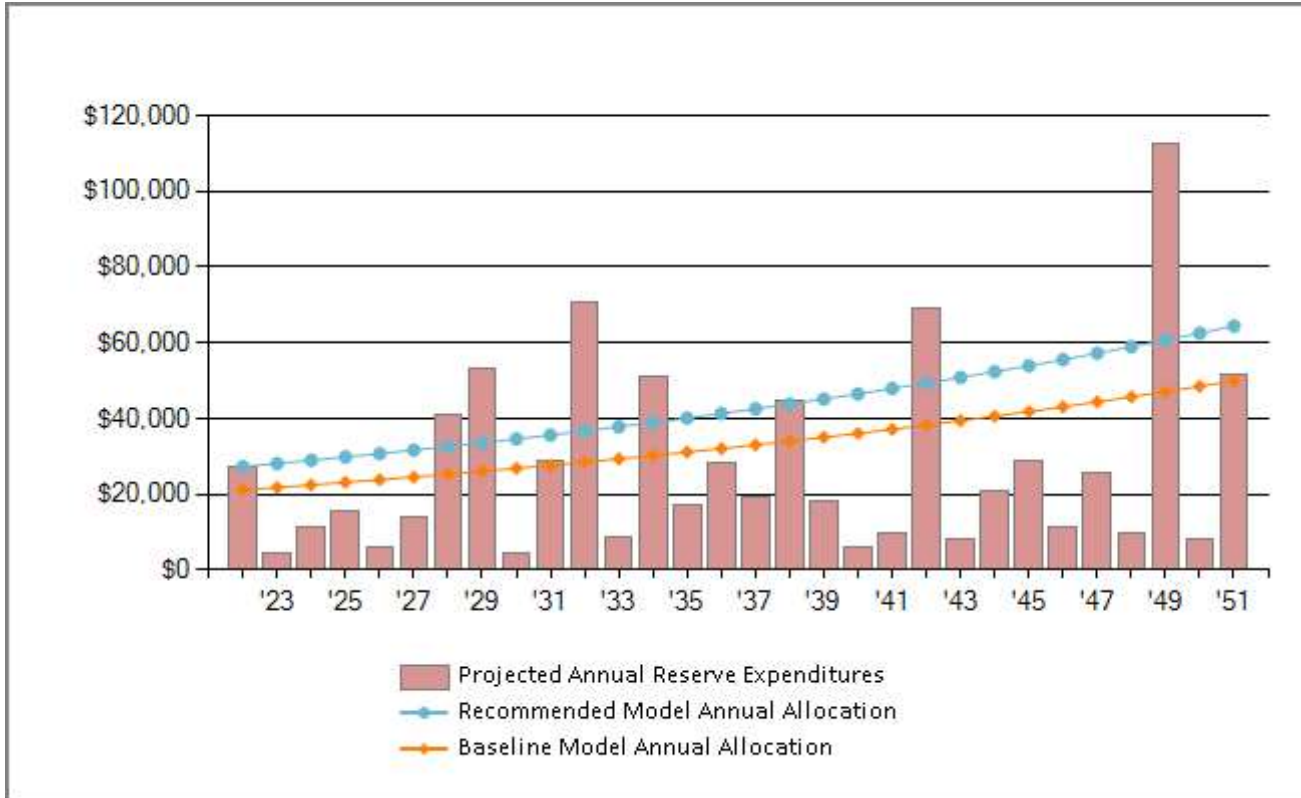
Current Assessment Funding Model Summary of Calculations	
Required Annual Contribution	\$8,330.00
Average Net Annual Interest Earned	<u> \$0.00</u>
Total Annual Allocation to Reserves	\$8,330.00

The Knolls
Current Funding - Year End Projections

Beginning Balance: \$5,437

Year	Asset Cost	Inflation Rate	Reserve Allocation	Allocation % Change	Net Interest	Projected Expenditures	Year End Acct. Balance	Year End FFB	Year End % Funded
2022	331,210	3.0%	8,330			27,461	-13,694	171,666	
2023	341,146	3.0%	8,580	3.00%		4,602	-9,715	192,443	
2024	351,380	3.0%	8,837	3.00%		11,554	-12,432	207,018	
2025	361,922	3.0%	9,102	3.00%		15,866	-19,196	218,209	
2026	372,779	3.0%	9,375	3.00%		6,302	-16,122	240,353	
2027	383,963	3.0%	9,657	3.00%		14,213	-20,679	254,971	
2028	395,482	3.0%	9,946	3.00%		41,156	-51,888	242,937	
2029	407,346	3.0%	10,245	3.00%		53,137	-94,780	218,284	
2030	419,567	3.0%	10,552	3.00%		4,573	-88,801	244,146	
2031	432,154	3.0%	10,869	3.00%		28,612	-106,544	246,409	
2032	445,118	3.0%	11,195	3.00%		70,844	-166,193	205,973	
2033	458,472	3.0%	11,531	3.00%		8,915	-163,577	228,229	
2034	472,226	3.0%	11,877	3.00%		50,971	-202,672	209,496	
2035	486,393	3.0%	12,233	3.00%		17,108	-207,547	225,917	
2036	500,984	3.0%	12,600	3.00%		28,233	-223,180	232,689	
2037	516,014	3.0%	12,978	3.00%		19,101	-229,304	250,447	
2038	531,494	3.0%	13,367	3.00%		44,807	-260,744	243,174	
2039	547,439	3.0%	13,768	3.00%		18,000	-264,976	265,042	
2040	563,862	3.0%	14,181	3.00%		6,145	-256,940	300,137	
2041	580,778	3.0%	14,607	3.00%		9,818	-252,151	333,956	
2042	598,202	3.0%	15,045	3.00%		69,234	-306,340	308,638	
2043	616,148	3.0%	15,496	3.00%		8,311	-299,155	347,247	
2044	634,632	3.0%	15,961	3.00%		20,867	-304,061	374,004	
2045	653,671	3.0%	16,440	3.00%		28,656	-316,277	394,675	
2046	673,281	3.0%	16,933	3.00%		11,382	-310,726	434,277	
2047	693,479	3.0%	17,441	3.00%		25,671	-318,956	460,855	
2048	714,284	3.0%	17,964	3.00%		9,635	-310,626	505,947	
2049	735,712	3.0%	18,503	3.00%		112,364	-404,487	446,733	
2050	757,784	3.0%	19,058	3.00%		8,259	-393,687	495,062	
2051	780,517	3.0%	19,630	3.00%		51,677	-425,734	500,819	

The Knolls Projected Annual Expenditures - Chart



The above chart provides a visual of the reserve account projected expenditures over the timeframe covered in this study. We suggest making a note of large expenditure years (peak years) when there will be significant projected expenditures related to one or more component projects that will require repair/replacement. These large but infrequent component expenses during “peak” years are typically the most difficult to budget for as they are often overlooked or ignored due to the perception that the expenses are far in the future and there will be time to budget for them later.

One of the greatest challenges when planning for reserve budgeting is creating and implementing a funding model that is stable and fair while also adequate to cover reserve project expenditures that are typically infrequent and erratic. This is particularly true for reserve accounts that drop to low levels of funding; there will be a need to catch up the reserve account to a more suitable level while also being as fair and stable as possible as time progresses.

We have created numerous funding models in this reserve study with various goals; the above models adhere to the prime principles of having stability and fairness going forward in time while also covering the projected annual reserve expenditures. Their respective annual allocation rates (lines) are shown compared to the annual reserve expenditures (columns) within the timeframe of this reserve study. Note the stableness of the annual funding model allocation rates versus the erratic nature of the reserve expenditures.

The Knolls
Projected Annual Expenditures - List

Description	Expenditures
Replacement Year 2022	
1031 Asphalt (Tract P) - Seal Coat & Repairs	4,843
1036 Asphalt (Tract T) - Seal Coat & Repairs	2,863
1001 Asphalt (Tract D) - Overlay & Seal Coat	19,755
Total for 2022	\$27,461
Replacement Year 2023	
1030 Asphalt (Tract G) - Seal Coat & Repairs	4,602
Total for 2023	\$4,602
Replacement Year 2024	
1046 Asphalt (Tract F) - Seal Coat & Repairs	2,253
1033 Asphalt (Tract H) - Seal Coat & Repairs	2,857
1047 Asphalt (Tract I) - Seal Coat & Repairs	2,064
1045 Asphalt (Tract N) - Seal Coat & Repairs	2,770
1048 Asphalt (Tract S) - Seal Coat & Repairs	1,609
Total for 2024	\$11,554
Replacement Year 2025	
1008 Asphalt (Tract E/2005) - Overlay & Seal Coat	15,866
Total for 2025	\$15,866
Replacement Year 2026	
1028 Asphalt (Tract M) - Seal Coat & Repairs	3,501
1029 Asphalt (Tract O) - Seal Coat & Repairs	2,801
Total for 2026	\$6,302
Replacement Year 2027	
1027 Asphalt (Tract D) - Seal Coat & Repairs	3,664
1031 Asphalt (Tract P) - Seal Coat & Repairs	5,614
1036 Asphalt (Tract T) - Seal Coat & Repairs	3,319
1032 Asphalt (Tract H/2022) - Seal Coat & Repairs	1,616
Total for 2027	\$14,213
Replacement Year 2028	
1030 Asphalt (Tract G) - Seal Coat & Repairs	5,335

The Knolls
Projected Annual Expenditures - List

Description	Expenditures
<i>Replacement Year 2028 continued...</i>	
1006 Signage (entry monument) - Replace	35,822
Total for 2028	\$41,156
Replacement Year 2029	
1046 Asphalt (Tract F) - Seal Coat & Repairs	2,612
1045 Asphalt (Tract N) - Seal Coat & Repairs	3,211
1010 Asphalt (Tract H) - Overlay & Seal Coat	20,699
1049 Asphalt (Tract I) - Overlay & Seal Coat	14,955
1050 Asphalt (Tract S) - Overlay & Seal Coat	11,659
Total for 2029	\$53,137
Replacement Year 2030	
1025 Asphalt (Tract E/all areas) - Seal Coat & Repairs	4,573
Total for 2030	\$4,573
Replacement Year 2031	
1029 Asphalt (Tract O) - Seal Coat & Repairs	3,247
1011 Asphalt (Tract M) - Overlay & Seal Coat	25,365
Total for 2031	\$28,612
Replacement Year 2032	
1027 Asphalt (Tract D) - Seal Coat & Repairs	4,248
1032 Asphalt (Tract H/2022) - Seal Coat & Repairs	1,873
1034 Asphalt (Tract P) - Overlay & Seal Coat	40,677
1035 Asphalt (Tract T) - Overlay & Seal Coat	24,046
Total for 2032	\$70,844
Replacement Year 2033	
1030 Asphalt (Tract G) - Seal Coat & Repairs	6,184
1007 Concrete Surfaces (mailboxes) - Replace	1,900
1005 Lights (landscape) - Replace	831
Total for 2033	\$8,915
Replacement Year 2034	
1033 Asphalt (Tract H) - Seal Coat & Repairs	3,839

The Knolls
Projected Annual Expenditures - List

Description	Expenditures
<i>Replacement Year 2034 continued...</i>	
1047 Asphalt (Tract I) - Seal Coat & Repairs	2,774
1048 Asphalt (Tract S) - Seal Coat & Repairs	2,163
1039 Asphalt (Tract F) - Overlay & Seal Coat	18,927
1040 Asphalt (Tract N) - Overlay & Seal Coat	23,268
Total for 2034	\$50,971
Replacement Year 2035	
1025 Asphalt (Tract E/all areas) - Seal Coat & Repairs	5,301
1037 Asphalt (Tract E/2014) - Overlay & Seal Coat	11,807
Total for 2035	\$17,108
Replacement Year 2036	
1028 Asphalt (Tract M) - Seal Coat & Repairs	4,705
1014 Asphalt (Tract O) - Overlay & Seal Coat	23,528
Total for 2036	\$28,233
Replacement Year 2037	
1027 Asphalt (Tract D) - Seal Coat & Repairs	4,924
1031 Asphalt (Tract P) - Seal Coat & Repairs	7,545
1036 Asphalt (Tract T) - Seal Coat & Repairs	4,460
1032 Asphalt (Tract H/2022) - Seal Coat & Repairs	2,172
Total for 2037	\$19,101
Replacement Year 2038	
1015 Asphalt (Tract G) - Overlay & Seal Coat	44,807
Total for 2038	\$44,807
Replacement Year 2039	
1046 Asphalt (Tract F) - Seal Coat & Repairs	3,511
1033 Asphalt (Tract H) - Seal Coat & Repairs	4,451
1047 Asphalt (Tract I) - Seal Coat & Repairs	3,216
1045 Asphalt (Tract N) - Seal Coat & Repairs	4,316
1048 Asphalt (Tract S) - Seal Coat & Repairs	2,507
Total for 2039	\$18,000

The Knolls
Projected Annual Expenditures - List

Description	Expenditures
Replacement Year 2040	
1025 Asphalt (Tract E/all areas) - Seal Coat & Repairs	6,145
Total for 2040	\$6,145
Replacement Year 2041	
1028 Asphalt (Tract M) - Seal Coat & Repairs	5,454
1029 Asphalt (Tract O) - Seal Coat & Repairs	4,364
Total for 2041	\$9,818
Replacement Year 2042	
1031 Asphalt (Tract P) - Seal Coat & Repairs	8,747
1036 Asphalt (Tract T) - Seal Coat & Repairs	5,171
1001 Asphalt (Tract D) - Overlay & Seal Coat	35,680
1016 Asphalt (Tract H/2002) - Overlay & Seal Coat	15,736
1004 Culverts (Tract D) - Replace	3,901
Total for 2042	\$69,234
Replacement Year 2043	
1030 Asphalt (Tract G) - Seal Coat & Repairs	8,311
Total for 2043	\$8,311
Replacement Year 2044	
1046 Asphalt (Tract F) - Seal Coat & Repairs	4,070
1033 Asphalt (Tract H) - Seal Coat & Repairs	5,160
1047 Asphalt (Tract I) - Seal Coat & Repairs	3,728
1045 Asphalt (Tract N) - Seal Coat & Repairs	5,003
1048 Asphalt (Tract S) - Seal Coat & Repairs	2,906
Total for 2044	\$20,867
Replacement Year 2045	
1008 Asphalt (Tract E/2005) - Overlay & Seal Coat	28,656
Total for 2045	\$28,656
Replacement Year 2046	
1028 Asphalt (Tract M) - Seal Coat & Repairs	6,323

The Knolls
Projected Annual Expenditures - List

Description	Expenditures
<i>Replacement Year 2046 continued...</i>	
1029 Asphalt (Tract O) - Seal Coat & Repairs	5,059
Total for 2046	<u>\$11,382</u>
Replacement Year 2047	
1027 Asphalt (Tract D) - Seal Coat & Repairs	6,618
1031 Asphalt (Tract P) - Seal Coat & Repairs	10,140
1036 Asphalt (Tract T) - Seal Coat & Repairs	5,994
1032 Asphalt (Tract H/2022) - Seal Coat & Repairs	2,919
Total for 2047	<u>\$25,671</u>
Replacement Year 2048	
1030 Asphalt (Tract G) - Seal Coat & Repairs	9,635
Total for 2048	<u>\$9,635</u>
Replacement Year 2049	
1046 Asphalt (Tract F) - Seal Coat & Repairs	4,718
1045 Asphalt (Tract N) - Seal Coat & Repairs	5,800
1010 Asphalt (Tract H) - Overlay & Seal Coat	37,384
1049 Asphalt (Tract I) - Overlay & Seal Coat	27,011
1050 Asphalt (Tract S) - Overlay & Seal Coat	21,058
1021 Culverts (Tract I) - Replace	5,464
1022 Culverts (Tract O) - Replace	5,464
1019 Culverts (Tract S) - Replace	5,464
Total for 2049	<u>\$112,364</u>
Replacement Year 2050	
1025 Asphalt (Tract E/all areas) - Seal Coat & Repairs	8,259
Total for 2050	<u>\$8,259</u>
Replacement Year 2051	
1029 Asphalt (Tract O) - Seal Coat & Repairs	5,865
1011 Asphalt (Tract M) - Overlay & Seal Coat	45,812
Total for 2051	<u>\$51,677</u>

The Knolls
Projected Annual Expenditures - Spreadsheet

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Beginning Balance	5,437	5,345	29,015	46,640	60,872	85,651	103,505	95,339	76,104	106,550
Annual Reserve Account Contribution	27,350	28,170	29,016	29,886	30,783	31,706	32,657	33,637	34,646	35,686
Interest Earned	19	101	163	212	299	361	333	265	372	398
Expenditures	27,461	4,602	11,554	15,866	6,302	14,213	41,156	53,137	4,573	28,612
Fully Funded Balance	171,666	192,443	207,018	218,209	240,353	254,971	242,937	218,284	244,146	246,409
Percent Funded	3%	15%	23%	28%	36%	41%	39%	35%	44%	46%
Ending Reserve Account Balance	5,345	29,015	46,640	60,872	85,651	103,505	95,339	76,104	106,550	114,021

ID Description

1027 Asphalt (Tract D) - Seal Coat & Repairs						3,664				
1025 Asphalt (Tract E/all areas) - Seal Coat & Repai..									4,573	
1046 Asphalt (Tract F) - Seal Coat & Repairs			2,253					2,612		
1030 Asphalt (Tract G) - Seal Coat & Repairs		4,602					5,335			
1033 Asphalt (Tract H) - Seal Coat & Repairs			2,857							
1047 Asphalt (Tract I) - Seal Coat & Repairs			2,064							
1028 Asphalt (Tract M) - Seal Coat & Repairs					3,501					
1045 Asphalt (Tract N) - Seal Coat & Repairs			2,770					3,211		
1029 Asphalt (Tract O) - Seal Coat & Repairs					2,801					3,247
1031 Asphalt (Tract P) - Seal Coat & Repairs	4,843					5,614				
1048 Asphalt (Tract S) - Seal Coat & Repairs			1,609							
1036 Asphalt (Tract T) - Seal Coat & Repairs	2,863					3,319				
1001 Asphalt (Tract D) - Overlay & Seal Coat	19,755									
1008 Asphalt (Tract E/2005) - Overlay & Seal Coat				15,866						
1037 Asphalt (Tract E/2014) - Overlay & Seal Coat										
1039 Asphalt (Tract F) - Overlay & Seal Coat										
1015 Asphalt (Tract G) - Overlay & Seal Coat										
1010 Asphalt (Tract H) - Overlay & Seal Coat								20,699		
1016 Asphalt (Tract H/2002) - Overlay & Seal Coat										
1032 Asphalt (Tract H/2022) - Seal Coat & Repairs						1,616				
1049 Asphalt (Tract I) - Overlay & Seal Coat								14,955		
1011 Asphalt (Tract M) - Overlay & Seal Coat										25,365
1040 Asphalt (Tract N) - Overlay & Seal Coat										
1014 Asphalt (Tract O) - Overlay & Seal Coat										

The Knolls
Projected Annual Expenditures - Spreadsheet

ID Description	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
1034 Asphalt (Tract P) - Overlay & Seal Coat										
1050 Asphalt (Tract S) - Overlay & Seal Coat								11,659		
1035 Asphalt (Tract T) - Overlay & Seal Coat										
1007 Concrete Surfaces (mailboxes) - Replace										
1004 Culverts (Tract D) - Replace										
1018 Culverts (Tract F) - Replace										
1021 Culverts (Tract I) - Replace										
1024 Culverts (Tract M) - Replace										
1023 Culverts (Tract N) - Replace										
1022 Culverts (Tract O) - Replace										
1017 Culverts (Tract P) - Replace										
1019 Culverts (Tract S) - Replace										
1020 Culverts (Tract T) - Replace										
1005 Lights (landscape) - Replace										
1006 Signage (entry monument) - Replace							35,822			
Year Total:	27,461	4,602	11,554	15,866	6,302	14,213	41,156	53,137	4,573	28,612

The Knolls
Projected Annual Expenditures - Spreadsheet

	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
Beginning Balance	114,021	80,212	109,539	97,903	121,383	134,990	159,054	158,689	186,545	227,756
Annual Reserve Account Contribution	36,756	37,859	38,995	40,164	41,369	42,610	43,889	45,205	46,562	47,958
Interest Earned	280	382	341	423	471	555	553	651	794	931
Expenditures	70,844	8,915	50,971	17,108	28,233	19,101	44,807	18,000	6,145	9,818
Fully Funded Balance	205,973	228,229	209,496	225,917	232,689	250,447	243,174	265,042	300,137	333,956
Percent Funded	39%	48%	47%	54%	58%	64%	65%	70%	76%	80%
Ending Reserve Account Balance	80,212	109,539	97,903	121,383	134,990	159,054	158,689	186,545	227,756	266,826

ID Description

1027 Asphalt (Tract D) - Seal Coat & Repairs	4,248					4,924				
1025 Asphalt (Tract E/all areas) - Seal Coat & Repai..				5,301					6,145	
1046 Asphalt (Tract F) - Seal Coat & Repairs								3,511		
1030 Asphalt (Tract G) - Seal Coat & Repairs		6,184								
1033 Asphalt (Tract H) - Seal Coat & Repairs			3,839					4,451		
1047 Asphalt (Tract I) - Seal Coat & Repairs			2,774					3,216		
1028 Asphalt (Tract M) - Seal Coat & Repairs					4,705					5,454
1045 Asphalt (Tract N) - Seal Coat & Repairs								4,316		
1029 Asphalt (Tract O) - Seal Coat & Repairs										4,364
1031 Asphalt (Tract P) - Seal Coat & Repairs						7,545				
1048 Asphalt (Tract S) - Seal Coat & Repairs			2,163					2,507		
1036 Asphalt (Tract T) - Seal Coat & Repairs						4,460				
1001 Asphalt (Tract D) - Overlay & Seal Coat										
1008 Asphalt (Tract E/2005) - Overlay & Seal Coat										
1037 Asphalt (Tract E/2014) - Overlay & Seal Coat				11,807						
1039 Asphalt (Tract F) - Overlay & Seal Coat			18,927							
1015 Asphalt (Tract G) - Overlay & Seal Coat							44,807			
1010 Asphalt (Tract H) - Overlay & Seal Coat										
1016 Asphalt (Tract H/2002) - Overlay & Seal Coat										
1032 Asphalt (Tract H/2022) - Seal Coat & Repairs	1,873					2,172				
1049 Asphalt (Tract I) - Overlay & Seal Coat										
1011 Asphalt (Tract M) - Overlay & Seal Coat										
1040 Asphalt (Tract N) - Overlay & Seal Coat			23,268							
1014 Asphalt (Tract O) - Overlay & Seal Coat					23,528					

The Knolls
Projected Annual Expenditures - Spreadsheet

ID Description	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
1034 Asphalt (Tract P) - Overlay & Seal Coat	40,677									
1050 Asphalt (Tract S) - Overlay & Seal Coat										
1035 Asphalt (Tract T) - Overlay & Seal Coat	24,046									
1007 Concrete Surfaces (mailboxes) - Replace		1,900								
1004 Culverts (Tract D) - Replace										
1018 Culverts (Tract F) - Replace										
1021 Culverts (Tract I) - Replace										
1024 Culverts (Tract M) - Replace										
1023 Culverts (Tract N) - Replace										
1022 Culverts (Tract O) - Replace										
1017 Culverts (Tract P) - Replace										
1019 Culverts (Tract S) - Replace										
1020 Culverts (Tract T) - Replace										
1005 Lights (landscape) - Replace		831								
1006 Signage (entry monument) - Replace										
Year Total:	70,844	8,915	50,971	17,108	28,233	19,101	44,807	18,000	6,145	9,818

The Knolls
Projected Annual Expenditures - Spreadsheet

	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051
Beginning Balance	266,826	247,854	291,439	324,107	350,652	396,248	429,340	480,364	430,252	486,264
Annual Reserve Account Contribution	49,397	50,879	52,405	53,978	55,597	57,265	58,983	60,752	62,575	64,452
Interest Earned	864	1,016	1,130	1,223	1,382	1,497	1,675	1,501	1,696	1,747
Expenditures	69,234	8,311	20,867	28,656	11,382	25,671	9,635	112,364	8,259	51,677
Fully Funded Balance	308,638	347,247	374,004	394,675	434,277	460,855	505,947	446,733	495,062	500,819
Percent Funded	80%	84%	87%	89%	91%	93%	95%	96%	98%	100%
Ending Reserve Account Balance	247,854	291,439	324,107	350,652	396,248	429,340	480,364	430,252	486,264	500,787

ID Description

1027 Asphalt (Tract D) - Seal Coat & Repairs						6,618				
1025 Asphalt (Tract E/all areas) - Seal Coat & Repai..									8,259	
1046 Asphalt (Tract F) - Seal Coat & Repairs			4,070					4,718		
1030 Asphalt (Tract G) - Seal Coat & Repairs		8,311					9,635			
1033 Asphalt (Tract H) - Seal Coat & Repairs			5,160							
1047 Asphalt (Tract I) - Seal Coat & Repairs			3,728							
1028 Asphalt (Tract M) - Seal Coat & Repairs					6,323					
1045 Asphalt (Tract N) - Seal Coat & Repairs			5,003					5,800		
1029 Asphalt (Tract O) - Seal Coat & Repairs					5,059					5,865
1031 Asphalt (Tract P) - Seal Coat & Repairs	8,747					10,140				
1048 Asphalt (Tract S) - Seal Coat & Repairs			2,906							
1036 Asphalt (Tract T) - Seal Coat & Repairs	5,171					5,994				
1001 Asphalt (Tract D) - Overlay & Seal Coat	35,680									
1008 Asphalt (Tract E/2005) - Overlay & Seal Coat				28,656						
1037 Asphalt (Tract E/2014) - Overlay & Seal Coat										
1039 Asphalt (Tract F) - Overlay & Seal Coat										
1015 Asphalt (Tract G) - Overlay & Seal Coat										
1010 Asphalt (Tract H) - Overlay & Seal Coat								37,384		
1016 Asphalt (Tract H/2002) - Overlay & Seal Coat	15,736									
1032 Asphalt (Tract H/2022) - Seal Coat & Repairs						2,919				
1049 Asphalt (Tract I) - Overlay & Seal Coat								27,011		
1011 Asphalt (Tract M) - Overlay & Seal Coat										45,812
1040 Asphalt (Tract N) - Overlay & Seal Coat										
1014 Asphalt (Tract O) - Overlay & Seal Coat										

The Knolls
Projected Annual Expenditures - Spreadsheet

ID	Description	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051
1034	Asphalt (Tract P) - Overlay & Seal Coat										
1050	Asphalt (Tract S) - Overlay & Seal Coat								21,058		
1035	Asphalt (Tract T) - Overlay & Seal Coat										
1007	Concrete Surfaces (mailboxes) - Replace										
1004	Culverts (Tract D) - Replace	3,901									
1018	Culverts (Tract F) - Replace										
1021	Culverts (Tract I) - Replace								5,464		
1024	Culverts (Tract M) - Replace										
1023	Culverts (Tract N) - Replace										
1022	Culverts (Tract O) - Replace								5,464		
1017	Culverts (Tract P) - Replace										
1019	Culverts (Tract S) - Replace								5,464		
1020	Culverts (Tract T) - Replace										
1005	Lights (landscape) - Replace										
1006	Signage (entry monument) - Replace										
Year Total:		69,234	8,311	20,867	28,656	11,382	25,671	9,635	112,364	8,259	51,677

The Knolls
Fully Funded Balance Calculations (Beginning Fiscal Year)

Asset ID	Description	Current Cost	x	Age	/	Useful Life	=	Fully Funded
1027	Asphalt (Tract D) - Seal Coat ...	\$3,161	x	2	/	7	=	\$903
1025	Asphalt (Tract E/all areas) - ...	\$3,610	x	4	/	12	=	\$1,203
1046	Asphalt (Tract F) - Seal Coat ...	\$2,124	x	4	/	6	=	\$1,416
1030	Asphalt (Tract G) - Seal Coat...	\$4,468	x	4	/	5	=	\$3,574
1033	Asphalt (Tract H) - Seal Coat ...	\$2,693	x	4	/	6	=	\$1,795
1047	Asphalt (Tract I) - Seal Coat ...	\$1,946	x	4	/	6	=	\$1,297
1028	Asphalt (Tract M) - Seal Coa...	\$3,110	x	4	/	8	=	\$1,555
1045	Asphalt (Tract N) - Seal Coat...	\$2,611	x	4	/	6	=	\$1,741
1029	Asphalt (Tract O) - Seal Coat...	\$2,489	x	4	/	8	=	\$1,244
1031	Asphalt (Tract P) - Seal Coat ...	\$4,843	x	2	/	2	=	\$4,843
1048	Asphalt (Tract S) - Seal Coat ...	\$1,517	x	4	/	6	=	\$1,011
1036	Asphalt (Tract T) - Seal Coat ...	\$2,863	x	2	/	2	=	\$2,863
1001	Asphalt (Tract D) - Overlay &...	\$19,755	x	20	/	20	=	\$19,755
1008	Asphalt (Tract E/2005) - Ove...	\$14,520	x	17	/	20	=	\$12,342
1037	Asphalt (Tract E/2014) - Ove...	\$8,040	x	8	/	21	=	\$3,063
1039	Asphalt (Tract F) - Overlay & ...	\$13,275	x	8	/	20	=	\$5,310
1015	Asphalt (Tract G) - Overlay &...	\$27,923	x	4	/	20	=	\$5,585
1010	Asphalt (Tract H) - Overlay &...	\$16,830	x	13	/	20	=	\$10,940
1016	Asphalt (Tract H/2002) - Ove...	\$8,713	x	0	/	20	=	\$0
1032	Asphalt (Tract H/2022) - Seal...	\$1,394	x	0	/	5	=	\$0
1049	Asphalt (Tract I) - Overlay & ...	\$12,160	x	13	/	20	=	\$7,904
1011	Asphalt (Tract M) - Overlay ...	\$19,440	x	11	/	20	=	\$10,692
1040	Asphalt (Tract N) - Overlay &...	\$16,320	x	8	/	20	=	\$6,528
1014	Asphalt (Tract O) - Overlay &...	\$15,555	x	6	/	20	=	\$4,667
1034	Asphalt (Tract P) - Overlay & ...	\$30,268	x	10	/	20	=	\$15,134
1050	Asphalt (Tract S) - Overlay & ...	\$9,480	x	13	/	20	=	\$6,162
1035	Asphalt (Tract T) - Overlay & ...	\$17,893	x	10	/	20	=	\$8,946
1007	Concrete Surfaces (mailboxe...	\$1,373	x	29	/	40	=	\$995
1004	Culverts (Tract D) - Replace	\$2,160	x	20	/	40	=	\$1,080
1018	Culverts (Tract F) - Replace	\$3,000	x	4	/	40	=	\$300
1021	Culverts (Tract I) - Replace	\$2,460	x	13	/	40	=	\$800
1024	Culverts (Tract M) - Replace	\$2,460	x	8	/	40	=	\$492
1023	Culverts (Tract N) - Replace	\$2,460	x	6	/	40	=	\$369
1022	Culverts (Tract O) - Replace	\$2,460	x	13	/	40	=	\$800
1017	Culverts (Tract P) - Replace	\$13,160	x	10	/	40	=	\$3,290

The Knolls
Fully Funded Balance Calculations (Beginning Fiscal Year)

Asset ID	Description	Current Cost	x	Age	/	Useful Life	=	Fully Funded
1019	Culverts (Tract S) - Replace	\$2,460	x	13	/	40	=	\$800
1020	Culverts (Tract T) - Replace	\$1,620	x	10	/	40	=	\$405
1005	Lights (landscape) - Replace	\$600	x	9	/	20	=	\$270
1006	Signage (entry monument) - ...	\$30,000	x	29	/	35	=	\$24,857
Total Asset Summary:								<u><u>\$174,929</u></u>

The Knolls

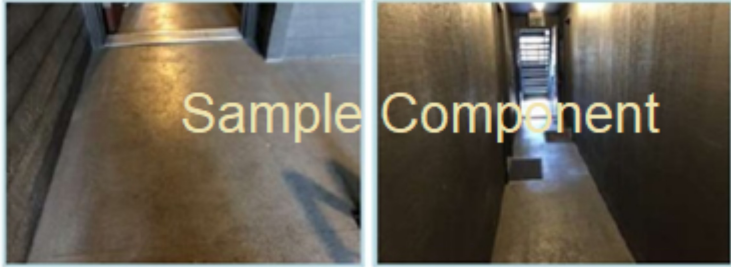
About the Component Detail Reports Section

In the following Component Details Section of this reserve study you will find each component that has been listed within the Component List. This section has more detailed information for each component and reviewing it will often answer questions that arise regarding specific components within this reserve study. Below you will find an explanation of what and where this information is located.

1
Elevated Walkways/Hallways- Topcoat- 2019

		1,340 sf	
Asset ID	1055	Asset Cost	@ \$4.75
		Percent Replacement	100%
Category	Decks/Porches/Patios	Future Cost	\$6,365.00
Placed in Service	June 2012		
Useful Life	5		
Replacement Year	2019		
Remaining Life	0		

2



4

5

This elastomeric surface type (at elevated walkways, covered staircases and covered hallways) needs to be top coated periodically for waterproof integrity, protection of surrounding structure and appearance. As routine maintenance, we strongly suggest annual professional inspections, with cleaning and repair as needed. Clean with mild solution such as TSP; bleach can be added if mold/mildew becomes a problem. Plan for regular intervals of professional maintenance top coating at the interval indicated.

3

1. Component Name and next Replacement Year as well as a unique Asset ID to cross reference with other sections within this reserve study.
2. This area has the category of the component, estimated placed in-service date (when last installed), the estimated useful life of the component (estimate of how long the component will last), the next replacement year in this reserve study and the remaining useful life (how many years before replacement is estimated to occur).
3. The area has the total measurement/unit count of the component, the cost per unit, the total asset cost (unit count X unit cost), the percent replacement (amount funded to be replaced in a cycle), and the future cost (estimated cost at the next replacement date).
4. Pictures of the component are included for Level I studies unless the Client has requested fewer pages in the study in which case we will omit them.
5. Specific comments about this component which can include explanations for adjustments to the useful life, phasing, maintenance of the component, Vendor recommendations, etc.

**The Knolls
Component Detail Reports**

Asphalt (Tract D) - Seal Coat & Repairs - 2027

		7,902 sf	@ \$0.40
Asset ID	1027	Asset Actual Cost	\$3,160.80
		Percent Replacement	100%
	Asphalt Surfaces	Future Cost	\$3,664.23
Placed in Service	January 2018		
Useful Life	5		
Adjustment	-3		
Replacement Year	2027		
Remaining Life	5		

The primary reason to seal coat is to protect the pavement from the deteriorating effects of sun and water, which causes the asphalt to harden, or oxidize; the pavement turns brittle. The seal coat provides a waterproof membrane which slows the oxidation process and helps the pavement shed water, preventing the water to infiltrate the base material.

Proper drainage is vital for the longevity of asphalt surfaces. Standing water can seep through the asphalt and get into the sub-base and sub-grade below, significantly weakening the structural integrity of the road and causing premature failure.

Oil spills eat through the asphalt seal and should be cleaned up between seal coats. Power washing is recommended annually where needed and treated as an operating expense.

Cost estimate includes crack filling and 2 coats are to be applied. In years when an Overlay/Replacement project is set to occur sealcoating will typically be applied as soon as possible to surfaces. We typically recommend funding for this component at the same time as the Overlay/Replacement project for cost efficiency with the Vendor.

[Life adjustment given so this cycles with the overlay component. .](#)

*Cost Source: Reserve Data Analyst In-House Research & Cost Records

**The Knolls
Component Detail Reports**

Asphalt (Tract E/all areas) - Seal Coat & Repairs - 2030

		9,024 sf	@ \$0.40
Asset ID	1025	Asset Actual Cost	\$3,609.60
		Percent Replacement	100%
	Asphalt Surfaces	Future Cost	\$4,572.53
Placed in Service	January 2018		
Useful Life	5		
Adjustment	2		
Replacement Year	2030		
Remaining Life	8		

The primary reason to seal coat is to protect the pavement from the deteriorating effects of sun and water, which causes the asphalt to harden, or oxidize; the pavement turns brittle. The seal coat provides a waterproof membrane which slows the oxidation process and helps the pavement shed water, preventing the water to infiltrate the base material.

Proper drainage is vital for the longevity of asphalt surfaces. Standing water can seep through the asphalt and get into the sub-base and sub-grade below, significantly weakening the structural integrity of the road and causing premature failure.

Oil spills eat through the asphalt seal and should be cleaned up between seal coats. Power washing is recommended annually where needed and treated as an operating expense.

Cost estimate includes crack filling and 2 coats are to be applied. In years when an Overlay/Replacement project is set to occur sealcoating will typically be applied as soon as possible to surfaces. We typically recommend funding for this component at the same time as the Overlay/Replacement project for cost efficiency with the Vendor.

[Life adjustment given so this cycles with the overlay component.](#)

*Cost Source: Reserve Data Analyst In-House Research & Cost Records

**The Knolls
Component Detail Reports**

Asphalt (Tract F) - Seal Coat & Repairs - 2024

		5,310 sf	@ \$0.40
Asset ID	1046	Asset Actual Cost	\$2,124.00
		Percent Replacement	100%
	Asphalt Surfaces	Future Cost	\$2,253.35
Placed in Service	January 2018		
Useful Life	5		
Adjustment	1		
Replacement Year	2024		
Remaining Life	2		

The primary reason to seal coat is to protect the pavement from the deteriorating effects of sun and water, which causes the asphalt to harden, or oxidize; the pavement turns brittle. The seal coat provides a waterproof membrane which slows the oxidation process and helps the pavement shed water, preventing the water to infiltrate the base material.

Proper drainage is vital for the longevity of asphalt surfaces. Standing water can seep through the asphalt and get into the sub-base and sub-grade below, significantly weakening the structural integrity of the road and causing premature failure.

Oil spills eat through the asphalt seal and should be cleaned up between seal coats. Power washing is recommended annually where needed and treated as an operating expense.

Cost estimate includes crack filling and 2 coats are to be applied. In years when an Overlay/Replacement project is set to occur sealcoating will typically be applied as soon as possible to surfaces. We typically recommend funding for this component at the same time as the Overlay/Replacement project for cost efficiency with the Vendor.

[Slight life adjustment given so this cycles the overlay components.](#)

*Cost Source: Reserve Data Analyst In-House Research & Cost Records

**The Knolls
Component Detail Reports**

Asphalt (Tract G) - Seal Coat & Repairs - 2023

		11,169 sf	@ \$0.40
Asset ID	1030	Asset Actual Cost	\$4,467.60
		Percent Replacement	100%
	Asphalt Surfaces	Future Cost	\$4,601.63
Placed in Service	January 2018		
Useful Life	5		
Replacement Year	2023		
Remaining Life	1		

The primary reason to seal coat is to protect the pavement from the deteriorating effects of sun and water, which causes the asphalt to harden, or oxidize; the pavement turns brittle. The seal coat provides a waterproof membrane which slows the oxidation process and helps the pavement shed water, preventing the water to infiltrate the base material.

Proper drainage is vital for the longevity of asphalt surfaces. Standing water can seep through the asphalt and get into the sub-base and sub-grade below, significantly weakening the structural integrity of the road and causing premature failure.

Oil spills eat through the asphalt seal and should be cleaned up between seal coats. Power washing is recommended annually where needed and treated as an operating expense.

Cost estimate includes crack filling and 2 coats are to be applied. In years when an Overlay/Replacement project is set to occur sealcoating will typically be applied as soon as possible to surfaces. We typically recommend funding for this component at the same time as the Overlay/Replacement project for cost efficiency with the Vendor.

[Life adjustment given so this cycles with the overlay component.](#)

*Cost Source: Reserve Data Analyst In-House Research & Cost Records

**The Knolls
Component Detail Reports**

Asphalt (Tract H) - Seal Coat & Repairs - 2024

		6,732 sf	@ \$0.40
Asset ID	1033	Asset Actual Cost	\$2,692.80
		Percent Replacement	100%
	Asphalt Surfaces	Future Cost	\$2,856.79
Placed in Service	March 2018		
Useful Life	5		
Adjustment	1		
Replacement Year	2024		
Remaining Life	2		

The primary reason to seal coat is to protect the pavement from the deteriorating effects of sun and water, which causes the asphalt to harden, or oxidize; the pavement turns brittle. The seal coat provides a waterproof membrane which slows the oxidation process and helps the pavement shed water, preventing the water to infiltrate the base material.

Proper drainage is vital for the longevity of asphalt surfaces. Standing water can seep through the asphalt and get into the sub-base and sub-grade below, significantly weakening the structural integrity of the road and causing premature failure.

Oil spills eat through the asphalt seal and should be cleaned up between seal coats. Power washing is recommended annually where needed and treated as an operating expense.

Cost estimate includes crack filling and 2 coats are to be applied. In years when an Overlay/Replacement project is set to occur sealcoating will typically be applied as soon as possible to surfaces. We typically recommend funding for this component at the same time as the Overlay/Replacement project for cost efficiency with the Vendor.

[Life adjustment given so this cycles with the overlay component.](#)

*Cost Source: Reserve Data Analyst In-House Research & Cost Records

**The Knolls
Component Detail Reports**

Asphalt (Tract I) - Seal Coat & Repairs - 2024

		4,864 sf	@ \$0.40
Asset ID	1047	Asset Actual Cost	\$1,945.60
		Percent Replacement	100%
	Asphalt Surfaces	Future Cost	\$2,064.09
Placed in Service	March 2018		
Useful Life	5		
Adjustment	1		
Replacement Year	2024		
Remaining Life	2		

The primary reason to seal coat is to protect the pavement from the deteriorating effects of sun and water, which causes the asphalt to harden, or oxidize; the pavement turns brittle. The seal coat provides a waterproof membrane which slows the oxidation process and helps the pavement shed water, preventing the water to infiltrate the base material.

Proper drainage is vital for the longevity of asphalt surfaces. Standing water can seep through the asphalt and get into the sub-base and sub-grade below, significantly weakening the structural integrity of the road and causing premature failure.

Oil spills eat through the asphalt seal and should be cleaned up between seal coats. Power washing is recommended annually where needed and treated as an operating expense.

Cost estimate includes crack filling and 2 coats are to be applied. In years when an Overlay/Replacement project is set to occur sealcoating will typically be applied as soon as possible to surfaces. We typically recommend funding for this component at the same time as the Overlay/Replacement project for cost efficiency with the Vendor.

[Life adjustment given so this cycles with the overlay component.](#)

*Cost Source: Reserve Data Analyst In-House Research & Cost Records

**The Knolls
Component Detail Reports**

Asphalt (Tract M) - Seal Coat & Repairs - 2026

		7,776 sf	@ \$0.40
Asset ID	1028	Asset Actual Cost	\$3,110.40
		Percent Replacement	100%
	Asphalt Surfaces	Future Cost	\$3,500.78
Placed in Service	January 2018		
Useful Life	5		
Adjustment	3		
Replacement Year	2026		
Remaining Life	4		

The primary reason to seal coat is to protect the pavement from the deteriorating effects of sun and water, which causes the asphalt to harden, or oxidize; the pavement turns brittle. The seal coat provides a waterproof membrane which slows the oxidation process and helps the pavement shed water, preventing the water to infiltrate the base material.

Proper drainage is vital for the longevity of asphalt surfaces. Standing water can seep through the asphalt and get into the sub-base and sub-grade below, significantly weakening the structural integrity of the road and causing premature failure.

Oil spills eat through the asphalt seal and should be cleaned up between seal coats. Power washing is recommended annually where needed and treated as an operating expense.

Cost estimate includes crack filling and 2 coats are to be applied. In years when an Overlay/Replacement project is set to occur sealcoating will typically be applied as soon as possible to surfaces. We typically recommend funding for this component at the same time as the Overlay/Replacement project for cost efficiency with the Vendor.

[Life adjustment given so this cycles with the overlay component.](#)

*Cost Source: Reserve Data Analyst In-House Research & Cost Records

**The Knolls
Component Detail Reports**

Asphalt (Tract N) - Seal Coat & Repairs - 2024

		6,528 sf	@ \$0.40
Asset ID	1045	Asset Actual Cost	\$2,611.20
		Percent Replacement	100%
	Asphalt Surfaces	Future Cost	\$2,770.22
Placed in Service	January 2018		
Useful Life	5		
Adjustment	1		
Replacement Year	2024		
Remaining Life	2		

The primary reason to seal coat is to protect the pavement from the deteriorating effects of sun and water, which causes the asphalt to harden, or oxidize; the pavement turns brittle. The seal coat provides a waterproof membrane which slows the oxidation process and helps the pavement shed water, preventing the water to infiltrate the base material.

Proper drainage is vital for the longevity of asphalt surfaces. Standing water can seep through the asphalt and get into the sub-base and sub-grade below, significantly weakening the structural integrity of the road and causing premature failure.

Oil spills eat through the asphalt seal and should be cleaned up between seal coats. Power washing is recommended annually where needed and treated as an operating expense.

Cost estimate includes crack filling and 2 coats are to be applied. In years when an Overlay/Replacement project is set to occur sealcoating will typically be applied as soon as possible to surfaces. We typically recommend funding for this component at the same time as the Overlay/Replacement project for cost efficiency with the Vendor.

[Slight life adjustment given so this cycles the overlay components.](#)

*Cost Source: Reserve Data Analyst In-House Research & Cost Records

**The Knolls
Component Detail Reports**

Asphalt (Tract O) - Seal Coat & Repairs - 2026

		6,222 sf	@ \$0.40
Asset ID	1029	Asset Actual Cost	\$2,488.80
		Percent Replacement	100%
	Asphalt Surfaces	Future Cost	\$2,801.17
Placed in Service	January 2018		
Useful Life	5		
Adjustment	3		
Replacement Year	2026		
Remaining Life	4		

The primary reason to seal coat is to protect the pavement from the deteriorating effects of sun and water, which causes the asphalt to harden, or oxidize; the pavement turns brittle. The seal coat provides a waterproof membrane which slows the oxidation process and helps the pavement shed water, preventing the water to infiltrate the base material.

Proper drainage is vital for the longevity of asphalt surfaces. Standing water can seep through the asphalt and get into the sub-base and sub-grade below, significantly weakening the structural integrity of the road and causing premature failure.

Oil spills eat through the asphalt seal and should be cleaned up between seal coats. Power washing is recommended annually where needed and treated as an operating expense.

Cost estimate includes crack filling and 2 coats are to be applied. In years when an Overlay/Replacement project is set to occur sealcoating will typically be applied as soon as possible to surfaces. We typically recommend funding for this component at the same time as the Overlay/Replacement project for cost efficiency with the Vendor.

[Life adjustment given so this cycles with the overlay component.](#)

*Cost Source: Reserve Data Analyst In-House Research & Cost Records

**The Knolls
Component Detail Reports**

Asphalt (Tract P) - Seal Coat & Repairs - 2022

		12,107 sf	@ \$0.40
Asset ID	1031	Asset Actual Cost	\$4,842.80
		Percent Replacement	100%
	Asphalt Surfaces	Future Cost	\$4,842.80
Placed in Service	January 2018		
Useful Life	5		
Adjustment	-3		
Replacement Year	2022		
Remaining Life	0		

The primary reason to seal coat is to protect the pavement from the deteriorating effects of sun and water, which causes the asphalt to harden, or oxidize; the pavement turns brittle. The seal coat provides a waterproof membrane which slows the oxidation process and helps the pavement shed water, preventing the water to infiltrate the base material.

Proper drainage is vital for the longevity of asphalt surfaces. Standing water can seep through the asphalt and get into the sub-base and sub-grade below, significantly weakening the structural integrity of the road and causing premature failure.

Oil spills eat through the asphalt seal and should be cleaned up between seal coats. Power washing is recommended annually where needed and treated as an operating expense.

Cost estimate includes crack filling and 2 coats are to be applied. In years when an Overlay/Replacement project is set to occur sealcoating will typically be applied as soon as possible to surfaces. We typically recommend funding for this component at the same time as the Overlay/Replacement project for cost efficiency with the Vendor.

[Life adjustment given so this cycles with the overlay component.](#)

*Cost Source: Reserve Data Analyst In-House Research & Cost Records

**The Knolls
Component Detail Reports**

Asphalt (Tract S) - Seal Coat & Repairs - 2024

		3,792 sf	@ \$0.40
Asset ID	1048	Asset Actual Cost	\$1,516.80
		Percent Replacement	100%
	Asphalt Surfaces	Future Cost	\$1,609.17
Placed in Service	March 2018		
Useful Life	5		
Adjustment	1		
Replacement Year	2024		
Remaining Life	2		

The primary reason to seal coat is to protect the pavement from the deteriorating effects of sun and water, which causes the asphalt to harden, or oxidize; the pavement turns brittle. The seal coat provides a waterproof membrane which slows the oxidation process and helps the pavement shed water, preventing the water to infiltrate the base material.

Proper drainage is vital for the longevity of asphalt surfaces. Standing water can seep through the asphalt and get into the sub-base and sub-grade below, significantly weakening the structural integrity of the road and causing premature failure.

Oil spills eat through the asphalt seal and should be cleaned up between seal coats. Power washing is recommended annually where needed and treated as an operating expense.

Cost estimate includes crack filling and 2 coats are to be applied. In years when an Overlay/Replacement project is set to occur sealcoating will typically be applied as soon as possible to surfaces. We typically recommend funding for this component at the same time as the Overlay/Replacement project for cost efficiency with the Vendor.

[Life adjustment given so this cycles with the overlay component.](#)

*Cost Source: Reserve Data Analyst In-House Research & Cost Records

**The Knolls
Component Detail Reports**

Asphalt (Tract T) - Seal Coat & Repairs - 2022

		7,157 sf	@ \$0.40
Asset ID	1036	Asset Actual Cost	\$2,862.80
		Percent Replacement	100%
	Asphalt Surfaces	Future Cost	\$2,862.80
Placed in Service	January 2018		
Useful Life	5		
Adjustment	-3		
Replacement Year	2022		
Remaining Life	0		

The primary reason to seal coat is to protect the pavement from the deteriorating effects of sun and water, which causes the asphalt to harden, or oxidize; the pavement turns brittle. The seal coat provides a waterproof membrane which slows the oxidation process and helps the pavement shed water, preventing the water to infiltrate the base material.

Proper drainage is vital for the longevity of asphalt surfaces. Standing water can seep through the asphalt and get into the sub-base and sub-grade below, significantly weakening the structural integrity of the road and causing premature failure.

Oil spills eat through the asphalt seal and should be cleaned up between seal coats. Power washing is recommended annually where needed and treated as an operating expense.

Cost estimate includes crack filling and 2 coats are to be applied. In years when an Overlay/Replacement project is set to occur sealcoating will typically be applied as soon as possible to surfaces. We typically recommend funding for this component at the same time as the Overlay/Replacement project for cost efficiency with the Vendor.

[Life adjustment given so this cycles with the overlay component.](#)

*Cost Source: Reserve Data Analyst In-House Research & Cost Records

**The Knolls
Component Detail Reports**

Asphalt (Tract D) - Overlay & Seal Coat - 2022

		7,902 sf	@ \$2.50
Asset ID	1001	Asset Actual Cost	\$19,755.00
		Percent Replacement	100%
	Asphalt Surfaces	Future Cost	\$19,755.00
Placed in Service	January 2002		
Useful Life	20		
Replacement Year	2022		
Remaining Life	0		

Appears to be deteriorating at a rate typical of its age. As routine maintenance, keep surface clean, ensure that drains are clean and free flowing, repair cracks and clean oils stains promptly. Best to plan for eventual intervals of resurfacing (overlay).

If properly built, asphalt surfaces will deteriorate from the top down, which only requires the replacement of a layer of asphalt, or preferably the application of a layer on top of the existing asphalt (overlay). The asphalt overlay not only provides a new paving surface for a fraction of the cost of rebuilding the entire surface, but it is the only preventive maintenance technique that adds structural value while extending a pavement's service life. Cost estimate assumes a 2 inch overlay over existing surfaces and a sealcoat.

[Installation date per dated Google Earth aerial maps.](#)

[Note that the most common mistake we see when budgeting for asphalt is pushing out the overlay project too far in time due to the high expense. The typical outcome of this scenario is that Vendors will no longer be able to complete an overlay project due to advanced deterioration and there must be a replacement project completed at approximately twice the expense of an overlay project. Deterioration to asphalt typically rapidly increases in the later years of its useful life so delaying an Overlay project is often an extremely costly budgeting mistake.](#)

[We also suggest consulting with the Asphalt Vendor to determine conclusively if an Overlay appropriate for these shared driveways. Different Vendors will have different opinions as to the benefit of an Overlay versus Replacement of these areas \(replacement of the asphalt and aggregate base - which is typically considerably more expensive than an Overlay\). Should the Client wish to budget for a Replacement project versus an Overlay \(based on the Asphalt Vendor recommendations\) this reserve study or a future update should be revised to reflect that decision.](#)

*Cost Source: Reserve Data Analyst In-House Research & Cost Records

**The Knolls
Component Detail Reports**

Asphalt (Tract E/2005) - Overlay & Seal Coat - 2025

		5,808 sf	@ \$2.50
Asset ID	1008	Asset Actual Cost	\$14,520.00
		Percent Replacement	100%
	Asphalt Surfaces	Future Cost	\$15,866.40
Placed in Service	January 2005		
Useful Life	20		
Replacement Year	2025		
Remaining Life	3		

Appears to be deteriorating at a rate typical of its age. As routine maintenance, keep surface clean, ensure that drains are clean and free flowing, repair cracks and clean oils stains promptly. Best to plan for eventual intervals of resurfacing (overlay).

If properly built, asphalt surfaces will deteriorate from the top down, which only requires the replacement of a layer of asphalt, or preferably the application of a layer on top of the existing asphalt (overlay). The asphalt overlay not only provides a new paving surface for a fraction of the cost of rebuilding the entire surface, but it is the only preventive maintenance technique that adds structural value while extending a pavement's service life. Cost estimate assumes a 2 inch overlay over existing surfaces and a sealcoat.

Installation date per dated [Google Earth aerial maps](#).

Note that the most common mistake we see when budgeting for asphalt is pushing out the overlay project too far in time due to the high expense. The typical outcome of this scenario is that Vendors will no longer be able to complete an overlay project due to advanced deterioration and there must be a replacement project completed at approximately twice the expense of an overlay project. Deterioration to asphalt typically rapidly increases in the later years of its useful life so delaying an Overlay project is often an extremely costly budgeting mistake.

We also suggest consulting with the Asphalt Vendor to determine conclusively if an Overlay appropriate for these shared driveways. Different Vendors will have different opinions as to the benefit of an Overlay versus Replacement of these areas (replacement of the asphalt and aggregate base - which is typically considerably more expensive than an Overlay). Should the Client wish to budget for a Replacement project versus an Overlay (based on the Asphalt Vendor recommendations) this reserve study or a future update should be revised to reflect that decision.

*Cost Source: Reserve Data Analyst In-House Research & Cost Records

**The Knolls
Component Detail Reports**

Asphalt (Tract E/2014) - Overlay & Seal Coat - 2035

		3,216 sf	@ \$2.50
Asset ID	1037	Asset Actual Cost	\$8,040.00
		Percent Replacement	100%
	Asphalt Surfaces	Future Cost	\$11,807.01
Placed in Service	January 2014		
Useful Life	20		
Adjustment	1		
Replacement Year	2035		
Remaining Life	13		

Appears to be deteriorating at a rate typical of its age. As routine maintenance, keep surface clean, ensure that drains are clean and free flowing, repair cracks and clean oils stains promptly. Best to plan for eventual intervals of resurfacing (overlay).

If properly built, asphalt surfaces will deteriorate from the top down, which only requires the replacement of a layer of asphalt, or preferably the application of a layer on top of the existing asphalt (overlay). The asphalt overlay not only provides a new paving surface for a fraction of the cost of rebuilding the entire surface, but it is the only preventive maintenance technique that adds structural value while extending a pavement's service life. Cost estimate assumes a 2 inch overlay over existing surfaces and a sealcoat.

Installation date per dated Google Earth aerial maps.

Note that the most common mistake we see when budgeting for asphalt is pushing out the overlay project too far in time due to the high expense. The typical outcome of this scenario is that Vendors will no longer be able to complete an overlay project due to advanced deterioration and there must be a replacement project completed at approximately twice the expense of an overlay project. Deterioration to asphalt typically rapidly increases in the later years of its useful life so delaying an Overlay project is often an extremely costly budgeting mistake.

We also suggest consulting with the Asphalt Vendor to determine conclusively if an Overlay appropriate for these shared driveways. Different Vendors will have different opinions as to the benefit of an Overlay versus Replacement of these areas (replacement of the asphalt and aggregate base - which is typically considerably more expensive than an Overlay). Should the Client wish to budget for a Replacement project versus an Overlay (based on the Asphalt Vendor recommendations) this reserve study or a future update should be revised to reflect that decision.

*Cost Source: Reserve Data Analyst In-House Research & Cost Records

**The Knolls
Component Detail Reports**

Asphalt (Tract F) - Overlay & Seal Coat - 2034

		5,310 sf	@ \$2.50
Asset ID	1039	Asset Actual Cost	\$13,275.00
		Percent Replacement	100%
	Asphalt Surfaces	Future Cost	\$18,926.98
Placed in Service	January 2014		
Useful Life	20		
Replacement Year	2034		
Remaining Life	12		

Appears to be deteriorating at a rate typical of its age. As routine maintenance, keep surface clean, ensure that drains are clean and free flowing, repair cracks and clean oils stains promptly. Best to plan for eventual intervals of resurfacing (overlay).

If properly built, asphalt surfaces will deteriorate from the top down, which only requires the replacement of a layer of asphalt, or preferably the application of a layer on top of the existing asphalt (overlay). The asphalt overlay not only provides a new paving surface for a fraction of the cost of rebuilding the entire surface, but it is the only preventive maintenance technique that adds structural value while extending a pavement's service life. Cost estimate assumes a 2 inch overlay over existing surfaces and a sealcoat.

[Installation date per dated Google Earth aerial maps.](#)

[Note that the most common mistake we see when budgeting for asphalt is pushing out the overlay project too far in time due to the high expense. The typical outcome of this scenario is that Vendors will no longer be able to complete an overlay project due to advanced deterioration and there must be a replacement project completed at approximately twice the expense of an overlay project. Deterioration to asphalt typically rapidly increases in the later years of its useful life so delaying an Overlay project is often an extremely costly budgeting mistake.](#)

[We also suggest consulting with the Asphalt Vendor to determine conclusively if an Overlay appropriate for these shared driveways. Different Vendors will have different opinions as to the benefit of an Overlay versus Replacement of these areas \(replacement of the asphalt and aggregate base - which is typically considerably more expensive than an Overlay\). Should the Client wish to budget for a Replacement project versus an Overlay \(based on the Asphalt Vendor recommendations\) this reserve study or a future update should be revised to reflect that decision.](#)

*Cost Source: Reserve Data Analyst In-House Research & Cost Records

**The Knolls
Component Detail Reports**

Asphalt (Tract G) - Overlay & Seal Coat - 2038

		11,169 sf	@ \$2.50
Asset ID	1015	Asset Actual Cost	\$27,922.50
		Percent Replacement	100%
	Asphalt Surfaces	Future Cost	\$44,807.41
Placed in Service	January 2018		
Useful Life	20		
Replacement Year	2038		
Remaining Life	16		

Appears to be deteriorating at a rate typical of its age. As routine maintenance, keep surface clean, ensure that drains are clean and free flowing, repair cracks and clean oils stains promptly. Best to plan for eventual intervals of resurfacing (overlay).

If properly built, asphalt surfaces will deteriorate from the top down, which only requires the replacement of a layer of asphalt, or preferably the application of a layer on top of the existing asphalt (overlay). The asphalt overlay not only provides a new paving surface for a fraction of the cost of rebuilding the entire surface, but it is the only preventive maintenance technique that adds structural value while extending a pavement's service life. Cost estimate assumes a 2 inch overlay over existing surfaces and a sealcoat.

[Installation date per dated Google Earth aerial maps.](#)

[Note that the most common mistake we see when budgeting for asphalt is pushing out the overlay project too far in time due to the high expense. The typical outcome of this scenario is that Vendors will no longer be able to complete an overlay project due to advanced deterioration and there must be a replacement project completed at approximately twice the expense of an overlay project. Deterioration to asphalt typically rapidly increases in the later years of its useful life so delaying an Overlay project is often an extremely costly budgeting mistake.](#)

[We also suggest consulting with the Asphalt Vendor to determine conclusively if an Overlay appropriate for these shared driveways. Different Vendors will have different opinions as to the benefit of an Overlay versus Replacement of these areas \(replacement of the asphalt and aggregate base - which is typically considerably more expensive than an Overlay\). Should the Client wish to budget for a Replacement project versus an Overlay \(based on the Asphalt Vendor recommendations\) this reserve study or a future update should be revised to reflect that decision.](#)

*Cost Source: Reserve Data Analyst In-House Research & Cost Records

**The Knolls
Component Detail Reports**

Asphalt (Tract H) - Overlay & Seal Coat - 2029

		6,732 sf	@ \$2.50
Asset ID	1010	Asset Actual Cost	\$16,830.00
		Percent Replacement	100%
	Asphalt Surfaces	Future Cost	\$20,698.78
Placed in Service	January 2009		
Useful Life	20		
Replacement Year	2029		
Remaining Life	7		

Appears to be deteriorating at a rate typical of its age. As routine maintenance, keep surface clean, ensure that drains are clean and free flowing, repair cracks and clean oils stains promptly. Best to plan for eventual intervals of resurfacing (overlay).

If properly built, asphalt surfaces will deteriorate from the top down, which only requires the replacement of a layer of asphalt, or preferably the application of a layer on top of the existing asphalt (overlay). The asphalt overlay not only provides a new paving surface for a fraction of the cost of rebuilding the entire surface, but it is the only preventive maintenance technique that adds structural value while extending a pavement's service life. Cost estimate assumes a 2 inch overlay over existing surfaces and a sealcoat.

[Installation date per dated Google Earth aerial maps.](#)

[Note that the most common mistake we see when budgeting for asphalt is pushing out the overlay project too far in time due to the high expense. The typical outcome of this scenario is that Vendors will no longer be able to complete an overlay project due to advanced deterioration and there must be a replacement project completed at approximately twice the expense of an overlay project. Deterioration to asphalt typically rapidly increases in the later years of its useful life so delaying an Overlay project is often an extremely costly budgeting mistake.](#)

[We also suggest consulting with the Asphalt Vendor to determine conclusively if an Overlay appropriate for these shared driveways. Different Vendors will have different opinions as to the benefit of an Overlay versus Replacement of these areas \(replacement of the asphalt and aggregate base - which is typically considerably more expensive than an Overlay\). Should the Client wish to budget for a Replacement project versus an Overlay \(based on the Asphalt Vendor recommendations\) this reserve study or a future update should be revised to reflect that decision.](#)

*Cost Source: Reserve Data Analyst In-House Research & Cost Records

**The Knolls
Component Detail Reports**

Asphalt (Tract H/2002) - Overlay & Seal Coat - 2042

		3,485 sf	@ \$2.50
Asset ID	1016	Asset Actual Cost	\$8,712.50
		Percent Replacement	100%
	Asphalt Surfaces	Future Cost	\$15,735.74
Placed in Service	March 2022		
Useful Life	20		
Replacement Year	2042		
Remaining Life	20		



Appears to be deteriorating at a rate typical of its age. As routine maintenance, keep surface clean, ensure that drains are clean and free flowing, repair cracks and clean oils stains promptly. Best to plan for eventual intervals of resurfacing (overlay).

If properly built, asphalt surfaces will deteriorate from the top down, which only requires the replacement of a layer of asphalt, or preferably the application of a layer on top of the existing asphalt (overlay). The asphalt overlay not only provides a new paving surface for a fraction of the cost of rebuilding the entire surface, but it is the only preventive maintenance technique that adds structural value while extending a pavement's service life. Cost estimate assumes a 2 inch overlay over existing surfaces and a sealcoat.

Installation date per Client. As of the date of the site inspection the road was still dirt/gravel.

Note that the most common mistake we see when budgeting for asphalt is pushing out the overlay project too far in time due to the high expense. The typical outcome of this scenario is that Vendors will no longer be able to complete an overlay project due to advanced deterioration and there must be a replacement project completed at approximately twice the expense of an overlay project. Deterioration to asphalt typically rapidly increases in the later years of its useful life so delaying an

The Knolls
Component Detail Reports

Asphalt (Tract H/2002) - Overlay & Seal Coat continued...

Overlay project is often an extremely costly budgeting mistake.

We also suggest consulting with the Asphalt Vendor to determine conclusively if an Overlay appropriate for these shared driveways. Different Vendors will have different opinions as to the benefit of an Overlay versus Replacement of these areas (replacement of the asphalt and aggregate base - which is typically considerably more expensive than an Overlay). Should the Client wish to budget for a Replacement project versus an Overlay (based on the Asphalt Vendor recommendations) this reserve study or a future update should be revised to reflect that decision.

*Cost Source: Reserve Data Analyst In-House Research & Cost Records

**The Knolls
Component Detail Reports**

Asphalt (Tract H/2022) - Seal Coat & Repairs - 2027

		3,485 sf	@ \$0.40
Asset ID	1032	Asset Actual Cost	\$1,394.00
		Percent Replacement	100%
	Asphalt Surfaces	Future Cost	\$1,616.03
Placed in Service	March 2022		
Useful Life	5		
Replacement Year	2027		
Remaining Life	5		



The primary reason to seal coat is to protect the pavement from the deteriorating effects of sun and water, which causes the asphalt to harden, or oxidize; the pavement turns brittle. The seal coat provides a waterproof membrane which slows the oxidation process and helps the pavement shed water, preventing the water to infiltrate the base material.

Proper drainage is vital for the longevity of asphalt surfaces. Standing water can seep through the asphalt and get into the sub-base and sub-grade below, significantly weakening the structural integrity of the road and causing premature failure.

Oil spills eat through the asphalt seal and should be cleaned up between seal coats. Power washing is recommended annually where needed and treated as an operating expense.

Cost estimate includes crack filling and 2 coats are to be applied. In years when an Overlay/Replacement project is set to occur sealcoating will typically be applied as soon as possible to surfaces. We typically recommend funding for this component at the same time as the Overlay/Replacement project for cost efficiency with the Vendor.

[Life adjustment given so this cycles with the overlay component.](#)

The Knolls
Component Detail Reports

Asphalt (Tract H/2022) - Seal Coat & Repairs continued...

*Cost Source: Reserve Data Analyst In-House Research & Cost Records

**The Knolls
Component Detail Reports**

Asphalt (Tract I) - Overlay & Seal Coat - 2029

		4,864 sf	@ \$2.50
Asset ID	1049	Asset Actual Cost	\$12,160.00
		Percent Replacement	100%
	Asphalt Surfaces	Future Cost	\$14,955.27
Placed in Service	January 2009		
Useful Life	20		
Replacement Year	2029		
Remaining Life	7		

Appears to be deteriorating at a rate typical of its age. As routine maintenance, keep surface clean, ensure that drains are clean and free flowing, repair cracks and clean oils stains promptly. Best to plan for eventual intervals of resurfacing (overlay).

If properly built, asphalt surfaces will deteriorate from the top down, which only requires the replacement of a layer of asphalt, or preferably the application of a layer on top of the existing asphalt (overlay). The asphalt overlay not only provides a new paving surface for a fraction of the cost of rebuilding the entire surface, but it is the only preventive maintenance technique that adds structural value while extending a pavement's service life. Cost estimate assumes a 2 inch overlay over existing surfaces and a sealcoat.

Installation date per dated [Google Earth aerial maps](#).

Note that the most common mistake we see when budgeting for asphalt is pushing out the overlay project too far in time due to the high expense. The typical outcome of this scenario is that Vendors will no longer be able to complete an overlay project due to advanced deterioration and there must be a replacement project completed at approximately twice the expense of an overlay project. Deterioration to asphalt typically rapidly increases in the later years of its useful life so delaying an Overlay project is often an extremely costly budgeting mistake.

We also suggest consulting with the Asphalt Vendor to determine conclusively if an Overlay appropriate for these shared driveways. Different Vendors will have different opinions as to the benefit of an Overlay versus Replacement of these areas (replacement of the asphalt and aggregate base - which is typically considerably more expensive than an Overlay). Should the Client wish to budget for a Replacement project versus an Overlay (based on the Asphalt Vendor recommendations) this reserve study or a future update should be revised to reflect that decision.

*Cost Source: Reserve Data Analyst In-House Research & Cost Records

**The Knolls
Component Detail Reports**

Asphalt (Tract M) - Overlay & Seal Coat - 2031

		7,776 sf	@ \$2.50
Asset ID	1011	Asset Actual Cost	\$19,440.00
		Percent Replacement	100%
	Asphalt Surfaces	Future Cost	\$25,364.79
Placed in Service	January 2011		
Useful Life	20		
Replacement Year	2031		
Remaining Life	9		

Appears to be deteriorating at a rate typical of its age. As routine maintenance, keep surface clean, ensure that drains are clean and free flowing, repair cracks and clean oils stains promptly. Best to plan for eventual intervals of resurfacing (overlay).

If properly built, asphalt surfaces will deteriorate from the top down, which only requires the replacement of a layer of asphalt, or preferably the application of a layer on top of the existing asphalt (overlay). The asphalt overlay not only provides a new paving surface for a fraction of the cost of rebuilding the entire surface, but it is the only preventive maintenance technique that adds structural value while extending a pavement's service life. Cost estimate assumes a 2 inch overlay over existing surfaces and a sealcoat.

[Installation date per dated Google Earth aerial maps.](#)

[Note that the most common mistake we see when budgeting for asphalt is pushing out the overlay project too far in time due to the high expense. The typical outcome of this scenario is that Vendors will no longer be able to complete an overlay project due to advanced deterioration and there must be a replacement project completed at approximately twice the expense of an overlay project. Deterioration to asphalt typically rapidly increases in the later years of its useful life so delaying an Overlay project is often an extremely costly budgeting mistake.](#)

[We also suggest consulting with the Asphalt Vendor to determine conclusively if an Overlay appropriate for these shared driveways. Different Vendors will have different opinions as to the benefit of an Overlay versus Replacement of these areas \(replacement of the asphalt and aggregate base - which is typically considerably more expensive than an Overlay\). Should the Client wish to budget for a Replacement project versus an Overlay \(based on the Asphalt Vendor recommendations\) this reserve study or a future update should be revised to reflect that decision.](#)

*Cost Source: Reserve Data Analyst In-House Research & Cost Records

**The Knolls
Component Detail Reports**

Asphalt (Tract N) - Overlay & Seal Coat - 2034

		6,528 sf	@ \$2.50
Asset ID	1040	Asset Actual Cost	\$16,320.00
		Percent Replacement	100%
	Asphalt Surfaces	Future Cost	\$23,268.42
Placed in Service	January 2014		
Useful Life	20		
Replacement Year	2034		
Remaining Life	12		

Appears to be deteriorating at a rate typical of its age. As routine maintenance, keep surface clean, ensure that drains are clean and free flowing, repair cracks and clean oils stains promptly. Best to plan for eventual intervals of resurfacing (overlay).

If properly built, asphalt surfaces will deteriorate from the top down, which only requires the replacement of a layer of asphalt, or preferably the application of a layer on top of the existing asphalt (overlay). The asphalt overlay not only provides a new paving surface for a fraction of the cost of rebuilding the entire surface, but it is the only preventive maintenance technique that adds structural value while extending a pavement's service life. Cost estimate assumes a 2 inch overlay over existing surfaces and a sealcoat.

Note that the most common mistake we see when budgeting for asphalt is pushing out the overlay project too far in time due to the high expense. The typical outcome of this scenario is that Vendors will no longer be able to complete an overlay project due to advanced deterioration and there must be a replacement project completed at approximately twice the expense of an overlay project. Deterioration to asphalt typically rapidly increases in the later years of its useful life so delaying an Overlay project is often an extremely costly budgeting mistake.

We also suggest consulting with the Asphalt Vendor to determine conclusively if an Overlay appropriate for these shared driveways. Different Vendors will have different opinions as to the benefit of an Overlay versus Replacement of these areas (replacement of the asphalt and aggregate base - which is typically considerably more expensive than an Overlay). Should the Client wish to budget for a Replacement project versus an Overlay (based on the Asphalt Vendor recommendations) this reserve study or a future update should be revised to reflect that decision.

*Cost Source: Reserve Data Analyst In-House Research & Cost Records

**The Knolls
Component Detail Reports**

Asphalt (Tract O) - Overlay & Seal Coat - 2036

		6,222 sf	@ \$2.50
Asset ID	1014	Asset Actual Cost	\$15,555.00
		Percent Replacement	100%
	Asphalt Surfaces	Future Cost	\$23,528.33
Placed in Service	January 2016		
Useful Life	20		
Replacement Year	2036		
Remaining Life	14		

Appears to be deteriorating at a rate typical of its age. As routine maintenance, keep surface clean, ensure that drains are clean and free flowing, repair cracks and clean oils stains promptly. Best to plan for eventual intervals of resurfacing (overlay).

If properly built, asphalt surfaces will deteriorate from the top down, which only requires the replacement of a layer of asphalt, or preferably the application of a layer on top of the existing asphalt (overlay). The asphalt overlay not only provides a new paving surface for a fraction of the cost of rebuilding the entire surface, but it is the only preventive maintenance technique that adds structural value while extending a pavement's service life. Cost estimate assumes a 2 inch overlay over existing surfaces and a sealcoat.

Installation date per dated [Google Earth aerial maps](#).

Note that the most common mistake we see when budgeting for asphalt is pushing out the overlay project too far in time due to the high expense. The typical outcome of this scenario is that Vendors will no longer be able to complete an overlay project due to advanced deterioration and there must be a replacement project completed at approximately twice the expense of an overlay project. Deterioration to asphalt typically rapidly increases in the later years of its useful life so delaying an Overlay project is often an extremely costly budgeting mistake.

We also suggest consulting with the Asphalt Vendor to determine conclusively if an Overlay appropriate for these shared driveways. Different Vendors will have different opinions as to the benefit of an Overlay versus Replacement of these areas (replacement of the asphalt and aggregate base - which is typically considerably more expensive than an Overlay). Should the Client wish to budget for a Replacement project versus an Overlay (based on the Asphalt Vendor recommendations) this reserve study or a future update should be revised to reflect that decision.

*Cost Source: Reserve Data Analyst In-House Research & Cost Records

**The Knolls
Component Detail Reports**

Asphalt (Tract P) - Overlay & Seal Coat - 2032

		12,107 sf	@ \$2.50
Asset ID	1034	Asset Actual Cost	\$30,267.50
		Percent Replacement	100%
	Asphalt Surfaces	Future Cost	\$40,676.99
Placed in Service	January 2012		
Useful Life	20		
Replacement Year	2032		
Remaining Life	10		

Appears to be deteriorating at a rate typical of its age. As routine maintenance, keep surface clean, ensure that drains are clean and free flowing, repair cracks and clean oils stains promptly. Best to plan for eventual intervals of resurfacing (overlay).

If properly built, asphalt surfaces will deteriorate from the top down, which only requires the replacement of a layer of asphalt, or preferably the application of a layer on top of the existing asphalt (overlay). The asphalt overlay not only provides a new paving surface for a fraction of the cost of rebuilding the entire surface, but it is the only preventive maintenance technique that adds structural value while extending a pavement's service life. Cost estimate assumes a 2 inch overlay over existing surfaces and a sealcoat.

Installation date per dated [Google Earth aerial maps](#).

Note that the most common mistake we see when budgeting for asphalt is pushing out the overlay project too far in time due to the high expense. The typical outcome of this scenario is that Vendors will no longer be able to complete an overlay project due to advanced deterioration and there must be a replacement project completed at approximately twice the expense of an overlay project. Deterioration to asphalt typically rapidly increases in the later years of its useful life so delaying an Overlay project is often an extremely costly budgeting mistake.

We also suggest consulting with the Asphalt Vendor to determine conclusively if an Overlay appropriate for these shared driveways. Different Vendors will have different opinions as to the benefit of an Overlay versus Replacement of these areas (replacement of the asphalt and aggregate base - which is typically considerably more expensive than an Overlay). Should the Client wish to budget for a Replacement project versus an Overlay (based on the Asphalt Vendor recommendations) this reserve study or a future update should be revised to reflect that decision.

*Cost Source: Reserve Data Analyst In-House Research & Cost Records

**The Knolls
Component Detail Reports**

Asphalt (Tract S) - Overlay & Seal Coat - 2029

		3,792 sf	@ \$2.50
Asset ID	1050	Asset Actual Cost	\$9,480.00
		Percent Replacement	100%
	Asphalt Surfaces	Future Cost	\$11,659.20
Placed in Service	January 2009		
Useful Life	20		
Replacement Year	2029		
Remaining Life	7		

Appears to be deteriorating at a rate typical of its age. As routine maintenance, keep surface clean, ensure that drains are clean and free flowing, repair cracks and clean oils stains promptly. Best to plan for eventual intervals of resurfacing (overlay).

If properly built, asphalt surfaces will deteriorate from the top down, which only requires the replacement of a layer of asphalt, or preferably the application of a layer on top of the existing asphalt (overlay). The asphalt overlay not only provides a new paving surface for a fraction of the cost of rebuilding the entire surface, but it is the only preventive maintenance technique that adds structural value while extending a pavement's service life. Cost estimate assumes a 2 inch overlay over existing surfaces and a sealcoat.

Installation date per dated [Google Earth aerial maps](#).

Note that the most common mistake we see when budgeting for asphalt is pushing out the overlay project too far in time due to the high expense. The typical outcome of this scenario is that Vendors will no longer be able to complete an overlay project due to advanced deterioration and there must be a replacement project completed at approximately twice the expense of an overlay project. Deterioration to asphalt typically rapidly increases in the later years of its useful life so delaying an Overlay project is often an extremely costly budgeting mistake.

We also suggest consulting with the Asphalt Vendor to determine conclusively if an Overlay appropriate for these shared driveways. Different Vendors will have different opinions as to the benefit of an Overlay versus Replacement of these areas (replacement of the asphalt and aggregate base - which is typically considerably more expensive than an Overlay). Should the Client wish to budget for a Replacement project versus an Overlay (based on the Asphalt Vendor recommendations) this reserve study or a future update should be revised to reflect that decision.

*Cost Source: Reserve Data Analyst In-House Research & Cost Records

**The Knolls
Component Detail Reports**

Asphalt (Tract T) - Overlay & Seal Coat - 2032

		7,157 sf	@ \$2.50
Asset ID	1035	Asset Actual Cost	\$17,892.50
		Percent Replacement	100%
	Asphalt Surfaces	Future Cost	\$24,046.02
Placed in Service	January 2012		
Useful Life	20		
Replacement Year	2032		
Remaining Life	10		

Appears to be deteriorating at a rate typical of its age. As routine maintenance, keep surface clean, ensure that drains are clean and free flowing, repair cracks and clean oils stains promptly. Best to plan for eventual intervals of resurfacing (overlay).

If properly built, asphalt surfaces will deteriorate from the top down, which only requires the replacement of a layer of asphalt, or preferably the application of a layer on top of the existing asphalt (overlay). The asphalt overlay not only provides a new paving surface for a fraction of the cost of rebuilding the entire surface, but it is the only preventive maintenance technique that adds structural value while extending a pavement's service life. Cost estimate assumes a 2 inch overlay over existing surfaces and a sealcoat.

Installation date per dated [Google Earth aerial maps](#).

Note that the most common mistake we see when budgeting for asphalt is pushing out the overlay project too far in time due to the high expense. The typical outcome of this scenario is that Vendors will no longer be able to complete an overlay project due to advanced deterioration and there must be a replacement project completed at approximately twice the expense of an overlay project. Deterioration to asphalt typically rapidly increases in the later years of its useful life so delaying an Overlay project is often an extremely costly budgeting mistake.

We also suggest consulting with the Asphalt Vendor to determine conclusively if an Overlay appropriate for these shared driveways. Different Vendors will have different opinions as to the benefit of an Overlay versus Replacement of these areas (replacement of the asphalt and aggregate base - which is typically considerably more expensive than an Overlay). Should the Client wish to budget for a Replacement project versus an Overlay (based on the Asphalt Vendor recommendations) this reserve study or a future update should be revised to reflect that decision.

*Cost Source: Reserve Data Analyst In-House Research & Cost Records

**The Knolls
Component Detail Reports**

Concrete Surfaces (mailboxes) - Replace - 2033

		90 sf	@ \$15.25
Asset ID	1007	Asset Actual Cost	\$1,372.50
		Percent Replacement	100%
	Concrete Surfaces	Future Cost	\$1,899.86
Placed in Service	January 1993		
Useful Life	40		
Replacement Year	2033		
Remaining Life	11		



This component is for the replacement of the concrete surfaces on site. No widespread damage or deterioration noted at time of site visit. We recommend repairing trip hazards immediately to limit liability.

*Cost Source: Reserve Data Analyst In-House Research & Cost Records

**The Knolls
Component Detail Reports**

Culverts (Tract D) - Replace - 2042

		36 lf	@ \$60.00
Asset ID	1004	Asset Actual Cost	\$2,160.00
		Percent Replacement	100%
	Culverts	Future Cost	\$3,901.20
Placed in Service	January 2002		
Useful Life	40		
Replacement Year	2042		
Remaining Life	20		



Culverts are (corrugated metal/corrugated PVC) piping. Please note that the estimated cost is for replacement of the existing culverts with corrugated PVC piping and does not consider any need for future installation of new culverts as it is assumed the roads/culvert system was designed appropriately and with adequate drainage. Should new culverts be installed at a future date they can then be added to updates to this reserve study.

[Only culverts located under asphalt roadways maintained by the Client have been included in this measurement. Culverts at private driveways are reportedly the Lot Owner's responsibility.](#)

*Cost Source: Reserve Data Analyst In-House Research & Cost Records

**The Knolls
Component Detail Reports**

Culverts (Tract F) - Replace - 2058

		50 lf	@ \$60.00
Asset ID	1018	Asset Actual Cost	\$3,000.00
		Percent Replacement	100%
	Culverts	Future Cost	\$8,694.83
Placed in Service	January 2018		
Useful Life	40		
Replacement Year	2058		
Remaining Life	36		



Culverts are (corrugated metal/corrugated PVC) piping. Please note that the estimated cost is for replacement of the existing culverts with corrugated PVC piping and does not consider any need for future installation of new culverts as it is assumed the roads/culvert system was designed appropriately and with adequate drainage. Should new culverts be installed at a future date they can then be added to updates to this reserve study.

[Only culverts located under asphalt roadways maintained by the Client have been included in this measurement. Culverts at private driveways are reportedly the Lot Owner's responsibility.](#)

*Cost Source: Reserve Data Analyst In-House Research & Cost Records

**The Knolls
Component Detail Reports**

Culverts (Tract I) - Replace - 2049

		41 lf	@ \$60.00
Asset ID	1021	Asset Actual Cost	\$2,460.00
		Percent Replacement	100%
	Culverts	Future Cost	\$5,464.37
Placed in Service	January 2009		
Useful Life	40		
Replacement Year	2049		
Remaining Life	27		



Culverts are (corrugated metal/corrugated PVC) piping. Please note that the estimated cost is for replacement of the existing culverts with corrugated PVC piping and does not consider any need for future installation of new culverts as it is assumed the roads/culvert system was designed appropriately and with adequate drainage. Should new culverts be installed at a future date they can then be added to updates to this reserve study.

Only culverts located under asphalt roadways maintained by the Client have been included in this measurement. Culverts at private driveways are reportedly the Lot Owner's responsibility.

*Cost Source: Reserve Data Analyst In-House Research & Cost Records

**The Knolls
Component Detail Reports**

Culverts (Tract M) - Replace - 2054

		41 lf	@ \$60.00
Asset ID	1024	Asset Actual Cost	\$2,460.00
		Percent Replacement	100%
	Culverts	Future Cost	\$6,334.70
Placed in Service	January 2014		
Useful Life	40		
Replacement Year	2054		
Remaining Life	32		



Culverts are (corrugated metal/corrugated PVC) piping. Please note that the estimated cost is for replacement of the existing culverts with corrugated PVC piping and does not consider any need for future installation of new culverts as it is assumed the roads/culvert system was designed appropriately and with adequate drainage. Should new culverts be installed at a future date they can then be added to updates to this reserve study.

Only culverts located under asphalt roadways maintained by the Client have been included in this measurement. Culverts at private driveways are reportedly the Lot Owner's responsibility.

*Cost Source: Reserve Data Analyst In-House Research & Cost Records

**The Knolls
Component Detail Reports**

Culverts (Tract N) - Replace - 2056

		41 lf	@ \$60.00
Asset ID	1023	Asset Actual Cost	\$2,460.00
		Percent Replacement	100%
	Culverts	Future Cost	\$6,720.48
Placed in Service	January 2016		
Useful Life	40		
Replacement Year	2056		
Remaining Life	34		



Culverts are (corrugated metal/corrugated PVC) piping. Please note that the estimated cost is for replacement of the existing culverts with corrugated PVC piping and does not consider any need for future installation of new culverts as it is assumed the roads/culvert system was designed appropriately and with adequate drainage. Should new culverts be installed at a future date they can then be added to updates to this reserve study.

Only culverts located under asphalt roadways maintained by the Client have been included in this measurement. Culverts at private driveways are reportedly the Lot Owner's responsibility.

*Cost Source: Reserve Data Analyst In-House Research & Cost Records

**The Knolls
Component Detail Reports**

Culverts (Tract O) - Replace - 2049

		41 lf	@ \$60.00
Asset ID	1022	Asset Actual Cost	\$2,460.00
		Percent Replacement	100%
	Culverts	Future Cost	\$5,464.37
Placed in Service	January 2009		
Useful Life	40		
Replacement Year	2049		
Remaining Life	27		



Culverts are (corrugated metal/corrugated PVC) piping. Please note that the estimated cost is for replacement of the existing culverts with corrugated PVC piping and does not consider any need for future installation of new culverts as it is assumed the roads/culvert system was designed appropriately and with adequate drainage. Should new culverts be installed at a future date they can then be added to updates to this reserve study.

Only culverts located under asphalt roadways maintained by the Client have been included in this measurement. Culverts at private driveways are reportedly the Lot Owner's responsibility.

*Cost Source: Reserve Data Analyst In-House Research & Cost Records

**The Knolls
Component Detail Reports**

Culverts (Tract P) - Replace - 2052

		188 lf	@ \$70.00
Asset ID	1017	Asset Actual Cost	\$13,160.00
		Percent Replacement	100%
	Culverts	Future Cost	\$31,942.77
Placed in Service	January 2012		
Useful Life	40		
Replacement Year	2052		
Remaining Life	30		



Culverts are corrugated metal piping. Please note that the estimated cost is for replacement of the existing culverts with corrugated PVC piping and does not consider any need for future installation of new culverts as it is assumed the roads/culvert system was designed appropriately and with adequate drainage. Should new culverts be installed at a future date they can then be added to updates to this reserve study.

Only culverts located under asphalt roadways maintained by the Client have been included in this measurement. Culverts at private driveways are reportedly the Lot Owner's responsibility.

*Cost Source: Reserve Data Analyst In-House Research & Cost Records

**The Knolls
Component Detail Reports**

Culverts (Tract S) - Replace - 2049

		41 lf	@ \$60.00
Asset ID	1019	Asset Actual Cost	\$2,460.00
		Percent Replacement	100%
	Culverts	Future Cost	\$5,464.37
Placed in Service	January 2009		
Useful Life	40		
Replacement Year	2049		
Remaining Life	27		



Culverts are (corrugated metal/corrugated PVC) piping. Please note that the estimated cost is for replacement of the existing culverts with corrugated PVC piping and does not consider any need for future installation of new culverts as it is assumed the roads/culvert system was designed appropriately and with adequate drainage. Should new culverts be installed at a future date they can then be added to updates to this reserve study.

Only culverts located under asphalt roadways maintained by the Client have been included in this measurement. Culverts at private driveways are reportedly the Lot Owner's responsibility.

*Cost Source: Reserve Data Analyst In-House Research & Cost Records

**The Knolls
Component Detail Reports**

Culverts (Tract T) - Replace - 2052

		27 lf	@ \$60.00
Asset ID	1020	Asset Actual Cost	\$1,620.00
		Percent Replacement	100%
	Culverts	Future Cost	\$3,932.16
Placed in Service	January 2012		
Useful Life	40		
Replacement Year	2052		
Remaining Life	30		



Culverts are (corrugated metal/corrugated PVC) piping. Please note that the estimated cost is for replacement of the existing culverts with corrugated PVC piping and does not consider any need for future installation of new culverts as it is assumed the roads/culvert system was designed appropriately and with adequate drainage. Should new culverts be installed at a future date they can then be added to updates to this reserve study.

Only culverts located under asphalt roadways maintained by the Client have been included in this measurement. Culverts at private driveways are reportedly the Lot Owner's responsibility.

*Cost Source: Reserve Data Analyst In-House Research & Cost Records

**The Knolls
Component Detail Reports**

Lights (landscape) - Replace - 2033

		4 ea	@ \$150.00
Asset ID	1005	Asset Actual Cost	\$600.00
		Percent Replacement	100%
	Lighting	Future Cost	\$830.54
Placed in Service	January 2013		
Useful Life	20		
Replacement Year	2033		
Remaining Life	11		



Landscape lights appear to be deteriorating at a rate typical of their age. We recommend budgeting for replacement at the timeframe indicated due to constant exposure to the elements and deterioration of the component over time.

This expense is only for replacement of the fixtures, not to rewire the whole system. It is assumed the wiring was appropriately installed and buried to a depth that has minimized the deterioration/damage to it. Should it be determined that the wiring also need to be redone this can be added into an update to this reserve study.

*Cost Source: Reserve Data Analyst In-House Research & Cost Records

**The Knolls
Component Detail Reports**

Signage (entry monument) - Replace - 2028

			2 ea @ \$15,000.00
Asset ID	1006	Asset Actual Cost	\$30,000.00
		Percent Replacement	100%
	Signage	Future Cost	\$35,821.57
Placed in Service	January 1993		
Useful Life	35		
Replacement Year	2028		
Remaining Life	6		



Entry monument appears to be deteriorating at a rate typical of its age and is typically a long life component. As routine maintenance, inspect regularly, clean/touch up for appearance and complete minor repairs, paid from operating budget. Reserve funding for eventual replacement of this monument recommended to maintain a consistent, quality appearance.

*Cost Source: Client Historical Records – Inflated to Current Estimate

The Knolls

Definitions, Disclosure & Calculations Appendixes

Definitions Index

Abbreviations

ea = each	FY = fiscal year	If or lin ft = lineal feet	ls = lump sum
RL = remaining life	sf or sq ft = square feet	sy or sq yd= square yard	
UL = useful life	100 sq ft = 1 square)	% = percent	

1. **Allocation %**
A percentage of the total Reserve Allocation. See - Calculations Appendix
2. **Allocation Increase Rate**
Expressed as a percentage rate that reflects the increase of a given year's Reserve Allocation over the previous year's Reserve Allocation and utilized only in the Cash Flow Analysis.
3. **Base Year**
The year in which the governing documents were recorded and/or the buildings constructed (average year may be used for phases built over a period) and utilized to determine the approximate complex age. This parameter is provided for information only.
4. **Common Interest Development (CID)**
Defined by shared property and restrictions in the deed on use of the property. A CID is governed by a mandatory Association of homeowners which administers the property and enforces its restrictions. The following are two typical CID subdivision types:
 - Condominium- In general, the recorded owner has title to the unit (or airspace). They are typically responsible for the interior of their individual unit/garage, all utilities that service their unit and any exclusive use common area associated with their unit.
 - Planned Development- In general, the recorded owner has title to the lot. They are typically responsible for the maintenance and repair of any structure or improvement located on their respective lot.

**Note- CIDs & subdivision types are general and may not apply or may vary, based on your local.*

8. **Current Cost**
The current fiscal year's estimated cost to maintain, replace, repair, or restore a reserve component to its original functional condition. Sources utilized to obtain estimates may include: the association, its contractors, other contractors, specialists and independent consultants, the State department of Real Estate (or other state department as applicable), construction pricing and estimating manuals, and the preparer's own experience and/or database of costs formulated in the preparation of other reserve study reports. See - Calculations Appendix.
9. **Disbursement / Expenditures**
The funds expected to be paid or expended from the Reserve Balance.
10. **Extended Cost**
See - Calculations Appendix.
11. **Fiscal Year (FY)**
A twelve-month period for which an organization plans the use of its funds. There are two distinct types:
 - Calendar Fiscal Year (ends December 31)
 - Non-Calendar Fiscal Year (does not end December 31)
12. **Full Funded Balance (FFB)**
Total Accrued Depreciation. An indicator against which the FY Start Balance can be compared. The balance that is in direct proportion to the fraction of life "used up" of the cost. See - Calculations Appendix.
13. **Funding Goal**
Independent of methodology utilized, the following represents the basic categories of funding plan goals:
 - Baseline Funding- Maintaining a Net Reserve Balance above zero for length of the study.
 - Full Funding- Maintaining a Reserve Balance at or near Percent Funded of 100%.
 - Statutory Funding- Maintaining a specified Reserve Balance/Percent Funded per statutes.
 - Threshold Funding- Establishing and maintaining a set predetermined Reserve Balance or Percent Funded.
14. **Funding Method (or Funding Plan)**
An Association's plan to provide income to the reserve fund to offset expected disbursements from that fund. The following represents two (2) basic methodologies used to fund reserves:
 - Cash Flow Method- A method of developing a reserve funding plan where allocations to the reserve fund are designed to offset the variable annual expenditures from the reserve fund. Different reserve funding plans are tested against the anticipated schedule of reserve expenses until the desired funding goal is achieved.
 - Component Method- The component method develops a reserve-funding plan where the total contribution is based on the sum of contributions for individual components. The component method is the more conservative (typically higher reserve account balance) of the two funding options and assures that the association will achieve and maintain an ideal level of reserves over time. This method also allows for computations on individual components in the analysis. However, this method has also limitations with respects to variations in actual useful life of components and is much more time intensive to accurately follow this funding strategy.

The Knolls

Definitions, Disclosure & Calculations Appendixes

15. **Funding Plan**
The combined Funding Method & Funding Goal.
16. **FY End Balance (same as next FY Start Balance)**
The balance in reserves at end of applicable fiscal year. See - Calculations Appendix.
17. **FY Start Balance (same as prior year FY End Balance)**
The balance in reserves at start of applicable fiscal year.
18. **Inflation Rate**
Expressed as a percentage rate that reflects the increase of this year's costs over the previous year's costs. Also known as a 'cost increase factor'.
19. **Interest Earned**
The annual earning of reserve funds that have been deposited into certificates of deposit (CDs), money market accounts or other investment vehicles. See - Calculations Appendix.
20. **Interest Rate**
The ratio of the gain received from an investment and the investment over a period (usually one year), prior to any federal or state-imposed taxes.
21. **Interest Rate (net effective)**
The ratio of the gain received from an investment and the investment over a period (usually one year), after any federal or state-imposed taxes.
22. **Levels of Service**
Level 1 Reserve Study (Full or Comprehensive)- A Reserve Study in which the following five Reserve Study tasks are performed:
- Component Inventory
 - Condition Assessment (based upon on-site visual observations)
 - Life and Valuation Estimates
 - Fund Status
 - Funding Plan
- Level 2 Reserve Study** (Update, With-Site-Visit/On-Site Review)- A Reserve Study update in which the following five tasks are performed:
- Component Inventory (from prior study)
 - Condition Assessment (based upon on-site visual observations)
 - Life and Valuation Estimates
 - Fund Status
 - Funding Plan
- *Note- Updates are reliant on the validity of prior Reserve Studies.
- Level 3 Reserve Study** (Update, No-Site-Visit/Off-Site Review)- A Reserve Study update with no on-site visual observations in which the following three tasks are performed:
- Component Inventory (from prior study)
 - Condition Assessment (based upon on-site visual observations)
 - Life and Valuation Estimates
 - Fund Status
 - Funding Plan
- *Note- Updates are reliant on the validity of prior Reserve Studies.
23. **Percent Funded**
A comparison of the Fully Funded Balance (ideal balance) to the Fiscal Year Actual Start Balance expressed as a percentage and used to provide a 'general indication' of reserve strength. See Calculations Appendix.
24. **Quantity**
The number or amount of a reserve component or subcomponent.
25. **Remaining Life (RL)**
The estimated time, in years, that a reserve component can be expected to continue to serve its intended function.
26. **Replacement %**
A percentage of the total replacement for a reserve component or subcomponent. This parameter is normally 100%.
27. **Reserve Allocation**
The amount to be annually budgeted towards reserves based on a Funding Plan.
28. **Reserve Component (or subcomponent)**
The individual line items in the reserve study, developed or updated in the physical analysis that form the building blocks of the reserve study. They typically are:
- an association responsibility,
 - with limited useful life expectancies,
 - predictable remaining useful life expectancies,
 - above a minimum threshold cost,
 - and, as required by statutes.
29. **Restoration**
Defined as to bring back to an unimpaired or improved condition. General types follow:
- Building- In general, funding utilized to defray the cost (in whole or part) of major building components that are not necessarily included as line items and may include termite treatment.
 - Irrigation System- In general, funding utilized to defray the cost (in whole or part) of sectional irrigation system areas including modernization to improve water management.
 - Landscape- In general, funding utilized to defray the cost (in whole or part) of sectional landscape areas including modernization to improve water conservation & drainage.
30. **Risk Factor (Percent Funded)**
The associated risk of the availability of reserves to fund expenditures by interpreting the Percent Funded parameter as follows:
- 70% and above - LOW
 - 30% to 70% - MODERATE
 - 30% and below - HIGH
- *High risk is associated with a higher risk for reliance on special assessments, loans and litigation.
31. **Unit Cost**
The current fiscal year's estimated cost to maintain, replace, repair, or restore an individual "unit of measure" of a reserve component or subcomponent to its original functional condition.
32. **Unit of Measure**
A system of units used in measuring a reserve component or subcomponent (i.e. each, lineal feet, square feet, etc.).
33. **Useful Life (UL)**
Total Useful Life or Depreciable Life. The estimated time, in years, that a reserve item can be expected to serve its intended function if properly constructed and maintained in its present application or installation.

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Disclosures Index

The below disclosures are in accordance with reserve study standards developed by CAI, APRA and statutory requirements.

1. Items Beyond the Scope of this Report

This reserve study has been conducted to outline a financial plan for the proper and adequate budgeting of the Association component repair and/or replacement. This report should not be utilized for any other purpose and should not be considered or deemed appropriate or reliable for, but not limited to, any of the following:

- Building or land appraisals for any purpose
- State or local zoning ordinance violations
- Building code violations
- Soils conditions, soils contamination or geological stability of site
- Engineering analysis or structural stability of site
- Air quality, asbestos, electromagnetic radiation, formaldehyde, lead, mercury, or radon
- Water quality or other environmental hazards
- Invasions by termites and any or all other destroying organisms or insects
- Damage or destruction due to pests, birds, bats or animals to buildings or site
- Adequacy or efficiency of any system or component on site
- Specifically excluded reserve items
- Septic systems and septic tanks
- Buried or concealed portions of swing pools, pool liners, Jacuzzis/spas or similar items
- Items concealed by signs, carpets or other things
- Missing or omitted information supplied by the Association for the purposes of reserve study preparation
- Hidden improvements such as sewer lines, water lines, or other buried or concealed items

2. Qualifications

We are a professional business in the market to prepare Reserve Studies. Our Reserve Analysts' are either designated with or working towards the RS and/or PRA designations which are given by the two leading industry organizations which require peer review, continuing education and provide resources to stay on top of industry trends.

3. Invasive Testing

Estimated life expectancies and life cycles are based upon conditions that were readily accessible and visible at the time of the site visit. We did not destroy any landscape work, building walls, or perform any methods of intrusive/invasive testing during the site visit. In these cases, information may have been obtained by contacting the contractor or vendor that has worked on the property. The physical analysis performed during this site visit is not intended to be exhaustive in nature and may include representative sampling.

4. Conflicts of Interests

As the preparer of this reserve study; the Reserve Analyst certifies that we do not have any vested interests, financial interests, or other interests that would cause a conflict of interest in the preparation of this reserve study.

5. Representative Sampling

This study and report is based on observations of the visible and apparent conditions of a reasonable representative sampling of the property's elements at the time of inspection. Although due diligence was performed during the inspection phase, we make no representations regarding latent or concealed defects that may exist. The inspection did not constitute any invasive investigations and was not intended to determine whether applicable building components, systems, or equipment are adequate or in compliance with any specific or commonly accepted design requirement, building code, or specification. Such tasks as material testing, engineering analysis, destructive testing, or performance testing of building systems, components, or equipment are not considered as part of the scope of work, nor are they considered by the reserve study industry standard.

6. Reliance on Client & Vendor Data Provided

Information provided to the preparer of a reserve study by an official representative of the association regarding financial, historical, physical, quantitative or reserve project issues will be deemed reliable by the preparer. A reserve study will reflect information provided to the preparer of the reserve study. The total of actual or projected reserves required as presented in the reserve study is based upon information provided that was not audited. A reserve study is not intended to be used to perform an audit, an analysis of quality, a forensic study or a background check of historical records. A site visit conducted in conjunction with a reserve study should not be deemed to be a project audit or quality inspection. The results of this study are based on the independent opinion of the preparer and their experience and research during their career in preparing Reserve Studies. In addition, the opinions of experts on certain components have been gathered through research within their industry and with client's actual vendors. There is no implied warranty or guarantee regarding our life and cost estimates/predictions. There is no implied warranty or guarantee in any of our work product. Our results and findings will vary from another preparer's results and findings. A Reserve Study is necessarily a work in progress and subsequent Reserve Studies will vary from prior studies.

7. Update to Prior Reserve Studies

Level II Studies: Quantities of major components as reported in previous reserve studies are deemed to be accurate and reliable. The reserve study relies upon the validity of previous reserve studies. Level III Studies: In addition to the above we have not visited the property when completing a Level III "No Site Visit" study. Therefore, we have not verified the current condition of the common area components. It is assumed all prior study component information related to quantities, condition assessments, useful life and remaining useful life are accurate.

8. Assumption Regarding Ongoing Maintenance

The projected life expectancy of the major components and the funding needs of the reserves of the association are based upon the association performing appropriate routine and preventative maintenance for each major component. Failure to perform such maintenance can negatively impact the remaining useful life of the major components.

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9. Assumptions Regarding Defect in Design or Construction
This Reserve Study assumes that all construction assemblies and components identified herein are built properly and are free from defects in materials and/or workmanship. Defects can lead to reduced useful life and premature failure. It was not the intent of this Reserve Study to inspect for or to identify defects. If defects exist, repairs should be made so that the construction components and assemblies at the community reach their full and expected useful lives. We have assumed all components have been properly built and will reach normal, typical life expectancies. In general, a reserve study is not intended to identify or fund for construction defects. We did not and will not look for or identify construction defects during our site visit.

10. Basis of Cost Estimates
Pricing used for the repair or replacement costs indicated in this report are derived from a variety of sources, e.g., recent contractor bids received by subject property HOA or prior clients, construction product vendor catalogs, internet, or national construction cost estimating publishers (RS Means / Marshall & Swift). The material and labor pricing provided are estimates and have been augmented, as necessary, to account for specific site conditions (i.e. material handling, scaffolding, etc.). The total expenses represent a useful guideline whereby reserve funds can be accumulated for future repairs and replacements. The estimated repair and replacement expenses, unless otherwise noted, do not include allowances for architectural, engineering, or permitting fees.

11. Limitations on Report Use
A reserve study is not intended to be used to perform an audit, an analysis of quality, a forensic study or a background check of historical records. A site visit conducted in conjunction with a reserve study should not be deemed to be a project audit or quality inspection. This Reserve Study is provided as an aid for planning purposes and not as an accounting tool. Since it deals with events yet to take place, there is no assurance that the results enumerated within it will, in fact, occur as described. Additionally, other unanticipated expenses may arise that are not included within this reserve study. This reserve study should be reviewed carefully. It may not include all common and limited common element components that will require major maintenance, repair, or replacement in future years, and may not include regular contributions to a reserve account for the cost of such maintenance, repair, or replacement. The failure to include a component in a reserve study, or to provide contributions to a reserve account for a component, may, under some circumstances, require you to pay on demand as a special assessment your share of common expenses for the cost of major maintenance, repair, or replacement of a reserve component.

12. State Specific Disclosures

Washington State

RCW 64.34.382 & WA State RCW 64.38.070

This reserve study includes all aspects required per WA State RCW requirements outlined in the Washington Condominium Act and the Homeowners' Association Act.

This reserve study should be reviewed carefully. It may not include all common and limited common element components that will require major maintenance, repair, or replacement in future years, and may not include regular contributions to a reserve account for the cost of such maintenance, repair, or replacement. The failure to include a component in a reserve study, or to provide contributions to a reserve account for a component, may, under some circumstances, require you to pay on demand as a special assessment your share of common expenses for the cost of major maintenance, repair, or replacement of a reserve component.

Washington State

Disclosures Required by RCW 64.90.550.

This Reserve Study meets all requirements of the Washington Uniform Common Interest Ownership Act.

- a) This Reserve Study was prepared with the assistance of a reserve study professional and that professional was independent;
- b) This Reserve Study includes all information required by RCW 64.90.550 Reserve Study – Contents; and
- c) This reserve study should be reviewed carefully. It may not include all common and limited common element components that will require major maintenance, repair, or replacement in future years, and may not include regular contributions to a reserve account for the cost of such maintenance, repair, or replacement. The failure to include a component in a reserve study, or to provide contributions to a reserve account for a component, may, under some circumstances, require the association to (1) defer major maintenance, repair, or replacement, (2) increase future reserve contributions, (3) borrow funds to pay for major maintenance, repair, or replacement, or (4) impose special assessments for the cost of major maintenance, repair, or replacement.

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Calculations Index

1. Allocation % =

Reserve Allocation (Component Method) / Total Reserve Allocation (Component Method) x 100

2. Current Cost =

Extended Cost (for a component without subcomponents)
 i. -or-
 Sum of subcomponent Extended Costs (for a component with subcomponents)

3. Extended Cost =

Quantity x Unit Cost x Replacement % x (1+Contingency Rate)

4. FY End Balance (same as Next FY Start Balance) =

Initial or current fiscal year-

Current Reserve Balance + Interest Earned +
 Reserve Allocation to Fund + Special Assessment
 to
 Fund + Funds Due from Operating - Approved
 Funds to Disburse - Disbursements

Subsequent fiscal years-

FY Start Balance + Interest Earned + (Reserve Allocation (from previous year) x (1 + Reserve Allocation Rate) - Disbursements

5. Interest Earned=

Initial fiscal year-

Current Reserve Balance x (Interest Rate (net effective)/12 x Number of funding months remaining in current fiscal year)

Subsequent fiscal years-

FY Start Balance x Interest Rate (net effective)

Accumulation Function and Amount Function

<https://www.reservedataanalyst.com/int>

6. Percent Funded =

(Reserve Account Balance / Fully Funded Balance) x 100

7. Reserve Allocation (Component Method) =

Current Cost / Useful Life

8. Fully Funded Balance (FFB) =

Basic Fully Funded

Fully Funded = Age/Useful Life * Cost

Note that "Age" is adjusted for each year of the study (e.g. one year later also equates to an Age which is one year greater). We do not use the age from the first year of the study for future FFB calculations as this would not appropriately address the deterioration of the component over time (i.e. when providing future projections one can make a valid assumption that a component will deteriorate by one year if providing projections for one year later).

Cost (component project cost) is inflated for each year based on an annual inflation rate (compounding) given in this reserve study (e.g., a paint project "cost" may be \$1,000 in Year 1 of the study but will have a "cost" of \$1,030 in Year 2 of the study, and \$1,060.90 in Year 3 of the study, when utilizing an annual 3% inflation rate). Note that we do not use the "cost" (current project cost) from the first year of the study for future year's FFB calculations as this approach does not consider the impact of inflation on the project cost and will usually result in a significantly underfunded reserve account over time. This is also known as the Inflation Adjusted Cost Method

***Unless specifically noted otherwise we have utilized the above FFB formula and methodology in this reserve study.*

Community Association Institute FFB Formula

The Community Association Institute published the below FFB formula to account for inflation and interest earned on deposit ("present value" is based on the current cost only - with no inflation of the project cost) the writers of 'RESERVE FUNDS: How & Why community Associations Invest Assets' published:

$$Basic_FF = (Age / Useful Life) * Present Value$$

$$CAI_FF = Basic_FF$$

$$+ Basic_FF / (1 + interest)^{Remaining Life}$$

$$- Basic_FF / (1 + inflation)^{Remaining Life}$$

More mathematical information can be found at the following link: www.reservedataanalyst.com/math

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Component Index**

Asset ID	Description	Replacement	Page
1027	Asphalt (Tract D) - Seal Coat & Repairs	2027	39
1025	Asphalt (Tract E/all areas) - Seal Coat & Repairs	2030	40
1046	Asphalt (Tract F) - Seal Coat & Repairs	2024	41
1030	Asphalt (Tract G) - Seal Coat & Repairs	2023	42
1033	Asphalt (Tract H) - Seal Coat & Repairs	2024	43
1047	Asphalt (Tract I) - Seal Coat & Repairs	2024	44
1028	Asphalt (Tract M) - Seal Coat & Repairs	2026	45
1045	Asphalt (Tract N) - Seal Coat & Repairs	2024	46
1029	Asphalt (Tract O) - Seal Coat & Repairs	2026	47
1031	Asphalt (Tract P) - Seal Coat & Repairs	2022	48
1048	Asphalt (Tract S) - Seal Coat & Repairs	2024	49
1036	Asphalt (Tract T) - Seal Coat & Repairs	2022	50
1001	Asphalt (Tract D) - Overlay & Seal Coat	2022	51
1008	Asphalt (Tract E/2005) - Overlay & Seal Coat	2025	52
1037	Asphalt (Tract E/2014) - Overlay & Seal Coat	2035	53
1039	Asphalt (Tract F) - Overlay & Seal Coat	2034	54
1015	Asphalt (Tract G) - Overlay & Seal Coat	2038	55
1010	Asphalt (Tract H) - Overlay & Seal Coat	2029	56
1016	Asphalt (Tract H/2002) - Overlay & Seal Coat	2042	57
1032	Asphalt (Tract H/2022) - Seal Coat & Repairs	2027	59
1049	Asphalt (Tract I) - Overlay & Seal Coat	2029	61
1011	Asphalt (Tract M) - Overlay & Seal Coat	2031	62
1040	Asphalt (Tract N) - Overlay & Seal Coat	2034	63
1014	Asphalt (Tract O) - Overlay & Seal Coat	2036	64
1034	Asphalt (Tract P) - Overlay & Seal Coat	2032	65
1050	Asphalt (Tract S) - Overlay & Seal Coat	2029	66
1035	Asphalt (Tract T) - Overlay & Seal Coat	2032	67
1007	Concrete Surfaces (mailboxes) - Replace	2033	68
1004	Culverts (Tract D) - Replace	2042	69
1018	Culverts (Tract F) - Replace	2058	70
1021	Culverts (Tract I) - Replace	2049	71
1024	Culverts (Tract M) - Replace	2054	72
1023	Culverts (Tract N) - Replace	2056	73
1022	Culverts (Tract O) - Replace	2049	74
1017	Culverts (Tract P) - Replace	2052	75
1019	Culverts (Tract S) - Replace	2049	76

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Asset ID	Description	Replacement	Page
1020	Culverts (Tract T) - Replace	2052	77
1005	Lights (landscape) - Replace	2033	78
1006	Signage (entry monument) - Replace	2028	79
	Total Funded Assets	39	
	Total Unfunded Assets	<u>0</u>	
	Total Assets	39	