

J. JOHNSON ENGINEERING, INC.

RESERVE STUDY

**The Groves at the Villages of Wetherington
Condominium Association**
Wooster, Ohio

Study Completed By:
J. R. Johnson Engineering, Inc.
6673 Eastland Road
Middleburg Hts., Ohio 44130
(440) 234-9972

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EXECUTIVE SUMMARY

At the request of The Groves at the Villages of Wetherington Condominium Association Board, J. R. Johnson Engineering has conducted a Reserve Study for The Groves at the Villages of Wetherington Condominium Association located in Wooster, Ohio. The results of our study are identified in this report. We conducted our visual, noninvasive inspection for this study on March 19, 2015. This Reserve study is meant to be used as a tool to assist with the planning of future capital expenditures.

The Groves at the Villages of Wetherington Condominiums consist of 52 units in 13 buildings. The building exteriors are made up of vinyl siding and stone veneer with shingle roofs. Four of the buildings were built in 2004 followed by three in 2005 and six in 2006. There are thirteen Reserve Components that will possibly need to be repaired or replaced over the next 30 years. According to the Association's Management the Reserve Fund Balance, as of December 2015 is projected to be \$108,260. If the Association were to continue to fund Reserves at its 2015 budgeted amount of \$9,000, the Reserve Fund would potentially incur a shortage by 2029. The association has previously funded the Reserve Fund as high as \$17,000 per year; however, even at this amount the Reserve Fund would potentially incur a shortage by 2029. This Reserve Study's funding goal is to keep the Reserve Fund Balance above an adequate threshold.

Although there are several ways to fund capital repairs such as special assessments and loans, we recommend Level Monthly Reserve Assessments with annual adjustments for inflation. This method allows for the equal distribution of repair costs amongst all of the Condominium. This method also assists in maintaining an acceptable overall property appearance.

This Reserve Study utilizes the Cash Flow Method to determine the appropriate Reserve Funding Plan. The Reserve Funding Plan calculates the adequate Reserve Contributions required to maintain the year-end balance above a defined threshold, through a 30-year Cash Flow Analysis. National standards require a Reserve Component to have a "Predictable Remaining Useful Life." Beyond thirty years the accuracy of estimates deteriorates drastically due to large variances in construction inflation and component lifecycles. The Cash Flow Analysis takes numerous factors into account such as current Reserve Funds, future interest earnings, inflation, increases in construction costs and planned Reserve Expenditures.

Our historical costs and published sources, (i.e., R.S. Means, National Renovation and Insurance Repair Estimator and National Construction Estimator Software) were used to establish the current and future costs of replacement.

The Groves at the Villages of Wetherington Condominium Association has budgeted \$9,000 for Reserve Contributions in 2015. We recommend that The Groves at the Villages of Wetherington Condominium Association adopt a reserve budget of \$24,992 in 2016. We also recommend an annual Reserve Contribution increase of 4.0% in order to stay ahead of inflation. The recommended year 2016 Reserve Contribution of \$24,992 is a \$15,992 increase from the previously budgeted amount. By adopting this increase contributions will grow to create an adequate Reserve Fund to cover future major Reserve Expenditures as shown in Exhibit B "*Tables*." Exhibit B "*Tables*" Funding Balance Sheet shows the recommended annual Reserve Contributions and projected year-end balances.

EXECUTIVE SUMMARY (CON'T)

Reserve Studies should be updated every two to three years in order to account for the numerous variables that can affect Reserve Contributions. In addition, construction costs and technology as well as inflation and interest rates can change affecting Reserve Contributions either positively or negatively. Therefore, in order to ensure adequate Reserve Funds and avoid Excessive Reserve Funds this Reserve Study should be updated every two to three years.

The following is the Reserve Funding Plan that we are recommending based on our site visit and analysis. Keep in mind that we did not investigate any liabilities against the existing property.

MEANS AND METHODS

In this report, the following factors were used for our analysis:

- In order to compute the 30-year Reserve Funding Plan the Cash Flow Method was used.
- The identification of each Reserve Component along with the anticipated year of replacement as shown in Exhibit B: "Tables".
- Local equipment, material and labor costs.
- Both current and future Reserve Component replacement costs.
- Reserve Component removal costs as part of the cost of replacement.
- Historical data and local economic conditions are considered in estimating future inflation rates for construction costs in Wooster, Ohio at an annual inflation rate of 1.71%.
- How the current and past maintenance practices of The Groves at the Villages of Wetherington Condominium Association effects the remaining useful life of the major common area expenditures.
- Necessary operating budget expenses have not been included in the Funding Plan. It is our understanding that unless specifically noted, the costs for ongoing normal maintenance of Reserve Components or property elements are included in the future operating budgets. The Groves at the Villages of Wetherington Condominium Association should continue to include these costs of maintenance in the operating budget.
- Since this study does not include providing financial or investment advice we assumed that the Association should be able to achieve on average a 2.17% return on their investment of the yearly reserve balance. We recommend that the Association seek the advice of a financial and investment advisor.

CLASSIFICATION OF RESERVE COMPONENTS

Our investigation included Reserve Components as described in the Associations Declaration. We segregated the property elements based on the responsibility for repair and replacement.

There are thirteen Reserve Components that have been determined to require Reserve Expenditures over the next 30 years. In Exhibit B: "Tables", the "Component Replacement Table" identifies the components as follows:

The Groves at the Villages of Wetherington

- Concrete Drives
- Catch Basins
- Concrete Driveways
- Concrete Sidewalks
- Vinyl Fence
- Security Lights
- Security Lights Replaced in 2015
- Security Lights Replaced in 2014
- Misc. Signs
- Vinyl Siding
- Stone Veneer
- Shingle Roofs
- Gutters and Downspouts

In addition, to the above listed Reserve Components, we have identified the following Long-Lived Property Elements, which do not have "Predictable Remaining Useful Life" expectancies:

- Electrical Systems
- Storm Sewers
- Sanitary Sewers
- Water Pipes

Long-Lived Property Elements (with unpredictable remaining useful lives) occasionally need to be repaired due to unforeseen circumstances, defective construction or deterioration from normal use. These typically infrequent repairs should be funded through the Association's Operating Budget in order to avoid constantly adjusting Reserve Contributions.

Certain Reserve Components require money from the Operating Budget for ongoing maintenance. Reserve Components requiring Operating Budget money for ongoing maintenance are listed below. The following items should be included in The Groves at the Villages of Wetherington Operating Budget and have not been included in the Reserve Study Update.

- General Maintenance to Reserve Components
- Landscaping Maintenance, Mowing and Mulching
- Minor Paving Repairs
- Miscellaneous repairs that are typically funded through the operating budget.

COMPONENT ASSESSMENT

We recommend that the Board review the Reserve Components on an annual basis in order to confirm whether the Components should be funded through the Reserve Fund or through the Operating and Maintenance Budget.

The Component Assessment portion of this Reserve Study describes each Reserve Component. These explanations provide descriptions of the Reserve Component, highlight certain conditions and problems, and cite the expected year or years of replacement.

Concrete Drives - The existing Concrete Drives appear to be in good overall condition, as shown in Exhibit A: *"Photographs"*. Concrete has a useful life of 25 to 30 years before portions of it need to be replaced. However, these components are not typically completely replaced at one time, but rather on an as needed basis. Therefore, we have projected these components to be replaced on a cyclical basis of 12% every five years or 72% over 30 years. The replacements are projected to begin in 2029. This will allow for partial replacement of the components on an as needed basis to repair damage caused by snow removal, freeze thaw cycles, etc.

Catch Basins - The existing Catch Basins appear to be in average overall condition, as shown in Exhibit A: *"Photographs"*. The Catch Basins were installed in 2009. Catch Basins have a useful life of approximately 25-30 years. These components are not typically completely replaced at one time, but rather on an as needed basis. Therefore, based on their current age and condition, we have projected the repair/replacement of two of the Catch Basins every five years starting in 2034.

Concrete Driveways - The existing Concrete Driveways appear to be in good overall condition, as shown in Exhibit A: *"Photographs"*. Concrete has a useful life of 25 to 30 years before portions of it need to be replaced. However, these components are not typically completely replaced at one time, but rather on an as needed basis. Therefore, we have projected these components to be replaced on a cyclical basis of 12% every five years or 72% over 30 years. The replacements are projected to begin in 2029. This will allow for partial replacement of the components on an as needed basis to repair damage caused by snow removal, freeze thaw cycles, etc.

Concrete Sidewalks - The existing Concrete Sidewalks appear to be in good overall condition, as shown in Exhibit A: *"Photographs"*. Concrete has a useful life of 25 to 30 years before portions of it need to be replaced. However, these components are not typically completely replaced at one time, but rather on an as needed basis. Therefore, we have projected these components to be replaced on a cyclical basis of 12% every five years or 72% over 30 years. The replacements are projected to begin in 2029. This will allow for partial replacement of the components on an as needed basis to repair damage caused by snow removal, freeze thaw cycles, etc.

Vinyl Fence - The existing Vinyl Fence appears to be in good condition based on its age, as shown in Exhibit A: *"Photographs"*. According to the board the Vinyl Fence was installed in 2007. Vinyl Fence has a useful life of up to 40 years. Therefore, based on its current age and condition we have projected the replacement of the Vinyl Fence in 2047.

COMPONENT ASSESSMENT (CON'T)

Security Lights - The existing Security Lights appear to be in good condition based on their age, as shown in Exhibit A: *"Photographs"*. According to the Board the association started a Security Light replacement program in 2014. Five (5) lights were replaced in 2014 and eleven (11) are projected to be replaced in 2015. Security Lights have a useful life of approximately 20 to 25 years. Therefore, based on the Board's projections, we have projected the replacement of the remaining thirty-six (36) security lights over the next three years.

Misc. Signs - The existing Misc. Signs appear to be in good condition based on their age, as shown in Exhibit A: *"Photographs"*. According to the Board the Signs were installed in 2007. Signs have a useful life of approximately 20 years. Therefore, based on their current age and condition, we have projected the replacement of the Misc. Signs in 2027.

Vinyl Siding - The existing Vinyl Siding appears to be in good condition based on its age, as shown in Exhibit A: *"Photographs"*. Vinyl Siding has a useful life of up to 40 years. Therefore, based on its current age and condition, we have projected the replacement of the Vinyl Siding over a four year period starting in 2044.

Stone Veneer - The Stone Veneer appears to be in good condition, as shown in Exhibit A: *"Photographs"*. Stone Veneer has a useful life of approximately 30 years. However, Stone Veneer is not typically completely repointed at one time, but rather on an as needed basis. Therefore, we have projected these components to be repointed on a cyclical basis of 7% every five years or 40% over 30 years. The repointing is projected to begin in 2034.

Shingle Roofs - The Association has 13 buildings with Shingle Roofs. The Roofs appear to be in average condition based on our visual inspection from the ground, as shown in Exhibit A: *"Photographs"*. Shingles have a useful life of 20 - 25 years in Wooster, Ohio. Based on the age and condition of the Roofs, we have projected the replacement of the Roofs over a four-year period beginning in 2027. The Association should fund any repairs prior to the complete replacement of the Roofs through the operating budget.

Gutters and Downspouts - The existing Gutters and Downspouts appear to be in average condition, as shown in Exhibit A: *"Photographs"*. Gutters and Downspouts have the same useful life as roofs, which is typically 20 - 25 years. Therefore, we have projected the replacement of the Gutters and Downspouts in conjunction with the Shingle Roofs over a four-year period beginning in 2027.

A Reserve Study Update should be performed every two to three years. A Reserve Study only captures a snapshot in time and can not take all of the constantly changing variables into account, which is why periodic updates are necessary. The following is a list of variables that can affect the accuracy of a Reserve Study.

- Replacements or repairs that are performed prior to or after their projected time frame.
- Changes in construction inflation rates.
- Advancement in construction technology.
- Changes in the Associations return on investment of Reserves.

COMPONENT ASSESSMENT (CON'T)

- Adding or deleting components that are funded through Reserves.
- Changes in routine maintenance procedures.

EXHIBIT DESCRIPTIONS

By performing periodic updates changes in these variables are taken into account, and adjustments are made in the updated Reserve Study. By budgeting for future Reserve Studies the Board shows that it is planning on continuing to fulfill its financial responsibility to maintain commonly owned property and to appropriately fund reserves.

Exhibit A: "*Photographs*" documents the conditions of various property components as of the date of our visual inspection, March 19, 2015. References to these photographs are made throughout the Reserve Study.

Exhibit B: "*Tables*" contains two tables. The first table The "*Component Replacement Table*", includes an inventory of the Reserve Components, Reserve Expenditures, estimates of future costs and anticipated replacement times during the next 30 years. It includes a 1.71% annual percentage rate of inflation. The table arranges the following information in columns:

- For reference purposes item numbers have been provided.
- Reserve Component describes each component.
- Useful Life shows each component's typical useful life.
- Remaining Useful Life shows the remaining useful life of each component.
- Current Cost Per Replacement displays the cost of each replacement or partial replacement in "today's" dollars.
- Quantity Per Replacement displays the quantity of each replacement or partial replacement.
- Columns 2016-2046 show the years of replacement and estimated cost of replacement adjusted for inflation.

The second table of data in Exhibit B: "*Tables*" is the Reserve Funding Plan. This table includes the Association's current funding plan, and the proposed Cashflow model. Each of which assumes a 2.17% return on reserve investments, 1.71% inflation and a 4.0% yearly increase in Reserve Contributions. The table arranges the following list in rows for both the current funding plan and the proposed funding plan (Cash Flow Method).

- Starting Balance of Reserves.

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- Annual Deposit into the Reserve Fund.

EXHIBIT DESCRIPTIONS (CON'T)

- Projected Interest earned on Reserves.
- Expenditures which are planned.
- Planned Year-end balance of the Reserve Fund.
- Cumulative Expenditures
- Cumulative Receipts

Exhibit C: "*Graphs*" contains three graphs based on the numerical data found in the Reserve Funding Plan. The graphs illustrate our recommendations and observations pertaining to reserve balances, recommended annual Reserve Contributions and Reserve Expenditures during the next 30 years.

The graph titled "Current Association Funding" compares the Associations current funding methods, cumulative receipts and year-end balances against cumulative expenditures.

The second graph titled "Proposed Funding Method" compares the proposed funding method cumulative receipts and year-end balances against cumulative expenditures.

The third graph titled "Funding Method Comparison" compares the cumulative receipts of the current and proposed funding methods against the projected cumulative expenditures.

DEFINITIONS

Cash Flow Method - A method of calculating Reserve Contributions where contributions to the reserve fund are designed to offset the variable annual expenditures from the reserve fund. Different Reserve Funding Plans are tested against the anticipated schedule of reserve expenses until the desired funding goal is achieved.

Current Cost of Replacement - That amount required today derived from the quantity of a *Reserve Component* and its unit cost to replace or repair a Reserve Component using the most current technology and construction materials, duplicating the productive utility of the existing property at current local market prices for materials, labor and manufactured equipment, contractors' overhead, profit and fees, but without provisions for building permits, over time, bonuses for labor or premiums for material and equipment. We include removal and disposal costs in the cost of replacement where applicable.

Funding Goal - The stated purpose of this Reserve Study to determine the adequate, not excessive, future annual, reasonable *Reserve Contributions* to fund future *Reserve Expenditures*.

Future Cost of Replacement - *Reserve Expenditure* derived from the inflated current cost of replacement or current cost of replacement as defined above, with consideration given to the effects of inflation on local market rates for materials, labor and equipment.

Long-Lived Property Component - Property component of Association responsibility not likely to require capital repair or replacement during the next 30 years with an unpredictable remaining Useful Life beyond the next 30 years.

Remaining Useful Life - The estimated remaining functional or useful time in years of a *Reserve Component* based on its age, condition and maintenance.

Reserve Component - Property elements with: 1) Association responsibility; 2) limited Useful Life expectancies; 3) predictable Remaining Useful Life expectancies; and 4) a replacement cost above a minimum threshold.

Reserve Component Inventory - Line Items in Exhibit B *Reserve Expenditures* that identify a *Reserve Component*.

Reserve Contribution - An amount of money set aside or *Reserve Assessment* contributed to a *Reserve Fund* for future *Reserve Expenditures* to repair or replace *Reserve Components*.

Reserve Expenditure - *Future Cost of Replacement of & Reserve Component*

Reserve Fund Status - The accumulated amount of reserves in dollars at a given point in time, i.e., at year-end.

Reserve Funding Plan - The portion of the Reserve Study identifying the *Cash Flow Analysis* and containing the recommended *Reserve Contributions* and projected annual expenditures, interest earned and reserve balances.

DEFINITIONS (CON'T)

Reserve Study - A budget planning tool that identifies the current status of the *Reserve Fund* and a stable and equitable *Funding Plan* to offset the anticipated future major common area expenditures.

Useful Life - The anticipated total time in years that a *Reserve Component* is expected to serve its intended function in its present application or installation.

Definitions are derived from the standards set forth by the Community Associations Institute (CAI) representing America's 250,000 condominium, Condominium associations and cooperatives, and the Association of Professional Reserve Analysts, setting the standards of care for reserve study practitioners.

Exhibit A: Photographs



Exhibit A: Photographs

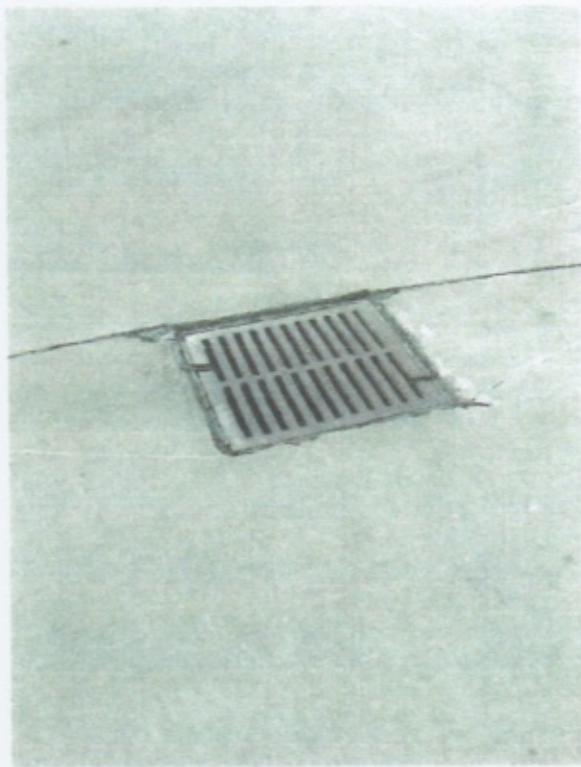


Exhibit A: Photographs

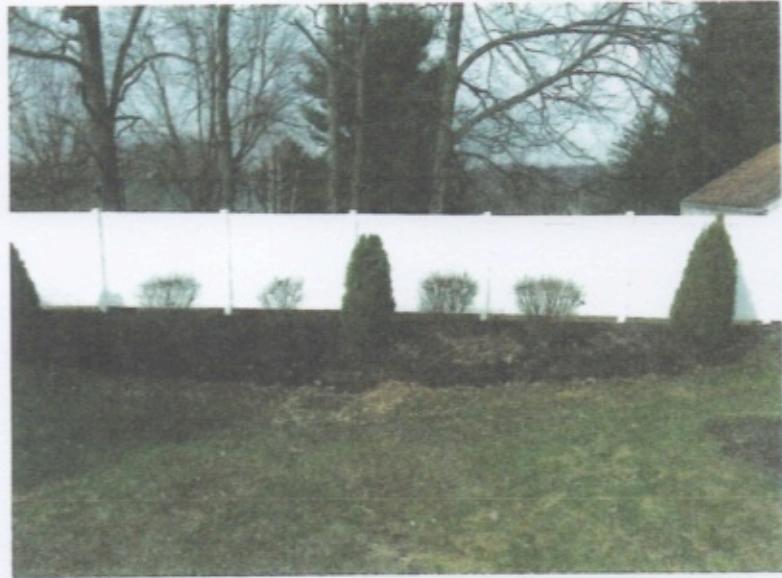


Exhibit A: Photographs



EXHIBIT B: TABLES
COMPONENT REPLACEMENT TABLE

RESERVE COMPONENT	Useful Life	Remaining Useful Life	Current Cost	Per Replacement			2016	2017	2018	2019	2020	2021
				QTY.	Per	Replacement						
1 CONCRETE DRIVES	25-30	14	\$68,131	5,745	SF							
2 CATCH BASINS	25-30	19	\$2,000	2	EA							
3 CONCRETE DRIVEWAYS	25-30	14	\$26,442	3,297	SF							
4 CONCRETE SIDEWALKS	25-30	14	\$3,721	673	SF							
5 VINYL FENCE	40	32	\$20,277	493	LF							
6 SECURITY LIGHTS	20-25	1	\$2,400	12	EA							
7 SECURITY LIGHTS REPLACED IN 2015	20-25	23	\$2,200	11	EA							
8 SECURITY LIGHTS REPLACED IN 2014	20-25	22	\$1,000	5	EA							
9 MISC. SIGNS	20	12	\$3,720	12	EA							
10 VINYL SIDING	40	29	\$39,077	10,916	SF							
11 STONE VENEER	30	19	\$8,302	1,436	SF							
12 SHINGLE ROOFS	20-25	12	\$101,277	281	SQ							
13 GUTTERS AND DOWNSPOUTS	20-25	12	\$7,533	912	LF							
Totals				\$2,400		\$2,441	\$2,483	\$0	\$0	\$0		

EXHIBIT B: TABLES
COMPONENT REPLACEMENT TABLE

RESERVE COMPONENT	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
1 CONCRETE DRIVES												
2 CATCH BASINS												
3 CONCRETE DRIVEWAYS												
4 CONCRETE SIDEWALKS												
5 VINYL FENCE												
6 SECURITY LIGHTS												
7 SECURITY LIGHTS REPLACED IN 2015												
8 SECURITY LIGHTS REPLACED IN 2014												
9 MISC. SIGNS												
10 VINYL SIDING												
11 STONE VENEER												
12 SHINGLE ROOFS												
13 GUTTERS AND DOWNSPOUTS												
Totals	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

EXHIBIT B: TABLES
COMPONENT REPLACEMENT TABLE

RESERVE COMPONENT	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046
1 CONCRETE DRIVES	\$92,447											\$109,529	
2 CATCH BASINS	\$2,714											\$3,215	
3 CONCRETE DRIVEWAYS	\$35,879											\$42,508	
4 CONCRETE SIDEWALKS	\$5,049											\$5,982	
5 VINYL FENCE													
6 SECURITY LIGHTS													
7 SECURITY LIGHTS REPLACED IN 2015													
8 SECURITY LIGHTS REPLACED IN 2014													
9 MISC. SIGNS													
10 VINYL SIDING													
11 STONE VENEER													
12 SHINGLE ROOFS													
13 GUTTERS AND DOWNSPOUTS													
Totals	\$147,353	\$0	\$0	\$1,428	\$3,195	\$163,935	\$3,605	\$3,667	\$0	\$0	\$237,402	\$63,896	\$64,986

EXHIBIT B: TABLES
FUNDING BALANCE SHEET

		Yearly Balance											
		2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027											
		Yearly Percentage Increase											
<u>Historical Funding</u>													
Inflation	1.71%												
Proposed Interest	2.17%												
Minimum Threshold Percentage	1.50%												
Proposed Yearly Contribution Increase	4.00%												
Current Interest	2.17%												
Current Yearly Contribution Increase	4.00%												
Starting Balance	\$108,260												
Annual Deposit	4.00%	\$9,000	\$9,360	\$9,734	\$10,124	\$10,529	\$10,950	\$11,388	\$11,843	\$12,317	\$12,810	\$13,322	\$13,855
Interest on Reserves	2.17%	\$2,349	\$2,543	\$2,749	\$3,250	\$3,549	\$3,863	\$4,194	\$4,542	\$4,908	\$5,293	\$5,697	\$6,093
Expenditures	\$2,400	\$2,441	\$2,483	\$2,500	\$2,540	\$2,580	\$2,620	\$2,660	\$2,700	\$2,740	\$2,780	\$2,821	\$2,869
Year End Balance	\$117,209	\$126,672	\$136,672	\$149,762	\$163,540	\$178,039	\$193,290	\$209,328	\$226,187	\$243,906	\$262,451	\$282,521	\$302,469
Cumulative Expenditures	\$2,400	\$2,441	\$2,483	\$2,500	\$2,540	\$2,580	\$2,620	\$2,660	\$2,700	\$2,740	\$2,780	\$2,821	\$2,869
Cumulative Receipts	\$119,609	\$131,513	\$143,996	\$157,085	\$170,864	\$185,303	\$200,614	\$216,052	\$233,511	\$251,229	\$269,844	\$289,396	
<u>Cash Flow Method (Recommended)</u>													
Starting Balance	\$108,260												
Annual Deposit	4.00%	\$24,992	\$25,982	\$27,031	\$28,113	\$29,237	\$30,407	\$31,623	\$32,888	\$34,203	\$35,572	\$36,944	\$38,474
Interest on Reserves	2.17%	\$2,349	\$2,890	\$3,464	\$4,072	\$4,771	\$5,509	\$6,288	\$7,111	\$7,978	\$8,894	\$9,859	\$10,875
Expenditures	\$2,400	\$2,441	\$2,483	\$2,500	\$2,540	\$2,580	\$2,620	\$2,660	\$2,700	\$2,740	\$2,780	\$2,821	\$2,869
Year End Balance	\$133,201	\$159,643	\$187,655	\$219,840	\$253,848	\$289,763	\$327,674	\$367,673	\$409,855	\$454,320	\$501,173	\$541,920	\$577,858
Minimum Funding Level	\$23,650	\$24,005	\$24,365	\$24,730	\$25,101	\$25,478	\$25,860	\$26,248	\$26,641	\$27,041	\$27,447	\$27,854	
Cumulative Expenditures	\$2,400	\$2,441	\$2,483	\$2,500	\$2,540	\$2,580	\$2,620	\$2,660	\$2,700	\$2,740	\$2,780	\$2,821	\$2,869
Cumulative Receipts	\$135,601	\$164,484	\$194,979	\$227,164	\$261,172	\$297,087	\$334,986	\$374,986	\$417,178	\$461,644	\$508,497	\$557,847	
Inflation	1.71%												
Average Yearly Expenditure	\$43,230												

EXHIBIT B: TABLES
FUNDING BALANCE SHEET

EXHIBIT B: TABLES
FUNDING BALANCE SHEET

EXHIBIT C: GRAPHS
CURRENT ASSOCIATION FUNDING \$9,000

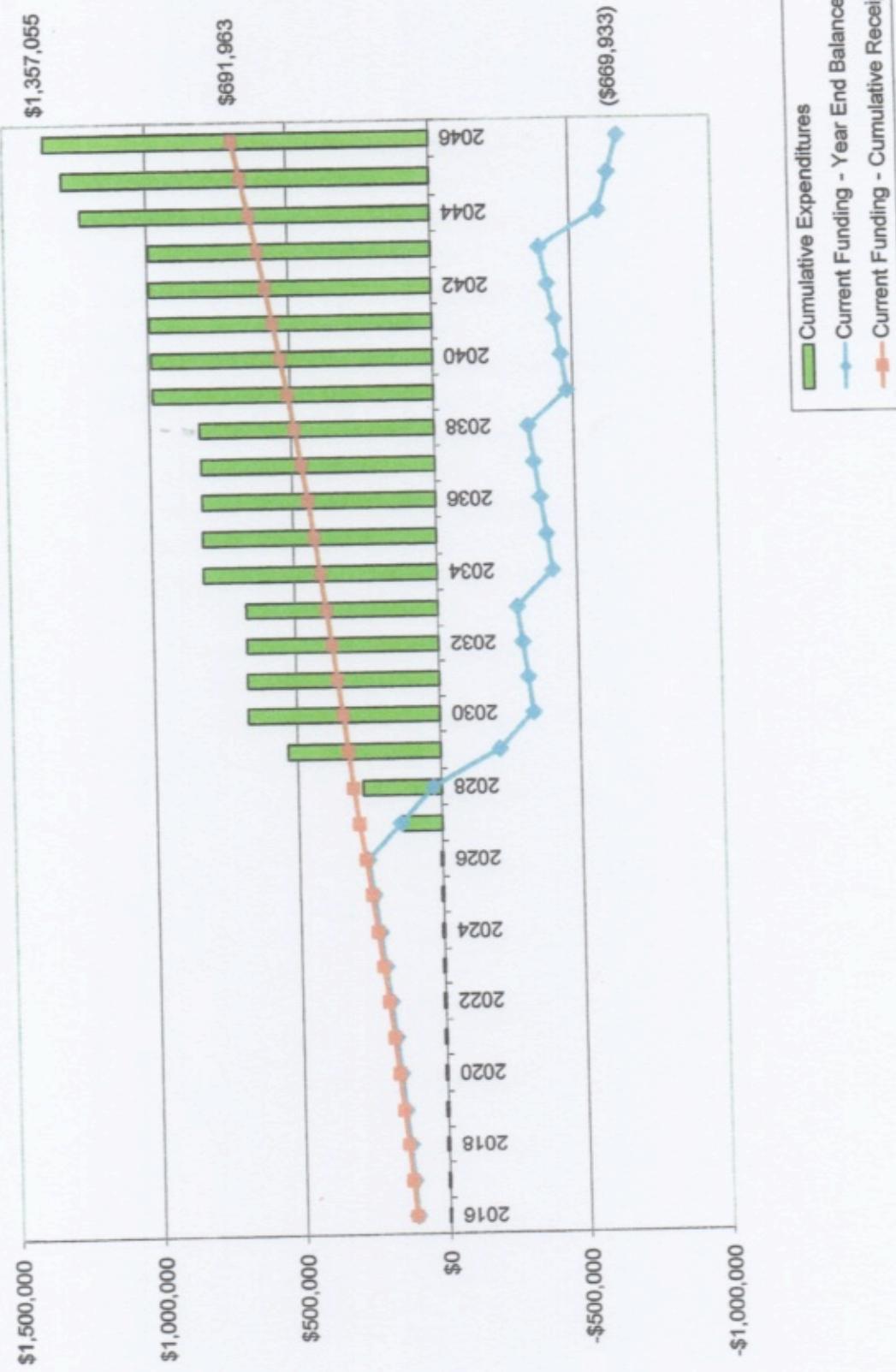
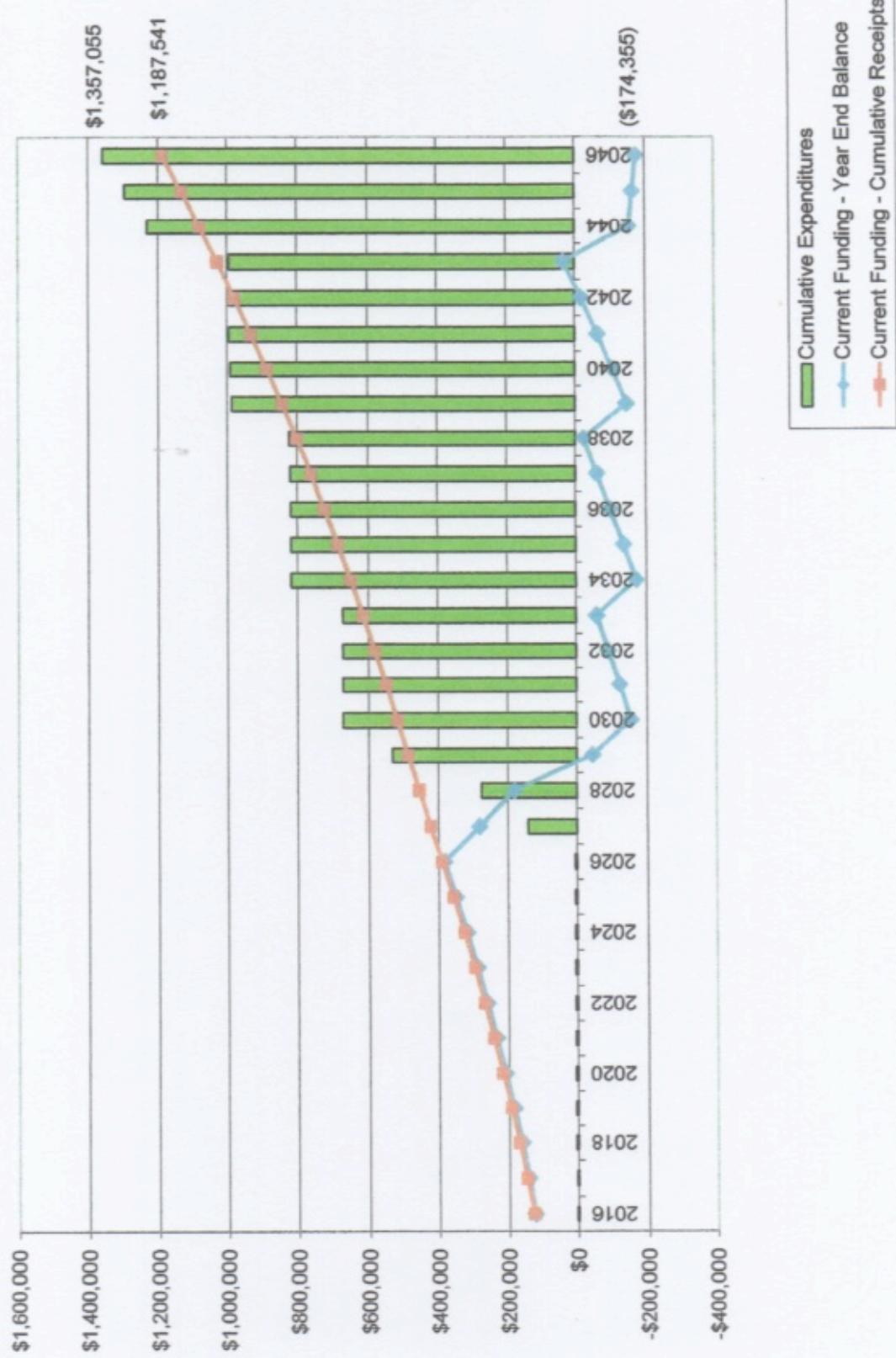
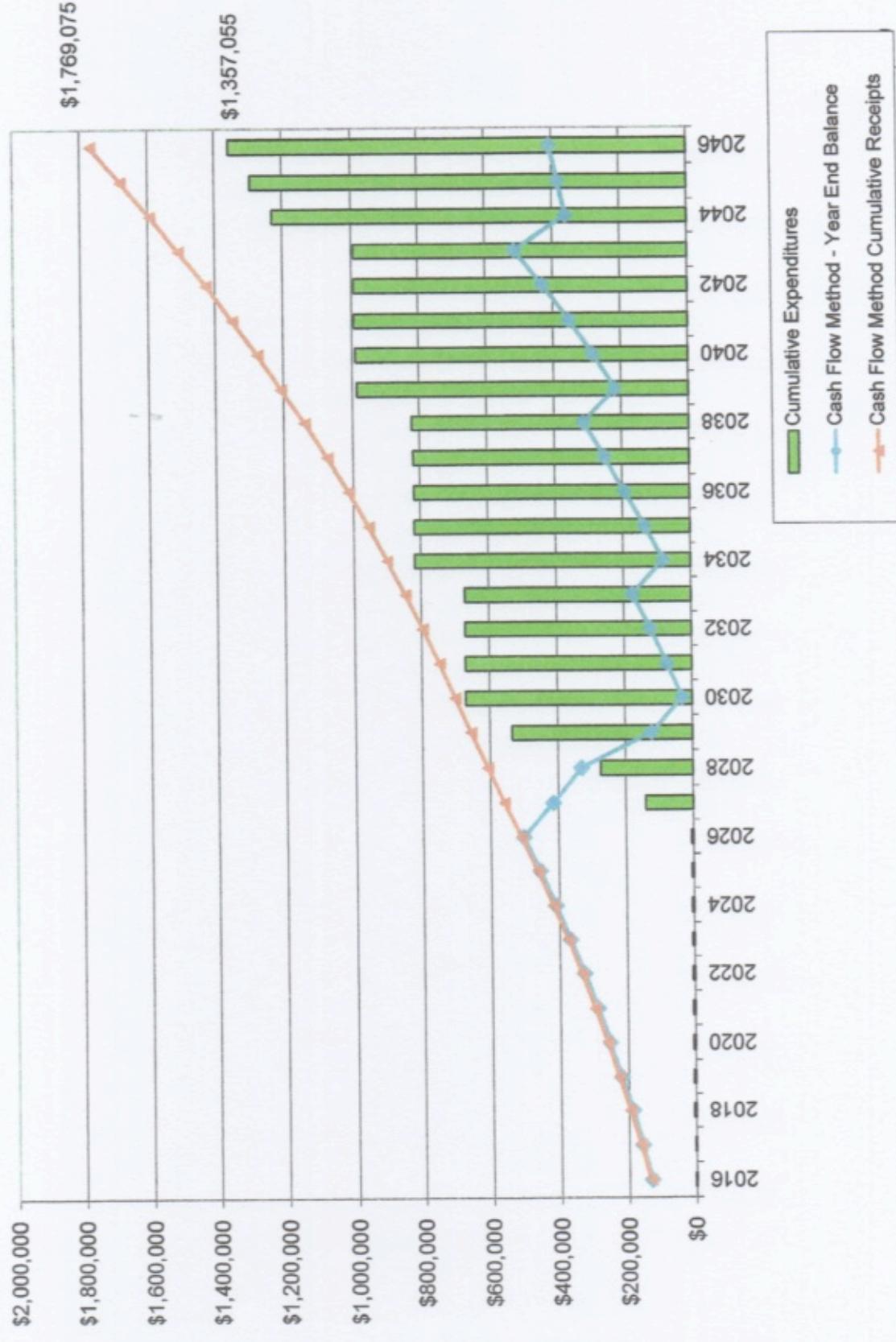


EXHIBIT C: GRAPHS
CURRENT ASSOCIATION FUNDING \$17,000



**EXHIBIT C: GRAPHS
PROPOSED FUNDING METHOD**



**EXHIBIT C: GRAPHS
FUNDING METHOD COMPARISON**

