

GREENWOOD GLEN



Glen Allen, Virginia

CAPITAL REPLACEMENT RESERVE STUDY

2009

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Prepared for:
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Greenwood Glen

HOW THE STUDY IS CONDUCTED

Purpose

Your community has assets and amenities that are owned in common by all property or unit owners. A summary of those assets in your community is provided on this page under the heading "Properties Included". A capital reserve account is an account designed specifically to accumulate funds for eventual replacement of your commonly owned property improvements when they reach the end of their useful lives. Each asset is referred to in this study as a *component* of your Capital Reserves. All components eventually need to be replaced, although they may normally function for 10, 20, 30 years, or longer. Regular operating and maintenance budgets do not cover the funding required for these needs. Therefore, separate funds must be accumulated over the life of the components. This Capital Reserve Study is designed to project the amount of money recommended to be deposited annually in your association's reserve account.

Not A Replacement Schedule

This study is designed to anticipate the types of capital expenditures that are likely to occur over the life of the property. By doing so we can establish a reasonable and logical budget for the reserve account(s). It is not a specific required replacement schedule however. Specific replacement annual budgets for expenditures should be established by the Board of Directors based on this information and on a periodic assessment of the actual condition of each reserve component.

Establishment of a Single Reserve Account

In developing this study we analyzed the reserve requirements for each component of your capital assets. Some associations maintain separate accounts for each. Certified Public Accountants advise us that the number of reserve accounts should be kept to a minimum. For Greenwood Glen, we recommend one account. Having one account gives you the spending flexibility to respond to unexpected needs without having to draw from dedicated line item accounts. Our study will develop one annual deposit amount that will meet the replacement

needs of all components.

Properties Included

Property improvements or assets which are owned by the Owners Association or for which the Association is required by the Declaration to provide maintenance, are included in this study. They include signage, asphalt path, vinyl fencing, and wood path bridge.

Study Parameters

Several parameters affect the outcome of this study. They include (1) the balance of your capital reserve account, (2) the minimum allowable or desired balance of the account (threshold), (3) a definition of reserve account components vs. regular maintenance account components, and (4) the ages of the community. The parameters for this study are:

- (1) Reserve balance at 12/31/08: **\$2,500.00.**
Based on our estimate of expected replacement costs and expected replacement schedule in this study; your present reserve balance represents **24%** of what would be considered full funding based on the component method of funding.
- (2) Minimum Allowable Balance (Threshold): **5%** of the total estimated present value of your next replacement of assets. In your community, this value is **\$25,116.80.** A minimum balance of five percent (5%) is our normal recommendation for reserves in communities where the assets are generally in good condition. It serves as a contingency balance for unplanned expenditures or emergencies. Five percent of the next replacement cost is **\$1,255.84.**
- (3) Definition of a Reserve Component: Generally, any commonly-owned constructed or manufactured asset whose service life equals or exceeds 5 years but is less than 50 years, and whose replacement cost equals or exceeds \$1,000.00.

- (4) Age of Community: is 10 years. Components are based on this age unless noted otherwise.

How Reserve Components Are Evaluated

Reserve Components are those capital improvements which the Association either owns, or is responsible for, *and* which will normally require replacement once or more during the normal life of the property. The *life* of a property is assumed to exceed 50 years. Reserve (replaceable) components included in this study, are those with a normal useful life of less than 50 years. These are further defined as those components which have a normal useful life of at least 5 years and a value of at least \$1,000.00. Anything which requires replacement in a shorter time, or which is valued at less than \$1,000.00 should be included in your normal operating and maintenance budget. Identification of reserve components and an understanding of their scope was made from information provided by Mr. Marc Bloom, President of Greenwood Glen Homeowner's Association and from our site visit to Greenwood Glen on March 4, 2009.

In the next section of this study, titled "Physical Analysis" we briefly describe the reserve components identified within each category at your community. We determine the normal useful life of each component on the basis of industry standards, typical product warranties, and our own experience in construction. We then project the remaining useful life of each component on the basis of its present age and its present condition. Those components which receive normal use and are in average condition for their age, will have a remaining useful life based on the *normal useful life* minus their present age. Components which are used more heavily, or which appear to be in poor condition for their age, will have a shorter projected remaining useful life. Any components that, appear to be in exceptionally good condition for their age, may have a projected remaining useful life that exceeds the projection based on their age alone.

Financial Analysis Methods

This study is designed to project the necessary annual allocation of funds needed to adequately fund your association's reserve account(s). The Community Associations Institute defines four methods for determining this annual allocation amount. They are:

Statutory Funding: Some states and localities have funding requirements based on local statutes. Neither Virginia nor any of its local jurisdictions have any funding statutes, therefore the statutory funding method is not used here.

Full Funding: We call this the *Component Cost Method*. This method starts by determining the present value of each reserve component. It then subtracts any existing funds already allocated to the replacement of this component. The remaining amount yet to be funded is divided into the projected remaining useful life of the component. This gives an annual figure required to fund the account fully by the time that the component is at the end of its useful life. For example: Let's say that the cost to replace a roof is \$10,000.00, and \$4,000.00 has been allocated to this replacement account already. The projected remaining useful life of the roof is 6 years. The amount needed to be placed into this account annually to fully fund the account is \$1,000.00:

$$\$10,000.00 - \$4,000.00 = \$6,000.00 / 6 \text{ years} = \$1,000.00 \text{ per year.}$$

This method usually is the most costly funding approach and can also cause funding needs to vary over time. It is best used in new communities where funding levels can be controlled from their beginning dates. In our experience, most communities are not fully funded from their beginning date, and conversion to full funding would place a higher cost burden on present owners.

Baseline Funding: In this method, each anticipated component replacement is plotted on a schedule over time. This schedule then calculates the annual total reserve account deposit required to maintain the account balance above zero over the entire period. This study is designed to project a fixed annual deposit amount. This method balances out payments over the life of the property, generally resulting in a lower annual funding requirement. We believe this also distributes the responsibility for reserve funding more equitably to all owners over the life of the community.

Threshold Funding: This is the same as the Baseline Method, except that we substitute a "threshold" amount (minimum account balance) for zero. As stated in our Study Parameters above, we use a threshold of 5% of the projected replacement cost for all your reserve components. This is the funding method that we will use in your study.

Inflation and Interest (Discounting): Our Threshold Funding Plan, also called a Cash Flow Schedule, is computed completely in present value dollars. We believe, however, that it is prudent to look at current inflation trends as well as the interest that you are earning on your account, to see how these factors might impact your planning over time. Following the cash flow schedule, we look at a discounted funding plan using projected inflation and interest rates.

Periodic Interval. **1 year**

*We have set the estimated construction inflation rate at 2.0%, which is low compared to an historic average of about 5.0%. This reflects the current construction and overall economic climate. This figure should be reviewed in 5 years or sooner as changing conditions warrant.

This discounted funding plan utilizes four variables that we can set for each study. These variables are:

- The anticipated rate of inflation over the period of the study. This is based on historical and present day inflation data as it relates to construction cost indexes (most capital reserve components are related to construction materials and trades, rather than the overall economy).
- The anticipated rate of return on your invested reserve funds. We base this on your community's current and/or immediately anticipated returns on investments - from simple savings accounts to more complex fund investments.
- The rate of increase or escalation in funding contributions that you will make over time. Because of inflation, it is natural that assessments and reserve contributions will increase over time. This variable is the amount or percentage of increase that we wish to apply to the funding plan. It is tied directly to the next variable which is:
- The interval period between each funding escalation. This means that you might elect to increase funding (usually in the form of increased assessments) every year, or every two or three years, or less often.

For your community, we have set these four variables as follows:

Inflation Rate. **2.0%***
 Rate of Return (average of all investments).. **0.0%**
 Rate of Funding Escalation. **2.0%**

RESULTS OF THE STUDY

Annual Fund Contribution - Component Method:

In our first spread sheet “Schedule of Components” we list all of the components in your community, their expected service life, and their expected replacement costs. We then apply the value of your present reserve account to the most immediate component needs in the second to last column. At the right side of the spread sheet, we provide the annual funding requirement for each component based on the “Full Funding” method. By applying the present fund balance to several components, those components can be considered to be fully funded at this time. Thus the funding requirement shown in this analysis only requires additional funding for the remaining components. Under this scenario the total annual funding requirement for your community would be **\$1,464.06**. This number does not take into account, the effects of longer term funding requirements of components with repetitive replacement needs over the life of the study.

Annual Fund Contribution - Cash Flow Method:

We do a second set of calculations in the section of our report, titled “Financial Analysis - Cash Flow Method”. Our “Cash Flow” method is also defined as “Threshold Funding”. In this analysis, we establish a minimum account threshold (balance) equal to 5% of the value of the reserves. Our goal in this study is to fund the account so that it never falls below that minimum balance. We start from your present account balance, and then we plot the projected reserve replacement costs for your community for each of the next 50 years. The analysis then calculates the annual funding requirement to accomplish our goal. The annual funding requirement that we come up with is a total budget figure unassigned to any particular line item or items. It is a flat annual dollar amount required to satisfy this schedule over 50 years, not including inflation or interest. This method takes advantage of the total funds available in the account to fund required expenditures, and arrives at a fixed annual contribution to fully fund the account. In reality, each individual account is being funded at a variable rate rather than a

straight line projection.

In our cash flow study for your community, we determined that the annual funding contribution necessary to keep the account above the minimum balance is: **\$1,341.76**.

At this funding level the account would be drawn down to its minimum allowable balance of **\$1,255.84** (5% of total reserves) in year **14 (2022)**.

Annual Fund Contribution - Discounted Funding Plan:

We tested our cash flow projection in our scenario described earlier, which included the following variables:

Inflation Rate.	2.0%
Rate of Return (average of all accounts).	0.0%
Rate of Funding Escalation.	2.0%
Periodic Interval.	1 year

In the discounted funding plan for your community, we determined that the first year funding contribution necessary to keep the account above the minimum balance throughout the study period is **\$1,568.30**.

This amount is then increased by **2.0%** per year. This amount is higher than the amount in the base study due, primarily, to the low interest rate of **0%**.

Again, the account would be drawn down to its minimum allowable balance after year **14 (2022)**. At that time, the minimum allowable balance has increased from **\$1,255.84** to **\$1642.56**, based on inflation. Your contribution in that year will have grown to **\$2,028.77**.

Recommendation:

We recommend that you use the Threshold Funding Plan based on our discounted cash flow analysis, and make a contribution beginning in year **2009** of **\$1,568.30 (rounded)**. For Greenwood Glen owners, this equates to \$18.45 (rounded) per owner per year or \$1.54 per owner per month. We further recommend you increase this by **2.0%** a year.

This plan needs to be updated every 5 years at a minimum (a Virginia state requirement). The update will adjust the study based on any actual replacements that you make during that time, your actual funding, current inflation rates, interest rates, and changes to the condition of the community's assets based on a new on-site review. It is very important that information on any capital replacement expenditures made by the community be kept on record and made available for later updates to this study.

PHYSICAL PROPERTY ANALYSIS

The physical property analysis is an observation of the present condition of each of your reserve components, a projection of probable useful life, and a projection of a likely course of action to replace the component along with an estimate of the replacement cost. The observations and opinions expressed in this report are based on our general professional knowledge of construction, and our knowledge of the typical replacement experience of many communities and other entities with the same component types. Our projections are not professional architectural or engineering recommendations for specific projects. The Board of Directors should seek professional or industry assistance for each specific replacement project, based on the conditions in existence at the time of replacement.

Greenwood Glen is a planned residential community consisting of eighty five (85) single family detached homes, located off Greenwood Road in Glen Allen, Virginia and is approximately 10 years old. Based on your Declaration and information that you provided to us, we determined that the primary common area components include an entrance sign, vinyl fencing, one asphalt path and one wood path bridge. These components are discussed on the following pages. There are also items related to the common areas of the community that are not included as capital replacement reserves. These are listed and explained below:

- a) All general landscaping - Generally landscaping (trees, shrubs, lawns, flowers) and associated maintenance of that landscaping is included in yearly operating budgets.
- b) The pond at the rear of the property is a “BMP” (which stands for “best management practice”). This is a stormwater control structure which receives the drainage from your roads (primarily), and then lets it out into the county watershed at a controlled rate. The pond is on Greenwood Glen common area, and the Association is responsible for general maintenance of the surrounding vegetation and litter pickup. Based on Article VI, Section I, para. “f” of your Declaration, Henrico County is responsible for “long term” maintenance of this pond and its drain structures. We interpret that to include any dredging and any repairs to the outfall structure or any piping. Therefore, there are no pond related components in your reserves.



Components included in this study are identified and discussed on the following pages.

Component:	Entrance Sign
In Service Date:	1998
Replacement Frequency (Yrs):	35
Remaining Useful Life (Yrs):	24
Quantity (Lot-See Description):	1
Unit Replacement Value:	\$2,400.00
Total Replacement Value:	\$2,400.00
% Replacement Expected:	100%
Replacement Costs:	\$2,400.00



DESCRIPTION OF COMPONENT: The entrance sign consists of a painted sign board made of high density urethane (HDU), shop-painted, and hung on iron brackets from a painted wood sign post and arm structure. The post and arm appear to be southern yellow pine and, we assume, are preservative treated. The post is set into a brick base at the ground. We recommend that this paint be kept in very good condition to prevent as much water as possible from entering the wood. Even so, water will enter the masonry base and the enclosed wood at the bottom. Over time, the preservative treatment will leach out and rot will occur. The most susceptible elements are the thinner built-up wood base boards around the heavy timber post, and the masonry itself which may be vulnerable to cracking from freezing water in certain winter conditions. This structure should have a reasonably long life, however. The sign board will last indefinitely if not damaged by outside forces (it is breakable). We are funding for replacement after a 35 year life. Because of the way the sign is installed, replacement will include demolition of the brick base, which will then have to be rebuilt or replaced.



Component:	Asphalt Path
In Service Date:	1998
Replacement Frequency (Yrs):	25
Remaining Useful Life (Yrs):	14
Quantity (Measurement in SF):	1,012
Unit Replacement Value:	\$1.40
Total Replacement Value:	\$1,416.80
% Replacement Expected:	100%
Replacement Costs:	\$1,416.80



DESCRIPTION OF COMPONENT: the asphalt path leads from the cul-de-sac at the end of Greenwood Glen Drive, to the pond (BMP) which we discussed on page 8. It is not a “necessary” structure - it provides convenient access to the pond for anyone who wants to go there. (We should note that this path provides required access for County maintenance, which will be required at some future time. The fence placements do not appear to provide room for County trucks and equipment to enter the area without removal of at least one side.)

Although the photos were taken after a snowfall, we visited the site a second time and looked at the full path. The path has transverse cracks across it at regular intervals. Also, the sides of the path are overgrown with grasses. The cracks are probably from gradual ground settlement. It is not likely that a significant (if any) base (usually compacted stone) was placed here before the paving.

The path can probably be left alone for some time, given its low use and importance, however proper maintenance would include periodic cleaning out any invasive grasses and other plant material and filling the cracks with a hot latex/asphalt crack filler. This keeps water from entering into the asphalt pavement section and causing more rapid deterioration.

Path paving is somewhat more expensive than road paving for the same area, because special smaller equipment is necessary for this work. Our normal allowance for a service life before resurfacing is necessary, is about 25 years. We are projecting funding for that time frame.

Component:	Vinyl Fence
In Service Date:	1998
Replacement Frequency (Yrs):	25
Remaining Useful Life (Yrs):	14
Quantity (Measurement in LF):	1,128
Unit Replacement Value:	\$16.50
Total Replacement Value:	\$18,612.00
% Replacement Expected:	100%
Replacement Costs:	\$18,612.00



DESCRIPTION OF COMPONENT: There are three-rail PVC fences at each community entrance (Greenwood Glen Drive and Hunton Commons Lane) and two-rail PVC fences along each side of the path to the BMP pond at the back of the properties. Some locations (shown) have significant mildew growth. This can be cleaned with a detergent and water solution, however the mildew will return. PVC fencing will not rot, however it is susceptible to UV rays from the sun, like any plastic product. Over time, these break down the chemical composition, reducing the plasticity of the material and making it more brittle - prone to breaking. It may also yellow after several years. Many manufacturers add inhibitors to slow these deterioration processes, but you have no way of knowing what was or was not included in the products in place here. We generally plan to have funds available for replacement in 25 years. Note the missing cap in the photo below. This does not cause a problem for the fence, however you may want to find a replacement source for this product, so that piece replacement can be done for missing or damaged parts.



Component:	Wood Path Bridge
In Service Date:	1998
Replacement Frequency (Yrs):	35
Remaining Useful Life (Yrs):	24
Quantity (Measurement in SF):	96.00
Unit Replacement Value:	\$28.00
Total Replacement Value:	\$2,688.00
% Replacement Expected:	100%
Replacement Costs:	\$2,688.00



DESCRIPTION OF COMPONENT: There is a wood footbridge along the path that spans the overflow outfall from the pond. The bridge is well constructed from pressure treated wood materials and is in very good condition. Replacement of the decking may be required at an earlier time than replacement of the entire bridge, and it is likely that this may occur on an as-needed basis with individual boards. In any case, replacement of the entire deck would amount to less than \$1,000.00, and is not included as a capital reserve component.

Replacement of the entire bridge, or substantial reconstruction of it, will be required during the window of this study. We are funding for replacement after 35 years.

SCHEDULE OF COMPONENTS

The following page contains a listing of all components visually observed at Greenwood Glen at our site visit on March 4, 2009. In the schedule, the first column lists all components considered. The second column lists the estimated date that the component was put in service. The third column lists the expected normal life expectancy or replacement frequency for each component. The fourth column is our estimate of the total replacement cost of each component. The fifth column lists the estimate remaining *useful life* of each component based on the age of the component, the type of exposure or use that it has, and a visual observation of its condition. The sixth column describes the unit of measurement for quantifying each component. The units are as follows:

SF = Square Feet
SQ = Square (100 sf)
CY = Cubic Yard
SY = Square Yard

PR = Pair
LF = Linear Foot
LOT = Total of all Parts
EA = Each

The seventh column lists the number of units measured for each component. The eighth column lists the estimated replacement cost for one unit of each component. This is also called a *unit price*. The ninth column indicates the percentage of the component that would have to be replaced at the end of its useful life. This is usually 100%, however some times it is not realistic to expect to replace the entire component at same time. The tenth column lists the estimated replacement cost of the component, based on the unit price and the replacement percentage we are recommending.

Component Cost Funding

The eleventh column takes your present account balance and apportions it among all of the components for as long as it will last. Finally, in the twelfth column we take the replacement cost and subtract out the present funding on hand. We then divide the remainder by the number of years left in its projected service life. The numbers shown are the result of that computation.

LINE	DESCRIPTION	THE	FREQUENCY OF	ESTIMATED	REMAINING	UNIT	NUMBER	ESTIMATED	PERCENTAGE	ESTIMATED	PRESENT	ANNUAL
	Greenwood Glen	YEAR	REPLACEMENT	TOTAL	LIFE	OF	OF	UNIT	TO	NEXT	FUND	CONTRIBUTION
	CAPITAL RESERVES - COMPONENT LIST	BUILT	(USEFUL LIFE)	REPLACEMENT	EXPECTANCY	MEASURE	UNITS	REPLACEMENT	REPLACE	REPLACEMENT	BALANCE	TO FULLY
			(YEARS)	COST	(YEARS)			COST		COST	\$2,500.00	FUND
1	Entrance Sign	1998	35	\$2,400.00	24	LOT	1.00	\$2,400.00	100.00%	\$2,400.00	\$0.00	\$100.00
2												
3	Asphalt Path	1998	25	\$1,416.80	14	SF	1,012.00	\$1.40	100.00%	\$1,416.80	\$1,416.80	\$0.00
4												
5	Vinyl Fence	1998	25	\$18,612.00	14	LF	1,128.00	\$16.50	100.00%	\$18,612.00	\$1,083.20	\$1,252.06
6												
7	Wood Path Bridge	1998	35	\$2,688.00	24	SF	96.00	\$28.00	100.00%	\$2,688.00	\$0.00	\$112.00
8												
9												
10												
	TOTALS			\$25,116.80						\$25,116.80	\$2,500.00	\$1,464.06

FINANCIAL ANALYSIS - CASH FLOW METHOD

The next several pages contain a cash flow projection based on a *fifty-year period*. Projected expenditures over the life of the study are based on *estimated* useful lives of each component. The analysis calculates the deposit recommended in each year to maintain the existing reserve components of the community that are scheduled on the previous page. It does this by increasing funding until it finds the lowest possible annual contribution that will maintain the minimum allowable balance (2%) in the worst expense year.

These schedules can be read as follows: The first column contains a list of all reserve components recorded in the Schedule of Component Lists at Present Value. Moving from left to right over the page, you will see a column for every year up to 10 years. Succeeding pages include the same information for years 11 to 20, 21 to 30, 31 to 40, and 41 to 50. Each column lists any expenditure which would be made in the corresponding year as projected from the "Remaining Life Expectancy In Years" column of the Schedule of Component Lists at Present Value. The sum of the total expenditures for each year is listed at the bottom of each column as "Total Annual Expenditures." At the top of the first column (year 1) we state the beginning balance of the account (your present account balance). In succeeding columns the beginning year balance is stated at the top of each.

The lines below the "Total Annual Expenditures" line are defined as follows:

ANNUAL CONTRIBUTION: The amount of money that needs to be deposited every year to fully fund the reserve expenses.

END OF YEAR BALANCE: The amount of money left in the account in every year after deposits and expenses are accounted for.

RESERVE VALUE (FROM COMPONENT TABLE): The total value of all reserves (from the Schedule of Component Values).

MINIMUM RECOMMENDED RESERVE %: The 2% minimum balance parameter of the study, based on the number on the line above.

MINIMUM RECOMMENDED BALANCE: The 2% minimum balance, stated as a number, based on the reserve value two lines above.

DISCOUNTED FUNDING PLAN: On each page, below the cash flow study is a chart with the results of that study discounted for inflation and with applied interest. We show first the projected expenses in each year and the expected contribution based on today's dollars, along with the running account balance. Below that we take the annual expenditure totals and discounts them over the fifty-year period of the study, based on an assumed inflation rate of **2.0%** per year. We then apply the average interest earned on your reserve accounts on deposit to the account balance at the end of each year. We used an interest rate of **2.0%** annually. We then propose that the account contribution would be increased at a rate of **2.0%** each year (roughly equal to the inflation rate). Finally, we need to discount the dollar value of the 5% bottom fund limit over the fifty-year period as well. The rows read as follows:

ANNUAL PROJECTED EXPENDITURES (FUTURE VALUE): These numbers are the totals of the columns in the previous schedule, inflated at an annual rate of **2.0%** times the number of years after the first year.

ANNUAL CONTRIBUTION: The amount of money that needs to be deposited every year to fully fund the reserve expenses, discounted for inflation.

RESULTING FUND BALANCE AT 2.0% INTEREST: The amount of money left in the account in every year after deposits and expenses are accounted for, earning **2.0%** interest per annum.

MINIMUM RECOMMENDED BALANCE: The 2% minimum balance required by the study, discounted for inflation per year.

RECOMMENDED ANNUAL DEPOSIT: The amount that must be deposited in each year. Succeeding years are increased by **2.0%** per year.

LINE	CASH FLOW RESERVE ANALYSIS	YEARS									
	Greenwood Glen	1	2	3	4	5	6	7	8	9	10
	CAPITAL RESERVES - YEARS 1 THROUGH 10	YEAR									
		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
	BEGINNING YEAR BALANCE	\$2,500.00	\$3,841.76	\$5,183.52	\$6,525.28	\$7,867.04	\$9,208.80	\$10,550.56	\$11,892.32	\$13,234.08	\$14,575.84
1	Entrance Sign										
2											
3	Asphalt Path										
4											
5	Vinyl Fence										
6											
7	Wood Path Bridge										
8											
9											
10											
	TOTAL EXPENDITURES	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	ANNUAL CONTRIBUTION	\$1,341.76	\$1,341.76	\$1,341.76	\$1,341.76	\$1,341.76	\$1,341.76	\$1,341.76	\$1,341.76	\$1,341.76	\$1,341.76
	END OF YEAR BALANCE	\$3,841.76	\$5,183.52	\$6,525.28	\$7,867.04	\$9,208.80	\$10,550.56	\$11,892.32	\$13,234.08	\$14,575.84	\$15,917.60
	RESERVE VALUE (FROM COMPONENT TABLE)	\$25,116.80									
	MINIMUM RECOMMENDED RESERVE %	5.00%									
	MINIMUM RECOMMENDED BALANCE	\$1,255.84									
	RECOMMENDED ANNUAL DEPOSIT	\$1,341.76									
	PROPOSED FUNDING SCENARIO ASSUMPTIONS:										
	ANNUAL CONSTRUCTION COST ESCALATION:	2.00%									
	ANNUAL CONTRIBUTION ESCALATION:	2.00%									
	ANNUAL FUND ESCALATION:	0.00%									
	CAPITAL RESERVES YEARS 1 THROUGH 10	1	2	3	4	5	6	7	8	9	10
		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
	ANNUAL PROJECTED EXPENDITURES (FUTURE VALUE)	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	ANNUAL CONTRIBUTION (WITH ESCALATION)	\$1,568.30	\$1,599.67	\$1,631.66	\$1,664.29	\$1,697.58	\$1,731.53	\$1,766.16	\$1,801.49	\$1,837.51	\$1,874.27
	RESULTING FUND BALANCE PLUS INTEREST	\$4,068.30	\$5,667.97	\$7,299.63	\$8,963.92	\$10,661.50	\$12,393.03	\$14,159.20	\$15,960.68	\$17,798.20	\$19,672.46
	MINIMUM RECOMMENDED BALANCE (5%) ESCALATED ANNUALLY	\$1,255.84	\$1,280.96	\$1,306.58	\$1,332.71	\$1,359.36	\$1,386.55	\$1,414.28	\$1,442.57	\$1,471.42	\$1,500.85
	REQUIRED ANNUAL CONTRIBUTION:	\$1,568.30	\$1,599.67	\$1,631.66	\$1,664.29	\$1,697.58	\$1,731.53	\$1,766.16	\$1,801.49	\$1,837.51	\$1,874.27

LINE	CASH FLOW RESERVE ANALYSIS	YEARS									
	Greenwood Glen	11	12	13	14	15	16	17	18	19	20
	CAPITAL RESERVES - YEARS 11 THROUGH 20										
		2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
	BEGINNING YEAR BALANCE	\$15,917.60	\$17,259.36	\$18,601.12	\$19,942.88	\$1,255.84	\$2,597.60	\$3,939.36	\$5,281.12	\$6,622.88	\$7,964.64
1	Entrance Sign										
2											
3	Asphalt Path				\$1,416.80						
4											
5	Vinyl Fence				\$18,612.00						
6											
7	Wood Path Bridge										
8		0									
9											
10		0									
	TOTAL EXPENDITURES	\$0.00	\$0.00	\$0.00	\$20,028.80	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	ANNUAL CONTRIBUTION	\$1,341.76	\$1,341.76	\$1,341.76	\$1,341.76	\$1,341.76	\$1,341.76	\$1,341.76	\$1,341.76	\$1,341.76	\$1,341.76
	END OF YEAR BALANCE	\$17,259.36	\$18,601.12	\$19,942.88	\$1,255.84	\$2,597.60	\$3,939.36	\$5,281.12	\$6,622.88	\$7,964.64	\$9,306.40
	RESERVE VALUE (FROM COMPONENT TABLE)	\$25,116.80									
	MINIMUM RECOMMENDED RESERVE %	5.00%									
	MINIMUM RECOMMENDED BALANCE	\$1,255.84									
	RECOMMENDED ANNUAL DEPOSIT	\$1,341.76									
	PROPOSED FUNDING SCENARIO										
	ANNUAL CONSTRUCTION COST ESCALATION:	2.00%									
	ANNUAL CONTRIBUTION ESCALATION:	2.00%									
	ANNUAL FUND ESCALATION:	0.00%									
	CAPITAL RESERVES YEARS 11 THROUGH 20	11	12	13	14	15	16	17	18	19	20
		2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
	ANNUAL PROJECTED EXPENDITURES (FUTURE VALUE)	\$0.00	\$0.00	\$0.00	\$25,909.39	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	ANNUAL CONTRIBUTION (WITH ESCALATION)	\$1,911.75	\$1,949.99	\$1,988.99	\$2,028.77	\$2,069.34	\$2,110.73	\$2,152.94	\$2,196.00	\$2,239.92	\$2,284.72
	RESULTING FUND BALANCE PLUS INTEREST	\$21,584.21	\$23,534.20	\$25,523.18	\$1,642.56	\$3,711.90	\$5,822.63	\$7,975.57	\$10,171.57	\$12,411.49	\$14,696.21
	MINIMUM RECOMMENDED BALANCE (5%) ESCALATED ANNUALLY	\$1,530.86	\$1,561.48	\$1,592.71	\$1,624.56	\$1,657.05	\$1,690.20	\$1,724.00	\$1,758.48	\$1,793.65	\$1,829.52
	REQUIRED ANNUAL CONTRIBUTION:	\$1,911.75	\$1,949.99	\$1,988.99	\$2,028.77	\$2,069.34	\$2,110.73	\$2,152.94	\$2,196.00	\$2,239.92	\$2,284.72

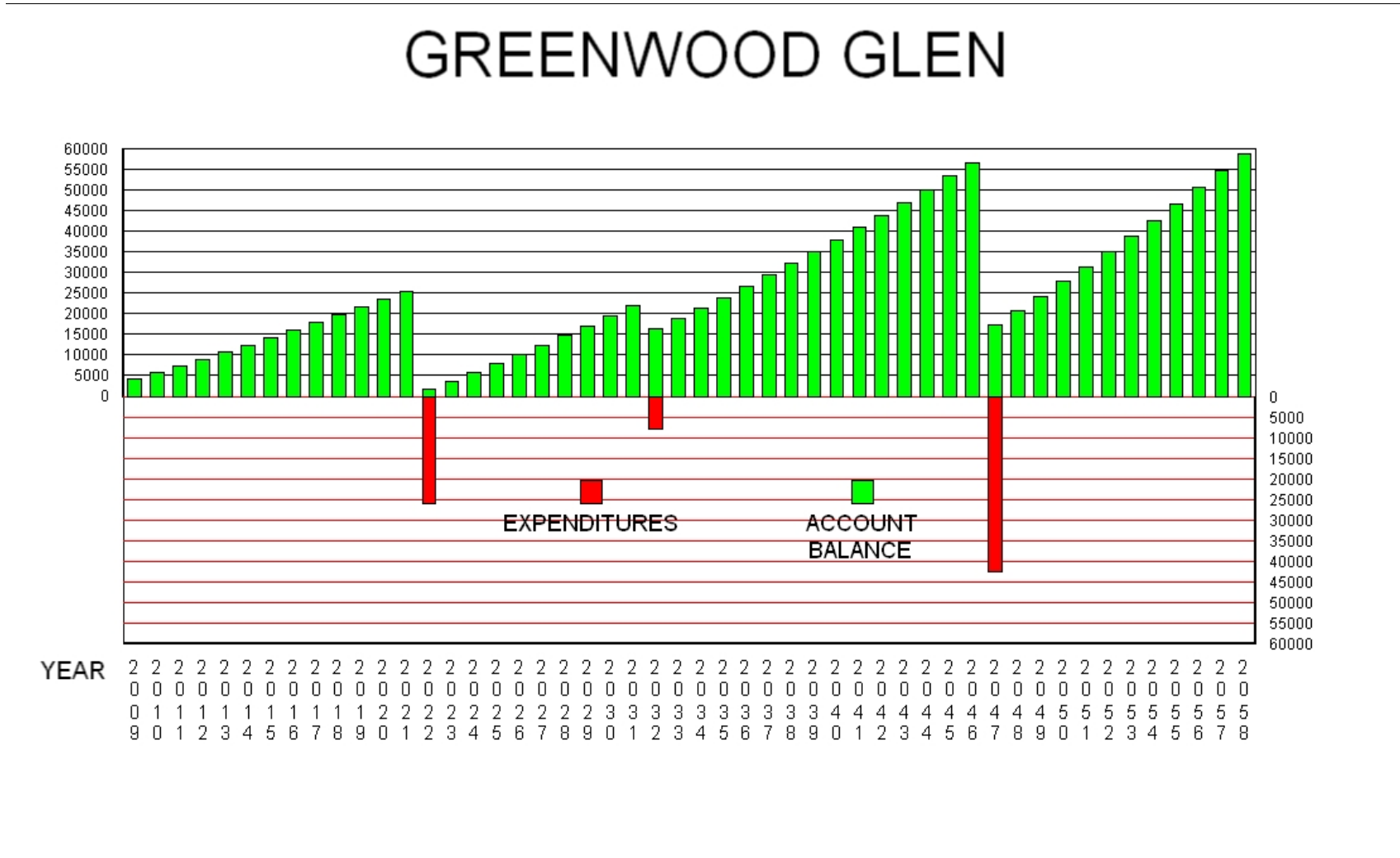
LINE	CASH FLOW RESERVE ANALYSIS	YEARS									
		21	22	23	24	25	26	27	28	29	30
	Greenwood Glen	21	22	23	24	25	26	27	28	29	30
	CAPITAL RESERVES - YEARS 21 THROUGH 30	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
	BEGINNING YEAR BALANCE	\$9,306.40	\$10,648.16	\$11,989.92	\$13,331.68	\$9,585.44	\$10,927.20	\$12,268.96	\$13,610.72	\$14,952.48	\$16,294.24
1	Entrance Sign				\$2,400.00						
2											
3	Asphalt Path										
4											
5	Vinyl Fence										
6											
7	Wood Path Bridge				\$2,688.00						
8		0									
9											
10		0									
	TOTAL EXPENDITURES	\$0.00	\$0.00	\$0.00	\$5,088.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	ANNUAL CONTRIBUTION	\$1,341.76	\$1,341.76	\$1,341.76	\$1,341.76	\$1,341.76	\$1,341.76	\$1,341.76	\$1,341.76	\$1,341.76	\$1,341.76
	END OF YEAR BALANCE	\$10,648.16	\$11,989.92	\$13,331.68	\$9,585.44	\$10,927.20	\$12,268.96	\$13,610.72	\$14,952.48	\$16,294.24	\$17,636.00
	RESERVE VALUE (FR OM COMPONENT TABLE)	\$25,116.80									
	MINIMUM RECOMMENDED RESERVE %	5.00%									
	MINIMUM RECOMMENDED BALANCE	\$1,255.84									
	RECOMMENDED ANNUAL DEPOSIT	\$1,341.76									
	PROPOSED FUNDING SCENARIO										
	ANNUAL CONSTRUCTION COST ESCALATION:	2.00%									
	ANNUAL CONTRIBUTION ESCALATION:	2.00%									
	ANNUAL FUND ESCALATION:	0.00%									
	CAPITAL RESERVES YEARS 21 THRO UGH 30	21	22	23	24	25	26	27	28	29	30
		2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
	ANNUAL PROJECTED EXPENDITURES (FUTURE VALUE)	\$0.00	\$0.00	\$0.00	\$8,023.26	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	ANNUAL CONTRIBUTION (WITH ESCALATION)	\$2,330.41	\$2,377.02	\$2,424.56	\$2,473.05	\$2,522.51	\$2,572.96	\$2,624.42	\$2,676.91	\$2,730.45	\$2,785.06
	RESULTING FUND BALANCE PLUS INTEREST	\$17,026.62	\$19,403.64	\$21,828.21	\$16,278.00	\$18,800.51	\$21,373.47	\$23,997.90	\$26,674.81	\$29,405.26	\$32,190.32
	MINIMUM RECOMMENDED BALANCE (5%) ESCALATED ANNUALLY	\$1,866.11	\$1,903.43	\$1,941.50	\$1,980.33	\$2,019.94	\$2,060.34	\$2,101.55	\$2,143.58	\$2,186.45	\$2,230.18
	REQUIRED ANNUAL CONTRIBUTION:	\$2,330.41	\$2,377.02	\$2,424.56	\$2,473.05	\$2,522.51	\$2,572.96	\$2,624.42	\$2,676.91	\$2,730.45	\$2,785.06

LINE	CASH FLOW RESERVE ANALYSIS	YEARS									
	Greenwood Glen	31	32	33	34	35	36	37	38	39	40
	CAPITAL RESERVES - YEARS 31 THROUGH 40	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
	BEGINNING YEAR BALANCE	\$17,636.00	\$18,977.76	\$20,319.52	\$21,661.28	\$23,003.04	\$24,344.80	\$25,686.56	\$27,028.32	\$28,370.08	\$9,683.04
1	Entrance Sign										
2											
3	Asphalt Path									\$1,416.80	
4											
5	Vinyl Fence									\$18,612.00	
6											
7	Wood Path Bridge										
8		0									
9											
10		0									
	TOTAL EXPENDITURES	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$20,028.80	\$0.00
	ANNUAL CONTRIBUTION	\$1,341.76	\$1,341.76	\$1,341.76	\$1,341.76	\$1,341.76	\$1,341.76	\$1,341.76	\$1,341.76	\$1,341.76	\$1,341.76
	END OF YEAR BALANCE	\$18,977.76	\$20,319.52	\$21,661.28	\$23,003.04	\$24,344.80	\$25,686.56	\$27,028.32	\$28,370.08	\$9,683.04	\$11,024.80
	RESERVE VALUE (FR OM COMPONENT TABLE)	\$25,116.80									
	MINIMUM RECOMMENDED RESERVE %	5.00%									
	MINIMUM RECOMMENDED BALANCE	\$1,255.84									
	RECOMMENDED ANNUAL DEPOSIT	\$1,341.76									
	PROPOSED FUNDING SCENARIO										
	ANNUAL CONSTRUCTION COST ESCALATION:	2.00%									
	ANNUAL CONTRIBUTION ESCALATION:	2.00%									
	ANNUAL FUND ESCALATION:	0.00%									
	CAPITAL RESERVES YEARS 31 THRO UGH 40	31	32	33	34	35	36	37	38	39	40
		2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
	ANNUAL PROJECTED EXPENDITURES (FUTURE VALUE)	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$42,507.10	\$0.00
	ANNUAL CONTRIBUTION (WITH ESCALATION)	\$2,840.76	\$2,897.58	\$2,955.53	\$3,014.64	\$3,074.93	\$3,136.43	\$3,199.16	\$3,263.14	\$3,328.40	\$3,394.97
	RESULTING FUND BALANCE PLUS INTEREST	\$35,031.08	\$37,928.66	\$40,884.19	\$43,898.82	\$46,973.75	\$50,110.18	\$53,309.34	\$56,572.48	\$17,393.79	\$20,788.76
	MINIMUM RECOMMENDED BALANCE (5%) ESCALATED ANNUALLY	\$2,274.78	\$2,320.28	\$2,366.68	\$2,414.02	\$2,462.30	\$2,511.54	\$2,561.77	\$2,613.01	\$2,665.27	\$2,718.57
	REQUIRED ANNUAL CONTRIBUTION:	\$2,840.76	\$2,897.58	\$2,955.53	\$3,014.64	\$3,074.93	\$3,136.43	\$3,199.16	\$3,263.14	\$3,328.40	\$3,394.97

LINE	CASH FLOW RESERVE ANALYSIS	YEARS									
	Greenwood Glen	41	42	43	44	45	46	47	48	49	50
	CAPITAL RESERVES - YEARS 41 THROUGH 50	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058
	BEGINNING YEAR BALANCE	\$11,024.80	\$12,366.56	\$13,708.32	\$15,050.08	\$16,391.84	\$17,733.60	\$19,075.36	\$20,417.12	\$21,758.88	\$23,100.64
1	Entrance Sign										
2											
3	Asphalt Path										
4											
5	Vinyl Fence										
6											
7	Wood Path Bridge										
8		0									
9											
10		0									
	TOTAL EXPENDITURES	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	ANNUAL CONTRIBUTION	\$1,341.76	\$1,341.76	\$1,341.76	\$1,341.76	\$1,341.76	\$1,341.76	\$1,341.76	\$1,341.76	\$1,341.76	\$1,341.76
	END OF YEAR BALANCE	\$12,366.56	\$13,708.32	\$15,050.08	\$16,391.84	\$17,733.60	\$19,075.36	\$20,417.12	\$21,758.88	\$23,100.64	\$24,442.40
	RESERVE VALUE (FR OM COMPONENT TABLE)	\$25,116.80									
	MINIMUM RECOMMENDED RESERVE %	5.00%									
	MINIMUM RECOMMENDED BALANCE	\$1,255.84									
	RECOMMENDED ANNUAL DEPOSIT	\$1,341.76									
	PROPOSED FUNDING SCENARIO										
	ANNUAL CONSTRUCTION COST ESCALATION:	2.00%									
	ANNUAL CONTRIBUTION ESCALATION:	2.00%									
	ANNUAL FUND ESCALATION:	0.00%									
	CAPITAL RESERVES YEARS 41 THRO UGH 50	41	42	43	44	45	46	47	48	49	50
		2049	2050	2051	2052	2053	2054	2055	2056	2057	2058
	ANNUAL PROJECTED EXPENDITURES (FUTURE VALUE)	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	ANNUAL CONTRIBUTION (WITH ESCALATION)	\$3,462.87	\$3,532.13	\$3,602.77	\$3,674.83	\$3,748.32	\$3,823.29	\$3,899.76	\$3,977.75	\$4,057.31	\$4,138.45
	RESULTING FUND BALANCE PLUS INTEREST	\$24,251.63	\$27,783.76	\$31,386.53	\$35,061.36	\$38,809.68	\$42,632.97	\$46,532.73	\$50,510.48	\$54,567.79	\$58,706.24
	MINIMUM RECOMMENDED BALANCE (5%) ESCALATED ANNUALLY	\$2,772.94	\$2,828.40	\$2,884.97	\$2,942.67	\$3,001.52	\$3,061.55	\$3,122.79	\$3,185.24	\$3,248.95	\$3,313.93
	REQUIRED ANNUAL CONTRIBUTION:	\$3,462.87	\$3,532.13	\$3,602.77	\$3,674.83	\$3,748.32	\$3,823.29	\$3,899.76	\$3,977.75	\$4,057.31	\$4,138.45

FUNDING PLAN - GRAPH

Below is a graphic depiction of the discounted funding plan developed on the previous pages. The green bars (top section of graph) show the account balance and growth over time. The red bars (bottom section of graph) show annual capital replacement expenditures in each year.



DEFINITIONS AND NOTES

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. See "Component Method."

Component - The individual line items in the Reserve Study, developed or updated in the Physical Analysis. These elements form the building blocks for the Reserve Study. Components typically are: 1) common area responsibility, 2) with limited Useful Life expectancies, 3) predictable Remaining Useful Life expectancies, and 4) above a minimum threshold cost.

Component Assessment and Valuation - The task of estimating Useful Life, Remaining Useful Life, and Repair or Replacement costs for the Reserve components.

Component Inventory - The task of selecting and quantifying Reserve Components. This task is accomplished through an on-site inspection, review of association design and organizational documents, and a review of established association precedents.

Component Method - A method of calculating Reserve contributions where the total contribution is based on the sum of contributions for individual components. See "Cash Flow Method."

Financial Analysis - The portion of a Reserve Study where current status of the Reserves (measured as cash or Percent Funded) and a recommended Reserve contribution rate (Reserve Funding Plan) is derived. The Financial Analysis is one of the two parts of a Reserve Study.

Funding Plan - An Association's plan to provide income to a Reserve fund to offset anticipated expenditures from that fund. "The Board will re-evaluate our homeowner assessment estimates for next year's budget when the Reserve Funding Plan is complete."

Physical Analysis - The portion of the Reserve Study where the Component Inventory is developed and the Component Valuation & Analysis is performed. This represents one of the two parts of the Reserve Study.

Remaining Useful Life (RUL) - Also referred to as "Remaining Life" (RL). The expected time, in years, that a reserve component can be expected to *continue* to serve its intended function. Projects anticipated to occur in the initial year have "zero" Remaining Useful Life.

Reserve Balance - Actual or projected funds as of a particular point in time that the association has identified for use to defray the future repair or replacement of those major components which the association is obligated to maintain. Also known as Reserves, Reserve Accounts, Cash Reserves.

Reserve Study - A budget planning tool which identifies the current status of the Reserve fund and a stable and equitable Funding Plan to offset the anticipated "major common area expenditures."

Useful Life (UL) - Total Useful Life or Depreciable Life. The estimated time (also the frequency of replacement), in years, that a reserve component can be expected to serve its intended function in its present application or installation.

Notes:

- 1) Scope and quantity of reserve components is determined from information provided by your community's homeowner's association president, Mr. Marc Bloom and from our site visit to on March 4, 2009; unless otherwise provided herein.
- 2) Financial information including your present fund balance, interest from funds on deposit, and recent capital expenditures, was provided by your property manager, and are deemed reliable and complete by Design/Management Associates, Inc. The "Current Balance" of this reserve account is based upon information provided by your manager and has not been audited.
- 3) The condition of the reserve components is based on a visual inspection of each, conducted specifically for this study. All common areas on the property were observed. No destructive testing, lab analysis or other investigative methods are used to determine the remaining useful life of components.
- 4) Information provided by the Association about prior reserve replacement projects is considered to be reliable and complete. No inspection by Design/Management Associates, Inc. should be interpreted as a project audit or quality inspection.
- 5) Industry Life Expectancy is based on printed product literature, product or material warranties, industry standards literature, and on the opinions of manufacturers, installers, or maintenance contractors based on their experience with these products and materials.
- 6) Unit prices are based on published unit price standards such as R. S. Means "Residential Cost Data", Facilities Maintenance and Repair Cost Data, and "Facilities Construction Cost Data", latest editions, and on pricing obtained from contractors, installers, or manufacturers. All prices are given in present dollars unless noted otherwise.
- 7) Design Management Associates' Capital Replacement Reserve Studies are designed to be used as planning tools. They are a reflection of information provided by the Association and of our observations of the Association properties, and are assembled for the Association's use. This reserve study shall not be used for the purpose of performing an audit, quality/forensic analyses, or for background checks of historical records. Prices listed are not guaranteed as exact quotes for work included.
- 8) Disclosure - Design Management Associates does not have any professional relationship or interest in Greenwood Glen beyond this work.
- 9) This study was prepared by Douglas L. Greene, AIA, RS. Mr. Greene is a registered architect in the Commonwealth of Virginia (#006174), and has a Reserve Specialist Designation (#133) from the Community Association Institute (CAI).