

Reserve Advisors, Inc. 735 N. Water Street, Suite 175 Milwaukee, WI 53202

### Reserve Study Update

December 5, 2012 The Reserve Study for Kinderton Village Residential Homeowners Master Association, Inc. Was submitted on .......December 5, 2012 To maintain the most accurate and cost-effective replacement schedule and funding plan for your property elements, this study should be updated on or about ........Fourth Quarter, 2014 As a valued client, we are pleased to offer a discounted rate of.......\$2,200 For a Reserve Study Update with Site visit as noted above. To initiate your Reserve Study Update, please sign this authorization and fax or mail to the number below. Upon receipt of this authorization we will contact you to schedule your site visit and invoice for the Reserve Study Update Service. Sign this contract below and fax to 414-272-3663. Or mail to Reserve Advisors, Inc. 735 N. Water St., Suite 175 Milwaukee, WI 53202 Delivery options for your Reserve Study Update Report, Please check one of the following: \_\_\_\_\_ 1-Full color printed copy PLUS Electronic Report Copy in CD Format, FREE 2-Full color printed copies PLUS Electronic Report Copy in CD Format, \$100 For Kinderton Village Residential Homeowners Master For Reserve Advisors, Inc. Association, Inc. Name:\_\_\_\_\_ Update Services Manager Ref. # 101789 Date:\_\_\_\_\_ 800-221-9882 Phone: December 5, 2012 Agent or Manager: Wendy Gallimore Management Firm: Gallimore Management Associates, Inc.

735 N. Water Street, Suite 175 Milwaukee, WI 53202



Long-term thinking. Everyday commitment.

December 5, 2012

Ms. Wendy Gallimore, President Gallimore Management Associates, Inc. P.O. Box 2325 Advance, NC 27006

RE: Kinderton Village Residential Homeowners Master Association, Inc.

Dear Ms. Gallimore:

We are pleased to submit the enclosed Report of our findings and recommendations. Our typical client's desire is to read and discuss the findings and recommendations of the Report at their own convenience. Some clients immediately adopt our findings and do not request changes. However, we are happy to discuss within the next six months any changes that you may want to suggest.

Your Advisor, Chris DeWall, and Reserve Advisors are always available as a resource to discuss the report now or at *anytime* in the future. Call us anytime at 800-221-9882 (or 800-980-9881 in Florida).

Per our contract, the final invoice is now due. It has been a privilege to serve you. Please contact me by email ted@reserveadvisors.com or by phone with any questions.

Sincerely,

Theodore J. Salgado, PRA, R.S.

Principal



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Reserve Advisors, Inc. 735 N. Water Street, Suite 175 Milwaukee, WI 53202

#### RESERVE STUDY EXECUTIVE SUMMARY

Client: Kinderton Village Residential Homeowners Master Association, Inc. (KVRHMA)

Location: Advance, North Carolina

Reference: 101789

Property Basics: Kinderton Village Residential Homeowners Master Association, Inc. is an association which is responsible for the common elements shared by the sub-associations. The Association began construction in 2001 and will comprise 404 units by the end of 2012. The development includes a clubhouse, pool and parking lot, all constructed in 2003, and five storm water management ponds.

Reserve Components Identified: 22 Reserve Components

Inspection Date: October 30, 2012

Funding Goal: The Funding Goal of this Reserve Study is to maintain reserves above an adequate, not excessive threshold during one or more years of significant expenditures. Our recommended Funding Plan recognizes this threshold funding year in 2040 due to replacement of the parking lot.

Cash Flow Method: We use the Cash Flow Method to compute the Reserve Funding Plan. This method offsets future variable Reserve Expenditures with existing and future stable levels of reserve funding. Our application of this method also considers:

- · current and future local costs of replacement
- 1.2% annual rate of return on invested reserves
- 1.5% future Inflation Rate for estimating Future Replacement Costs

Sources for Local Costs of Replacement: Our proprietary database, historical costs and published sources, i.e., R.S. Means, Incorporated.

Cash Status of Reserve Fund: \$138,504 as of September 30, 2012.

Recommended Reserve Funding: The Association budgeted \$46,584 for Reserve Contributions in 2012. The Association may adopt a reduced reserve budget of \$22,000 in 2013. Afterwards, the Association should budget gradual annual increases in reserve funding, that in part consider the effects of inflation. The recommended year 2013 Reserve Contribution of \$22,000 is equivalent to an average monthly contribution of \$4.54 per unit owner.

Certification: This Precision 20/20 Full Reserve Study exceeds the Community Associations Institute (CAI) and Association of Professional Reserve Analysts (APRA) standards fulfilling the requirements of a "Level I Full Reserve Study."

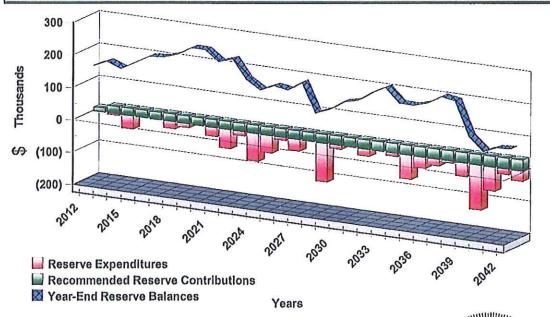






#### Kinderton Village Master Association Recommended Reserve Funding Table and Graph

Year	Reserve Contributions (S)	Reserve Balances (\$)	Year	Reserve Contributions (\$)	Reserve Balances (\$)	Year	Reserve Contributions (\$)	Reserve Balances (\$)
2013	22,000	170,004	2023	25,500	174,505	2033	29,500	210,884
2014	22,300	153,866	2024	25,900	148,468	2034	29,900	169,183
2015	22,600	178,448	2025	26,300	167,521	2035	30,300	167,691
2016	22,900	203,627	2026	26,700	161,076	2036	30,800	180,555
2017	23,200	207,491	2027	27,100	190,272	2037	31,300	207,751
2018	23,500	221,411	2028	27,500	101,305	2038	31,800	200,306
2019	23,900	248,111	2029	27,900	118,655	2039	32,300	96,165
2020	24,300	248,336	2030	28,300	148,549	2040	32,800	55,869
2021	24,700	217,317	2031	28,700	158,112	2041	33,300	72,688
2022	25,100	232,099	2032	29,100	189,284	2042	33,800	75,641



Respectfully submitted on December 5, 2012 by RESERVE ADVISORS, INC.

Michelle a. Stephans

Michelle A. Stephans, PRA<sup>1</sup>, RS<sup>2</sup>, Associate Director of Quality Assurance Visual Inspection and Report by: Christopher C. DeWall, PRA, RS



PRA (Professional Reserve Analyst) is the professional designation of the Association of Professional Reserve Analysts. Learn more about APRA at http://www.apra-usa.com.

<sup>&</sup>lt;sup>2</sup> RS (Reserve Specialist) is the reserve provider professional designation of the Community Associations Institute (CAI) representing America's more than 300,000 condominium, cooperative and homeowners associations.



#### RESERVE STUDY REPORT

At the direction of the Board that recognizes the need for proper reserve planning, we have conducted a *Precision 20/20 Full Reserve Study* of

#### Kinderton Village Residential Homeowners Master Association, Inc.

#### Advance, North Carolina

and submit our findings in this report. The effective date of this study is the date of our visual, noninvasive inspection, October 30, 2012.

We present our findings and recommendations in the following report sections and spreadsheets:

- Identification of Property Segregates all property into several areas of responsibility for repair or replacement
- Reserve Expenditures Identifies reserve components and related quantities, useful lives, remaining useful lives and future reserve expenditures during the next 30 years
- Reserve Funding Plan Presents the recommended Reserve Contributions and year-end Reserve Balances for the next 30 years
- Condition Assessment Describes the reserve components, documents conditions with photographs, describes our recommendations for repairs or replacement, and includes detailed solutions and procedures for replacements for the benefit of current and future board members
- Supplementary Information for Financial Statements Contains significant unaudited information about existing reserves from the Reserve Components and Expenditures, and estimated current and future replacement costs
- Methodology Lists the national standards, methods and procedures used, financial information relied upon for the Financial Analysis of the Reserve Study
- Definitions Contains definitions of terms used in the Reserve Study, consistent with national standards
- Conditions of our Service Describes Assumptions and Professional Service Conditions
- Credentials
- Resources



#### **IDENTIFICATION OF PROPERTY**

Kinderton Village Residential Homeowners Master Association, Inc. is an association which is responsible for the common elements shared by the sub-associations. The Association began construction in 2001 and will comprise 404 units by the end of 2012. The development includes a clubhouse, pool and parking lot, all constructed in 2003, and five storm water management ponds. We identify 22 major common elements that are likely to require capital repair or replacement during the next 30 years.

Our investigation includes Reserve Components or property elements as set forth in your Declaration. Our analysis begins by segregating the property elements into several areas of responsibility for repair and replacement. Our process of identification helps assure that future boards and the management team understand whether reserves, the operating budget or homeowners fund certain replacements and assists in preparation of the annual budget. We derive these segregated classes of property from our review of the information provided by the Association and through conversations with Management. These classes of property include:

- Reserve Components
- Long-Lived Property Elements
- Operating Budget Funded Repairs and Replacements
- Property Maintained by Homeowners
- Property Maintained by Others

We advise that the Board conduct an annual review of these classes of property to confirm its policy concerning the manner of funding, i.e., from reserves or the operating budget.



The Reserve Study identifies Reserve Components as set forth in your Declaration or which were identified as part of your request for proposed services. Reserve Components are defined by CAI as property elements with:

- KVRHMA responsibility
- · Limited useful life expectancies
- Predictable remaining useful life expectancies
- Replacement cost above a minimum threshold

Long-Lived Property Elements do not have predictable Remaining Useful Lives. The operating budget should fund infrequent repairs. Funding untimely or unexpected replacements from reserves will necessitate increases to Reserve Contributions. Periodic updates of this Reserve Study will help determine the merits of adjusting the Reserve Funding Plan. We identify the following Long-Lived Property Elements as excluded from reserve funding at this time.

- Electrical Systems, Common
- · Foundation, Clubhouse
- Overflow Structure, Large Pond
- Pipes, Interior Building, Water and Sewer, Clubhouse
- Pool Structure
- · Structural Frame, Clubhouse

The operating budget provides money for the repair and replacement of certain Reserve Components. Operating Budget Funded Repairs and Replacements relate to:

- General Maintenance to the Common Elements
- Expenditures less than \$3,000 (These relatively minor expenditures have a limited effect on the recommended Reserve Contributions.)
- Basketball Hoop
- · Concrete Sidewalks, Partial Replacements
- · Doors, Clubhouse
- Furniture, Clubhouse and Pool
- Irrigation System Controllers
- Landscape
- · Light Fixtures, Exterior, Clubhouse
- Masonry, Clubhouse
- Paint Finishes



- Ponds, Shoreline Erosion Control
- · Roof, Metal, Clubhouse
- Shutters, Clubhouse
- · Site Furniture, Benches and Picnic Table
- Volleyball Court
- · Water Heater, Clubhouse
- Wood Chip Replenishment, Playground
- · Other Repairs normally funded through the Operating Budget

#### Property Maintained by Homeowners relates to:

· Homes and Lots

#### Property Maintained by Others relates to:

- Alleys (Sub-Associations)
- Light Poles and Fixtures (Duke Energy)
- Mailbox Kiosks, Structures (Municipality)
- Pipes, Subsurface Utilities (Municipality)
- · Sidewalks, Adjacent to Streets (Municipality)
- Signage, Traffic Management (Municipality)
- Street Systems (Municipality)



#### RESERVE EXPENDITURES and FUNDING PLAN

The tables following this introduction present:

#### Reserve Expenditures

- · Line item numbers
- Total quantities replaced during the next 30 years
- Quantities replaced per phase (in a single year)
- Reserve component inventory
- Estimated first year of replacement
- Life analysis showing
  - useful life
  - remaining useful life
- Unit cost of replacement
- 2012 local cost of replacement
- Total future costs of replacement anticipated during the next 30 years
- Schedule of estimated future costs for each reserve component including inflation

#### Reserve Funding Plan

- Reserves at the beginning of each year
- Total recommended reserve contributions
- Estimated interest earned from invested reserves
- Anticipated expenditures by year
- Anticipated reserves at year end

Phided 12/05/2012

Reserve Advisors, Inc.

RESERVE EXPENDITURES
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	Openities	H :		Estimated	Life Analyzia, Years		1912	2012 Coat of Table	John Fulson (See X	(See Notes 1.5.2)							61	8	ŧ	ţ						ę	8
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4,110	3	145 Linear Food	Concrete Curbs and Culters, Partial	2002	3	ø	33.00	4,705	18,787								2,471							6,163			
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8	7	1 Abwance	Signage, Enfrance Monuments, Ranovalion	2010	15 to 20	•	00'000'0	8,000	28,164					0,740	₽												
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2,000	g	150 Square Foot Wandows	спорям 1	970	07-01	Ħ	42.50	6,375	3,672																		
			Pool Elements																•								
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6.000	7	1 Allowance	Mechanical Equipment, Chlorine Generales	2017	đ Ħ	43	0,000,00	000'8	197				ď	0,610						935						10,616	
6,502	~	1 Allowance	Mechanical Equipment, Pump and Filters	7102	51 04	.,	7,300.00	7,000	12.7				Ĩ.	0,403												10,15	
9	8	3,150 Square Find	Physics Fields	2014	8 to 12	7	502	25,200	21,059		25,562									ğ							
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#### RESERVE EXPENDITURES

for

Kinderton Village Residential Homeowners Master Association, Inc. Advance, North Carolina

Line Item	Reserve Component Inventory	21 2033	22 2034	23 2035	24 2036	25 2037	26 2038	27 2039	28 2040	29 2041	30 2042
	Property Site Elements	••••									
4.020	Asphalt Pavement, Crack Repair, Pakch and Seal Coat	6,019				6,420					
4.040	Asphalt Pavement, Mill and Overlay										
4.045	Asphalt Pavement, Total Replacement							125,675			
4.100	Catch Basins, Inspections and Capital Repairs							5,381			
4.110	Concrete Curbs and Gutters, Partial							7,153			
4.420	Irrigation Systems, Phased						29,897		30,801		31,732
4.600	Maliboxes, Metal										
4.660	Playground Equipment			33,601							
4.710	Ponds, Dredging, Partial										
4.733	Ramadas										
4.800	Signage, Entrance Monuments, Renovation				11,436						
	Clubhouse Elements										
5.200	HVAC Equipment, Phased	4,238							4,703		
5,500	Interior Renovation										
5.600	Roof Assembly, Asphalt Shingles (Includes Gullers and Downspouls)									17,248	
5.652	Security System				8,577						
5.777	Walls, Vinyl Siding								28,827		
5.800	Windows								9,672		
	Pool Elements										
6.200	Concrete Deck, Inspections, Partial Replacements and Repairs		16,443								
6.400	Fence, Metal		22,458								
6.600	Méchanical Equipment, Chlorine Generator						11,782				
6.602	Mechanical Equipment, Pump and Filters										
6.800	Plasier Finish		34,967								
	Reserve Study Update with Site Visit										
	Anticipated Expenditures, By Year	10,287	73,868	33,801	20,013	6,420	41,679	138,209	74,003	17,248	31,732

# RESERVE FUNDING PLAN

CASH FLOW ANALYSIS

Kinderton Village Residential Homeowners

2019 2020 2021 221,411 248,111 248,336 23,900 24,300 24,700 2,900 2,961 2,777 0 (27,036) (58,496) 248,111 248,336 217,317	2017         2018         2019         2020         2021         2022           203,627         207,491         221,411         248,111         248,336         217,317           23,200         23,500         23,900         24,300         24,700         25,100           2,452         2,558         2,900         2,961         2,777         2,660           (21,783)         (12,138)         0         (27,036)         (58,496)         (12,998)           207,491         221,411         248,311         248,336         217,317         232,099	2017         2018         2019         2020         2021         2022         2023           203,627         207,461         221,411         248,111         248,336         217,317         220,099           23,200         23,500         23,900         24,300         24,700         25,100         25,500           2,452         2,558         2,900         2,961         2777         2,680         2,425           (21,784)         (12,134)         0         (27,035)         (38,495)         (12,990)         (85,519)           207,491         221,411         248,111         248,336         217,317         232,039         174,505	2017         2018         2019         2020         2021         2022         2023         2024           203,627         207,491         221,411         248,111         248,336         217,317         232,039         174,505           23,200         23,500         23,900         24,300         24,700         25,100         25,500         25,900           2,452         2,558         2,800         2,861         2,777         2,680         2,425         1,926           (21,783)         (12,138)         0         (27,035)         (88,498)         (12,998)         (85,519)         (53,683)           207,491         222,040         24,425         1,926         1,926         1,926           207,494         12,1411         248,336         217,317         220,099         148,458         1,48,458	2017         2018         2019         2020         2021         2022         2023         2024         2025           2017         2018         2014         2020         2021         2022         2023         2024         2025           203,627         207,491         221,411         248,111         248,336         217,317         220,099         174,505         148,468           23,200         23,500         23,900         24,700         24,700         25,100         25,500         25,900         26,300           2,452         2,558         2,800         2,961         2,777         2,680         2,425         1,926         1,885           (21,784)         (12,138)         0         (27,035)         (38,498)         (12,998)         (85,519)         (53,863)         (9,132)           207,491         222,0491         222,049         174,505         148,468         167,521
2018         2019         2020         2021           207,461         221,411         248,111         248,336           23,500         23,900         24,300         24,700           2,558         2,900         2,961         2,777           (12,138)         0         (27,036)         (58,496)           221,411         248,111         248,336         217,317	2018         2019         2020         2021         2022           207,461         221,411         248,111         248,336         217,317           23,500         23,500         24,700         25,100           2,558         2,900         2,961         2,777         2,60           (12,138)         0         (27,035)         (58,496)         (12,998)           221,411         248,311         248,336         217,317         232,099	2018         2019         2020         2021         2022         2023           207,461         221,411         248,111         248,336         217,317         220,099           23,500         23,900         24,700         25,100         25,500           2,558         2,900         2,961         2,777         2,680         2,425           (12,138)         0         (27,036)         (38,498)         (12,998)         (85,519)           221,411         248,111         248,336         217,317         232,099         174,505	2018         2019         2020         2021         2022         2023         2024           207,491         221,411         248,111         248,336         217,317         222,099         174,505         25,500         25,500         25,900           2,558         2,390         2,430         24,700         25,100         25,500         25,900           2,558         2,390         2,961         2,777         2,660         2,425         1,926           (12,138)         0         (27,036)         (58,496)         (12,599)         (85,519)         (53,683)           221,411         248,336         217,317         222,099         174,505         148,468         7	2018         2019         2020         2021         2022         2023         2024         2025           207,491         221,411         248,111         248,336         217,317         222,039         174,505         148,468           23,500         23,500         24,700         25,100         25,500         25,300         26,300           2,558         2,900         2,961         2777         2,660         2,425         1,926         1,885           (12,138)         0         (27,036)         (38,496)         (12,599)         (85,519)         (53,863)         (9,132)           221,411         248,336         217,317         232,099         174,505         148,468         167,521
2020 2021 248,111 248,336 24,300 24,700 2,961 2,777 (27,035) (58,496) 248,336 217,317	2020         2021         2022           248,111         248,336         217,317           24,300         24,700         25,100           2,861         2777         2,600           (27,036)         (58,496)         (12,999)           248,336         217,317         232,099	2020         2021         2022         2023           248,111         248,336         217,317         222,089           24,300         24,700         25,100         25,500           2,961         2777         2,680         2,425           (27,036)         (58,496)         (12,990)         (55,519)           248,336         217,317         232,099         174,505	2020         2021         2022         2023         2024           248,111         248,336         217,317         222,039         174,505           24,300         24,700         25,100         25,500         25,900           2,561         2,777         2,680         2,425         1,926           (27,036)         (58,496)         (12,990)         (85,519)         (53,863)           248,336         217,317         232,099         174,505         148,468	2020         2021         2022         2023         2024           248,111         248,336         217,317         222,039         174,505           24,300         24,700         25,100         25,500         25,900           2,561         2,777         2,680         2,425         1,926           (27,036)         (58,496)         (12,990)         (85,519)         (53,863)           248,336         217,317         232,099         174,505         148,468
2021 248,336 24,700 2,777 (58,496)	2021 2022 248,336 217,317 24,700 25,100 2,777 2,680 (58,496) (12,599) 217,317 232,099	2021         2022         2023           248,336         217,317         220,039           24,700         25,100         25,500           2777         2,600         2,425           (18,496)         (12,599)         (85,519)           217,317         232,099         174,505	2021         2022         2023         2024           248,336         217,317         232,099         174,505           24,700         25,100         25,500         25,800           2,777         2,680         2,425         1,526           152,8486         172,989         (85,519)         (33,683)           217,317         232,099         174,505         148,468	2021         2022         2023         2024         2025           248,336         217,317         222,039         174,505         148,468           24,700         25,100         25,500         25,300         26,300           2777         2,680         2,425         1,926         1,885           (58,496)         (12,999)         (85,519)         (53,883)         (9,132)           217,317         232,099         174,505         148,468         167,521
	2022 217,317 25,100 2,680 (12,998)	2022 2023 217,317 222,099 25,100 25,500 2,600 2,425 (12,599) (85,519) 232,099 174,505	2022         2023         2024           217,317         232,099         174,505         25,500           25,100         25,500         25,900         25,900           2,680         2,425         1,926           (12,999)         (85,519)         (33,863)           222,039         174,505         148,468	2022         2023         2024         2025           217,317         222,039         174,505         148,468           25,100         25,500         25,900         26,300           2,660         2,425         1,926         1,885           (12,999)         (85,519)         (33,833)         (9,132)           232,039         174,505         148,468         167,521
		2023 232,099 25,500 2,425 (85,519)	2023 2024 222,099 174,505 25,500 25,500 2,425 1,926 (85,519) (53,863) 174,505 148,458	2023         2024         2025           222,039         174,505         148,468           25,500         25,900         26,300           2,425         1,526         1,885           (85,519)         (33,863)         (9,132)           174,505         148,468         167,521

(continued)	Individual Resi	erve Budgets		ws for the Ne	xt 30 Years.	Continued									
	2028	3 2029	2030		2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
Reserves at Beginning of Year	190,272	101,305	118,555		158,112	189,284	210,884	169,183	167,691	180,555	207,751	200,306	96,165	55,869	72,688
Total Recommended Reserve Contributions	27,500		28,300		29,100	29,500	29,900	30,300	30,800	31,300	31,800	32,300	32,800	33,300	33,800
Plus Estimated Interest Earned, During Year	1,739		1,594		2,072	2,387	2,267	2,009	2,077	2,316	2,434	1,768	206	767	885
Less Anticipated Expenditures, By Year	(118,206)		0	~	0	(10,287)	(73,868)	(33,801)	(20,013)	(6,420)	(41,679)	(138,209)	(74,003)	(17,248)	(31,732)
Anticipated Reserves at Year End	101,305	118,655	148.549	158.112	189.284	210.884	169,183	167.691	180,555	207,751	200,306	96.165	55.869 (NOTE 5)	72.688	Z5.841 NOTE 4)

## Explanatory Notes:

- Year 2012 reserves are as of September 30, 2012; FY 2012 starts January 1 and ends December 31.

  Reserve Contributions for 2012 are the remaining budgeted three months; 2013 is the first year of recommended contributions.

  1.2% is the estimated annual rate of return on invested reserves; 2012 is a partial year of interest earned.

  Accumulated year 2042 anding reserves consider the age, size, overall condition and complexity of the property.

  Threshold Funding Year (reserve balance at critical point).

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#### CONDITION ASSESSMENT

The Condition Assessment of this *Precision 20/20 Full Reserve Study* includes *Enhanced Solutions and Procedures (ESP)* for select significant components. These narratives describe the Reserve Components, document specific problems and conditions, and may include detailed solutions and procedures for necessary capital repairs and replacements for the benefit of current and future board members. We advise the Board use this information to help define the scope and procedures for repair or replacement when soliciting bids or proposals from contractors. *However, the Report in whole or part is not and should not be used as a design specification or design engineering service.* 

#### **Property Site Elements**

Asphalt Pavement, Crack Repair, Patch and Seal Coat - An asphalt pavement parking lot and access drive comprises 2,950 square yards near the clubhouse. The pavement is in good to fair overall condition at an age of nine years. We note pavement cracks and deterioration. Parked vehicles leak motor oil and other fluids that can damage asphalt pavement. We recommend periodic *seal coat* applications to maintain the pavement. Seal coat applications minimize the damaging effects of these vehicle fluids, maintain a uniform and positive appearance, and maximize the useful life of the pavement. The Association should plan applications every three- to five-years. We elaborate on solutions and procedures necessary for the optimal maintenance of asphalt pavement in the following discussion.

There are four main types of seal coats available: fog coat, acrylic sealer, chip seals and asphaltic emulsion. A *fog coat* is a simple mixture of water and asphalt. *Acrylic sealers* include an acrylic additive to the water and asphalt mixture for greater resistance to abrasion. *Fog coats* 



and acrylic sealers are typically spray applied and are only for aesthetic purposes. Chip seal is the most substantial type of seal coat which involves placement of oil and aggregate on the driving surface. Either a roller or normal vehicular traffic works the gravel into the oil. Asphaltic emulsions combine a sharp sand mixture or mineral fibers and an emulsifying agent with the water and asphalt mixture. Asphaltic emulsions are typically hand applied with squeegees to ensure that the sealer fills surface abrasions and minor cracks. This prevents the infiltration of water through cracks into the underlying pavement base. Seal coats therefore minimize the damaging effects of water from expansion and contraction. We regard asphaltic emulsions as the most effective and economical type of seal coat.

KVRHMA should repair any isolated areas of deteriorated pavement prior to seal coat applications. Proposals for seal coat applications should include both crack repair and area patching. These activities reduce water infiltration and the effects of inclement weather. The contractor should only apply seal coat applications after remedial crack and surface repairs are completed. A seal coat does not bridge or close cracks, therefore, unrepaired cracks render the seal coat applications useless. Our future estimates of cost include an allowance for both crack repair and area patching.

We recommend that KVRHMA plan the next application of seal coat in 2013 and subsequent applications every four years thereafter except when repaving occurs. Line Item 4.020 of *Reserve Expenditures* notes our estimate of future costs and anticipated times of seal coat applications. Our costs include allowances for striping of the parking areas.



Asphalt Pavement, Repaving - As mentioned above, the 2,950 square yards of asphalt pavement access drive and parking lot near the clubhouse are in good to fair overall condition at an age of nine years. We note cracks and deterioration, primarily at the parking lot. Page 5.2 of *Photographs* depicts these conditions. The useful life of pavement in Advance is from 15- to 20-years. We include the following solutions and procedures pertaining to *components* of the pavement, the *manner of repaving*, *time* of repaving and *coordination* of other possible replacements with the repaving for the benefit of the present and future board members.

Components of asphalt pavement include native soil, aggregate and asphalt. First the contractor creates a base course of aggregate or crushed stone and native soil. The base course is individually compacted to ninety-five percent (95%) dry density prior to the application of the asphalt. Compaction assures a stable base for the asphalt that reduces the possibility of settlement. The initial installation of asphalt uses at least two lifts, or two separate applications of asphalt, over the base course. The first lift is the binder course. The second lift is the wearing course. The wearing course comprises a finer aggregate for a smoother more watertight finish. The following diagram depicts these components.





#### ASPHALT DIAGRAM

Sealcoat or Wearing Surface Asphalt Overlay Not to Exceed 1.5 inch Thickness per Lift or Layer

Original Pavement Inspected and milled until sound povement is found, usually comprised of two layers

Compacted Crushed Stone or Aggregate Base

Subbase of Undisturbed Native Soils Compacted to 95% dry density

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The manner of repaving is either a mill and overlay or total replacement. A mill and overlay is a method of repaving where cracked, worn and failed pavement is mechanically removed or milled until sound pavement is found. A new layer of asphalt is overlaid atop the remaining base course of pavement. Total replacement includes the removal of all existing asphalt down to the base course of aggregate and native soil followed by the application of two or more new lifts of asphalt. We recommend mill and overlayment on asphalt pavement that exhibits normal deterioration and wear. We recommend total replacement of asphalt pavement that exhibits severe deterioration, inadequate drainage, pavement that has been overlaid multiple times in the past or where the configuration makes overlayment not possible. Based on the apparent visual condition and configuration of the asphalt pavement, we recommend the mill and overlay method for initial repaving and the total replacement method for subsequent repaving at KVRHMA.



A variety of repairs are necessary to deteriorated pavement prior to the application of an overlay. The contractor should use a combination of area patching, crack repair and milling before the overlayment. The contractor should patch areas that exhibit potholes, alligator or spider web pattern cracks and areas of pavement that are severely deteriorated from oil and gasoline deposits from parking vehicles. Area patching requires total replacement of isolated areas of pavement. The contractor should mechanically rout and fill all cracks with hot emulsion. Crack repair minimizes the chance of the underlying cracks transmitting through the overlayment. In addition to area patching and crack repair, the contractor should mill the pavement prior to overlayment. Properly milled pavement removes part of the existing pavement and permits the overlay to match the elevation of adjacent curbs and gutters, catch basins and other areas not subject to repaying. Milling also allows the contractor to make adjustments to the slope of the pavement to ensure proper drainage. The contractor should clean the milled pavement to ensure proper bonding of the new overlayment. We recommend an overlayment thickness that averages 1½ inches (not less than one inch or more than two inches). Variable thicknesses are often necessary to create an adequate slope for proper drainage. The contractor should identify and quantify areas of pavement that require area patching, crack repair and milling to help the Association compare proposed services.

Total replacement requires the removal of all existing asphalt. For area patching, we recommend the contractor use a rectangular saw cut to remove the deteriorated pavement. For larger areas such as entire parking areas or driveways, we recommend the contractor grind, mill or pulverize the existing pavement to remove it. The contractor should then augment and compact the existing aggregate and native soil to create a stable base. Finally the contractor should install the new asphalt in at least two lifts.



The *time* of replacement is dependent on the useful life, age and condition of the pavement. The useful life of 15- to 20-years is dependent in part on the maintenance applied to the pavement, the amounts and concentration of auto solvents that penetrate the pavement, the exposure to sunlight and detrimental effects of inclement weather. KVRHMA should repair any isolated areas of deteriorated pavement concurrent with periodic seal coat applications. We recommend the Association plan for a milling and overlayment of the pavement with area patching of up to ten percent (10%) by 2021. We recommend the Association plan for total replacement of the asphalt pavement by 2039. We depict this information on Line Items 4.040 and 4.045 of *Reserve Expenditures*. The Association should *coordinate* asphalt repairs to catch basins.

Catch Basins - Four catch basins collect storm water from the parking lot and access drive pavement and conduct it into the storm water system. The overall condition of the catch basins is good without settlement visually apparent. The useful life of catch basins is up to 60 years. However, achieving this useful life usually requires interim capital repairs or partial replacements every 15- to 20-years.

The Association should anticipate the occasional displacement or failure of a catch basin and the surrounding pavement from erosion. Erosion causes settlement around the collar of catch basins. Left unrepaired, the *entire catch basin* will shift and need replacement. KVRHMA should plan to repair or replace any displaced or failed catch basins concurrently with surrounding pavement or curbs and gutters. The exact times and amount of capital repairs or replacements are dependent upon variable natural forces. Based on the age and condition of the



catch basins, we recommend the Association anticipate the inspection, capital repair or partial replacement of the four catch basins in conjunction with each repaving event. We include this information on Line Item 4.100 of *Reserve Expenditures*.

Concrete Curbs and Gutters - Concrete curbs and gutters line the access drive and parking lot pavement of KVRHMA. These curbs and gutters comprise 1,450 linear feet and are in good condition overall. We note isolated cracks. An example is shown on Page 5.3 of *Photographs* depicts this condition. This application of concrete has a useful life of up to 65 years although isolated deterioration of limited areas of concrete is common. Inclement weather, inadequate subsurface preparation and improper concrete mixtures or finishing techniques can result in premature deterioration such as settlement, chips, cracks and spalls. Variable conditions like these result in the need to plan for periodic partial replacements of the concrete flatwork throughout the next 30 years. We estimate that up to 145 linear feet of curbs and gutters, or ten percent (10%) of the total, will require replacement by 2021, 2029 and 2039. We depict this information on Line Item 4.110 of *Reserve Expenditures*. The Association should coordinate partial replacements of concrete curbs and gutters with asphalt pavement, due to the interrelated nature of these items. The times and costs of these replacements may vary. However, the estimated expenditures detailed in *Reserve Expenditures* are sufficient to budget appropriate reserves.

Irrigation Systems - KVRHMA is responsible for the irrigation systems which water the lawn and landscaped areas at the Glen Arbor Drive entrance, clubhouse area and entrance, and four large common areas. The systems comprise 29 zones and approximately 425 heads. Irrigation systems typically include the following components:



- Electronic controls (timer)
- Impact rotors
- Network of supply pipes
- Pop-up heads
- Valves

Water pressure activates the lawn spray pop-up heads. Controllers operate the main water flow valves. The exact amounts and locations of system components were not ascertained due to the nature of the underground construction and the non-invasive nature of the inspection.

The irrigation systems are original and in good overall condition. The systems as a whole have a useful life of 35- to 40-years. The systems' network supply pipes will dislodge as tree roots grow and soil conditions change. KVRHMA should anticipate interim and partial replacements of the systems' network supply pipes and other components as normal maintenance to maximize the useful life of the irrigation systems. The Association should fund these ongoing seasonal repairs through the operating budget. In addition, we recommend KVRHMA budget for a complete replacement of the systems beginning by 2038 and concluding by 2042. We note this information on Line Item 4.420 of *Reserve Expenditures*.

Mailboxes, Metal - A total of eight mailbox kiosks throughout the property contain the individual mailboxes that serve the sub-associations. Management informs us the municipality is responsible for the structures. The metal mailboxes are in original, in good overall condition and have a useful life of up to 25 years. We note isolated mailbox rust as shown on Page 5.5 of *Photographs*. KVRHMA should budget for replacement of the mailboxes by 2023. We depict this information on Line Item 4.600 of *Reserve Expenditures*. The Association should verify the new mailboxes meet the specifications of the United States Postal Service.



Playground Equipment - The Association maintains playground equipment near the pool. The playground equipment is in good to fair condition at an age of seven years. Safety is the major purpose for maintaining playground equipment. We recommend an annual inspection of the playground equipment to identify and repair as normal maintenance loose connections and fasteners or damaged elements. *Playworld Systems*<sup>1</sup> is a leading innovator of modular playground equipment. We suggest the Association learn more about the specific requirements of playground equipment at http://www.playworldsystems.com. We recommend the use of a specialist for the design or replacement of the playground equipment environment. Playground equipment of this type has a useful life of 15- to 20-years. We recommend replacement of the playground equipment by 2020 and again by 2035. We include this information on Line Item 4.660 of *Reserve Expenditures*.

Ponds - The Association maintains a large pond, two small ponds and two overflow ponds at the southern portion of the community. Management does not report problems with algae blooms. We include the following solutions and procedures as a summary of the minimum requirements for successful pond management for present and future board members.

The gradual build-up of natural debris, including tree leaves, branches and silt, may eventually change the topography of areas of the ponds. Dredging of a pond becomes necessary if this accumulation alters the quality of the pond water. Dredging is the optimal but also the most capital intensive method of pond management. Excavation equipment used for dredging includes clamshells, draglines and suction pipe lines. Dredging can also include shoreline

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regrading. Regrading includes removal of collapsed and eroded soil, and redefining the shoreline.

The large pond comprises approximately 43,780 square yards of water surface area. The two smaller and two overflow ponds comprise approximately 2,370 square yards. Based on the visual condition of the ponds, adjacent deciduous trees and design of the water flow, we recommend the Association anticipate the need to dredge the ponds. For reserve budgeting purposes, we estimate the need to dredge one hundred percent (100%) of the four smaller ponds and up to ten percent (10%) of the large pond surface area, or 6,900 square yards, an average depth of one yard. However, the actual volume of material to dredge may vary dependent upon an invasive analysis at the time of dredging. We conservatively recommend the Association budget for this variable but probable activity by 2028. The time and cost of this maintenance activity may vary. However, we judge the amount shown on Line Item 4.710 of *Reserve Expenditures* sufficient to budget appropriate reserves.

Ramadas - The Association maintains three ramadas at the common areas. The ramadas are original and in good condition. We note paint finish deterioration and wood rot as shown on Page 5.8 of *Photographs*. The Association should fund paint finishes and repairs through the operating budget. Wood structures exposed to weather have a useful life of up to 25 years. We recommend KVRHMA budget for replacement by 2023. We depict this information on Line Item 4.733 of *Reserve Expenditures*.

Signage - The Association maintains four entrance monuments that include 1,850 square feet of masonry, four metal roofs, two signs and eight light fixtures. These elements are original



and in good condition. However, we note wood rot beneath the entrance sign as shown on Page 5.8 of *Photographs*. The Association should fund paint finishes and repairs through the operating budget. Community signage contributes to the overall aesthetic appearance to owners and potential buyers. Renovation or replacement of community signs is often predicated upon the desire to "update" the perceived identity of the community rather than for utilitarian concerns. Therefore, the specific times for replacement or renovation are discretionary. We recommend the Association plan to renovate the signage every 15- to 20-years, or by 2018 and 2036. Renovation should include the following work:

- · Replacement of the signs, light fixtures and metal roofs
- Repointing and repairs to the 1,850 square feet of masonry

We note this information on Line Item 4.800 of *Reserve Expenditures*. The Association should fund interim repairs and replacements through the operating budget.

#### Clubhouse Elements

HVAC Equipment - The clubhouse HVAC (heating, ventilating and air conditioning) equipment includes the following:

- Heat pump with three tons of heating/cooling
- Air handler

The air handler is original and in good operational condition. The heat pump is in good condition at two years of age. The useful life of residential size units is from 12- to 18-years. We recommend the Association anticipate the phased replacement of these building services components beginning by 2018, concluding by 2025, and every 15 years thereafter. We include this information on Line Item 5.200 of *Reserve Expenditures*.



Interior Renovation - The clubhouse interior comprises approximately 1,100 square feet of finished area. Interior components of the clubhouse include:

- Concrete and vinyl floor coverings
- · Paint finishes on the walls and ceilings
- Plumbing fixtures
- · Light fixtures including exit and emergency lights
- Kitchen cabinets and countertops
- · Various appliances including a stove, refrigerator and microwave

The clubhouse interior elements are original and in good overall condition. The useful lives of these interior building elements vary. However, due to interrelated nature of these elements and the desire to achieve a uniform appearance, we recommend the Association combine their replacements into coordinated interior renovations.

We recommend the Association anticipate complete interior renovations every 25 years. These *complete* renovations should include replacement of all the interior components listed above.

Based on the age and visual condition of these interior clubhouse elements, we recommend the Association budget for a coordinated complete interior renovation by 2026. We note this information on Line Item 5.500 of *Reserve Expenditures*.

Roof Assembly, Asphalt Shingles - The clubhouse roof assembly comprises 35 squares<sup>2</sup> of asphalt shingles and 280 linear feet of gutters and downspouts. The roof is original and in good condition. We note sheathing deflection as shown on Page 5.11 of *Photographs*. The useful life of an asphalt shingle roof is from 15- to 20-years. We recommend the Association

We quantify the roof area in squares, where one square is equal to 100 square feet of surface area.



anticipate complete replacement of the clubhouse roof by 2022 and again by 2041. We note this information on Line Item 5.600 of *Reserve Expenditures*.

Security System - KVRHMA utilizes an automated card reading system for access to the pool, and four cameras, a monitor and a recording device for added security within the clubhouse and outside grounds. The security system is in good operational condition at an age of up to two years. As the system ages, service interruptions will increase in frequency. We anticipate a useful life of the system of 12- to 15-years. The Association should anticipate the replacement of the security system by 2023 and 2036. We include this information on Line Item 5.652 of *Reserve Expenditures*. The Association should anticipate interim replacements of a limited quantity of components as normal maintenance to achieve a uniform useful life for the entire system.

Walls, Vinyl Siding - Vinyl siding comprises approximately 3,800 square feet of the clubhouse exterior walls. This quantity includes the aluminum soffit and fascia. The siding is original, in good overall condition and has a useful life of up to 40 years. The clubhouse siding utilizes J-channels at window and door perimeters, and includes water-vapor permeable building paper. The lack of replacement pieces matching the color and profile of the existing siding may result in the need for a premature replacement. These variables may affect the need for partial and complete replacements. With consideration of the age and existing condition of the siding, we recommend the Association anticipate replacement of the siding by 2040. For purposes of this Reserve Study, we base our cost on replacement with a minimum of .042-inch thick siding. We note this information on Line Item 5.777 of Reserve Expenditures.



Vinyl siding is relatively maintenance free. However, the Association should periodically clean the vinyl siding with a water hose. A nonabrasive household cleaner or manufacturer specified vinyl siding cleaner will remove more intense stains. The Association should fund these ongoing expenses through the operating budget.

Windows - The clubhouse windows comprise approximately 150 square feet, are original and are in good overall condition. The useful life of vinyl, dual pane windows is up to 40 years. The useful life of the windows is based on the occurrence of water infiltration, thermal inefficiencies compared to present technology, type of frame, availability of replacement parts and aesthetics. Based on these factors, we recommend the Association anticipate replacement of the windows by 2040, in conjunction with replacement of the siding. We depict this information on Line Item 5.800 of *Reserve Expenditures*.

#### Pool Elements

Concrete Deck - A concrete deck surrounds the pool and comprises approximately 7,900 square feet. The deck is original and in good condition. We note several concrete pool deck cracks as shown on Page 5.13 of *Photographs*. The useful life of a concrete pool deck is up to 60 years. However, we recommend the Association conduct inspections, partial replacements and repairs to the deck every 8- to 12-years.

Inadequate subsurface preparation, improper concrete mixtures, poor finishing techniques, soil movement and water infiltration underneath the concrete deck can cause significant settlement and cracks in the concrete. The pool deck should also be free of trip



hazards for the safety of residents and their guests. We recommend the Association budget for the following by 2014 and every 10 years thereafter:

- Selective cut out and replacements of up to ten percent (10%) of concrete
- Crack repairs as needed
- Mortar joint repairs
- Caulk replacement

The times, amounts and related costs of these repairs and replacements may vary. However, we judge the amounts shown on Line Item 6.200 of *Reserve Expenditures* sufficient to budget appropriate reserves.

Fence, Metal - KVRHMA maintains approximately 390 linear feet of metal fence around the pool deck. The fence is in good condition at an age of two years. These fences are prone to damage from pedestrians in high traffic areas, such as near sidewalks and surrounding pool decks. We estimate a useful life of up to 25 years for the metal fence and recommend the Association budget for replacement by 2034. We include this information on Line Item 6.400 of *Reserve Expenditures*.

Mechanical Equipment - The pool mechanical equipment comprises the following:

- Chlorine generator
- Controls
- Filters
- Interconnected pipe, fittings and valves
- Pumps

The pump and filters are original and in good condition. The chlorine generator is in good condition at an age of one year. The pump and filters have a useful life of up to 15 years. The useful life of the chlorine generator is up to 10 years. Failure of the pool mechanical equipment as a single event is unlikely. We recommend the Association anticipate replacement



of the filters and pump by 2017 and every 14 years thereafter. We recommend replacement of the chlorine generator by 2017 and every seven years thereafter. We consider interim replacement of motors and minor repairs as normal maintenance. We note this information on Line Items 6.600 and 6.062 of *Reserve Expenditures*.

Plaster Finish - The pool wall and floor surfaces have a plaster finish of 3,150 square feet based on the horizontal surface area. The pool plaster appears original and in fair overall condition. We note plaster discoloration and possible granular accumulation as depicted on Page 5.14 of *Photographs*. This type of pool finish deteriorates with time and requires periodic maintenance and replacement. We recommend the Association anticipate the need to replace the plaster finish and conduct related repairs every 8- to 12-years to maintain the integrity of the pool structure. Removal and replacement provides the opportunity to inspect the pool structure and to allow for partial repairs of the underlying concrete surfaces as needed. We recommend the Association budget for the following by 2014 and every 10 years thereafter:

- Removal and replacement of the plaster finish
- Partial replacements of the scuppers and coping as needed
- · Replacement of up to ten percent (10%) of the tiles
- Replacement of joint sealants as needed
- · Concrete structure repairs as needed

We include this information on Line Item 6.800 of Reserve Expenditures.

Reserve Study Update - An ongoing review by the Board and an Update of this Reserve Study in two- to three- years are necessary to ensure an equitable funding plan since a Reserve Study is a snapshot in time. Many variables change after the study is conducted that may result in significant overfunding or underfunding the reserve account. Variables that may affect the Reserve Funding Plan include, but are not limited to:



- · Deferred or accelerated capital projects based on Board discretion
- · Changes in the interest rates on reserve investments
- Changes in the *local* construction inflation rate
- Additions and deletions to the Reserve Component Inventory
- · The presence or absence of maintenance programs
- Unusually mild or extreme weather conditions
- Technological advancements

Periodic updates incorporate these variable changes since the last Reserve Study or Update.

The Association can expense the fee for an Update with site visit from the reserve account. This fee is included in the Reserve Funding Plan. We base this budgetary amount on updating the same property components and quantities of this Reserve Study report. Budgeting for an Update demonstrates the Board's objective to continue fulfilling its fiduciary responsibility to maintain the commonly owned property and to fund reserves appropriately.



#### **PHOTOGRAPHS**

*Photographs* document the conditions of various property components as of the date of our visual inspection, October 30, 2012. The Condition Assessment contains references to these photographs.

The following is an overview image of the subject property:



The next pages contain the photographs related to Section 4 - Condition Assessment





Asphalt pavement parking lot overview



Pavement cracks and deterioration



Page 5.2 - Photographs

Pavement cracks





Catch basin



Concrete curb crack and settlement



Page 5.3 - Photographs

Concrete sidewalk cracks

Note: The Association should fund concrete sidewalk partial replacements through the operating budget





Concrete sidewalk deterioration



North Forke Drive mailbox kiosk

Note: Structure is Municipality responsibility



Page 5.4 - Photographs

Parkview Lane mailbox kiosk

Note: Structure is Municipality responsibility





Mailbox station rust



Playground equipment



Page 5.5 - Photographs

Large pond overview





Typical natural shoreline of large pond



Steep embankment at south edge of large pond



Large pond inlet basin

Page 5.6 - Photographs





Large pond overflow pond



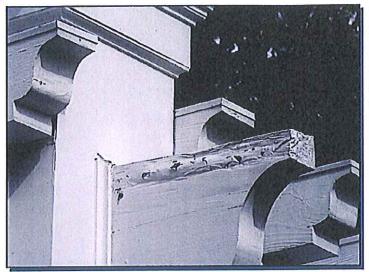
Overview of the pond south of Brookstone Drive



Page 5.7 - Photographs

Ramada and pergola at intersection of Townpark and Glen Arbor Drive



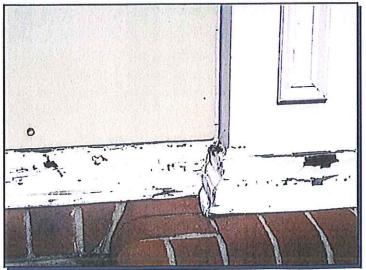


Wood rot and paint finish deterioration

Note: The Association should fund paint finishes and repairs through the operating budget



**Entrance monuments** 



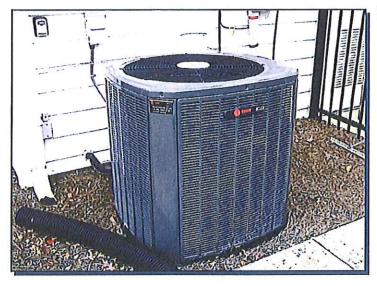
Page 5.8 - Photographs

Wood rot beneath entrance sign

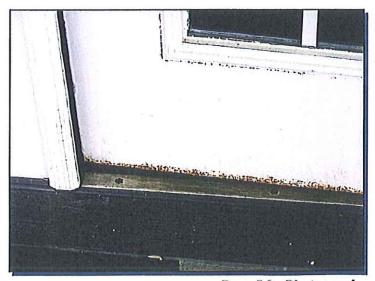




Clubhouse



Heat pump



Page 5.9 - Photographs

## Door rust

Note: The Association should fund clubhouse door replacements through the operating budget





Pool mechanical room door rust



Main room



Page 5.10 - Photographs

Kitchen





Rest room



Concrete floor paint finish deterioration

Note: The Association should fund interim paint finishes through the operating budget



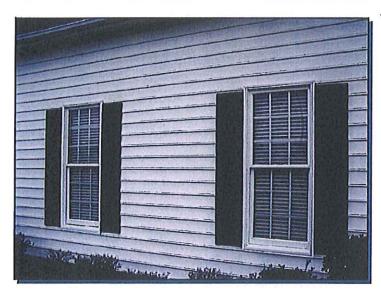
Sheathing deflection

Page 5.11 - Photographs

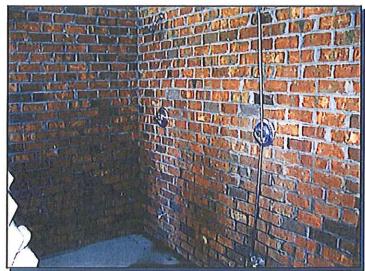




Security cameras



Windows



Page 5.12 - Photographs

## Efflorescence at shower

Note: The Association should fund any clubhouse masonry repairs through the operating budget





Concrete pool deck crack



Pool deck cracks



Page 5.13 - Photographs

Pool fence

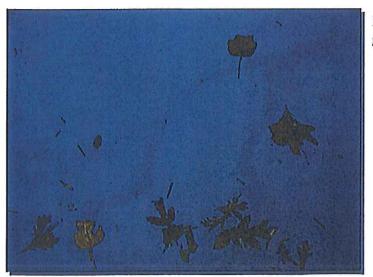




Mechanical equipment



Pool overview



Page 5.14 - Photographs

Plaster discoloration and possible granular accumulation



### SUPPLEMENTARY INFORMATION FOR FINANCIAL STATEMENTS

The Reserve Funding Plan uses the Cash Flow Method to determine an appropriate funding plan with the following unaudited financial information furnished by the Association.

Unaudited Supplemental Information on Future Major Repairs and Replacements

Reserve Component Calegories	Total Current Replacement Costs	Total Future or Inflated Replacement Costs	% of Total Future Replacements	Component of Projected 2012 YE Fund Balance		
Property Site Elements	\$459,607	\$605,772	63.15%	\$95,096		
Clubhouse Elements	\$100,675	\$135,588	14.14%	\$21,285		
Pool Elements	\$174,935	\$215,670	22.48%	\$33,856		
Reserve Study Update	\$2,200	\$2,200	0.23%	\$345		
Totals	\$737,417	\$959,230	100%	\$150,583		

The Audit and Accounting Guide for Common Interest Realty Associations presents recommendations on Supplementary Information on Future Major Repairs and Replacements in end of fiscal year Audits of Financial Statements for community associations<sup>1</sup>. Accountants use discretion and judgment on how to present the Supplementary Information on Future Major Repairs and Replacements. However, the Supplementary Information on Future Major Repairs and Replacements often references and includes excerpts from our Reserve Studies. The following table excerpts significant unaudited information from the Reserve Expenditures about Reserve Component categories and estimated current and future replacement costs based on inflation at an annual rate of 1.5%.

The information included in the table above may be included as part of the Supplementary Information on Future Major Repairs and Replacements. *However, Reserve* 

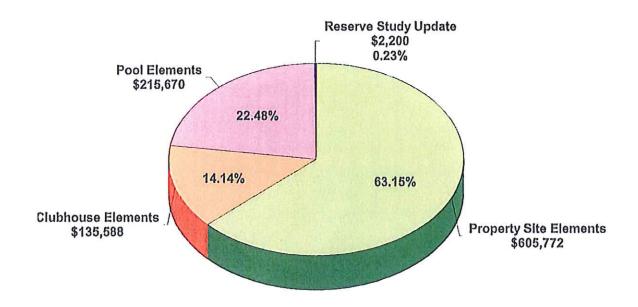
<sup>&</sup>lt;sup>1</sup> American Institute of Certified Public Accountants (AICPA) Audit and Accounting Guide - Common Interest Realty Associations; American Institute of Certified Public Accountants, Inc.; 2003



Advisors, Inc. does not certify that the information in the table will fully satisfy the recommendations of the AICPA guideline.

The most important category of Reserve Components noted in *Reserve Expenditures* is the Property Site Elements. The following chart illustrates the relative importance of the Reserve Expenditures and relative funding during the next 30 years.

# Future Expenditures Relative Cost Illustration Kinderton Village Residential Homeowners Master Association, Inc.





### **METHODOLOGY**

Reserves for replacement are the amounts of money required for future expenditures to repair or replace Reserve Components that wear out before the entire facility or project wears out. Reserving funds for future repair or replacement of the Reserve Components is also one of the most reliable ways of protecting the value of the property's infrastructure and marketability.

KVRHMA can fund capital repairs and replacements in any combination of the following:

- 1) Increases in the operating budget during years when the shortages occur
- 2) Loans using borrowed capital for major replacement projects
- 3) Level monthly reserve assessments annually adjusted upward for inflation to increase reserves to fund the expected major future expenditures
- 4) Special assessments

We do not advocate special assessments or loans unless near term circumstances dictate otherwise. Although loans provide a gradual method of funding a replacement, the costs are higher than if the Association were to accumulate reserves ahead of the actual replacement. Interest earnings on reserves also accumulate in this process of saving or reserving for future replacements, thereby defraying the amount of gradual reserve collections. We advocate the third method of *Level Monthly Reserve Assessments* with relatively minor annual adjustments. The method ensures that homeowners pay their "fair share" of the weathering and aging of the commonly owned property each year. Level reserve assessments preserve the property and enhance the resale value of the homes.



This Reserve Study is in compliance with and exceeds the National standards<sup>1</sup> set forth by Community Associations Institute (CAI) and the Association of Professional Reserve Analysts (APRA) fulfilling the requirements of a "Full Reserve Study." These standards require a Reserve Component to have a "predictable remaining Useful Life." Estimating Remaining Useful Lives and Reserve Expenditures beyond 30 years is often indeterminate. Long-Lived Property Elements are necessarily excluded from this analysis. We considered the following factors in our analysis:

Information Furnished by the Association					
September 30, 2012 unaudited Cash Status of the Reserve Fund	\$138,504				
Remaining 2012 Budgeted Reserve Contributions	\$11,646				
Anticipated Interest on Reserve Fund	\$433				
Less Anticipated Reserve Expenditures	.\$0				
Projected 2012 Year-End Reserve Balance	\$150,583				

The Cash Flow Method to compute, project and illustrate the 30-year Reserve Funding Plan

Local<sup>2</sup> costs of material, equipment and labor

Current and future costs of replacement for the Reserve Components

Costs of demolition as part of the cost of replacement

Local economic conditions and a historical perspective to arrive at our estimate of long term future inflation for *construction costs* in Advance, North Carolina at an annual inflation rate of 1.5%. Isolated or regional markets of greater construction (development) activity may experience slightly greater rates of inflation for both construction materials and labor.

The past and current maintenance practices of KVRHMA and their effects on remaining useful lives

<sup>&</sup>lt;sup>1</sup> Identified in the APRA "Standards - Terms and Definitions" and the CAI "Terms and Definitions".

<sup>&</sup>lt;sup>2</sup> See Credentials for addition information on our use of published sources of cost data.



The Funding Plan excludes necessary operating budget expenditures. It is our understanding that future operating budgets will provide for the ongoing normal maintenance of Reserve Components

The anticipated effects of appreciation of the reserves over time in accord with an anticipated future return or yield on investment of your cash equivalent assets at an annual rate of 1.2% (We did not consider the costs, if any, of Federal and State Taxes on income derived from interest and/or dividend income)

Interest rates on reserves are steady or increasing in concert with the certificates of deposit and money market rates. Slight increases exist in the savings rates of one, two or three-year CDs. Without significant differences in these savings rates, shorter term investments are the choice of many investors. We recommend consultation with a professional investment adviser before investing reserves to determine an appropriate investment strategy to maximize a safe return on reserve savings. The following table summarizes rates of inflation and key rates for government securities, generally considered as safe investment alternatives.

	•	riicab ol Deg	osit		br 3-Year Co		
U.10% 1	O MOREY MO	enctousedo		U.O.A	DI E-1 COI C	a moda ord	срози
0.4602 (	he Honou He	rkel Savings		0.8%	br 2-Year Co	Olo election	Escan
alon Rata,	Bureau of Labo	v Statistics (BLS	- 12 months)				2.3%
0.02	3.6%	3.6%	3.2%	2.1%	2%	2%	2%
4.50	4.50	3.60	2.80	4.50	2.55	2.50	2.90
2.50	2.25	2.20	1.85	2.50	1.50	1.45	1.70
0.30	0.15	0.10	0.10	0.30	0.19	0.18	0.18
).050%	0.40%	0.20%	0.20%	0.05%	0.10%	0.1%	0.1%
011:1 (A)	2011:2 (A)	2011:3 (A)	2011:4 (E)	2012:1 (A)	2012:2 (A)	2012:3 (A)	2012:4 (
	0.30 0.50% 0.30 2.50 4.50 0.02	111:1 (A) 2011:2 (A) 1.050% 0.40% 0.30 0.15 2.50 2.25 4.50 4.50 0.02 3.6%	2011:1 (A)         2011:2 (A)         2011:3 (A)           0.50%         0.40%         0.20%           0.30         0.15         0.10           2.50         2.25         2.20           4.50         4.50         3.60           0.02         3.6%         3.6%	111:1 (A)         2011:2 (A)         2011:3 (A)         2011:4 (E)           0.50%         0.40%         0.20%         0.20%           0.30         0.15         0.10         0.10           2.50         2.25         2.20         1.85           4.50         4.50         3.60         2.80	0.050%         0.40%         0.20%         0.20%         0.05%           0.30         0.15         0.10         0.10         0.30           2.50         2.25         2.20         1.85         2.50           4.50         3.60         2.80         4.50           0.02         3.6%         3.8%         3.2%         2.1%	111:1 (A)         2011:2 (A)         2011:3 (A)         2011:4 (E)         2012:1 (A)         2012:2 (A)           0.50%         0.40%         0.20%         0.20%         0.05%         0.10%           0.30         0.15         0.10         0.10         0.30         0.19           2.50         2.25         2.20         1.85         2.50         1.50           4.50         4.50         3.60         2.80         4.50         2.55           0.02         3.6%         3.6%         3.2%         2.1%         2%	111:1 (A)         2011:2 (A)         2011:3 (A)         2011:4 (E)         2012:1 (A)         2012:2 (A)         2012:3 (A)           0.50%         0.40%         0.20%         0.20%         0.05%         0.10%         0.1%           0.30         0.15         0.10         0.10         0.30         0.19         0.18           2.50         2.25         2.20         1.85         2.50         1.50         1.45           4.50         4.50         3.60         2.80         4.50         2.55         2.50           0.02         3.6%         3.6%         3.2%         2.1%         2%         2%

Updates to this Reserve Study will continue to monitor historical facts and trends concerning the external market conditions.



#### DEFINITIONS1

- 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.
- Component Method A method of developing a Reserve Funding Plan with the total contribution is based on the sum of the contributions for individual components,
- 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, overtime, bonuses for labor or premiums for material and equipment. We include removal and disposal costs where applicable.
- Fully Funded Balance The Reserve balance that is in direct proportion to the fraction of life "used up" of the current Repair or Replacement cost similar to Total Accrued Depreciation
- Funding Goal (Threshold) The stated purpose of this Reserve Study is to determine the adequate, not excessive, minimal threshold reserve balances.
- 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 KVRHMA 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.
- Percent Funded The ratio, at a particular point of time (typically the beginning of the Fiscal Year), of the actual (or projected) Reserve Balance to the Fully Funded Balance, expressed as a percentage.
- 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) KVRHMA 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 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 a 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 *Cush Flow Analysis* and containing the recommended Reserve Contributions and projected annual expenditures, interest earned and reserve balances.
- 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.

<sup>&</sup>lt;sup>1</sup> Definitions are derived from the standards set forth by the Community Associations Institute (CAI) representing America's 305,000 condominium and homeowners associations and cooperatives, and the Association of Professional Reserve Analysts, setting the standards of care for reserve study practitioners.