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**CAPITAL RESERVE STUDY**  
FOR  
**REGENCY HILLS SUBDIVISION**

PREPARED FOR:

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## I. CAPITAL RESERVE DETERMINATION

### A. METHODOLOGY AND ASSUMPTIONS

A Capital Reserve Study is a report giving an estimate of the amount of money which must be put aside to replace or restore the common elements and building components that will require replacement before the community's use expires. Typically, the items included are limited to those with a useful life of 30 years or less.

The commonly accepted guidelines as established by governing statutes, the Community Associations Institute, and our engineering judgment and experience have been used as a basis for the reserve schedule in this report. The schedule, when implemented in conjunction with a well-planned preventive maintenance program, will provide adequate funds for the replacement of the community's common elements as they reach the end of their useful lives. In order to assure that this schedule remains current, a reassessment of the existing condition and replacement costs for each item is necessary at a regular interval as recommended within the report. Updating of the schedule, reduction of the useful lives, and inflation of the replacement costs may be executed with the benefit of re-inspection. The schedule must also be adjusted as common elements are added or modified.

It is important to note that a reserve item is a common element component which will require replacement on a recurring basis using a similar cost item. If an upgrade is necessitated due to a cost change or other extraordinary reason, the cost over and above the replacement cost is considered to be a capital improvement rather than a capital replacement. Capital improvements should not be funded from the reserves. After it has been upgraded, the item will then become part of the reserve schedule.

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B. SUMMARY OF REPLACEMENT RESERVE NEEDS

1. TECHNICAL DEFINITIONS

This page is a summary of each of the different categories within the detailed schedule. It shows the total dollar amounts for each category and is based on the full funding of each item.

Following are descriptions of the different variables, which are shown on the reserve schedule in the order in which they appear.

Description

This column on the schedule lists all of the components for which we recommend that reserves be accumulated. The basis for the selection of these items includes:

- Review of the governing documents regarding the common and limited common elements.
- Review of all available maintenance contracts.
- The type of component and its anticipated full useful life and condition.
- A review of applicable statutes dealing with reserve requirements.

Quantity

The quantities which are used as a basis for this report are calculated from field measurements and drawings which have been supplied to Ray Engineering, Inc. Ray Engineering, Inc. has not made extensive as-built measurements, and the quantities used are based primarily on the reference materials provided.

Unit Cost

The construction and replacement costs used in this report are based primarily on the various publications written by the R.S. Means Company. These are listed in the Bibliography.

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Reserve Requirements Present Dollars

This is calculated by multiplying the “quantity” by the “unit costs.”

Existing Reserve Fund

This is an allocation of the total existing reserve funds to the individual line items using a weighing factor which is based on the total “reserve requirement present dollars,” the “estimated remaining life,” and other factors. An existing budget was submitted to Ray Engineering, Inc. This budget was used in developing our reserve study.

Estimated Useful Life

The useful life values that are part of this report come from a variety of sources, some of which are listed in the Bibliography. In order to ensure that all items attain their anticipated useful lives, it is imperative that a well-planned maintenance schedule be adhered to. If an existing item is replaced with an upgraded product, the estimated remaining life has been listed for the new product.

Estimated Remaining Life

The estimated remaining life is based on both the age of the component and the results of the field inspections conducted in [June 2004](#).

Annual Reserve Funding

The reserve requirement present value was converted to the future value for the time in which each replacement will occur. A 3% compounded inflation rate has been assumed. The future value was then converted to an annual reserve fund value. The arithmetic calculations and formulas are indicated later in this report.

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**C. REPLACEMENT RESERVE REQUIREMENTS**

**SCHEDULE I**

Sitework

**SCHEDULE II**

Exterior/Interior Building Maintenance

**SCHEDULE III**

Electrical/Mechanical Maintenance

**YEAR BY YEAR FUNDING RECAP - ALL ITEMS**

**COST AND FUNDING RECAP**

**ITEMIZED PROJECT COSTS BY YEAR**

PROJECT NAME REGENCY HILLS SUBDIVISION

INFLATION RATE 3.00%

YIELD ON RESERVE FUNDS 1.00%

BEGINNING YEAR OF FUNDING 2004

PLANNING HORIZON 20 yrs





**SCHEDULE 1b  
REGENCY HILLS SUBDIVISION  
SITEWORK ITEMS - REPLACEMENT COST & FUNDING DATA**

Sitework Item Description	First Replacement			Second Replacement			Third Replacement			Fourth Replacement		
	Yr Replaced	Adjusted Cost if Inflation is 3.00%	Annual Funding Thru Yr Replaced	Yr Replaced	Adjusted Cost if Inflation is 3.00%	Annual Funding Thru Yr Replaced	Yr Replaced	Adjusted Cost if Inflation is 3.00%	Annual Funding Thru Yr Replaced	Yr Replaced	Adjusted Cost if Inflation is 3.00%	Annual Funding Thru Yr Replaced
1 Asphalt Parking & Drive Areas - Repair/Seal-coat	2004	2078	2078	2010	2481	413	2016	2962	494	2022	3537	589
2 Asphalt Parking & Drive Areas - 2" overlay	2017	16271	1162	2037			2057			2077		
3 Concrete Curb, Sidewalks & Apron - Repair/Replace	2009	4057	676	2019	5453	545	2029			2039		
4 Monument Signs, Walls & Pilasters - Repair/Paint	2004	3000	3000	2011	3690	527	2018	4538	648	2025		
5 Site Wood Fencing - Repair/Replace	2007	13113	3278	2014	16127	2304	2021	19834	2833	2028		
6 Site Chain Link Fencing - Repair/Repacc	2004	1500	1500	2009	1739	348	2014	2016	403	2019	2337	467
7 Main Pool Plaster & Tile	2014	26878	2443	2024			2034			2044		
8 Kiddly & Water Slide Pool - Resurface	2007	6556	1639	2017	8811	881	2027			2037		
9 Pool Furniture - Replace	2007	6556	1639	2012	7601	1520	2017	8811	1762	2022	10215	2043
10 Pool Accessories - Replace	2006	1591	530	2014	2016	252	2022	2554	319	2030		
11 Pool Deck - Repair/Replace	2009	9274	1546	2019	12464	1246	2029			2039		
12 Pool Deck - Immediate Repair	2004	3500	3500	2029			2054			2079		
13 Pool Covers - Replace	2011	14758	1845	2019	18696	2337	2027			2035		
14 Alum. Fence & Wood Posts @ Pool - Repair/Paint	2004	1800	1800	2011	2214	316	2018	2723	389	2025		
15 Tennis Courts - Repair/Resurface	2004	7000	7000	2011	8609	1230	2018	10588	1513	2025		
16 Tennis Court - Replace	2022	47668	2509	2047			2072			2097		
17 Tennis Courts Windscreens Replace	2006	2652	884	2014	3360	420	2022	4256	532	2030		
18 Playground Equipment - Replace	2012	6334	704	2027			2042			2057		
19 Playground Equipment - Repair	2004	500	500	2009	580	116	2014	672	134	2019	779	156
20 Basketball Court - Resurface	2004	1800	1800	2011	2214	316	2018	2723	389	2025		
21 Basketball Court - Replace	2022	17024	896	2047			2072			2097		
22 Wood Cross Tie Retaining Walls - Repair/Replace	2009	3478	580	2019	4674	467	2029			2039		
23 Irrigation System - Repair/Replace	2009	5796	966	2014	6720	1344	2019	7790	1558	2024		
24 Drainage - Immediate Repair	2004	5000	5000	2029			2054			2079		
25 Drainage -General Repair	2009	2898	483	2014	3360	672	2019	3895	779	2024		
26 Detention Ponds - Immediate Repair	2004	12500	12500	2029			2054			2079		
27 Detention Ponds - Maintain	2012	44337	4926	2027			2042			2057		
28 Traffic & Identification Signs - Repair/Replace/Paint	2007	4371	1093	2014	5376	768	2021	6611	944	2028		
29 Site Appurtenances - Repair/Replace/Paint	2004	1200	1200	2009	1391	278	2014	1613	323	2019	1870	374









**REGENCY HILLS SUBDIVISION  
COST & FUNDING RECAP**

Year	Annual Funds	Future Expenses	Net Accumulated Funds
current funds			0
2004	70,000	60,178	10,523
2005	35,000	0	45,978
2006	35,000	5,835	75,953
2007	35,000	53,489	58,573
2008	35,000	3,939	90,570
2009	40,000	31,764	100,111
2010	40,000	2,481	139,032
2011	40,000	77,605	103,217
2012	40,000	100,328	44,321
2013	40,000	0	85,164
2014	45,000	69,212	62,254
2015	45,000	0	108,327
2016	45,000	5,101	149,759
2017	45,000	85,439	111,267
2018	45,000	49,310	108,520
2019	40,000	58,735	91,270
2020	40,000	9,628	122,954
2021	40,000	65,618	98,965
2022	40,000	85,254	55,102
2023	40,000	0	96,053

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D. NOTES

The accompanying notes are an integral part of the reserve schedule contained in this report. When reviewing the schedule, please be sure to read all notes pertaining to a particular line item. This will provide the most complete explanation of each line item and will provide any clarification where necessary.

1. These items were found to be in good condition and well maintained. The useful life reflects the age and overall condition of the respective item. For the purpose of this report, it is our understanding that the common elements reviewed are approximately seven years old.
2. At the time of the observation, the asphalt wearing course at the parking and drive areas was found to be in average condition and experiencing normal wear and tear. During the course of our review, we found some minor cracks in the pavement surface (reference photographs). The cracks are typical for an asphalt wearing course and are caused by thermal and rolling stresses. They are not indicative of a deficiency. The cracks should be sealed, however, to prevent moisture intrusion, which could result in premature deterioration of the pavement and base over time.

*Based on the current condition of the parking and drive areas, we would recommend that the asphalt wearing course be seal-coated this year. The seal-coating will help ensure that the pavement will perform for the term of its estimated useful service life. After the initial application, the surface should be sealed approximately every six years thereafter until the pavement reaches the end of its useful service life, which is typically 20 years. When the asphalt reaches the end of its useful service life, the pavement should be repaired and resurfaced. The resurfacing should consist of the installation of a 1½-inch asphalt overlay. A budget of \$2,078 has been allocated for minor repair, seal-coating, and striping of the parking and drive areas every six years, beginning this year. A second budget of \$11,080 has been provided for minor repair and resurfacing of the parking and drive areas every 20 years, beginning in 2017.*

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3. The concrete sidewalks and curbing were observed to be in good condition and experiencing normal wear and tear, with no remedial work required at this time. However, at the concrete aprons of the entry drives, we observed several cracks which have formed in the concrete (reference photographs). The cracks appear to be due to normal wear and tear, as no displacement was observed.

*At this time, we would recommend sealing the cracks to prevent moisture intrusion, which could result in further deterioration of the concrete. Based on our observation, we believe that the concrete aprons may need to be repaired in four to five years. A budget of \$3,500 has been allotted every 10 years, beginning in 2009, for the repair and replacement of cracked, settled, and/or deteriorated concrete sidewalks, curbing, and entry aprons as needed.*

4. The community monument signs located at each side of the main entry are stone veneer with a recessed painted backboard and a combination of recessed painted lettering and surface-mounted lettering. The monument signs are flanked on each side by stucco masonry walls and pilasters with aluminum fence panels installed between the pilasters. Our observation of the monument signs and walls found them to be in fair condition and in need of remedial repair. During the course of our review, we noted the following (reference photographs):

- The stone veneer monuments and inset signs were observed to be dirty and stained.
- A majority of the aluminum fence posts were found to be loose, and the masonry and stucco finish surrounding the posts have been damaged due to the movement of the posts.

*Based on the current condition of the monument and logo signs, we recommend cleaning and painting of the monuments and logo signs this year. Additionally, all of the loose aluminum fence posts should be reset and all damaged stucco repaired as needed this year. A budget of \$3,000 has been allotted for general repair, cleaning, and painting of the monument signs, walls, pilasters, and fencing as needed every seven years, beginning this year.*

5. Painted wood fencing with painted stucco pilasters extend along Boat Rock Road from the entry monument signs. Additionally, a combination of painted and un-



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painted wood fencing extends from Boat Rock Road along portions of the property that border Campbellton Road. It is our understanding that portions of the fence were painted by the developer in 2003 and 2004. Our observation generally found the fencing to be in good condition, with no remedial work required at this time.

*Based on the current condition of the fence, we estimate that it will require repair and painting in three to four years. A budget of \$12,000 has been allotted every seven years, beginning in year 2008, for the repair and replacement of wood fence components as needed and for painting of the site wood fencing every seven years.*

6. The site chain link fencing consists of the fencing installed around the perimeter of the five storm drain detention ponds located throughout the property. Our observation generally found the fencing to be in good condition; however, we did observe some damaged fencing at the detention pond located behind the residence at 5425 Stone Croft Trail (reference photographs). The remaining fencing appeared to be in good condition; however, it should be noted that many sections of the fencing were not visible due to the overgrowth of weeds and bushes. The subject of overgrowth is addressed further in the detention pond review in Item 20 below.

*It is our recommendation that the fencing be repaired this year. A budget of \$1,500 has been allotted every five years, beginning this year, for the repair and replacement of the site chain link fence components as needed.*

7. It is our understanding that the main pool was resurfaced and the tile repaired as needed in April of this year. The kiddie and waterslide pool, however, were not included in the restoration. Our observation of the main pool, excluding the caulking between the deck and coping, found the surface and tile to be in good condition, with no remedial work required at this time. The surfaces and tile of the kiddie and waterslide pools were observed to be in fair condition and, in our opinion, will require resurfacing in two to three years. In regard to the caulking between the pool deck and coping, please refer to Item 10 below.

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*A budget of \$25,000 has been allocated for resurfacing the main pool, for repair and replacement of the tile as needed, and for replacing the caulking between the deck and coping every 10 years, beginning in year 2014. A second budget of \$7,000 has been allocated for repairing the tile as needed and resurfacing of the kiddie and waterslide pools every 10 years, beginning in year 2007. The budget also includes the replacement of the caulking at the kiddie pool.*

8. Our observation found the pool furniture to be in average condition, with no remedial work required at this time.

*An allotment of \$12,000 every five years, beginning in year 2007, is recommended for repair and replacement of the pool furniture as needed.*

9. Our review of the pool accessories, which include the dip nets and poles, lifeguard stand, signage, and all equipment necessary for safe operation of the pool, were observed to be in average condition and experiencing normal wear and tear.

*An allotment of \$2,500 every eight years, beginning in year 2006, is recommended for repair and replacement of the pool accessories as needed.*

10. At the time of our observation, the concrete pool deck was found to be in fair to good condition, with some remedial work required at this time. The deficiencies noted are as follows (reference photographs):

- Deteriorated caulking at the joint between the pool coping and deck at the main and kiddie pools.

*We recommend removing the old caulk and installing new caulk.*

- At the main pool, we observed cracks in the concrete surrounding several of the skimmer drains.

*We recommend routing out and sealing the cracks to prevent moisture intrusion and monitoring the cracks for further movement.*

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- At the south side of the main pool deck, we observed several areas where the concrete of the deck has spalled adjacent to an expansion joint. The spalled concrete appears to be the result of wood formwork stakes left in place after the concrete of the deck was installed.

*We recommend that all of the wood stakes be cut out and the concrete deck properly repaired.*

- At the waterslide pool, we observed a crack in the concrete deck that extends the full length of its south side and is located about 12 inches from the nose of the deck.

*The crack appears to be the result of slight settlement of the pool deck. Further review found no evidence of displacement or differential settlement, and it was noted that the crack is very thin. We found no evidence that would indicate active settlement, and it appears the deck is stable. Because the crack is a hairline crack, it cannot be effectively sealed; therefore, we would recommend periodically monitoring the crack for further movement. If the crack widens or if differential settlement occurs, it may indicate an underlying problem and further review may be required, as well as possible replacement of that portion of the deck slab.*

*It is our recommendation that the caulking around the main and kiddie pools be removed and replaced, the cracks at the skimmers sealed, the wood stakes removed, and the deck properly repaired this year. To correct the problems noted above, a one-time budget of \$3,500 has been provided. A second reoccurring budget of \$8,000 has been provided for repair and/or replacement as needed of cracked, settled, or deteriorated sections of the concrete pool deck every 10 years, beginning in year 2009.*

11. At the time of our review, the pool covers had been removed from the pools and were observed to be stored in the mechanical room. Their overall condition and age could not be determined; however, they appeared to be fairly new and in good condition. Based on our review, we believe the covers should last for another six to seven years.

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*A budget of \$12,000 has been allotted for replacing the pool covers every eight years, beginning in year 2011.*

12. The pool is secured by aluminum fence panels supported by painted 6x6 wood fence posts. At the time of our review, we found the wood posts to be in good condition; however, a number of the aluminum fence panels have experienced some minor damage and should be repaired (reference photographs).

*We would recommend allocating \$1,800 every seven years for repair and replacement of the wood posts and aluminum fence components as needed and for painting the wood posts every seven years. Although the fence posts do not require painting at this time, we are recommending that the exterior of the clubhouse be restored this year, as noted in the clubhouse review below. Therefore, we would also recommend that the wood fence posts be painted so that the painted wood components within the amenities area will all have a fresh coat of paint. We would also recommend that the damaged aluminum fence panels be restored as needed this year.*

13. At the time of our observation, the tennis court surfaces were generally found to be in fair condition (reference photographs). We observed minor cracking of the asphalt wearing course at the playing surfaces of both courts. The cracks are typical of those caused by thermal stresses and are not indicative of a deficiency in the construction of the courts. We also noted a drainage problem along the south side of the courts, which will be addressed in the drainage review below.

*Based on our observation of the current condition of the courts, it is our recommendation that the cracks be properly repaired and sealed and the courts be resurfaced this year. A budget of \$7,000 has been allocated for repair and resurfacing of the tennis courts every seven years, beginning this year. When the wearing surfaces of the tennis courts reach the end of their useful service life, which is typically every 25 years, the surfaces should be replaced or overlaid. A second budget of \$28,000 has been allocated for overlaying the playing surface and repair and replacement of the chain link fencing and nets, if required, beginning in year 2022.*

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14. Our observation of the tennis court windscreens found them to be in average condition, with no remedial work required. Based on the current condition of the windscreens, they appear to be nearing the end of their useful service life, and consideration should be given to replacing them within the next two years.

*A budget of \$1,200 has been provided for replacing the windscreens every eight years, beginning in year 2006.*

15. Our observation of the playground equipment found it to be in fair to good condition. Although no repairs were observed to be required, we would recommend cleaning and sealing all of the wood components to help ensure the long-term performance of the wood.

*It is our recommendation that the playground equipment be cleaned and sealed this year. A budget of \$500 has been provided every five years, beginning this year, for general repair as needed and sealing of the wood components. A second budget of \$5,000 has been provided for replacing the equipment every 15 years, beginning in year 2012.*

16. Our observation of the basketball court playing surface found it to be in fair condition. We also noted some deterioration of the surface, which appears to be occurring at cold joints in the asphalt surface (reference photograph). The deteriorated joints should be routed, cleaned out, and properly sealed. Based on the current condition of the court surface, it is our recommendation that the court be repaired and resurfaced this year.

*For the repair and resurfacing of the court, a budget of \$2,500 has been provided every seven years, beginning this year. A second budget of \$8,000 has been provided for replacing the asphalt wearing surface and fencing at the end of their useful service lives, which is 25 years with proper maintenance.*

17. There are several wood cross-tie retaining walls located within the amenities area. Our observation generally found the walls to be in good condition, with no remedial work required at this time.

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*A budget of \$3,000 has been provided every 10 years for general repair and replacement of the wood cross-tie retaining wall components as needed, beginning in year 2009.*

18. The irrigation system within the common areas appeared to be functioning adequately. It should be noted that we did not operate or test each zone, as that was not intended as part of our scope of work; however, we did visually observe all of the irrigated areas for the purpose of identifying any obvious deficiencies. Our general observation found the system to be in good condition.

*A budget of \$5,000 has been provided every five years, beginning in year 2009, for general repair and replacement of the irrigation system components as needed each year.*

19. At the time of our observation, the drainage at the amenity area appeared to be functioning adequately; however, we did observe several areas where remedial work is required (reference photographs). The areas of concern are as follows:

- We observed evidence of poor drainage and ponding water at the south side of the tennis courts. The poor drainage appears to be the result of existing grades at the end of the courts being above the finished surface of the courts and the landscape mulch being allowed to accumulate along the fence line, which is restricting the flow of the surface runoff. Over time, the trapped water could result in premature deterioration of the court surfaces, as well as the underlying base.

*We recommend that the general area along the south side of the tennis courts be lowered and re-graded to ensure that surface flow is directed off of the courts. All disturbed areas should be stabilized with mulch. We would recommend utilizing cypress mulch in lieu of pine straw at this location.*

- At the basketball court, we observed ponding water at the west end of the court and erosion of the slopes occurring at both the east and west sides of the wood cross-tie retaining wall installed at the north side of the court. It appears that a majority of the surface runoff from the tennis courts is directed to the swale located at the top of the retaining wall. The run off is eroding the slopes

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behind and at the ends of the wall and is also saturating the soils behind the wall. It also appears that a majority of the runoff is flowing across the court. Generally, permeable drainage swales are not recommended to be installed behind retaining walls of any type due to erosion problems and the potential for saturating the soils behind the wall, creating excessive hydrostatic pressures.

*To correct the drainage problems, we recommend the following:*

- *Install a concrete flume behind the wall to direct surface runoff past the ends of the wall.*
- *At the west side of the court, lower the elevation of the finished grade adjacent to the sidewalk, and re-grade the general area from the sidewalk to the existing yard inlet located at the southwest corner of the court to ensure positive drainage.*
- *At the east side of the courts, re-grade the area adjacent to the sidewalk to establish a swale to ensure that runoff is directed past the sidewalk and courts to the drainage inlet located beyond the southeast corner of the court.*

*To correct the drainage problems as recommended above, a one-time budget of \$5,000 is provided. For general repair and correcting drainage problems that occur over time, a budget of \$2,500 has been allocated every five years, beginning in year 2009.*

20. It is the Consultant's understanding that there are five detention ponds located within the community. Our observation of the detention ponds found them to be in generally good condition, but some remedial work will be required (reference photographs). On the basis of our observation, we noted the following deficiencies:

*General – All Ponds*

- We observed the overgrowth of weeds, vines, shrubbery, and immature trees in the basins, along the slopes and in and around the surrounding chain link



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fencing. Fulton County requires that all detention ponds be kept in a mowable condition. Additionally, trees should not be allowed to grow on any dam or retaining structure or behind any concrete retaining wall or within a pond basin. Tree root growth will weaken the structures over time and could result in premature failure. Also, trees growing in a basin will trap more sediment, which could reduce the original storage volume. Trees and shrubbery growing adjacent to chain link fencing will also result in damage to the fencing over time.

*To correct the problem, we recommend cutting down all overgrowth, shrubbery, and trees within each basin area and on the slopes and surfaces of all dams and retaining structures. Additionally, the fence lines surrounding each of the ponds should be cleared to ensure the long-term performance of the fences.*

*Detention Pond Located Behind 360 Prestmoore Place*

- We observed a dead tree partially blocking the overflow structure.

*We recommend removing the dead tree to prevent trapping more debris and to ensure proper stormwater flow.*

*Detention Pond Located Behind 5275 and 5285 Stone Croft Trail*

- Reference General Notes above; no additional deficiencies observed.

*Detention Pond Located at the Right Side of 5340 Stone Croft Trail*

- It should be noted that the pond basin has been recently cleared of weeds and overgrowth and is in the condition that should be established at all of the other pond locations. We would, however, recommend clearing the remaining fence line around the basin area.
- The trash grate at the constant flow opening is partially blocked by accumulated trash and debris.



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*We recommend removing the accumulated trash and debris to ensure proper flow.*

- We observed some accumulated debris at the interior of the structure.

*We recommend removing the accumulated debris to ensure proper flow.*

- We observed that the grate inlet at the top of the structure was constructed utilizing reinforcing steel that has been wired together. The wire is severely corroded, and when the grate is lifted, we expect it may fall apart. The grate inlet does not meet Fulton County Standards.

*We recommend installing a grate inlet that conforms to Fulton County Standards.*

*Detention Pond Located Generally Behind 5425 Stone Croft Trail*

- We observed erosion of the slopes at the back side of the pond area due to insufficient ground cover. We also noted severe erosion occurring at the slopes of the adjoining property, 5425 Stone Croft Trail. The silt from the erosion is flowing into, and is beginning to fill, the pond basin.

*We recommend back-filling all eroded areas as needed and stabilizing the slopes utilizing straw mats, over-seeding, and planting appropriate ground cover. We also recommend removing all accumulated silt from the pond basin.*

- As noted in the chain link fence review, the fencing has been damaged and is recommended to be repaired.

*Detention pond located behind the Clubhouse amenities area*

- From our observation, it appears that the overflow structure has been constructed in an undisturbed area, and for that reason, the removal of trees and shrubbery will most likely not be allowed; however, we would recommend clearing the fence lines and general area around the structure.

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*It is our recommendation that the detention ponds be restored this year. To provide for the restoration, a one-time budget of \$12,500 has been allocated. In regard to the long-term maintenance of the detention ponds, the scope of work generally consists of removing accumulated trash, debris, and silt and for repairing associated problems from erosion or failure of a storm drain structure. It has been our experience with similar types of communities that the time interval for restoration of a pond is about every 15 years on average. A budget of \$35,000 is recommended to restore the detention ponds as needed every 15 years, beginning in year 2012.*

21. The site traffic and identification signs were generally found to be in average condition, and based on their current condition, we believe they will be required to be repaired and painted within the next two to three years. During the course of our review, we did observe some minor deterioration at the information sign near the guardhouse that will require repair (see photographs).

*We recommend repairing the sign by the guardhouse this year. A budget of \$4,000 has been provided every 7 years, beginning in 2007, for general repair and replacement as needed each year and for painting of the sign poles and bases once every seven years.*

22. The site appurtenances generally include wood benches, trash receptacles, and bike racks located within the amenities area. Our observation found the items to be in good condition. Although no repairs were observed to be required, we would recommend cleaning and sealing all of the wood components to help ensure the long-term performance of the wood.

*A budget of \$1,200 has been provided every five years, beginning this year, for the general repair, replacement, and sealing of the appurtenances as needed.*

23. The clubhouse, pump house, and guardhouse roofs consist of composition asphalt shingles. The clubhouse has pre-finished aluminum gutters and downspouts. At the time of the observation, the roofs and gutter downspouts appeared to be in good condition, with no apparent problems.

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*The shingles utilized for all buildings appear to be architectural-style shingles and typically have an estimated useful life of approximately 20 years, with proper maintenance. Replacement of the roofs should include the removal of the existing shingles, restoration of any deteriorated roof decking, replacement of felt underlayment and flashings, and installation of new ridge or gravity vents. The pre-finished aluminum gutters and downspouts should also perform for 20 years, and it is our recommendation that they be replaced at the same time that the clubhouse is re-roofed. Appropriate budgets and schedules have been provided for replacing the roof shingles and gutter/downspout systems every 20 years, beginning in year 2017.*

24. Our observation of both the interior and exterior of the poolhouse found the finishes to be in fair condition. Based on our review, it is our recommendation that both the exterior and interior of the clubhouse be restored this year. In addition to a typical building painting project, we observed a number of deficiencies which will require repair prior to beginning the preparation and painting work (reference photographs). The items noted as deficient are as follows:

Clubhouse Exterior

- At the right side of the building, we observed that the wood step is partially collapsed. Additionally, it does not meet current code requirements. The rise of the step is greater than the 7½-inch maximum allowed by the code.
- At the front elevation of the building, we observed deteriorated wood sills at the two right front windows.
- At the rear wood deck, we observed deteriorated wood casing at the tops and bottoms of the columns at both the upper and lower levels of the deck. (The use of non-pressure-treated lumber in construction exposed to the weather is not in conformance with current building code requirements.)
- We observed that the ends of a number of the bottom rails at the upper level deck were deteriorated. (The use of non-pressure-treated lumber in construction exposed to the weather is not in conformance with current building code requirements.)

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- At the lower level deck, we observed evidence of deterioration of the beam casing and trim. (The use of non-pressure-treated lumber in construction exposed to the weather is not in conformance with current building code requirements.)
  - At the small pump room for the waterslide pool, we observed that the wood access panel is showing evidence of deterioration and may require replacement. We also note that the access panel appears to be difficult to open, as a dozen or more screws have to be taken out to remove the panel. In our opinion, it does not conform to current building code standards, which require that the equipment be readily accessible. We would recommend modifying the panel to provide a hinged type of panel opening.
  - At the sidewalk near the left front of the building, we observed what appears to be an exposed electrical cable. The cable did not appear to be active, and its function could not be determined. We recommend removing and properly terminating the cable.

#### Clubhouse Interior

- At the kitchen, we observed a hole in the wall behind the door and mildew stains at the ceiling, indicating a possible roof or water leak. The nature of the leak could not be determined during the course of our review.
- At the upper level men's restroom, we observed loose and peeling wall covering.
- At the basement level men's restroom and adjacent storage room, we observed deteriorated and mildew-stained gypsum board walls, brownish-red silt, and water stains, all of which indicate a possible foundation leak. No determination could be made as to the cause of the leak, and further review will be required.
- At the basement level mechanical room accessed through the women's restroom, we observed deteriorated and mildew-stained gypsum board walls, which may indicate a possible plumbing leak. No determination could be made as to the cause of the leak, and further review will be required.

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- At the pool equipment room, we observed deteriorated gypsum board walls, apparently due to constant exposure to moisture, as well as several openings cut into the ceiling, apparently to provide access for repairs. The openings have not been closed back up.

*It is our recommendation that all of the deficiencies noted above be corrected prior to painting of the building interiors and exteriors. A budget of \$8,500 has been allotted for general repair as needed and painting of the exteriors of the clubhouse, guardhouse, and pump room, and a budget of \$6,500 has been allotted for general repair and painting of the clubhouse interior every seven years, beginning this year. Also, a one-time budget of \$5,000 is allotted for correcting the deficiencies at the interior and exterior as noted above. It should be noted that no repair costs have been included regarding the possible foundation leak, as the nature of the problem is not known.*

25. The restoration of the clubhouse interior, excluding painting, which is noted above, is somewhat subjective and is dependent on how often it is used. In regard to the carpet, vinyl flooring, and furnishings, it has been our experience that after 10 to 12 years of regular use, the facility is ready to be upgraded with new flooring and furnishings. Appropriate budgets and schedules have been provided for interior painting and for replacing and upgrading the carpet, vinyl flooring, and furnishings.

In regard to the ceramic tile, we find that it is not generally replaced due to the expense; therefore, a budget has been provided for general repair and replacement as needed.

The replacement of the exercise equipment is also dependent on the amount of usage it receives. It has been our experience that if the equipment is in regular use, its useful service life is only five to six years.

26. Our observation of the awning at the rear elevation of the clubhouse found the awning to be in fair condition and experiencing normal wear and tear. However, the awning at the waterslide was found to be in poor condition and in need of replacement.

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*A budget of \$3,500 has been provided for replacing the clubhouse awning every 10 years, beginning in year 2006. A second budget of \$300 has been provided for replacing the awning at the waterslide every 10 years, beginning this year.*

27. The mechanical equipment, including the pool filtration equipment, ceiling fans, toilet exhaust fans, pool equipment room exhaust fan, water heater, and water fountain appeared to be functioning adequately and experiencing normal wear and tear. During the course of our review, we did observe several conditions that will require remedial work (reference photographs). The items noted are as follows:

- At the pool equipment room, we observed an active leak at the valve of the center filter servicing the main pool.
- At the left side of the clubhouse, the A/C compressor units were almost covered by the surrounding shrubbery. Most manufacturers require a minimum clearance area of 30 inches around a typical compressor unit to provide adequate ventilation for cooling. Reducing the clearance area will result in premature deterioration of the unit, as well as reducing its useful service life.

*We recommend that the items noted above be corrected as soon as possible. Based on the current age and condition of the various pieces of mechanical equipment, appropriate budgets and schedules have been provided for their replacement.*

28. At the time of our observation, the tennis court lighting fixtures appeared to be in good condition and experiencing normal wear. No remedial work was noted to be required at this time.

*We would recommend allotting \$4,000 every 15 years, beginning in year 2012, for the general repair and replacement of the tennis court lighting fixtures as needed.*

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29. At the time of our observation, the exterior accent lighting at the entry monument signs and accent and security lighting at the clubhouse appeared to be in good condition and experiencing normal wear. No remedial work was noted to be required at this time.

*We would recommend allotting \$500 every five years for the general repair and replacement of the exterior lighting fixtures as needed.*

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## II. RESERVE CASH FLOW ANALYSIS

### A. INTRODUCTION

The enclosed chart and graph contain a 20-year cash flow projection of the reserve requirements for the Association. The budget should be adjusted at the end of the 20-year period to readjust for changes in remaining life, inflation, and current costs of replacements. This cash flow analysis is based on the assumption that all of the items that make up the schedule are fully funded. By this we mean that each item will accumulate its full replacement cost during its life span. At the end of this life, each item would be replaced and the funding would start aging for items with a long life. For items with a short useful life, the funding for the first replacement is budgeted in addition to future replacements due to the short life span. The future replacement funding is started in the first year; however, payments are less than the first replacement due to the extended time period allowed to accumulate funds. Taking all of the components that make up the reserve schedule, using this full funding analysis, there is typically an ongoing surplus in the reserve fund. This ensures that the Association will have a surplus at the end of the 10-year period. This is called the “pooling effect” and is represented by the upper line on the cash flow chart, which is designated as the “Net Cumulative Fund.” The “Net Cumulative Fund” is calculated by taking the existing amount in the reserve fund at the time the reserve schedule is prepared, adding to it the yearly contribution, and subtracting from it the annual expenditures.

The annual reserve funding required has been calculated by estimating the useful remaining life based on the current condition, age, and all other known factors of each item description. The present value replacement cost was estimated by either past quotations or other listed methods of estimation. The present value replacement cost was then converted to future value using a 3% annual compounded inflation rate. The future cost was calculated for the projected time when replacement will be required.

The future cost was then broken down into annual installments while still considering the 3% compounded annual inflation rate. The monthly reserve funding was calculated by a further breakdown of the annual reserve funding required.



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1. Formulas

The following economic formulas were used in our calculations:

DISCOUNTING FACTOR	FUNCTIONAL NOTATION	FORMULA
Single Payment Compound Amount	(F/P, i%,n)	$(1+i)^n \exp n$
Uniform Series Sinking Fund	(A/F, i%,n)	$i/[(1+i)^n - 1]$

2. Definitions

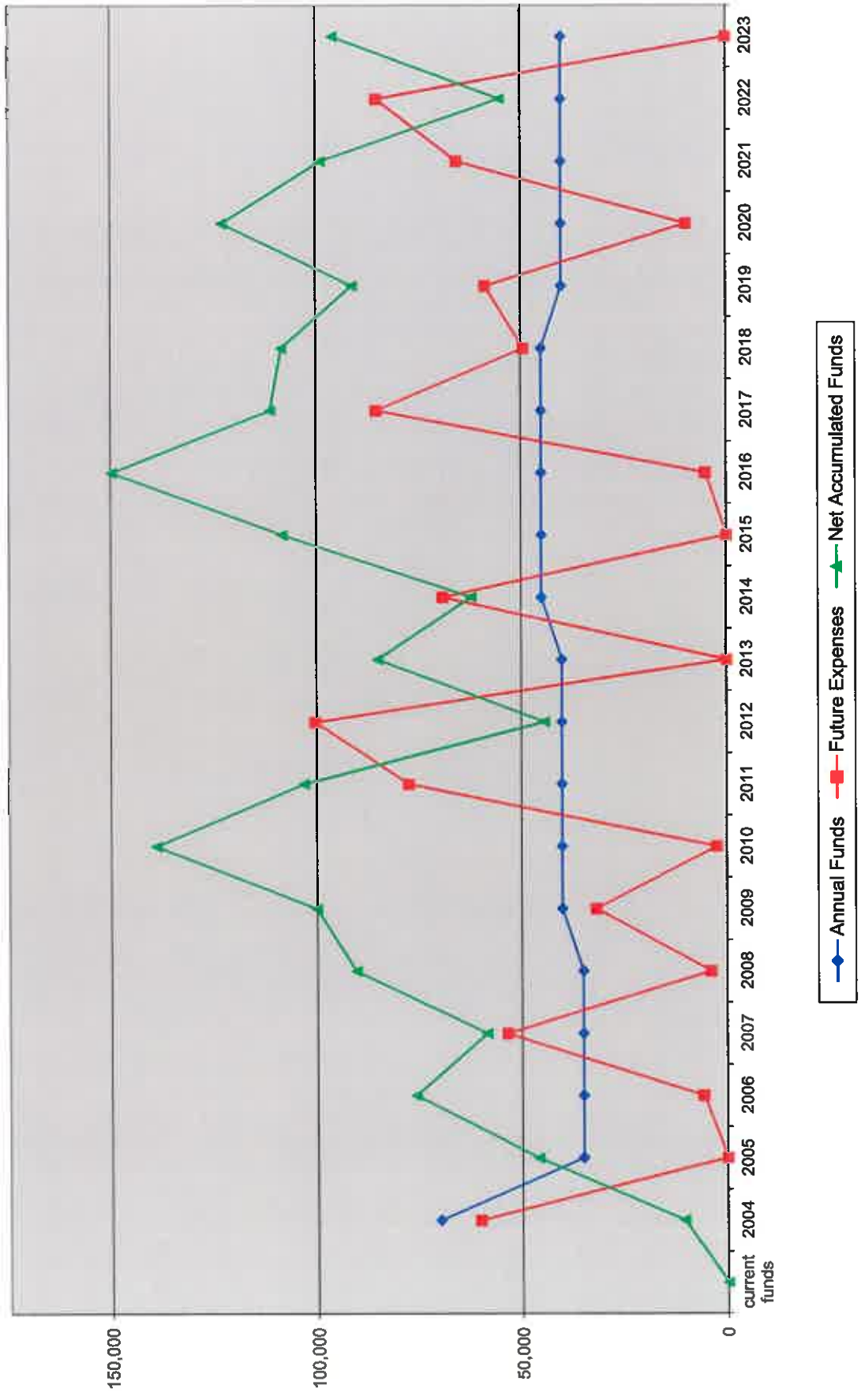
Definitions of the above mentioned terms are as follows:

TERM	DEFINITION
Single Payment Compound Amount	Conversion of present worth to future value
Uniform Series Sinking Fund	Conversion of future value to annual value
F	Future worth of item in $n$ years from present
P	Present Worth
A	Annual worth
I	interest rate (3% used)
N	# of years until each calculated replacement

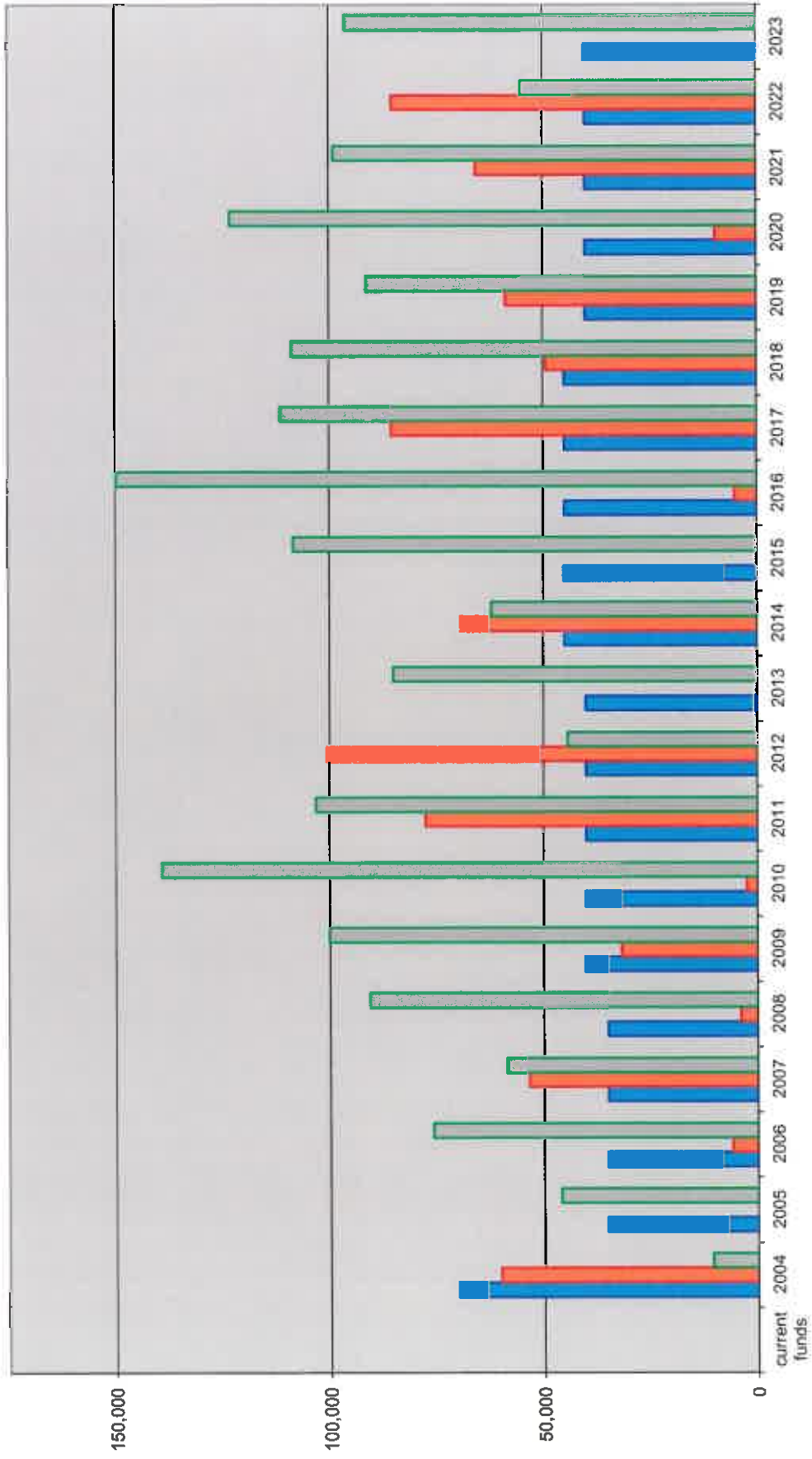
B. PROJECTED CASH FLOW GRAPH AND CHART

The projected cash flow for the Capital Reserve Study is illustrated by the bar graph and line chart on the following pages.

# REGENCY HILLS 2004 - PROJECTED CASH FLOW



# REGENCY HILLS 2004 - PROJECTED CASH FLOW



■ Annual Funds ■ Future Expenses ■ Net Accumulated Funds

C. RECOMMENDATIONS AND CONCLUSIONS

Based on our review, we would make the following recommendations. The Association should set aside the following amount for the specified year into the reserve fund:

**COST AND FUNDING RECAP**

Year	Annual Funds	Future Expenses	Net Accumulated Funds
current funds			0
2004	70,000	60,178	10,523
2005	35,000	0	45,978
2006	35,000	5,835	75,953
2007	35,000	53,489	58,573
2008	35,000	3,939	90,570
2009	40,000	31,764	100,111
2010	40,000	2,481	139,032
2011	40,000	77,605	103,217
2012	40,000	100,328	44,321
2013	40,000	0	85,164
2014	45,000	69,212	62,254
2015	45,000	0	108,327
2016	45,000	5,101	149,759
2017	45,000	85,439	111,267
2018	45,000	49,310	108,520
2019	40,000	58,735	91,270
2020	40,000	9,628	122,954
2021	40,000	65,618	98,965
2022	40,000	85,254	55,102
2023	40,000	0	96,053

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The Association should update the reserve schedule a minimum of once every two years. It is especially important to update the schedule when using average contribution due to the fact that even a minor change in the estimated useful life can have a significant impact on adequate funding.

The Association should review each of the individual line items that make up the reserve schedule to make sure that there is no overlap between what is indicated in the schedule and any other portion of the budget. For example, we may show on the reserve schedule the replacement of fencing, but at the same time, the Association may be replacing the fencing out of their operating budget. If a duplication like this exists, the item should either be removed from the reserve schedule or the operation budget. It should not be funded in two different locations.

The Association should review the items on the schedule to assure that their replacement is not covered under a maintenance contract. An example would be reserving for the replacement of mechanical equipment components while the Association has a maintenance contract for the item at the same time. The reserve schedule should be carefully reviewed to be sure that it does not fund the replacement of any portion of any item whose replacement is covered under a maintenance contract.

The Association should review the items on the schedule to be sure that they are all the Association's responsibility. As an example, if we have included site lighting on the reserve schedule, but at the same time the local municipality is responsible for the maintenance and repair of these connections, they should be removed from the schedule.

The Association should review the individual line items on the reserve schedule carefully to determine if a number of the smaller individual components can be consolidated into one line item which can be continuously funded.

For example, if there are five or six components with a total replacement cost of \$1,000 each, rather than reserving the full \$5,000 or \$6,000 dollars for all of these items, the Association may want to consider funding all six components under one line item for a total of \$1,000. Should one of these six items have to be replaced, that line item would have to be brought current within a year or so after its expenditure. By doing this rather than funding the full \$6,000, only a portion of the total would be funded. This would reduce the overall yearly contribution to reserves.

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Depending on the size of the overall operating budget, the Association may decide that any line item of less than the given amount will be funded directly through the operating budget rather than through the reserve schedule. If this is the case, any item with the given value or less should be removed from the schedule. The schedule would then be footnoted accordingly.

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### III. RECOMMENDED MAINTENANCE SCHEDULE (Association's Responsibility)

The following guidelines are intended to ensure that a program of preventive maintenance is implemented in order to assure that, as a minimum, the predicted useful lives of the major common elements is attained. A preventive maintenance program is made up of "a system of periodic inspections of existing facilities to uncover conditions leading to breakdown or harmful depreciation and the correction of these conditions while they are still minor." It should be noted that experience has shown that a proper maintenance program can add 50 percent to the expected useful life of some items.

In any case, the proper determination of the useful lives of the items which make up your common elements is critical to the proper updating of the reserve schedule. The items included will only attain their anticipated useful lives if a proper maintenance program is implemented. For this reason, it is recommended that the reserve schedule be updated every two years to assure that all items are being properly maintained.

#### A. ASPHALT PAVEMENT

The early detection and repair of minor defects is the most important consideration in the preventive maintenance of pavements. Cracks and other surface breaks, which in their first stages are almost unnoticeable, may develop into serious defects if not repaired in a timely manner. For this reason, walking inspections of the pavement should be conducted in the fall and spring of each year, as a minimum.

The inspections should note small cracks or other surface breaks in the pavement. In addition, there are other signs, such as mud or water on the pavement surface or soil erosion along the edges of the pavement, which may indicate possible future problem areas.

Most small cracks or surface breaks can be repaired by sealing them with a good commercial-grade caulk. Areas which have settled and pose a possible trip hazard should be cut out and replaced to prevent a potential liability problem, as well as to prevent further deterioration of the surface. If large areas are observed to be cracking or breaking up, this may be an indication of a problem with the base material and/or subsoils and would require further investigation to determine the cause and proper method of repair.

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B. CONCRETE PAVEMENT

The early detection and repair of minor defects is the most important consideration in the preventive maintenance of pavements. Cracks and other surface breaks, which in their first stages are almost unnoticeable, may develop into serious defects if not repaired in a timely manner. For this reason, walking inspections of the pavement should be conducted in the fall and spring of each year, as a minimum.

The inspections should note small cracks or other surface breaks in the pavement. In addition, there are other signs, such as mud or water on the pavement surface or soil erosion along the edges of the pavement, which may indicate possible future problem areas.

Most small cracks or surface breaks can be repaired by sealing them with a good commercial-grade caulk. Areas which have settled and pose a possible trip hazard should be cut out and replaced to prevent a potential liability problem, as well as to prevent further deterioration of the concrete surface. If large areas are observed to be cracking or breaking up, this may be an indication of a problem with the base material and/or subsoils and would require further investigation to determine the cause and proper method of repair.

C. CONCRETE CURBING

Any soil erosion behind the curbing should be noted, and possible problems such as broken pipes, malfunctioning sprinkler heads, and/or improper grading should be investigated and any necessary repairs made.

D. SIDEWALKS

Sidewalks should be inspected at least twice a year (spring and fall). The inspection should note any cracked sections, uneven settlement between sections (which may result in tripping hazards), and surface damage. Undermining of sidewalks (caused by soil erosion) should also be noted. Proper replacement of any sections with the above noted problems is necessary to eliminate safety hazards and potential liability problems. These repairs will also allow the curbing to achieve its full useful life.



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E. STORM DRAINAGE SYSTEMS

All storm drainage systems should be routinely inspected to ensure proper operation. Inspections should be scheduled for all facilities after major storms for routine maintenance. In addition, bi-annual structural inspections should be performed. The following are the recommended maintenance schedules for each individual section of a storm system:

1. Catch Basins

All catch basins should be routinely inspected after a major storm to ensure that they are working properly. During these inspections, any sediment buildup or debris should be removed from catch basins to ensure that they continue to function properly.

2. Drainage Swales

The five most prevalent maintenance problems with swales are:

- Weed growth
- Grass maintenance
- Sediment control
- Soil deterioration
- Mosquito control

Drainage swales should be inspected on a routine basis to ensure that they are functioning properly. The grass located within the swales should be mowed on a weekly basis to prevent the accumulation of debris, which may impede the flow of the drainage. The trash racks attached to the outlet structures should be periodically checked and cleaned of debris to prevent blockage. The outlet structures should also be checked for deterioration and/or cracking of concrete.

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F. LANDSCAPING

A discussion regarding the preventive maintenance of the landscaped areas of the development would require an entire report. For this reason, it is recommended that a professional service specializing in this area be consulted. It should be noted that landscaping is not included as a reserve schedule item since, with proper maintenance; large-scale replacement should not become necessary.

G. CROSS-TIE WALLS

Retaining wall surfaces should be inspected every spring as part of a preventive maintenance program. Areas should be checked for signs of major cracking, splitting and warping. The retaining walls should be checked for soil erosion behind the retaining wall and undermining of the footings.

H. LAWN SPRINKLER SYSTEM

The preventive maintenance of the lawn sprinkler system would require an extensive report concerning the operation and servicing of the control valve, pumps, sprinkler heads, and water lines. For this reason, it is recommended that a professional sprinkler system contractor be consulted to provide the necessary services to properly maintain the sprinkler system.

I. WOODEN FENCES AND OTHER WOODEN SITE FURNISHINGS

Wooden fences constructed of treated lumber should last a number of years with minimal maintenance. However, these items should be checked at least once a year to ensure that excessive weathering is not occurring. If excessive weathering is occurring, deteriorated members should be replaced, and the entire item should be treated with a preservative material.

Wooden site furnishings constructed of non-treated lumber should be regarded the same as exterior trim. Periodic application of a sealant to all surfaces is vital to preserve the wood. These items should be checked at least once a year to detect any peeling or deterioration. Deteriorated members should be replaced at this time, and resealing should be done as necessary.

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J. TOT LOTS

Tot lots should be looked at a minimum of twice a year, with one inspection in the spring and one in the fall. Any splintering or cracking wood should be repaired or replaced as necessary to prevent any injury. Exposed bolts must not have sharp edges. The bolts should not be protruding excessively so as to cause unnecessary injuries.

K. ROOFS • PITCHED

The standard asphalt/fiberglass shingles available on the market today have an expected useful life of 15 - 20 years. Proper maintenance in order to achieve this useful life requires periodic inspections to detect the need for repair or changes in the roof surface. In order to reduce maintenance and replacement costs, it is vital to detect problems when they are minor and prevent them from escalating into major problems.

Roof inspections should be conducted at least twice a year. These inspections should preferably occur in the early fall to prepare for winter and in the spring to assess any winter damage and prepare for the hot summer sun. In addition to these seasonal inspections, the roofs should be carefully checked after violent rain or windstorms or nearby fires or after workmen have been on the roof.

The roof inspections should include:

- Examination of exterior walls for settlement.
- Checking interior walls and the underside of roofs for leakage. This is necessary since the majority of roof problems may not be detected by inspecting the outside roof surface.
- Inspection of the roof surface for missing, loose, lifted, cracked or deteriorated shingles.
- A review of the roof drainage, including any change in the roof and the condition and operation of roof drains, gutters, and scuppers.
- Examination of flashed areas. Most water infiltration problems are caused by flashing defects. Lifted, loose, torn, or missing flashing require immediate repair.
- A review of ventilation, since improper ventilation can cause ice damming conditions and accelerates the deterioration of the roof shingles.

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L. GUTTERS AND DOWNSPOUTS

The key to maintaining gutters and downspouts is to make sure they are kept clear of debris. A buildup of leaves and other plant material will block downspouts and prevent proper drainage. If this occurs, trapped water could weigh down the gutters and cause them to loosen or fall. Blocked gutters will also overflow along their length, resulting in the washing away of the mulch and/or soils adjacent to the sides of a building, which could result in premature deterioration of a building's exterior finish over time. Ice damming will also be evident in the winter if gutters are not able to drain.

At least twice a year, the gutters should be cleaned and inspected for damage. This should be done in late spring and late fall. Any loose or misaligned gutters should be corrected at this time to prevent further damage. Splash blocks and downspout extension pipes should also be adjusted to prevent erosion and to direct water away from the building.

As the gutters age, the paint coating will oxidize and dull. When this occurs, an aluminum paint product should be used to restore the finish, or the gutters should be power washed to prevent deterioration.

M. CONCRETE PATIOS AND DECKS

Concrete patios should be inspected twice a year in the fall and spring. Minor cracks or cracks with vertical displacement should be noted and repaired where necessary. Sections should also be inspected for signs of surface deterioration.

Note: Salts used to eliminate ice during winter months can cause concrete to deteriorate. Only products rated safe for use on concrete should be applied for de-icing purposes.

N. STEEL STAIRS, RAILINGS, AND POSTS

All steel components should be inspected on a yearly basis for corrosion or damage. Any excessive corrosion should be addressed as soon as possible by wire brushing to remove all rust and scale, spot priming, and painting as needed.

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Of special concern are the steel and metal pan stairs. Moisture has a tendency to become trapped between the concrete in-fill of the treads and the metal support pans, resulting in rusting that occurs from the inside out. Since this condition is not visible, considerable damage can be done before a problem is realized. We recommend cleaning visible rust off of the stair components and priming and painting the affected areas. Additionally, we recommend cleaning and sealing the concrete of the treads and caulking all of the joints between the steel and concrete interfaces to prevent moisture intrusion.

Note: Salts used to eliminate ice on stairs during winter months can cause concrete and steel to deteriorate prematurely. Only products rated safe for use on concrete and steel should be applied for de-icing purposes.

O. BALCONIES/ DECKS

Deck surfaces should be inspected every spring as part of a preventive maintenance program. Areas should be checked for signs of major cracking. Railings and handrails should be inspected for signs of damage. They should also be checked to ensure that they are still sturdy and safe.

P. WOOD RAILINGS

All exterior wood surfaces should be inspected every spring as part of a preventive maintenance program. Areas should be checked for signs of major cracking, splitting and warping. Railings and handrails should be inspected for signs of damage. They should also be checked to ensure that they are still sturdy and safe.

Q. SYNTHETIC STUCCO VENEER

Stucco veneer is subject to cracking and loosening from a variety of environmental and construction causes. Veneers on all buildings should be thoroughly inspected in early spring and late fall. The inspections should include checking for chipped, cracked, deteriorated, and void areas at the stucco surfaces. All caulked joints should be checked for brittleness and delamination from the adjacent substrates. All damaged and deteriorated stucco should be repaired and

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all cracks caulked in accordance with the manufacturer's recommendations. Similarly, all dried out and delaminated caulking should be removed and replaced with new caulk. We recommend pressure washing of the exterior surface every two years to remove mold, mildew, and dirt.

#### R. STONE VENEER

Stone veneer is subject to cracking and loosening from a variety of environmental and construction causes. Veneers on all buildings should be thoroughly inspected in early spring and late fall. The inspections should include checking for chipped, loose, cracked, deteriorated, and missing stones. Cracked and missing stones should be replaced. Cracked mortar should be re-pointed and caulked at intersections. Other surfaces should be repaired where necessary. Any evidence of moisture on an interior wall surface may indicate water absorption through the stone veneer. This condition may be corrected by applying a sealant to the exterior stone face.

Excessive settlement of the foundation may be evidenced by open cracks, especially around window and door frames. Significant amounts of loose stone or bulging wall areas may indicate structural deficiencies or that large amounts of differential settlement have taken place at the foundation. These conditions should be investigated by a professional and the appropriate action taken to correct uncovered problems.

#### S. WINDOWS

Window inspections should be conducted a minimum of once a year and should include:

- Checking all fixed and sliding window glazing for seal.
- Replacing all deteriorated weather-stripping. This includes both the inside and outside perimeters and interlocks.
- Checking the fixed side of operating windows and sliding doors for defective weather-stripping.

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- Checking the rubber duster sweep at the top and base of sliding window and door interlocks.
  - Checking weep holes in the outside of the window frame for clogging.
  - Checking any defective removable window tracks.
  - Checking the rollers on sliding doors and screens.
  - Repairing or replacing of these items should be completed as necessary.

#### T. FLOORS

Preventive maintenance begins as soon as a new floor is laid. The owner should be aware of damage to the tiles and grout to assure that immediate damage is corrected. It is most important to be familiar with the manufacturer's instructions to:

- Protect the surface materials against damage due to the incorrect choice of cleaning materials.
- Protect the surface materials against damage due to the use of the wrong equipment for cleaning.

Carpeting is usually the most susceptible to wear and damage. The basic care for carpet includes:

- Regular vacuuming.
- Prompt removal of spots and stains.
- Report any irregularities in the floor as soon as they are noted.

#### U. MECHANICAL EQUIPMENT

A well-established plan of preventive maintenance is essential to obtaining the maximum performance and life from your mechanical equipment. All work should be performed by qualified technicians specializing in the particular equipment.

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The following guidelines are considered to be minimal procedures for maintaining the equipment:

1. FURNACES

*Surrounding Areas:*

The flow of combustion and ventilating air must not be obstructed from reaching the furnace. Air openings provided in the casing of the furnace must be kept free of obstructions, which would restrict airflow, thereby affecting efficiency and safe operation of the furnace. Furnaces must have air for proper performance. In addition, warm air furnaces should not be operated in a corrosive atmosphere. Paint solvents, cleaning chemicals, spray propellants, and bleaches should not be used in the vicinity of the furnace during normal operation.

*Thermostat:*

The thermostat is the heart of a warm air furnace center. Its operation depends on the surrounding air temperatures; therefore, it should be mounted on a draft-free inside wall for best operation. Because the thermostat is sensitive to heat, devices such as radios, televisions, or lamps should not be placed near it. The thermostat also accumulates lint, which affects its accuracy. For best operation, the thermostat should be cleaned annually.

*Filters:*

The filters remove dust and debris from the air before it is heated and circulated to the living spaces. Filters must be changed when dirty. Inspections of the filters should be made on a monthly basis.

*Blowers:*

The blower size and speed determine the air volume delivered by the furnace. The blower bearings are permanently lubricated and usually do not require servicing. Annual cleaning of the blower wheel and housing is recommended for maximum air output. It is recommended to consult a qualified service technician for this procedure.



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*Burners:*

Gas burners do not normally require scheduled servicing; however, accumulation of lint may cause a yellowing flame or delay ignition. Either condition indicates that a service call is required. For best operation, burners must be cleaned annually using a brush and vacuum cleaner. It is recommended to consult a qualified service technician for this procedure.

*Flue Pipe:*

For best operation, these items should be inspected for signs of corrosion and/or deterioration and cleaned, if necessary, at the beginning of each heating season by a qualified service technician.

2. HOT WATER HEATERS

The area near the water heater should be kept free of flammable liquids, such as gasoline, paint thinners, adhesives, and other combustible materials. Make certain that the flow of air to the water heater for adequate combustion (proper burner operation) and ventilation is not obstructed.

A water heater's tank can act as a settling basin for solids suspended in the water. It is, therefore, not uncommon for hard water deposits to accumulate in the bottom of the tank. It is suggested that a few quarts of water be drained from the water heater's tank every month to prevent this condition from occurring.

At least once a year, lift and release the level handle on the temperature pressure relief valve (located near the top of the water heater) to make certain that the valve operates freely, and allow several gallons to flush through discharge lines. Make certain that the discharge is directed to an open drain.

Visually inspect the burner annually, while firing, and pilot burner flame with the main burner off. If any unusual burner operation is noted, the water heater should be shut off until professional service assistance can be obtained.

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The water heater's internal flue should be inspected annually to be certain that it is clean by removing the draft hood and flue baffle. When reinstalling the flue baffle, make certain that it is hung securely by its hanger at the top of the flue. Remove any scale that may have fallen on the burner or flood shield. Reinstall the draft hood. It is recommended that a professional service be consulted for this procedure.

**GLOSSARY OF TERMS**

<u>Abbreviation</u>	<u>Definition</u>	<u>Abbreviation</u>	<u>Definition</u>
Avg.	Average	Lg.	Long Length
B.F.	Board Feet	L.S.	Lump Sum
Bit/Bitum.	Bituminous	Maint.	Maintenance
Bldg.	Building	Mat.,Mat'l	Material
Brk.	Brick	Max	Maximum
Cal	Calculated	MBF	Thousand Board Feet
C.C.F.	Hundred Cubic Feet	M.C.F.	Thousand Cubic Feet
C.F.	Cubic Feet	Min.	Minimum
C.L.F.	Hundred Linear Feet	Misc.	Miscellaneous
Col.	Column	M.L.F.	Thousand Linear Feet
Conc.	Concrete	M.S.F.	Thousand Square Feet
Cont.	Continuous, continued	M.S.Y.	Thousand Square Yards
C.S.F.	Hundred Square Feet	NA	Not applicable/available
Cu. Ft.	Cubic Feet	No.	Number
C.Y.	Cubic Yard, 27 cubic feet	O.C.	On Center
DHW	Domestic Hot Water	P.E.	Professional Engineer
Diam.	Diameter	Ply.	Plywood
Ea.	Each	Pr.	Pair
Est.	Estimated	PVC	Polyvinyl Chloride
Ext.	Exterior	Pvmt.	Pavement
Fig.	Figure	Quan. Qty.	Quantity
Fin.	Finished	R.C.P.	Reinforced Concrete Pipe
Fixt	Fixture	Reinf.	Reinforced
Flr.	Floor	Req'd	Required
FRP	Fiberglass Reinforced Plastic	Sch.,Sched.	Schedule
Ft.	Foot, Feet	S.F.	Square Foot
Galv.	Galvanized	Sq.	Square, 100 Square Feet
Ht.	Height	Std.	Standard
Htrs.	Heaters	Sys.	System
HVAC	Heating, Ventilation, A/C	S.Y.	Square Yard
HW	Hot Water	T&G	Tongue & Groove
In.	Inch	Th, Thk.	Thick
Int.	Interior	Tot.	Total
Inst.	Installation	Unfin.	Unfinished
Insul.	Insulation	V.C.T.	Vinyl Composition Tile
lb.	Pound	Vent.	Ventilator
L.F.	Linear Foot	Yd.	Yard

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Mechanical Cost Data  
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Electrical Cost Data  
by R.S. Means Company, Inc.

Open Shop Cost Data  
by R.S. Means Company, Inc.

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**PHOTOGRAPHS**

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1. General view of the parking lot showing some of the minor cracks in the pavement surface.



2. View showing a crack in the concrete of the parking lot entry apron.



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3. View showing the stained and dirty logo sign at the property entry.



4. View showing a loose fence post and deteriorated stucco finish at the wall paralleling the main entry drive.



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5. Damaged chain link fence at the detention pond adjacent to 5425 Stone Croft Trail.



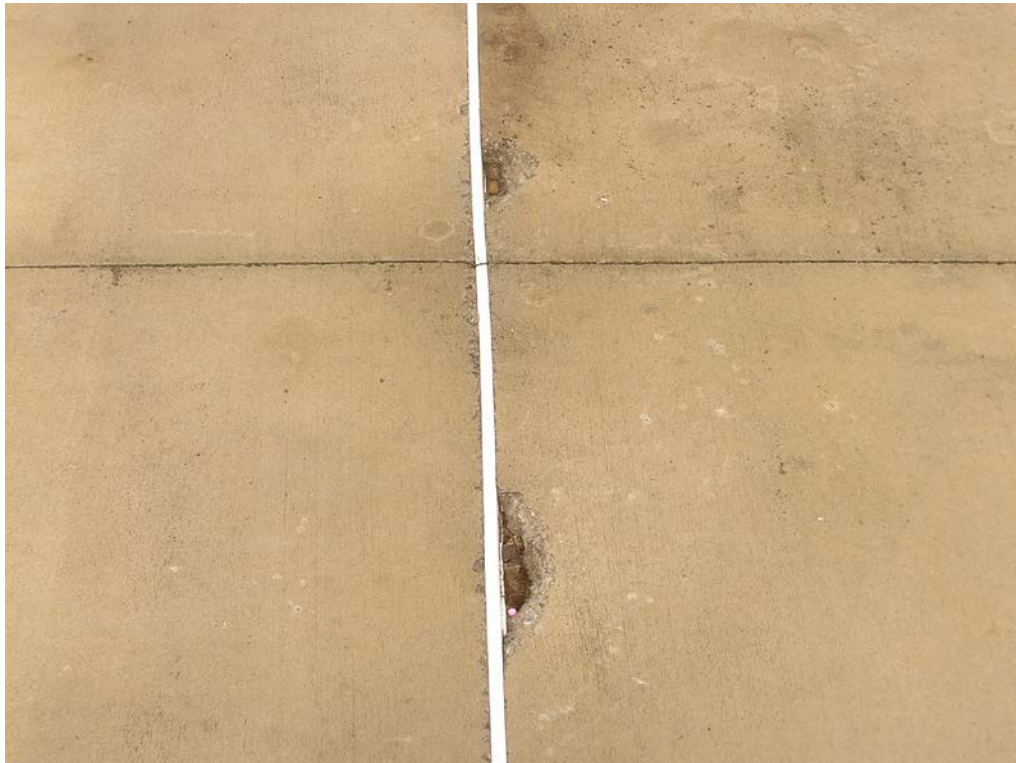
6. Deteriorated caulk joint at the main pool.



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7. Cracks in the concrete deck at a typical skimmer opening at the main pool.



8. View of the main pool deck showing the spalled concrete that has occurred where the wood formwork stakes were not removed.

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9. Hairline crack at the waterslide pool that appears to have occurred due to slight settlement.



10. Typical damaged aluminum fence pickets at the perimeter fence surrounding the pool deck.



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11. View showing typical cracks in the asphalt wearing course of the tennis courts.



12. Deteriorated cold joints in the asphalt surface of the basketball court.

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13. View showing evidence of ponding water at the south side of the tennis courts.



14. General view showing evidence of poor drainage and erosion occurring at the top of the retaining wall at the basketball court.



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15. General view showing evidence of ponding water at the west end of the basketball court and erosion of the slopes at the end of the retaining wall.



16. View showing the partially blocked outfall at the detention pond control structure located behind 360 Prestmoore Place.



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17. General view showing the overgrowth of the weeds, shrubbery, and immature trees growing adjacent to the chain link fence and within the pond basin. Typical at most detention pond locations.



18. View showing the partially blocked trash grate at the control structure located at the right side of 3540 Stone Croft Trail.



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19. View showing the grate inlet at the control structure located at the right side of 3540 Stone Croft Trail that does not conform to County standards.



20. View showing the erosion of the slopes occurring at the back side of the detention pond located adjacent to 4525 Stone Croft Trail.



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21. View showing the erosion occurring at the slopes located adjacent to 4525 Stone Croft Trail.



22. Deteriorated wood trim at the information sign located adjacent to the guardhouse.



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23. Collapsed wood step located at the right side of the clubhouse.



24. Deteriorated wood windowsill at the right front side of the clubhouse.

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25. View showing the deteriorated wood column casing at the upper level deck at the rear of the clubhouse.



26. Typical deteriorated wood casing and trim at the bottom of a column located at the lower level rear deck of the clubhouse.



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27. Typical deteriorated wood casing at the top of a column located at the lower level rear deck of the clubhouse.



28. View showing deteriorated wood casing and trim at a support beam located at the lower level rear deck of the clubhouse.



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29. Deteriorated wood access panel at the waterslide pump house.

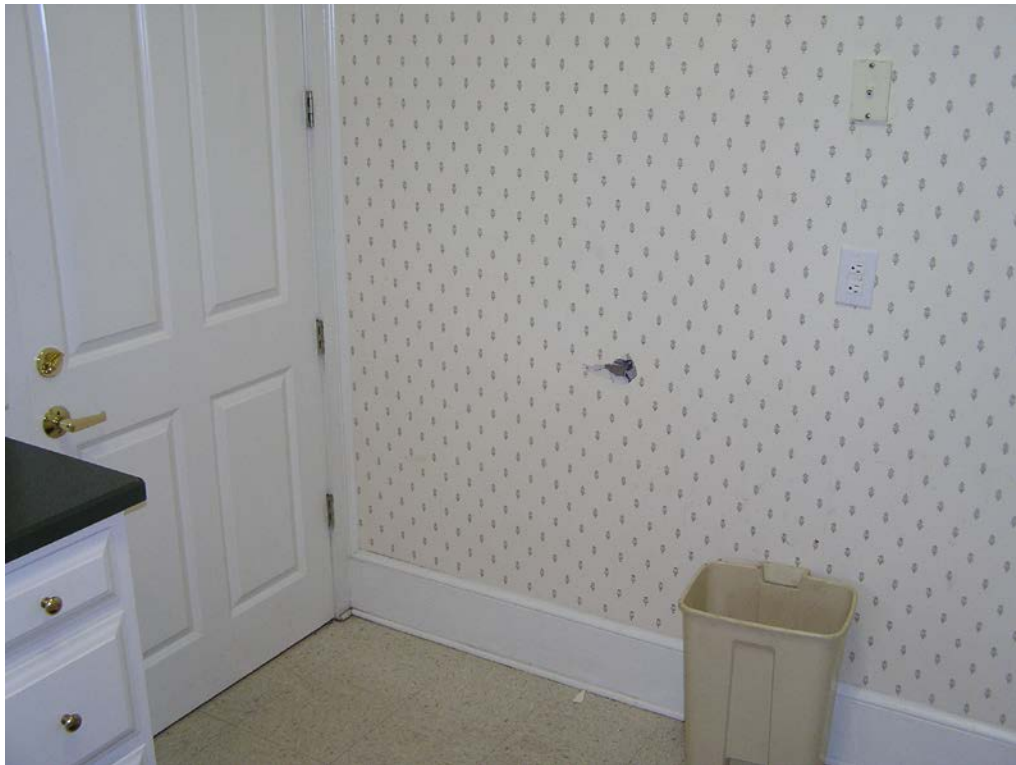


30. Exposed electrical cable at the sidewalk located near the left front side of the clubhouse.

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31. View of the kitchen ceiling showing mildew stains, indicating a possible leak problem.



32. View of the kitchen showing the hole in the wall behind the entry door.



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33. View showing peeling wallpaper in the upper level men's restroom.



34. View showing deteriorated and mildew-stained gypsum board walls at the lower level men's restroom, indicating a possible foundation leak problem.



35. View showing deteriorated and mildew-stained gypsum board walls at the lower level mechanical room, indicating a possible plumbing leak problem.



36. Deteriorated gypsum board walls in the pool equipment room.

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37. View of the pool equipment room ceiling showing access holes that have not been repaired.



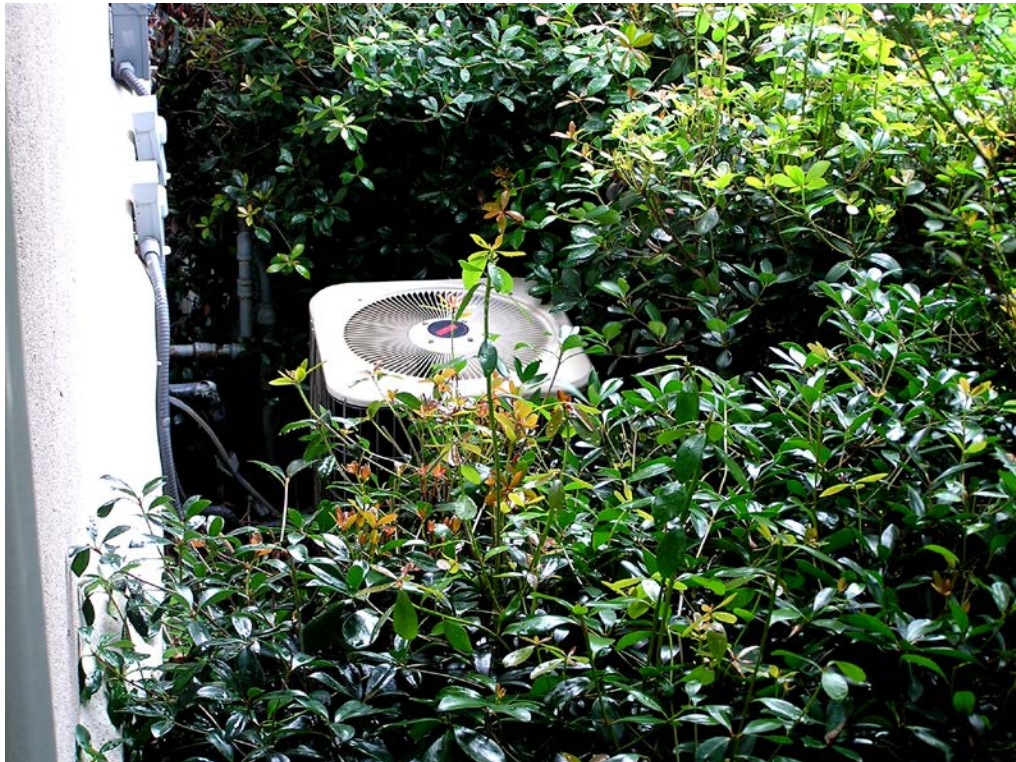
38. View of the deteriorated awning at the water slide.



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39. View showing the leaking valve at the filtration equipment for the main pool.



40. View showing the compressor units at the left side of the clubhouse that are almost enclosed by shrubbery.