

STRATHMEADE SQUARE

SECTION III

Architectural Guidelines

Reserve Study and Report



**Architectural Guidelines**

## **STRATHMEADE SQUARE COMMUNITY ASSOCIATION'S ARCHITECTURAL STANDARDS**

**INTRODUCTION.** In accordance with the Covenants of the Association, the Board of the Directors of the Strathmeade Square Community Association (SSCA) has adopted Architectural standards to ensure the continued fine appearance of the community. Please note that in every case where SSCA is mentioned it also encompasses the Board Architecture Committee, which normally has jurisdiction over matters pertaining to the exterior of the community.

**OWNER RESPONSIBILITIES.** Owners are responsible for their property regardless of whether it is owner occupied or leased. Therefore, they are responsible for all actions of their tenants. These standards are designed to assist owners with staying in conformance with community rules.

**MODIFICATIONS.** In many cases automatic approval is given for modification, particularly when it is a replacement in kind. However, often a modification request to the Board through its Architecture Committee is necessary before any change can be made. To make a request, an Architecture Modification (Appendix A) form must be submitted. This is done by completely filling out the form with necessary supporting information such as sketches, paint chips, etc., and submitting it to the management company who will forward it on for review. The SSCA then has 30 days to respond. If the owner does not receive a response within the 30-day period the request is considered approved.

The SSCA can take three actions on the modification request: they can deny, approve, or approve with conditions. Should a modification be disapproved an owner has the right to appeal directly to the Board for reconsideration.

At no time should an owner make a modification without prior approval if they are at all unclear if prior approval is required. Any unapproved modification found to be in violation of the standards might result in a daily fine and additional cost to have it rectified.

All work on SSCA houses is to be done by the owner or a licensed contractor and in accordance with all Fairfax County regulations and any other applicable regulations or laws.

**ARCHITECTURAL COMMITTEE.** The Board handles most of the architectural issues of the community through a committee appointed in accordance with the Bylaws. The committee meets regularly, usually once a month, and all residents are invited to attend. They are particularly encouraged to do so if they have a modification request pending in order to provide any amplifying information that might be required for the Committee to make a decision.

**PROPERTY INSPECTIONS.** Normally, the Management Company and/or members of the Architectural Committee do a walkthrough of the community at least once a year. At that time violations are noted for each property and the owners notified. Unless it is an egregious or an obvious health or safety issue, owners are normally given 30 days to correct the violation. Additional time may be granted for rectification if the owner has contacted SSCA and has demonstrated an obvious and substantive effort to bring their property into compliance. Otherwise the Board has the authority to schedule a hearing on the matter. The result of that hearing may be a daily fine and/or other expenses until the violation is corrected. Additionally, the Board may take a variety of actions to ensure compliance such as, but not limited to, a lien against the property, court order to have the work performed, and/or the arrangement to have the work performed to correct the violation in which case the owner will be charged for expenses incurred, plus substantial penalties. Any charge not paid may result in a lien against the property, suit, or some other legal action to ensure payment is made.

Adopted in entirety by the Strathmeade Community Association Board of Directors on March 16, 2004. Amended March 2006

An inspection is also done at the time of a pending sale of a property as required by the Commonwealth of Virginia. Any violations at that time are noted in the Disclosure package, which is required to be provided by the seller to the perspective buyer.

Finally, these standards are designed to help the community retain its property values, uniform appearance and unique character. By all owners abiding by the standards, Strathmeade Square will remain a pleasant place to live for many years to come.

## **STRATHMEADE SQUARE COMMUNITY ASSOCIATION'S ARCHITECTURAL STANDARDS**

### **D. DOOR AND DOOR FRAMES.**

In general SSCA houses have a solid door in the front and solid or sliding type in the rear and were originally designed to reflect the general colonial architectural nature of the community.

D.1 Doors are to be properly aligned, unbroken, and adequately painted in a color that reflects the general colonial architectural nature of the community. All door hardware (locks, knobs, handles, knockers, hinges, door bell button, etc.) is to be in good repair. All door changes, including a change in the color, style, type, and size of opening or number of windows must have previous approval from SSCA prior to installation.

D.2. Doorframes are to be in good repair and adequately painted in a color that matches the rest of the house trim. Bright white color is preauthorized. All other doorframe changes, including a change in the color, style, type, and size of opening or number of windows must have previous approval from SSCA prior to installation. Note that the wood in many doorframes tends to rot at the base of the frame.

D.3. Storm or screen doors, if installed, are to be properly aligned and in good repair and of a color to blend with the main door and trim. Bright white, black, or brass color is preauthorized. All other storm/screen doors must be approved by SSCA prior to installation. They are to be properly closed and latched when not in use.

### **W. WINDOWS.**

In general windows in SSCA are double hung or bay, have mullions, are white in color, and were originally designed to reflect the general colonial architectural nature of the community. This means that each window has two movable sashes, which slide up and down within the window frame. The sashes are divided into sections by mullions; most are divided into six sections. A few are divided into four sections. For the purpose of SSCA, mullions are defined as vertical and horizontal strips that divide each sash into sections, and normally support and secure individual pieces of glass. Specifics are given for frames, trim and sashes. However, it is important to note that any change in the color (other than to bright white), style, type, and size of opening or number of windows must have previous approval from SSCA.

W.1. Window frames and trim is to be in good repair and adequately painted. The frames and trim shall not be broken or deteriorating from rot, and the paint shall not be cracked or peeling. Replacement of window frames with metal or vinyl construction is allowed without prior authorization as long as they match the existing frame and are bright white in color. All other installations and colors must be approved by SSCA.

W.2. Sashes are to be in good repair and adequately painted. Replacement of window sashes with metal or vinyl construction is allowed without prior authorization as long as they match the existing sashes in style and are bright white in color. All other installations and colors must be approved by SSCA.

W.3. Windowpanes are to be transparent glass and free of paint or other obstruction. They are not to be cracked or broken.

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W.4. Mullions are required to maintain architectural consistency within the community, i.e. they are not to contain large panes of glass, which are not visually subdivided by mullions, even if the mullions are only decorative. Where a window is not required to have mullions as a structural element, such as a modern insulated glass replacement window, they must contain decorative mullions to give a similar appearance. The mullion requirement applies equally to both standard double hung windows and any other type of installation such as a garden or bay window. Mullions must be painted to match the sash of the window.

W.5. Storm windows, if installed, are to be in good repair, and if not of natural aluminum color, adequately painted in a color that matches the window sash. The sashes are to be square to the frame, of transparent glass, and free of paint or other obstruction.

W.6. Shutters may be of wood, vinyl or metal construction but must reflect the general colonial architectural nature of the community. They are to be in good repair, securely attached to the house and adequately painted. All color choices must be approved by SSCA.

W.7. Bay windows and surrounding structures under and around the windows are highly susceptible to water damage and wood rot. They are to be in good repair and adequately painted, including the connecting siding and other trim. Bright white color is preauthorized. All other color choices must be approved by SSCA. The wood or other covering shall not be deteriorating from rot, and the paint shall not be cracked or peeling. Metal flashing around or above these structures is to be firmly attached and adequately painted to match either the structure or the surrounding siding so that it is not noticeable.

Bay windows and/or their surrounding structure may be replaced without prior authorization by a metal or vinyl type if they match exactly the existing unit, do not hide any of the original architectural features of the home, are painted bright white, and meet all other standards regarding window requirements previously noted. Any deviation from this must be approved by SSCA.

## S. SIDING.

S.1. Brick exteriors are to be free of stains, such as algae, mildew, and other materials like gutter debris, not damaged missing or broken, and all mortared joints are to be properly filled. Some SSCA houses have bricks to which paint has been supplied to the outside surface. Other houses have bricks in which color is impregnated. Paint on bricks is not to be cracked or peeling and must be of a uniformed color throughout. Any choice in color must be approved by SSCA.

S.2. Siding other than brick may be of wood, vinyl, or metal construction but must reflect the general colonial architectural nature of the community. Replacement siding cannot cover the original architectural features of the home without prior approval from SSCA. Siding materials are to be in good repair and adequately painted. Bright white color is preauthorized. All other color choices must be approved by SSCA.

## R. ROOFS AND ATTACHED STRUCTURES. (See Appendix B. for diagram)

R.1. Dormers are structures, which project from a roof. They typically contain a window, e.g. a dormer window. Within SSCA there are two types of dormers, both of which are found on houses with gambrel style roofs. (A gambrel roof has a steep lower slope and a flatter upper slope on each side of the main ridge.) The first type of dormer has a triangular top and is called a gable dormer. The second type has a flat top and is called a shed dormer. Both have windows and both project slightly from the lower slope of the gambrel type roofs.

Adopted in entirety by the Strathmeade Community Association Board of Directors on March 16, 2004. Amended March 2006  
Dormers, including their windows are to be in good repair and adequately painted. Flashing found around dormers is to also be adequately painted. Bright white color is preauthorized. All other color choices must be approved by SSCA.

R.2. Gable trim boards (rake boards) exist in some fashion on all SSCA houses. See Appendix B. A gable of a house is the vertical triangular portion formed by the ends of a roof that slope downward at angles from a central ridge. Within SSCA only end unit houses have full gables. Most interior unit house have partial gables where their roof is offset somewhat from an adjacent unit's roof.

A few interior units have no gables; this occurs when their rooflines exactly match the rooflines of adjacent units. In this situation there is often a firewall cap between the houses (see firewall cap).

Trim boards called rake boards frame both full and partial gables. The boards are fully exposed to the elements, which often cause the paint to weather, chip, or peel.

Gable rake boards are to be in good repair and adequately painted or covered by a colored product such as vinyl or metal. Such a covering must be done so that it does not disguise any of the original architectural features of the house. Bright white color is preauthorized. All other color choices must be approved by SSCA.

R.3. Roof flashing is sheet metal strips or specifically formed metal shapes used to seal joints and direct water away from joints between differing materials on roofs and elsewhere on buildings. Besides being installed between roof shingles and gables, flashing is also typically found around roof vent pipes, roof fans, exhaust pipes, around bay window structures, and around dormers. It may also be found in other locations.

Most SSCA houses have "stair step type" roof flashing between their roof and the gable of the neighboring property(s). The visible vertical portion of a property/s flashing will thus be attached to the adjacent house. The horizontal portion of the flashing should not be visible; it should properly be installed beneath roof shingles. Although the flashing is only visible on the adjacent property, the flashing is the responsibility of the party benefiting from it, e.g., the owner of the property, which it is protecting and on which it is not visible. This includes all maintenance, painting, etc.

The vertical portion of the flashing is to be properly coated, and or painted, and is to be firmly attached to the adjacent gable. Bright white color is preauthorized. All other color choices must be approved by SSCA.

R.4. Roof vents and exhaust pipes are to be constructed of metal or plastic. While painting of the vent or exhaust pipe bright white is encouraged for community uniformity, it is not required. However, the vent or exhaust pipe must show no signs of rust or other deterioration. If previously painted the pipe or vent must either be kept properly painted or stripped of all existing paint coat so that it presents the same appearance from all vantage points.

R.5. Roof shingles are to be properly aligned. A roof is not to have missing or damaged shingles. Shingles are to be of a uniform color throughout and reflect the general colonial architectural nature of the community. Change of shingle color, style, or material requires prior approval from SSCA.

R.6. Firewall caps are on some SSCA houses where a house's rooflines match the rooflines of its adjacent house(s) there will not be a gable but there may be a firewall, which extends a few inches above the roofs. Sheet metal caps cover the firewalls.

Firewall caps are to be in good repair and adequately painted. Bright white color is preauthorized. All other color choices must be approved by SSCA. Since firewall caps are extensions of the common wall between properties, both properties are responsible for the correction of any deficiency.

R.7. Soffits are the underside surface of the roof's eaves. (Eaves are those portions of the roof, which overhang the house's exterior walls.)

Soffits are to be in good repair and adequately painted or covered to match the rest of the trim. Bright white color is preauthorized. All other color choices must be approved by SSCA.

R.8. Fascia boards are long, flat boards which cover the ends of a house's roof rafters. They are the boards to which the gutters are attached.

Fascia boards are to be in good repair and adequately painted or covered to match the rest of the trim. Bright white color is preauthorized. All other color choices must be approved by SSCA.

R.9. Frieze boards, sometimes also called fascia boards, are long flat boards attached to the exterior of houses directly beneath the soffits.

Frieze boards are to be in good repair and adequately painted or covered to match the rest of the trim. Bright white color is preauthorized. All other color choices must be approved by SSCA.

R.10. Gutters are to be securely attached and in alignment with the roofline. They are to be free of mildew and dirt, be adequately painted, and as far as practical, empty of leaves and debris. In all cases bright white gutters are authorized. All other color choices must be approved by SSCA.

R.11. Downspouts are to be securely attached to buildings. They are to be in good repair, free of mildew and dirt, and adequately painted. Normally, the color of the downspout should match that of the gutter. Any deviation from this policy must have prior approval from SSCA.

Downspouts should drain so as not to impinge on another property or cause erosion. Normally, this would be such that water can freely flow to the storm drainage system.

## E. EXTERIOR ATTACHMENTS

E.1. Railings for most front yard and entrance areas within SSCA are constructed of metal members, which are welded together and mounted in or to concrete or masonry. Railing members are to be securely welded together and free of rust. They are to be painted so that bare metal, rust and previous coats of paint are not visible. They are to be securely mounted to masonry or concrete walks or walls, or mounted in concrete supports. Black color is preauthorized. All other color choices must be approved by SSCA.

E.2. Sidewalks are the responsibility of owners for the sidewalk area that runs from their door or other parts of their property to where it joins the community pavement. The width of the sidewalk is to be approximately level. The sections are to meet evenly so that they do not pose a tripping hazard. They are not to be severely cracked or broken.

Sidewalks are normally constructed of concrete. However, brick is allowed. Paver bricks must be set on concrete base, mortared together, and must be level with the common sidewalk across the front of the property. Thresholds must be brick as well as the steps adjoining these two areas and of one color



Adopted in entirety by the Strathmeade Community Association Board of Directors on March 16, 2004. Amended March 2006 throughout. Design and color of bricks is subject to approval by SSCA.

E.3. Steps must match the width of the sidewalk, and be approximately level. The risers are to be of approximately equal dimensions including the first riser, with no separation between the steps and the sidewalk. They are not to be severely cracked or broken. Normally steps are to be left their natural color. Painting or other covering of any kind must be approved by SSCA.

E.4. Address mounts are to be approximately 6"x18"x1/2" in size, securely mounted to the building, adequately painted, and in good repair. The house numbers are to be firmly attached to the address mounts and of a contrasting color to the mounting surface. House numbers attached directly to the house in lieu of address mounts are acceptable. All numbers are to be uniform and of the same color.

E.5. Light fixtures are to be firmly attached to the building. They are to be in good repair and reflect the general colonial architectural nature of the community. Glass panes, where appropriate, are to be in place and unbroken.

E.6. Mailboxes are to be securely attached to the building. They are to be in good repair and adequately painted.

E.7. Antenna and cable TV wires are to be securely and unobtrusively attached to the house and where possible be of a matching or blending color. Wires normally are to be on the rear of the house. All other installations must first be approved by SSCA.

E.8. Satellite Dish Installation. See Appendix C.

## F. FENCES.

Fences are required between each property and the outer boundary of a property of an end unit. Fences are not required on the rear. In that case the dividers between properties must come to a finished end. Fences may extend to the furthest boundary of a home's footprint but may not impinge on community property. With the exception of hardware and post caps, all fences are to be of wood construction and painted with an approved fence paint color.

F.1. Fence construction is to be of 4"x4", 6"x6", or 4"x6" support posts, 2"x4" rails, and 1"x6" boards. Capping of the tops of the board with capping board is encouraged.

F.2. House address numbers are to be attached to the rear fence, preferably the gate and be at a height 4-6 feet off the ground. The numbers are to be unobtrusive and uniform in appearance and color. Where there is no rear fence or gate, the numbers shall be placed on the right side of the existing fence.

F.3. Cross-bars connecting posts, usually found over gates, are not permitted.

F.4. Wooden parts are to be free of green or black mildew and must be painted in accordance with SSCA. However, since it is recognized that new treated lumber takes time to cure, a grace period of 6 months is allowed before new or replaced wooden parts must be painted.

F.5. Colors approved for SSCA fences are:

Sears Weatherbeater – Bcelona Brown  
Sherwin Williams – Chateau Brown (latex)

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 Cuprinol Wood Stain and Wood Preservation – Barn Brown (Fisher’s Hardware in Springfield)  
 Behr, Deck Plus, Solid Color Stain (Manual) Deep Base 213 (Home Depot)

<u>Colorant (Gallon)</u>	OZ	48	96
B – Lamp Black	3	16	0
C – Yellow Oxide	0	40	0
F – Red Oxide	1	0	0
L – Raw Umber	0	6	0

F.6. Fence posts are to be vertical, firmly anchored in the ground, in good repair, and capped with a metal or plastic cap. Posts must be adequately painted with an approved fence paint color. Posts are not to extend more than 2” above the boards. Crossbars are not permitted.

F.7. Fence post caps are required on the top of each fence post. They are to be constructed of metal or plastic. While painting of the cap is encouraged for uniformity, it is not required. However, the cap must show no signs of rust or other deterioration.

F.8. Fence rails are the horizontal structural members of the fence. There are to be three in each fence section and they are to be parallel to each other. They are to be firmly attached to the posts, in good repair, and adequately painted with an approved fence paint color.

F.9. Fence boards are to be attached to both sides of the rails. There is to be a gap of approximately 3.5” between each board. The boards on the opposite side of the fence are to be staggered at approximately ½ again the distance of the other side. The boards are to be firmly attached to the rails, in good repair, and the exterior surfaces adequately painted with an approved fence paint color. The tops of the boards are to be straight, e.g., they are not to be ragged or rotted from long exposure to the elements.

F.10. Fence board caps are long flat wooded strips, which cover the tops of the boards. They are not required but are encouraged because they deter the deterioration of the top of the boards caused by weather elements. When caps are present they are to be firmly attached, and painted with an approved fence paint color.

F.11. Fence gates must be properly hinged, and have an operating and effective latch. The wood should be solid and adequately painted with an approved fence paint color. A gate is to be properly latched when closed.

F.12. Fence hardware consists of hinges, latches and locking devices. All hardware is to be firmly attached and adequately painted or constructed to be dark in color so that it blends with the color of the fence and shows no rust or other wear.

Y. YARD STRUCTURES AND APPEARANCE.

Y.1. Attached Structures to SSCA houses are normally not allowed other than that required for handicapped access, or in the case of a shed as referenced. This includes, but is not limited to, decks 24” or more above the ground level plane, breezeways, porches, etc. Therefore, before any such structure should be contemplated, discussion should be initiated with SSCA.

Y.2. Patios, decks, and other such rear yard covering do not require prior approval as long as it does not extend more than 24” above the ground plane and the house has a rear fence and gate such that all sight into the yard from a level of 6 feet or less is blocked. Therefore, patios, ground decks, and other

Adopted in entirety by the Strathmeade Community Association Board of Directors on March 16, 2004. Amended March 2006 permanent structures that can be seen from the 6-foot level must be pre-approved. An example is where a rear fence and/or gate do not exist.

Y.3. Sheds are allowed on an owner's property without prior approval from SSCA if it does not extend more than 12" above the fence line, except if built as an integral part of the divider between two properties. In that case the shed shall be no higher than 8 feet and of wooden construction painted to match the attached fence. The roofs of wooden sheds are to be properly shingled in a manner and color that matches as closely as possible that of the main house. Metal sheds may have metal roofs. Vinyl sheds are not allowed unless they have a roof that matches that of the house and do not extend above the fence line. If paint is required, the sides, doors, and any other area showing must be painted in accordance with the SSCA fence standards. If obtaining a metal or vinyl shed and it is impractical to paint it with one of the approved fence colors, it should be dark brown. All other colors must be approved by SSCA.

Y.4. Playground, hot tubs, or any other type of installation for recreation may be installed in a rear yard if it is not visible above the fence line. This applies to both portable and permanent installations. However, for safety reasons no such installation is allowed unless the yard is completely enclosed by a fence meeting the standards such that entry into the area can be controlled. In order to avoid any problems, approval for such an installation should first be obtained from SSCA and must meet all Fairfax County and other municipal laws and regulations.

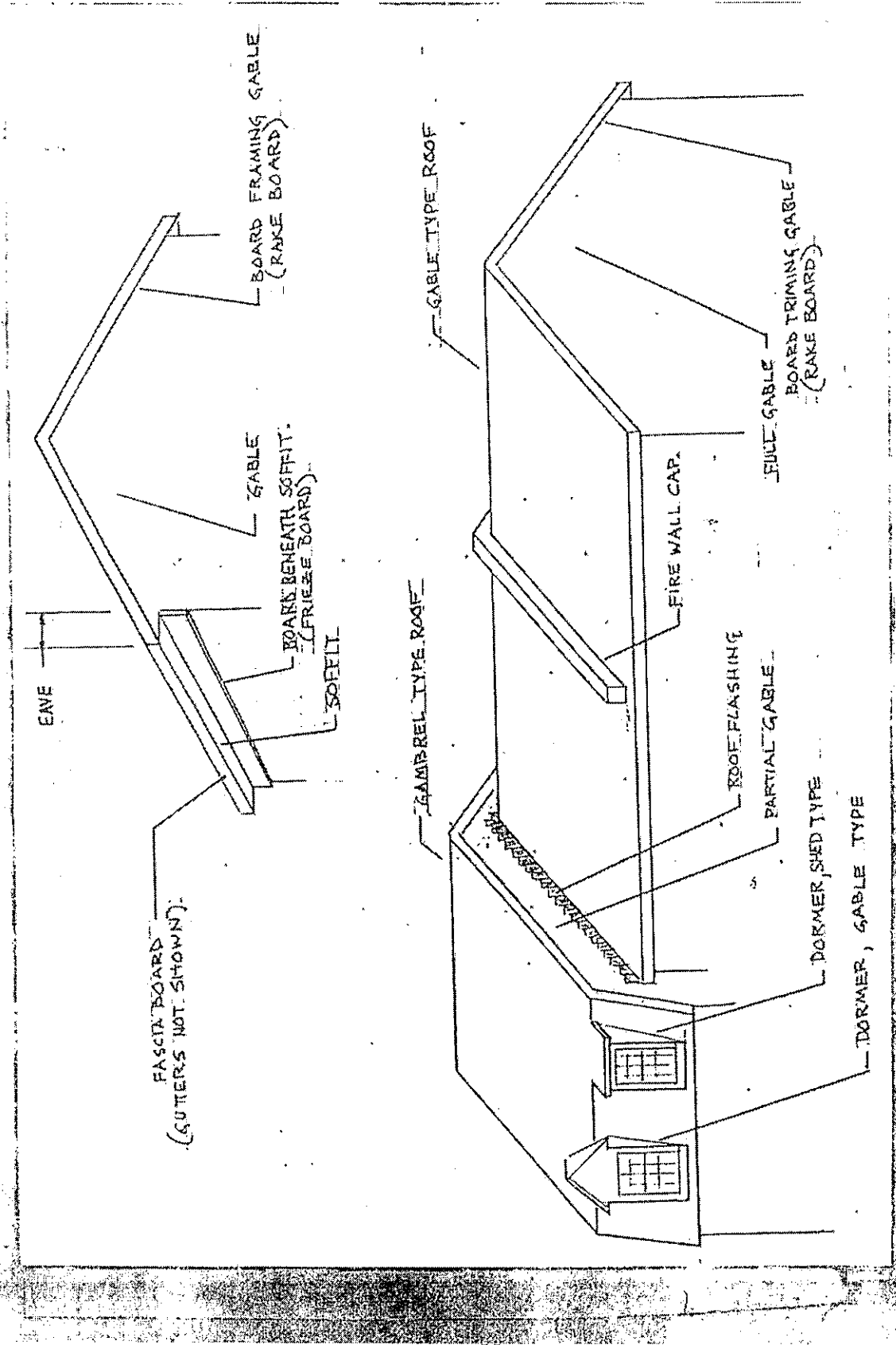
Y.5. Area neatness outside of the fence line or home rear and side exterior is the responsibility of the owner. No objects are to be stored outside of the fence line. It is acceptable to place trash containers outside the fence line on the night before and the day of trash collection. Visible portions of the rear yard area are to be kept in a neat condition and free of debris. If there is no rear fence then this applies to the entire backyard area.

Y.6. Front exteriors of a home must be landscaped with a covering of vegetation at least 75% of the total area up to a point where it joins the common SSCA and neighboring properties. This may be ground cover, grass, or flowers. All other configurations of the front exterior area must be approved by SSCA.

A border may be placed around the yard area. If it is constructed of wood, stone, rock, pavers, or other such outdoor material designed for such use, it may protrude above the ground level a maximum of 12 inches. If it is constructed of plastic and intended to be used as an exterior border, it may protrude above the ground level no more than 2 inches. Materials commonly sold for interior use, such as tiles, interior lumber, etc. are not appropriate to be used as an exterior border. Any other configuration must be approved by SSCA. *(This section amended March 2006)*

Z. OTHER. Anything not covered in these standards is the purview of the SSCA. Therefore, if standards are not present, pre-approval must be obtained from SSCA.

Appendix B.



Appendix A.

**STRATHMEADE SQUARE COMMUNITY ASSOCIATION  
ARCHITECTURAL MODIFICATION FORM**

Changes to the exterior of Strathmeade Square properties require prior approval of the Association's Architecture Committee. Please fill out and submit two copies of this form via the management company, retaining a third copy for your files. This may be done by mail or fax. A copy reflecting the actions taken by the Architectural Committee will be returned to you within thirty (30) days, to become part of your permanent records. (Additional copies of this form are available from Sequoia Management or the web site: <http://www.strathmeade-square.net>). Thank you.

Mail to: Sequoia Management Company, Inc., 13998 Parkeast Circle, Chantilly, VA 20151-2783, Fax: 703-968-0936

Owner \_\_\_\_\_  
Name Please Print Contact Number

Strathmeade Address \_\_\_\_\_

Mailing Address \_\_\_\_\_  
(if different) \_\_\_\_\_

Renter \_\_\_\_\_  
Name Please Print Contact Number

Signature of Owner \_\_\_\_\_ Date of Request \_\_\_\_\_

Description/Diagram of Modification Requested: (Please include diagram, description, sketch, paint sample, picture of modification, if applicable.) If you need more space, please use a separate sheet. Also, please remember that all work must be done in accordance with applicable Fairfax County regulations and other regulations or laws, and that "Miss Utility" must be called at 1-800-257-7777, prior to any digging so that all underground cables, pipes, etc. can be marked.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**FOR ARCHITECTURE COMMITTEE USE ONLY: Date Received \_\_\_\_\_**

\_\_\_ *Approved as Requested*

\_\_\_ *Approved subject to the following conditions/modifications:* \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

\_\_\_ *Disapproved for the following reasons:* \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
Date Copy Returned to owner

\_\_\_\_\_  
Signature, Architecture Committee Chairperson

## NOTICE

1. Corporate name. The certificate shows the exact name of the corporation as stated in its articles of incorporation. If the corporation operates under a name other than its exact name, it must comply with the fictitious name statutes, Section 59.1-69 *et seq.* of the Code of Virginia.
2. Registered agent and registered office. The registered agent of the corporation, as recited in the articles of incorporation, remains the registered agent until a new registered agent is appointed and a Form SCC 635/834 is filed with the Clerk of the Commission. *Papers mailed to the registered agent at the registered office address are deemed legally to have been received by the corporation.* This is true even if the agent has moved, resigned or is dead. If the agent dies, resigns or changes the registered office address the corporation must immediately file form 635/834. If the agent is not a member of the Virginia State Bar, Form 635/834 must be filed whenever the agent ceases to be an officer or director of the corporation. The law requires that the corporation always have a registered agent and registered office in Virginia.
3. Annual reports and annual registration fees. An annual registration fee is due from the corporation every year in the calendar month of its date of incorporation. The fee is based upon the corporation's authorized number of shares as stated in its articles of incorporation or any amendment thereto, on record with the Clerk of the Commission as of the first day of the second month next preceding the month of its date of incorporation. (Nonstock corporations pay \$25.) Payment of the fee, as assessed, is due by the last day of its anniversary month of each year. Similarly, the corporation must file an annual report by the last day of its anniversary month.

NOTE. that this means the Commission must receive the report and fee on or before that date. Postmarks are not considered.

The annual report form and registration fee statement is mailed to the corporation's registered agent at the registered office address approximately 2-1/2 months before the due date each year. Failure to pay the registration fee on time will result in a monetary penalty, and ultimately automatic termination of the corporation's existence. Failure to file an annual report also ultimately will result in termination of the corporation's existence. Notices of delinquency and impending termination of corporate existence are sent to the registered agent if the report or fee is not received when due.

4. Voluntary dissolution and termination. The corporation may voluntarily dissolve and terminate its existence by filing articles of dissolution and articles of termination with the Clerk of the Commission. Packaged forms and instructions may be obtained from the Clerk's Office. If termination is completed before the annual registration fee due date of any year, the annual registration fee assessed for the year will be cancelled. If termination is not completed before the due date, the fee must be paid.

# Commonwealth of Virginia



## STATE CORPORATION COMMISSION

*Richmond,* MARCH 12, 1968

*This is to Certify that the certificate of incorporation of*

STRATHMEADE SQUARE COMMUNITY ASSOCIATION, INC.

*was this day issued and admitted to record in this office  
and that the said corporation is authorized to transact its business  
subject to all Virginia laws applicable to the corporation and its  
business. Effective date: JUNE 21, 1968*



*State Corporation Commission*

*William J. Bridge*

*Clerk of the Commission*

# Commonwealth of Virginia



## State Corporation Commission

I Certify the Following from the Records of the Commission:

the foregoing is a true copy of the ARTICLES OF RESTATEMENT of STRATHMEADE SQUARE COMMUNITY ASSOCIATION, INC. issued August 05, 1983.

Nothing more is hereby certified.



Signed and Sealed at Richmond  
on this Date: March 12, 1998

*William J. Bridge*

William J. Bridge, Clerk of the Commission





**Reserve Study and Report**

RSTUDY+  
REPLACEMENT RESERVE STUDY

# STRATHMEADE SQUARE

Annandale, Virginia

Property Management:

**SEQUOIA MANAGEMENT COMPANY**

Sharon Robinson  
Property Manger

13998 Parkeast Circle  
Chantilly, Virginia  
Tel: 703.803.9641  
Email: SRobinson@SequoiaMgmt.com

Consultant:

**RICHARD J. SCHUETZ, AIA**  
**ARCHITECT**

Wm. Bruce Bennett  
Senior Reserve Analyst

5101 10th Street South, Suite #4  
Arlington, Virginia 22204  
Tel: 703.820.1790  
Fax: 703.820.1695  
Email: Rick@great-architecture.com

October 8, 2010



**RICHARD J. SCHUETZ, AIA**  
**ARCHITECT**

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October 8, 2010

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Chantilly, Virginia

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Email: SRobinson@SequoiaMgmt.com

Sharon Robinson:

Pursuant to your acceptance of our Proposal on July 19, 2010, we have completed our evaluation of STRATHMEADE SQUARE in Annandale, Virginia, and have developed the enclosed RSTUDY+ Replacement Reserve Study. The Study includes the following components:

- **Replacement Reserve Report.** The *Report* contains a summary of the financial data calculated by the *Replacement Reserve Analysis*, a general description of the community, a summary of the conditions observed during our site evaluation, and information about the *Replacement Reserve Inventory*.
- **Replacement Reserve Analysis.** The *Analysis* is a tabular and graphical presentation of current Association funding of Reserves, and recommended Reserve Funding, calculated by both standard funding methodologies, the Cash Flow and Component Method.
- **Replacement Reserve Inventory.** The *Inventory* lists the common components of the community evaluated by the *Replacement Reserve Analysis*, and includes estimated replacement costs, normal economic life, and the remaining economic life for each component evaluated.
- **List of Recommended Repairs.** The *Repair List* itemizes defects we observed during our site evaluation. The repairs are categorized by building trade and include estimated costs.
- **Supplemental Photographs.** The photographs document observations made during the site evaluation.
- **Replacement Reserve Allocations.** The *Replacement Reserve Allocations* suggests allocation of the annual deposits to Replacement Reserves by the Cash Flow and Component Method. Cash Flow contributions are allocated based upon a chronological method recently developed by RSTUDY.
- **Appendix.** The *Appendix* contains definitions and standard procedures.

This Study should be reviewed by the STRATHMEADE SQUARE, Board of Directors, those responsible for the management of the components included in the *Inventory*, and the accounting professionals employed by the Association. We are prepared to provide revisions to the *Replacement Reserve Analysis* and the *Replacement Reserve Inventory* upon the request of the Board of Directors. Revisions should be requested by the Board of Directors within three (3) months of the date of this Study. If you have any questions regarding this report, please contact Mr. Richard J. Schuetz at (703) 820-1790.

Sincerely,  
RICHARD J. SCHUETZ, AIA  
Architect

*Wm Bruce Bennett*

Wm. Bruce Bennett  
Senior Reserve Analyst

**Replacement Reserve Report**

- A. General Information - Page 1
- B. Financial Summary - Page 4
- C. Site Evaluation - Page 7
- D. Inventory - Page 12
- E. Methodology - Page 17

**Replacement Reserve Analysis**

- Summary - A1
- Cumulative Funding and Expenditures Graph - A2
- Cash Flow Method
- Cumulative Receipts and Expenditures - A3
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- Cumulative Receipts and Expenditures - A4
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- Cumulative Receipts and Expenditures - A5
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**Replacement Reserve Inventory**

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**Attachments**

- Supplemental Photographs
- Replacement Reserve Allocations
- Appendix

RSTUDY+

# REPLACEMENT RESERVE REPORT

## STRATHMEADE SQUARE

Annandale, Virginia  
October 8, 2010



### A. GENERAL INFORMATION

**Intent.** The intent of this RSTUDY+ Replacement Reserve Study is to provide STRATHMEADE SQUARE (hereinafter called the Association), with an inventory of the common community facilities and infrastructure components that require periodic replacement, a general view of the condition of these components, and an effective financial plan to fund projected periodic replacements.

- **Inventory of common components.** The attached *Replacement Reserve Inventory* lists the common components of the community that require periodic replacement, whose replacement is scheduled for funding from Replacement Reserves. Section D of this *Replacement Reserve Report* provides information about components excluded from the *Inventory*, whose replacement is not scheduled for funding from Replacement Reserves, and the basis of those exclusions.
- **Condition of common components.** The *Replacement Reserve Inventory* includes our estimates of the normal economic life and the remaining economic life for those components whose replacement is scheduled for funding from Replacement Reserves. Section C of this *Replacement Reserve Report* provides additional information about several of these components including recommendations for repairs, maintenance, and replacements.
- **Financial plan.** Because many components owned by the Association have limited life and require periodic replacement, it is essential the Association have an effective financial plan to provide funding for the timely replacement of these components, to protect the appearance and value of the community. In conformance with American Institute of Certified Public Accountant guidelines, the *Replacement Reserve Analysis* evaluates the current funding of Replacement Reserves as reported by the Association, and recommends annual funding of Replacement Reserves by two generally accepted accounting methods, the Cash Flow Method and the Component Method. The *Replacement Reserve Analysis* includes graphic and tabular presentations of these methods and current Association funding.

# REPLACEMENT RESERVE REPORT

**Scope.** STRATHMEADE SQUARE is a residential community of townhomes in Annandale, Virginia. The Request for Proposal submitted by the Association states that the community was constructed in 1970 and consists of 309 residential units and associated improvements. We have assumed that all of these units are individually owned and are not the responsibility of the Association. These individually owned units and other components of the community not identified in the Request for Proposal as being the responsibility of the Association were not evaluated and were not included in the *Replacement Reserve Inventory* or *Replacement Reserve Analysis*.

We have identified community facilities and infrastructure components with limited life that require periodic replacement and whose replacement is the responsibility of the Association, based upon our review of the following:

- The Request for Proposal, submitted and executed by the Association.
- Our field evaluations and measurements.
- The previous Replacement Reserve Studies prepared by our firm and dated October 2003 and May 2006.
- Aerial photographs acquired by Richard J. Schuetz, AIA.

We have divided the components whose replacement is the responsibility of the Association into two categories, based upon the source of funding for the needed replacement. The categories are:

- Funding from Replacement Reserves. Those components whose replacement is scheduled for funding from Replacement Reserves are listed in the *Replacement Reserve Inventory*. This is a comprehensive list and the funding of replacements other than those specifically listed in the *Replacement Reserve Inventory* will result in inaccuracies in the results calculated by the *Replacement Reserve Analysis*.
- Funding from other sources. Examples of components whose replacement is NOT to be funded from Replacement Reserves, are listed and discussed in Section D - Inventory, below. This is not a comprehensive list and we have assumed that the replacement of all components not specifically listed in the *Replacement Reserve Inventory* will NOT be funded from Replacement Reserves.

The major components included in the *Replacement Reserve Inventory* are the asphalt pavement, concrete sidewalks, concrete stairs, concrete curb & gutter, asphalt trails, Pool House, MP court, swimming pools, tot lots, fencing, etc. **The components included in the *Replacement Reserve Inventory* have an estimated one-time replacement cost of \$1,953,337.**

RSTUDY+

# REPLACEMENT RESERVE REPORT

**Site evaluation.** We conducted our site evaluation in August 2010. Our evaluation was visual and nondestructive.

**Replacement Reserve Study - Level of Service.** The *Replacement Reserve Study* has been performed as a Full Service *Replacement Reserve Study* as defined under the National Reserve Study Standards adopted by the Community Associations Institute. A complete component inventory was established based on information regarding commonly owned components provided by the Association and upon quantities derived from field measurement and/or quantity takeoffs from to-scale engineering drawings made available by the Association. The condition of all components was ascertained from a site visit and the visual inspection of each component by the analyst. The life expectancy and the value of components are provided based on these observations. The funding status (Replacement Reserves on Deposit) and funding plan (Current Annual Contribution to Replacement Reserves) have been provided by the Association.

# REPLACEMENT RESERVE REPORT

## B. FINANCIAL SUMMARY

**Purpose.** The purpose of the attached *Replacement Reserve Analysis* is to evaluate the current funding of Replacement Reserves as reported by the Association, and to recommend annual contributions to Replacement Reserves by two generally accepted accounting methodologies, the Cash Flow Method and the Component Method. All three evaluations are based upon the same 30-year Study Period, Replacement Reserves reported to be on deposit at the start of the Study Year, and projected expenditures for replacements of common elements shown in the *Replacement Reserve Inventory*.

**Study Year and Study Period.** The Association reports that they operate on a fiscal year that runs from February 1 to January 31. The first year evaluated by the *Replacement Reserve Analysis*, the "Study Year", is 2011. The *Replacement Reserve Analysis* evaluates funding in a 30-year period extending forward from February 1, 2011. This 30-year period is called the "Study Period".

**Current Funding.** The Association reports Replacement Reserves on Deposit of 237,358.38 as of February 1, 2011, and annual deposits to Replacement Reserves totaling \$62,000.

**Projected Expenditures.** We project that in the first five years of the study, from the Study Year, 2011, through the end of 2015, the Association has a cash requirement of between \$219,551 and \$252,551. This is based upon \$154,551 of expenditures for replacements listed in the *Replacement Reserve Inventory* and \$65,000 to \$98,000 of repairs, maintenance, and miscellaneous small replacements outlined in the *List of Recommended Repairs*. Several of the projects associated with these expenditures are discussed in Section C below.

We have projected annual Association expenditures (not including the \$65,000 to \$98,000 of repairs, maintenance, and minor replacements outlined in *List of Recommended Repairs*) over the next 30 years, based upon the *Replacement Reserve Inventory*. This data is presented as a graph on page A-6 of the *Replacement Reserve Analysis*. It shows that **the average annual expenditure from Replacement Reserves over the next 30 years is \$58,409.**

**List of Recommended Repairs - timing of repairs.** The enclosed *List of Recommended Repairs* itemizes \$65,000 to \$98,000 of defects we noted during our site evaluation. The accuracy of the values used for the remaining economic life in the *Replacement Reserve Inventory* and thereby the entire *Replacement Reserve Analysis* is dependent upon the timely completion of these repairs, maintenance, and miscellaneous small replacements.

**List of Recommended Repairs - funding of repairs.** We have assumed that NO Replacement Reserves will be used to fund the correction of the defects outlined in the *List of Recommended Repairs*. The United States Tax Code grants very favorable tax status to Replacement Reserves, conditional on the expenditure of Replacement Reserves within specific guidelines. Funding maintenance, repair, and/or capital improvements from Replacement Reserves may have adverse tax consequences and should be done only after consultation with an accounting professional.

# REPLACEMENT RESERVE REPORT

**EVALUATION OF CURRENT ASSOCIATION FUNDING.** Our evaluation of the current Association funding plan is based in part, on financial data provided to us by the Association.

**\$62,000**      **Current Association Funding.** The Association reports that they are currently contributing \$62,000 per year to Replacement Reserves (\$16,72 per unit per month). Based upon Replacement Reserves reported to be on deposit, and the *Replacement Reserve Inventory*, our evaluation of Current Association Funding shows that it results in the Association being able to make scheduled replacements in all 30 years of the thirty-year Study Period.

Projections of Current Association Funding are presented in graph and tabular format on page A-5 of the *Replacement Reserve Analysis*. These calculations assume that NO Replacement Reserves will be allocated to fund the \$65,000 to \$98,000 of repairs, maintenance, and/or minor replacements outlined in the *List of Recommended Repairs*. A more detailed explanation of the Current Association Funding calculations is contained in the *Appendix*.

**STANDARD ACCOUNTING METHODOLOGIES.** The enclosed *Replacement Reserve Analysis* calculates recommended funding of Replacement Reserves in each year of the of the 30-year Study Period, by two generally accepted methods, the Cash Flow Method, and the Component Method. Both calculations are based upon the same financial data, including the costs of the replacements scheduled in the *Replacement Reserve Inventory* and Replacement Reserves reported to be on deposit at the start of the Study. The Cash Flow Method and Component Method calculations and Replacement Reserve funding recommendations in 2011, the Study Year, are discussed below:

**\$64,250**      **Cash Flow Method -** Minimum Recommended Funding of Replacement Reserves in the Study Year (\$17.33 per unit per month). The Cash Flow Method calculates the minimum annual funding of Replacement Reserves that will fund Projected Annual Replacements from a common pool of Replacement Reserves and prevents Replacement Reserves from dropping below the Minimum Recommended Balance. Annual deposits to Replacements Reserves remain the same between peaks in cumulative expenditures called Peak Years.

Minimum Recommended Balance. We have established the Minimum Recommended Balance at \$97,667 or 5 percent of the one-time replacement cost of all of the components listed in the *Replacement Reserve Inventory*.

The Cash Flow Method calculations are presented in graph and tabular format on page A-3 of the *Replacement Reserve Analysis*. These calculations assume that NO Replacement Reserves will be allocated to fund the \$65,000 to \$98,000 of repairs, maintenance, and/or minor replacements outlined in the *List of Recommended Repairs*. A more detailed explanation of the Cash Flow Method is contained in the *Appendix*.



# REPLACEMENT RESERVE REPORT

**\$129,682**

**Component Method** - Recommended Funding of Replacement Reserves in the Study Year (\$34.97 per unit per month). The Component Method is a time tested and very conservative mathematical model developed by HUD in the early 1980's. The Component Method treats each component in the *Replacement Reserve Inventory* as a separate account and deposits are made annually to each of these individual accounts. A fence with a life of ten years and a value of \$1,000, will require a deposit of \$100 per year to Replacement Reserves. Based upon this funding formula, the Association should have \$896,103 on deposit (Current Funding Objective), but the Association reports to having Replacement Reserves totaling \$237,358 on deposit, approximately 26.5 percent funded.

The Component Method calculations are presented in graph and tabular format on page A-4 of the *Replacement Reserve Analysis*. These calculations assume that NO Replacement Reserves will be allocated to fund the \$65,000 to \$98,000 of repairs, maintenance, and/or minor replacements outlined in the *List of Recommended Repairs*. A more detailed explanation of the Component Method is contained in the *Appendix*.

## FUNDING RECOMMENDATIONS:

We recommend the Association adopt an annual contribution to Replacement Reserves calculated by one of the standard accounting methods, either the Cash Flow Method or the Component Method, to insure that proper funding is available to make scheduled replacements throughout the entire 30-year Study Period.

We further recommend the Association fully fund the *List of Recommend Repairs* in the Study Year, and establish the necessary annual funding for the normal maintenance and repairs needed throughout the community.

# REPLACEMENT RESERVE REPORT

## C. SITE EVALUATION

**General comments.** STRATHMEADE SQUARE is generally in good condition for a community constructed in 1970. The Board of Directors and management have continued to make significant improvements at the community since our last evaluation in 2006. The Association is facing several large and expensive replacement, repair, and maintenance projects which are normal and appropriate for a community of this age. The major replacement projects facing the Association in the first five years of the Study Period, from the Study Year, 2011, through the end of 2015, include:

- Partial replacement of the asphalt pavement.
- Partial replacement of concrete curb & gutter and sidewalk segments.
- Replacement of designated pieces of tot lot equipment and the wood tot lot borders.
- Partial replacements of the wood stockade fencing and the wood retaining walls.
- Replacement of the diving board, post lights, and a pump at the swimming pools..

These projects are scheduled in the *Replacement Reserve Inventory* and have an estimated cost of \$154,551 in the first five years of the Study Period, from 2011, the Study Year, through the end of 2015.

The *List of Recommended Repairs* outlines \$65,000 to \$98,000 of repairs, maintenance, and miscellaneous small replacements we observed throughout the community, which need correction now. Most of this amount is associated with the following:

- Maintenance and repair of the asphalt pavement.
- Replacement of concrete components that are potential safety hazards.
- Correction of various site grading and drainage defects.

**Safety defects.** Several of the defects in the *List of Recommended Repairs* are safety hazards and should be repaired immediately to protect the residents from potential injury and to protect the Association from potential liability. We have identified safety hazards in the *List of Recommended Repairs* by printing them in **bold**. We do NOT warranty that all defects throughout the community that could be considered "safety defects" are identified in the *List of Recommended Repairs*.

**Site plans and drawings.** No site plans, drawings, and documents were made available to Richard J. Schuetz, AIA., for our review in conjunction with the preparation of this Replacement Reserve Study. The Association is responsible for the maintenance, repair, and replacement of hundreds of thousands of dollars of components. Attempting to accomplish these tasks without comprehensive site plans, drawings and documents places an unnecessary and expensive additional burden on the Association.

We recommend the Association acquire comprehensive site plans and drawings, detailing the construction of all common elements of the community. These documents should be scanned into an electronic format and posted to an Association web site, where they will be an excellent resource for the residents, Board of Directors, and contractors working for the Association, in the coming years.

# REPLACEMENT RESERVE REPORT

**Comments on Site Evaluation.** The *List of Recommended Repairs* provides a component by component discussion of defects we observe during our site evaluation. The following comments are not intended to restate these observations but address one of the following specific issues regarding the larger, more significant components at the community:

- Components that require specific comments because of the manner in which they have been treated in the *Replacement Reserve Analysis*.
- Comments on components that could not be properly addressed in the *List of Recommended Repairs*.

The comments on the following pages reflect the conditions found at the time of our site evaluation.

**Asphalt pavement - general.** The Replacement Reserve Inventory identifies 207,640 square feet of asphalt pavement throughout the community that is the responsibility of the Association. The Association conducted a project to replace this pavement in 1999 (30%), 2001 (40%), and 2003 (30%). The majority of the asphalt pavement is in good condition considering its age, but the pavement at Conquistador, Webley and other locations is failing prematurely and is approaching the end of its normal economic life. At the most deteriorated areas, pavement is allowing water to penetrate through the asphalt pavement, causing damage and deterioration of the load carrying capabilities of the base materials and bearing soils beneath the pavement. The defects we observed included areas with open cracks, holes in the pavement, alligatoring, and depressed areas of pavement indicating damage to the base materials and bearing soils beneath the pavement. We have estimated that the areas with more severe deterioration represent approximately 30 percent of the pavement and we have scheduled this pavement for replacement in 2013. This project is identified as "Phase One" or "P1" in the Replacement Reserve Inventory.



As noted above, the remaining 70 percent of the asphalt pavement is generally in good condition considering the age of the pavement and we have scheduled this pavement for replacement in 2018. This project is identified as "Phase Two" or "P2" in the Replacement Reserve Inventory.

**Asphalt pavement - replacement and repair.** We have assumed that the Association will replace the asphalt pavement by overlaying with 2 inches of new asphalt and the cost of this project is included in the *Replacement Reserve Inventory*. Before the installation of the new pavement, the existing asphalt roads and parking areas should be milled. The asphalt pavement is milled to insure that the new pavement can be properly graded to move all water to the storm water system.

# REPLACEMENT RESERVE REPORT

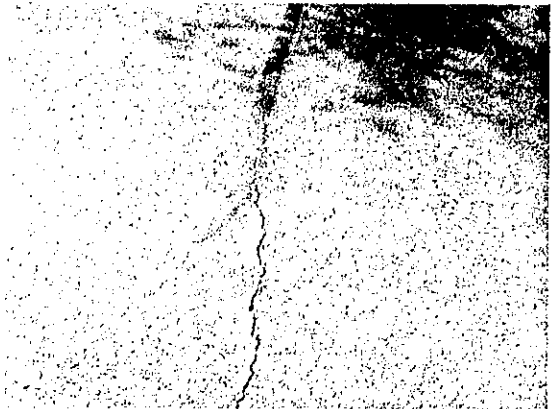
Throughout the community, we observed that previous pavement operations have been done without necessary milling of the asphalt pavement and without needed replacements of adjacent segments of curb & gutter. The coming Phase One and Two projects will need to correct these defects.

The project to replace the asphalt pavement should include the evaluation of all damaged and deteriorated pavement. Areas of asphalt pavement with minor defects that are limited to the asphalt pavement, where the base materials and bearing soils have not been damaged, may be repairable with one of the fabric reinforcing sheets in use today, to prevent defects from printing through to the new asphalt pavement.



Areas of asphalt pavement with more serious defects, where the asphalt pavement has significant damage and/or deterioration, or where base materials and/or bearing soils beneath the pavement have been damaged, should have defective asphalt pavement, base materials, and bearing soils removed and replaced with materials capable of properly supporting the new pavement. The replacement cost shown in the Replacement Reserve Inventory assumes a normal replacement project with base repairs at 5 to 15 percent of the total area. Failure to accomplish proper repairs prior the installation of a new asphalt top coat will result in the new pavement having a substantially reduced economic life as the old failures rapidly print through to the new asphalt. An asphalt pavement overlay, installed over defective pavement, frequently begins failing almost immediately and will generally be at complete failure in 2 to 5 years.

The result of a proper installation of a 2 inch asphalt overlay, after appropriate repairs, should be a new traffic surface with an economic life of 14 to 18 years for the roads and parking areas. For the *Replacement Reserve Inventory*, we have assumed that appropriate repairs will be made, that the new pavement will be properly installed, and that the roads and parking areas will have an economic life of 16 years. The economic life should be adjusted in the coming years as the *Replacement Reserve Inventory* is updated, to reflect the actual condition of the asphalt pavement as it ages. This evaluation should be conducted every three to five years.

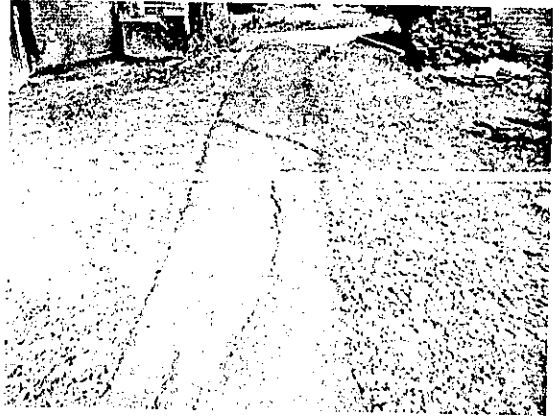


In multiple locations the concrete curb & gutter segments are damaged and/or displaced. These defective segments of curb & gutter will prevent proper grading of the new asphalt pavement and/or allow water to penetrate into the bearing soils beneath the curb & gutter segments and adjacent asphalt pavement. These curb & gutter segments should be replaced before, or in conjunction with,

# REPLACEMENT RESERVE REPORT

the project to replace the asphalt pavement, to establish a proper grade and insure that all water is properly directed to the storm water system.

**Asphalt trails.** The asphalt trails throughout the community were replaced in 2004 and 2005. We observed defects in the trail, including cracking. The correction of defects in the asphalt trails that are potential hazards should be corrected in conjunction with the Asphalt Pavement Maintenance Program discussed below. We have assumed that the maintenance and repair of the trails will allow the trails to be kept in service until 2018.



**Asphalt Pavement Maintenance Program.** If the Phase One and Phase Two asphalt pavement is to be kept in service until 2013 and 2018 respectively, the Association will need to establish an aggressive Asphalt Pavement Maintenance Program. This program should include the components discussed below:

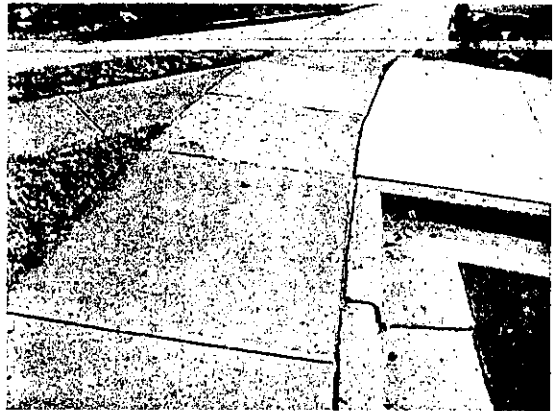
- Crack sealing. All small cracks and defects in the asphalt pavement should be sealed with an appropriate sealing compound. If the cracks or defects are too large to be sealed with a sealing compound, or if the defects have resulted in displacement of the asphalt pavement, indicating damage to the base materials or bearing soils, defective areas of asphalt pavement, base materials, and bearing soils should be cut out and replaced. This repair should be done **annually**.
- Cleaning. Long term exposure to oil and gas breaks down asphalt. Automobiles leaking gas and/or oil should be removed from the community immediately and spill areas cleaned to prevent damage to the asphalt pavement. The maintenance of the asphalt pavement should include the cleaning of asphalt pavement damaged by oil and/or gas and the cutting out and replacement of deteriorated pavement. This should be done **annually** in conjunction with the crack sealing project discussed above.
- Seal coating. Seal coating should be done **every three to five years**. For this maintenance activity to be effective in extending the life the asphalt, the crack sealing and cleaning of the asphalt discussed above, should be done first.
- Striping. After completion of the seal coating, install new striping in parking areas.



# REPLACEMENT RESERVE REPORT

The maintenance and repair activities associated with The Asphalt Pavement Maintenance Program are not appropriately funded from Replacement Reserves. Funding maintenance and repair from Replacement Reserves may have adverse tax consequences for the Association. We recommend the Association establish a line item in the annual community budget for maintenance and repair of the asphalt pavement.

**Concrete components.** We identified approximately 12,590 square feet of concrete pavement (sidewalks and stairs) and 12,160 feet of concrete curb & gutter throughout the community that is the responsibility of the Association. There are extensive defects in these components including components that are severely deteriorated, damaged, and displaced. Some of these defects are trip hazards and we have included the correction of safety related defects in the List of Recommended Repairs and recommend that the defective components be replaced as soon as possible to protect the residents from potential injury and the Association from potential liability for those injuries. Multiple segments of curb & gutter will need to be replaced prior to, or in conjunction with, the asphalt replacement repairs that will be necessary in conjunction with the Asphalt Pavement Maintenance Program, to insure that the repairs to the asphalt pavement can be properly graded to direct water to the storm water system.

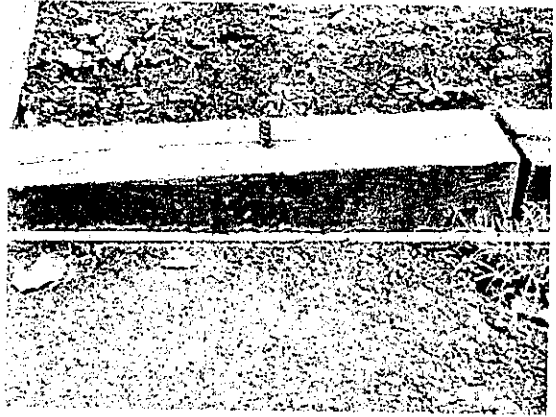


In the Replacement Reserve Inventory, we have assumed that 5 percent of the adjacent concrete components will be replaced in conjunction with the Phase One and Phase 2 Asphalt Pavement Replacement Project scheduled in 2013 and 2018. Subsequent cycles of concrete component replacements are scheduled at 16 year intervals in the *Replacement Reserve Inventory*, to coincide with future asphalt replacement projects. We have accelerated the percentages of concrete components scheduled for replacement in future projects to reflect a normal aging pattern. Interim replacements may be necessary and in the *Replacement Reserve Inventory*, we have assumed that these replacements will not be funded from Replacement Reserves.

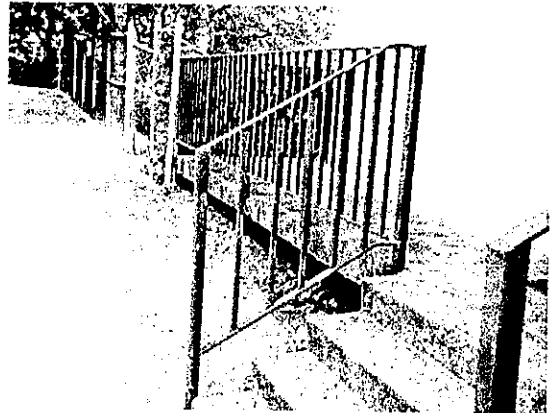


# REPLACEMENT RESERVE REPORT

**Tot lots.** The Association has continued to replace older tot lot equipment with new equipment that is of superior quality. The only "older" equipment that remains in service is the swing at the Conquistador Tot Lot and we have scheduled it for replacement in 2013. The List of Recommended Repairs outlines several defects we observed at the tot lots and recommends a comprehensive evaluation by a playground safety specialist. This evaluation should be conducted as soon as possible. The defects we have identified and those identified by the playground safety specialist should be corrected as soon as possible to protect those using the tot lot from potential injury and the Association from potential liability for those injuries.



**Community Building.** A concrete walkway is cantilevered from the building structure on all 4 sides of the upper level of the Community Building. The absence of a waterproof traffic coating on the exposed structural concrete is allowing water penetration and if not stopped, it will result in damage to the steel reinforcing and will require a expensive restoration project. We have included the installation of a protective waterproofing membrane in the List of Recommended Repairs.



The project should include the restoration of the metal railing and the metal railing attachment points.

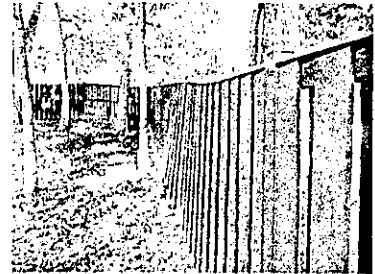
# REPLACEMENT RESERVE REPORT

## D. INVENTORY

**Basis.** The data contained in the *Replacement Reserve Inventory* is based upon information provided by the Association and our field observations and measurements in August 2010. No drawings or documents were provided for our review in conjunction with the preparation of this *Replacement Reserve Study*. We also utilized aerial photographs of the community. We confirmed the scale of the aerial photographs using field measurements.

**Partial and Normal Funding.** Several components have been included in the *Replacement Reserve Inventory* at less than 100 percent of their full replacement value. This is done on components that will never be replaced in their entirety, but which will require periodic replacements over time. Examples of this type of component include:

- **Wood stockade fencing.** Stockade fences have been installed to connect many of the buildings, creating semi enclosed landscaped areas. Additional fencing is installed at the Tobin Tot Lot. We have assumed that 25 percent of the system will be replaced every 5 years with the initial replacement scheduled in 2014.
- **Wood retaining walls.** Multiple small wood retaining walls are installed on property owned by the Association. We have made specific recommendations regarding the replacement of these walls in "Wood retaining walls" below. In the *Replacement Reserve Inventory*, we have assumed that 25 percent of the system will be replaced every 5 years with the initial replacement scheduled in 2014.



The percentage of the components scheduled for replacement should be adjusted in future years based on historical data and experience. All other components are included in the *Replacement Reserve Inventory* at their full estimated replacement cost.

**Estimated Life Left.** The values in the "Estimated Life Left in Years" column in the *Replacement Reserve Inventory* have been established by the Analyst based upon a visual evaluation of the components. The values are not based upon a mathematical formula directly related to "Estimated Economic Life in Years." Some components may experience longer lives while others may experience shorter lives depending on many factors such as environment, quality of the component, maintenance, timeliness of repairs, etc.

**Tennis court.** The Association has removed the tennis court since our last evaluation in May 2006.



# REPLACEMENT RESERVE REPORT

**Exclusions.** The following items have been excluded from the *Replacement Reserve Inventory*. If any of these exclusions have been made in error, we will reinsert the component at the request of the Board of Directors:

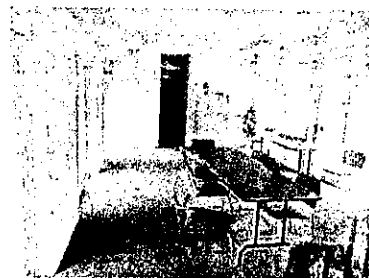
**Long-lived components.** Components that when properly maintained, can be assumed to have a life equal to the property as a whole, are excluded from the *Replacement Reserve Inventory*. Examples of components excluded from the *Replacement Reserve Inventory* by this standard include:

- Community Building electrical service.
- Community Building foundation and structure (monitoring of cracks in the foundations and the correction of defects in cantilevered concrete walk are discussed elsewhere in this Study).



**Value.** For ease of administration of the Replacement Reserves and to reflect accurately how Replacement Reserves are administered, components with a dollar value less than \$2,000.00 have been excluded from the *Replacement Reserve Inventory*. Examples of components excluded from the *Replacement Reserve Inventory* by this standard include:

- Community Building furnishings and fixtures
- Community Building plumbing fixtures and partitions.
- Community Building interior and exterior light fixtures.
- Community Building HVAC equipment and exhaust fans.
- Community Building exterior louvers.
- Community Building balcony coating.
- General signage throughout the community, notice board, and entrance signage.
- Diving board stand.
- Tot lot mulch/resilient ground cover.
- Trash receptacles and benches.
- Basketball goals.
- Metal railings located at the Pool House and throughout the community and a wood railing at Whipple Court.



**Unit improvements.** We understand that the elements of the project that relate to a single unit are the responsibility of that unit owner. Examples of components excluded from the *Replacement Reserve Inventory* by this standard include:

- Concrete lead walks behind the edge of the Association owned sidewalks, closest to the houses, including all replacements resulting from a differential in elevation between individual and community owned components.



# REPLACEMENT RESERVE REPORT

- Utility connections, including water, sewer, gas, and electrical, that serve a single unit, even when they are on property owned by the Association.
- Building exteriors and site improvements including the decks, concrete steps, fences, stoops, retaining walls and patios.

**Storm water management system.** There is an extensive storm water system installed throughout the community. No drawings detailing the components of the system were available for our review, but the system likely includes inlets, outlets, rip rap filters, subsurface piping, and other structures. For the purpose of the *Replacement Reserve Inventory*, we have excluded this system and assumed that any needed replacements will not be funded from Replacement Reserves.

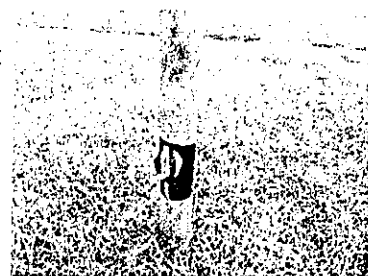


**Domestic water supply mains.** There is an extensive network of domestic water mains installed throughout the community on property owned by the Association. No drawings detailing the components of the system were available for our review. For the purpose of the *Replacement Reserve Inventory*, we have excluded this system and assumed that any needed replacements will not be funded from Replacement Reserves.

**Sanitary sewer mains.** There is an extensive network of sanitary sewer mains installed throughout the community on property owned by the Association. No drawings detailing the components of the system were available for our review. For the purpose of the *Replacement Reserve Inventory*, we have excluded this system and assumed that any needed replacements will not be funded from Replacement Reserves.

**Other Utilities.** Many improvements owned by utility companies are on property owned by the Association. We have assumed that repair, maintenance, and replacements of these components will be done at the expense of the appropriate utility company. Examples of components excluded from the *Replacement Reserve Inventory* by this standard include:

- Primary electric feeds and transformers.
- Telephone and cable TV systems.
- Streetlights.



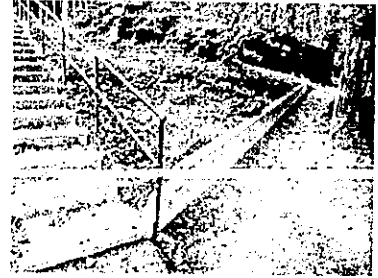
**Maintenance Activities.** Maintenance activities are NOT appropriately funded from Replacement Reserves. Funding maintenance and repair activities from Reserves may have adverse tax consequences for the Association. Examples of components excluded from the *Replacement Reserve Inventory* by this standard include:

- Painting of curbs.
- Painting of retaining wall at swimming pool.
- Painting of metal railings and Community Building exterior and interior.
- Asphalt pavement crack sealing, cleaning, striping, and seal coating.

# REPLACEMENT RESERVE REPORT

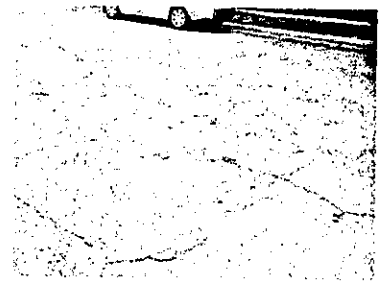
- Landscaping, landscape maintenance, and site grading.
- Cleaning and janitorial services.

**Wood retaining walls.** There are multiple small wood retaining walls installed throughout the community on property owned by the Association and we have included a project to replace 25 percent of these wall every 5 years in the Replacement Reserve Inventory. We recommend the Association make replacements with one of the segmental retaining wall systems on the market today. These systems generally have a cost 15 to 25 percent greater than a wood wall, but can be assumed to have an unlimited economic life. We have submitted an electronic copy (in Adobe pdf format) of a brochure on segmental retaining wall systems along with the electronic copy of this Replacement Reserve Study.



**Government.** Site improvements that serve the community are located on property owned by the local or state government. These improvements are located in the following areas:

- Tobin Road.
- Thompson Road.
- Beverly Drive.
- Breckenridge Court (the short section from Beverly Drive to the first cul-de-sac).



We have assumed that any needed repairs or replacements of components located in these areas are not the responsibility of the Association and costs associated with any work on these components will not be funded from Replacement Reserves.. They component located in these areas include but are not limited to those listed.



- Asphalt pavement.
- Concrete curb & gutter.
- Storm water management system components.
- Utilities, including electrical, sanitary sewers, domestic water mains, and natural gas.

# REPLACEMENT RESERVE REPORT

## E. METHODOLOGY

The site data used in this *Replacement Reserve Study* is based upon information provided by the Association and our visual survey of the property on the dates stated in the Report. We have estimated the normal economic life, remaining economic life, and replacement cost for each component listed in the *Replacement Reserve Inventory*. We have used Government standards, published estimating manuals, our experience with similar properties, and engineering judgment to develop these estimates.

Our visual survey of the property did not ascertain compliance with current building codes, but assumed that all components met building code requirements in force at the time of construction. This *Replacement Reserve Study* has been developed with care by experienced persons, but Richard J. Schuetz, AIA, Architect (and/or its representatives) makes no representations that the Study includes, evaluates, and estimates all appropriate components, or discloses all defects, concealed or visible. No warranty or guarantee is expressed or implied.

Actual experience in replacing components may differ significantly from the estimates in the Study because of conditions beyond our control. These differences may be caused by maintenance practices, inflation, variations in pricing and market conditions, future technological developments, regulatory actions, acts of God, and luck. Some components may function normally during our survey and then fail without notice.

The intent of this RSTUDY+ *Replacement Reserve Study* is to provide the Association with an inventory of the common elements of the community, a general view of the condition of these components, and an effective financial planning tool for the replacement of the community facilities and infrastructure components with limited life, for which, the Association is responsible. To be effective, this Study should be reviewed by the STRATHMEADE SQUARE Board of Directors, those responsible for the management of the components included in the *Inventory*, and the accounting professionals employed by the Association. We are prepared to provide a revision to *Replacement Reserve Inventory* and the *Replacement Reserve Analysis* upon the request of the Board of Directors.

Respectfully Submitted,  
RICHARD J. SCHUETZ, AIA  
ARCHITECT

*Wm Bruce Bennett*

Wm. Bruce Bennett  
Senior Reserve Analyst

**REPLACEMENT RESERVE ANALYSIS****Strathmeade Square****October 2010****GENERAL INFORMATION:**

2011	Study Year
\$237,358	Replacement Reserves reported to be on deposit at start of Study Year
\$1,953,337	Estimated value of all Components included in the Replacement Reserve Inventory

The information shown in this Summary does not account for interest earned on Replacement Reserves on deposit, nor does it include adjustments for inflation. For more information see the attached Appendix.

**REPORTED CURRENT FUNDING DATA:**

<b>\$62,000</b>	<b>REPORTED CURRENT ANNUAL CONTRIBUTION TO REPLACEMENT RESERVES</b>
\$16.72	Per unit current monthly contribution to Replacement Reserves

**CASH FLOW METHOD CALCULATIONS:**

<b>\$64,250</b>	<b>MINIMUM RECOMMENDED ANNUAL CONTRIBUTION TO REPLACEMENT RESERVES</b>
\$17.33	Per unit minimum recommended monthly contribution to Replacement Reserves
\$97,667	Recommended minimum Replacement Reserve Funding Threshold (5.0 percent)
2034	First year Reserves fall to minimum recommended level (Design Year)

**COMPONENT METHOD CALCULATIONS:**

<b>\$129,682</b>	<b>MINIMUM RECOMMENDED ANNUAL CONTRIBUTION TO RESERVES (IN STUDY YEAR)</b>
\$34.97	Per unit minimum recommended monthly contribution to Replacement Reserves
\$896,103	Current Funding Objective
26.49%	Funding Percentage
\$658,745	One time deposit required to fully fund Replacement Reserves
\$61,111	Annual Contribution to Replacement Reserves if Reserves were fully funded.

**PROJECT INFORMATION:**

<b>PROPERTY MANAGED BY:</b>	<b>MAJOR COMPONENTS IN ANALYSIS:</b>	<b>TYPE OF PROPERTY:</b>
SEQUOIA MANAGEMENT CO.	Asphalt pavement, concrete sidewalks, curb & gutter, asphalt trails, Pool House, MP court, swimming pools, tot lots, fencing, etc.	Townhouse
Mr. Sharon Robinson		<b># OF UNITS:</b>
13998 Parkeast Circle		309
Chantilly, Virginia 22151	<b>PROPERTY LOCATION:</b>	<b>YEAR BUILT:</b>
(703) 803-9641	Annandale, Virginia	1970

**NOTES:**

1. This Replacement Reserve Analysis complies with the National Reserve Study Standards, adopted by the Community Associations Institute (CAI) in 1998.
2. This Analysis applies to the 2011 accounting year, which runs from February 1, 2011 to January 31, 2012.
2. This Analysis does NOT include funding for the repairs and replacements outlined in the List of Recommended Repairs.
3. The Association reports Reserves totaling \$237,358 will be on deposit as of January 31, 2011. The Association reports they are currently contributing \$5,167 per month to Replacement Reserves.

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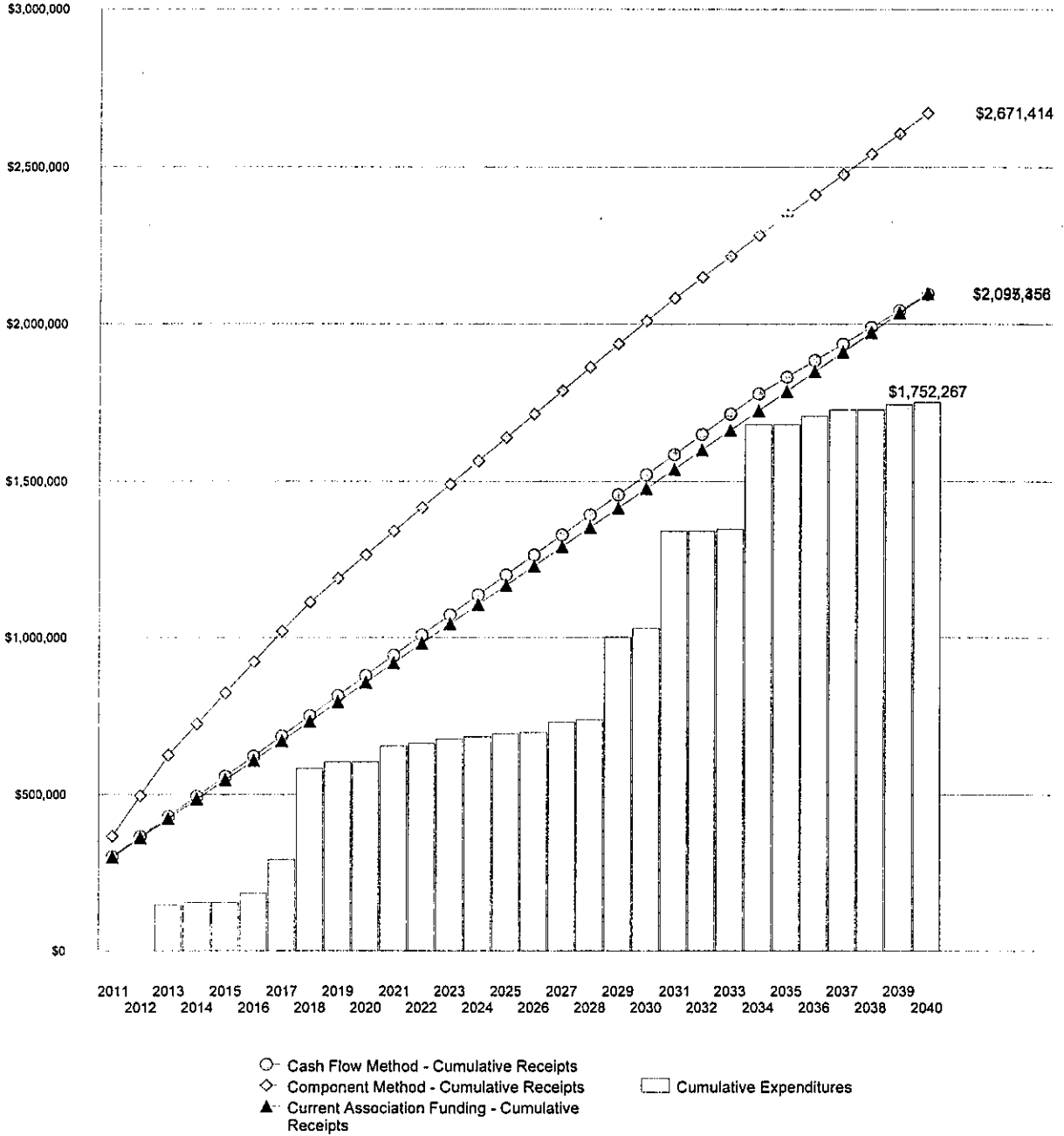
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# REPLACEMENT RESERVE ANALYSIS

Strathmeade Square

October 2010

### Funding Methods Comparison Graph - Cumulative Receipts and Expenditures



**Richard J. Schuetz, AIA, Architect**

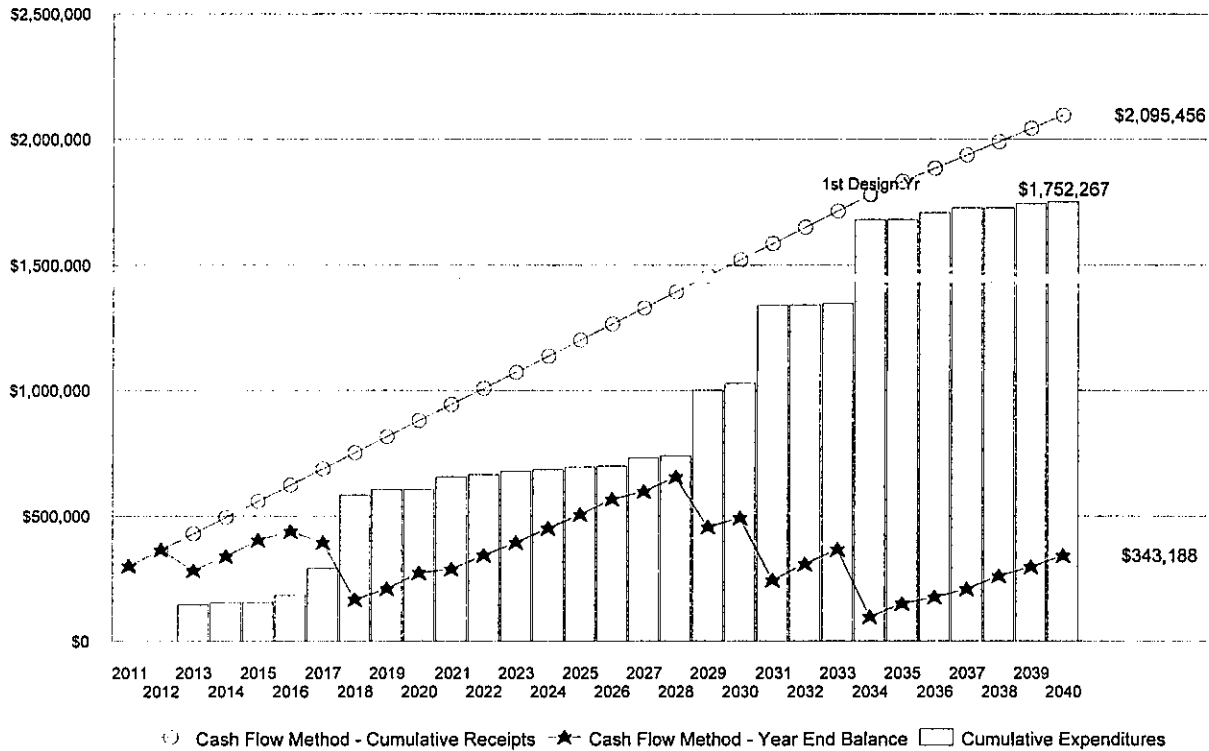
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# REPLACEMENT RESERVE ANALYSIS

Strathmeade Square

October 2010

## Cash Flow Method - Cumulative Receipts and Expenditures Graph



## Cash Flow Method Data - Years 1 through 30

Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	TEN YEAR SUMMARIES
Starting balance	\$237,358										
Annual deposit	\$84,250	\$84,250	\$84,250	\$84,250	\$84,250	\$84,250	\$84,250	\$84,250	\$84,250	\$84,250	
Expenditures	\$0	\$0	\$147,221	\$7,330	\$0	\$28,938	\$109,026	\$291,365	\$21,330	\$0	Expenditures: \$605,209
Year end balance	\$301,609	\$365,859	\$282,869	\$339,809	\$404,059	\$439,372	\$394,597	\$107,482	\$210,402	\$274,853	Receipts: \$879,862
Minimum rec. funding lvl.	\$97,667	\$97,667	\$97,667	\$97,667	\$97,667	\$97,667	\$97,667	\$97,667	\$97,667	\$97,667	
Cumulative expenditures	\$0	\$0	\$147,221	\$154,551	\$154,551	\$183,488	\$292,514	\$583,879	\$605,209	\$605,209	
Cumulative receipts	\$301,609	\$365,859	\$430,109	\$494,360	\$558,610	\$622,860	\$687,111	\$751,361	\$815,612	\$879,862	
Year	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	TEN YEAR SUMMARIES
Annual deposit	\$84,250	\$84,250	\$84,250	\$84,250	\$84,250	\$84,250	\$84,250	\$84,250	\$84,250	\$84,250	Expenditures: \$424,188
Expenditures	\$50,050	\$9,000	\$13,388	\$7,330	\$9,630	\$3,675	\$33,246	\$7,550	\$282,320	\$28,000	Receipts: \$644,525
Year end balance	\$288,853	\$344,104	\$394,966	\$451,887	\$506,507	\$567,082	\$598,087	\$654,787	\$456,717	\$492,968	
Minimum rec. funding lvl.	\$97,667	\$97,667	\$97,667	\$97,667	\$97,667	\$97,667	\$97,667	\$97,667	\$97,667	\$97,667	
Cumulative expenditures	\$655,259	\$694,259	\$677,647	\$684,977	\$694,607	\$698,282	\$731,528	\$739,078	\$1,001,398	\$1,029,397	
Cumulative receipts	\$944,112	\$1,008,363	\$1,072,613	\$1,136,863	\$1,201,114	\$1,265,364	\$1,329,614	\$1,393,865	\$1,458,115	\$1,522,365	
Year	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	TEN YEAR SUMMARIES
Annual deposit	\$84,250	\$84,250	\$84,250	\$84,250	\$52,682	\$52,682	\$52,682	\$52,682	\$52,682	\$52,682	Expenditures: \$722,870
Expenditures	\$312,190	\$0	\$8,200	\$333,913	\$0	\$26,750	\$19,938	\$0	\$16,330	\$7,550	Receipts: \$575,122
Year end balance	\$245,029	\$309,279	\$387,329	\$97,667	\$150,348	\$176,280	\$209,024	\$281,705	\$298,057	\$343,188	
Minimum rec. funding lvl.	\$97,667	\$97,667	\$97,667	\$97,667	\$97,667	\$97,667	\$97,667	\$97,667	\$97,667	\$97,667	
Cumulative expenditures	\$1,341,587	\$1,341,587	\$1,347,787	\$1,681,700	\$1,681,700	\$1,708,450	\$1,728,387	\$1,728,387	\$1,744,717	\$1,752,287	
Cumulative receipts	\$1,586,616	\$1,650,866	\$1,715,115	\$1,779,367	\$1,832,048	\$1,884,730	\$1,937,411	\$1,990,093	\$2,042,774	\$2,095,456	

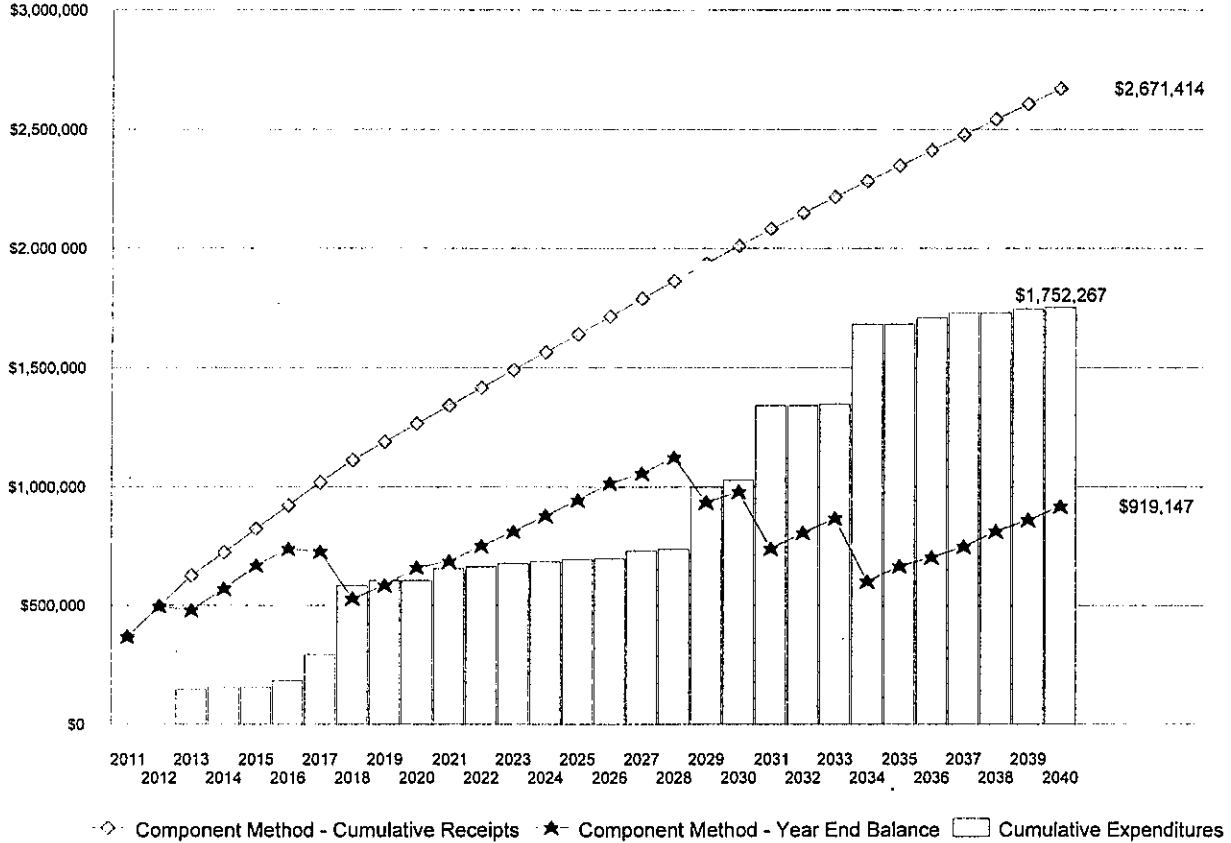
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# REPLACEMENT RESERVE ANALYSIS

Strathmeade Square

October 2010

## Component Method - Cumulative Receipts and Expenditures Graph



## Component Method Data - Years 1 through 30

Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	TEN YEAR SUMMARIES
Starting balance	\$237,358										
Annual deposit	\$129,882	\$129,882	\$129,882	\$99,046	\$98,777	\$98,777	\$97,394	\$92,823	\$76,847	\$75,982	
Expenditures	\$0	\$0	\$147,221	\$7,330	\$0	\$28,938	\$109,026	\$291,365	\$21,330	\$0	Expenditures: \$805,209
Year end balance	\$367,040	\$496,722	\$479,183	\$570,899	\$669,675	\$739,515	\$727,882	\$529,141	\$584,458	\$660,440	Receipts: \$1,265,649
Cumulative Expenditures	\$0	\$0	\$147,221	\$154,551	\$154,551	\$183,488	\$292,514	\$583,879	\$605,209	\$605,209	
Cumulative Receipts	\$367,040	\$496,722	\$626,403	\$725,449	\$824,226	\$923,003	\$1,020,397	\$1,113,020	\$1,189,667	\$1,265,649	
Year	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	
Annual deposit	\$75,982	\$74,736	\$74,515	\$74,515	\$74,515	\$74,477	\$74,444	\$74,127	\$74,127	\$72,779	Expenditures: \$424,188
Expenditures	\$50,050	\$9,000	\$13,388	\$7,330	\$9,630	\$3,675	\$33,246	\$7,550	\$282,320	\$28,000	Receipts: \$746,238
Year end balance	\$686,371	\$752,107	\$813,234	\$880,419	\$945,304	\$1,016,107	\$1,057,304	\$1,123,881	\$935,688	\$980,468	
Cumulative Expenditures	\$655,259	\$664,259	\$677,647	\$684,977	\$694,607	\$698,282	\$731,528	\$739,078	\$1,001,398	\$1,029,397	
Cumulative Receipts	\$1,341,630	\$1,416,366	\$1,490,881	\$1,565,396	\$1,639,911	\$1,714,388	\$1,788,832	\$1,862,959	\$1,937,086	\$2,009,865	
Year	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	Expenditures: \$722,870
Annual deposit	\$72,754	\$68,932	\$68,932	\$68,932	\$64,667	\$64,667	\$64,667	\$84,667	\$64,667	\$64,667	Receipts: \$863,580
Expenditures	\$312,190	\$0	\$8,200	\$333,913	\$0	\$26,750	\$19,938	\$0	\$16,330	\$7,550	
Year end balance	\$741,032	\$807,964	\$888,896	\$801,715	\$666,381	\$704,298	\$749,027	\$813,684	\$862,030	\$919,147	
Cumulative Expenditures	\$1,341,587	\$1,341,587	\$1,347,787	\$1,681,700	\$1,681,700	\$1,708,450	\$1,728,387	\$1,728,387	\$1,744,717	\$1,752,267	
Cumulative Receipts	\$2,082,619	\$2,149,551	\$2,216,483	\$2,283,415	\$2,348,081	\$2,412,748	\$2,477,415	\$2,542,081	\$2,606,748	\$2,671,414	

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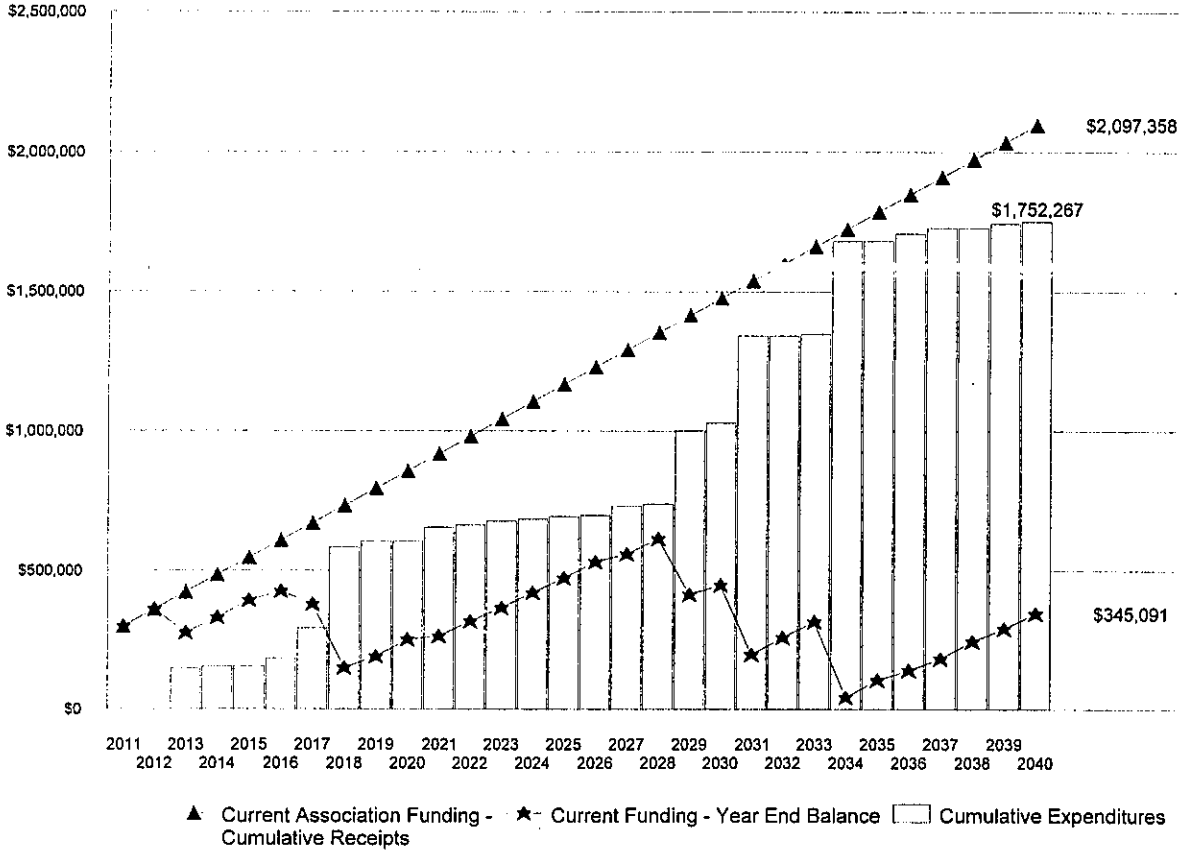


# REPLACEMENT RESERVE ANALYSIS

Strathmeade Square

October 2010

## Current Association Funding - Cumulative Receipts and Expenditures Graph



## Current Funding Data - Years 1 through 30

Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	TEN YEAR SUMMARIES
Starting balance	\$237,358										
Annual deposit	\$82,000	\$62,000	\$62,000	\$62,000	\$62,000	\$62,000	\$62,000	\$62,000	\$62,000	\$62,000	Expenditures: \$605,209 Receipts: \$857,358
Expenditures	\$0	\$0	\$147,221	\$7,330	\$0	\$28,938	\$109,028	\$291,365	\$21,330	\$0	
Year end balance	\$299,358	\$361,358	\$278,138	\$330,808	\$392,808	\$425,870	\$378,844	\$149,479	\$190,149	\$252,149	
Cumulative Expenditures	\$0	\$0	\$147,221	\$154,551	\$154,551	\$183,488	\$292,514	\$583,879	\$805,209	\$805,209	
Cumulative Receipts	\$299,358	\$361,358	\$423,358	\$485,358	\$547,358	\$609,358	\$671,358	\$733,358	\$795,358	\$857,358	
Year	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	
Annual deposit	\$62,000	\$62,000	\$62,000	\$62,000	\$62,000	\$62,000	\$62,000	\$62,000	\$62,000	\$62,000	Expenditures: \$424,188 Receipts: \$620,000
Expenditures	\$50,050	\$9,000	\$13,388	\$7,330	\$9,630	\$3,675	\$33,246	\$7,550	\$262,320	\$28,000	
Year end balance	\$264,099	\$317,099	\$365,712	\$420,382	\$472,752	\$531,077	\$559,831	\$614,281	\$413,061	\$447,981	
Cumulative expenditures	\$655,259	\$664,259	\$677,647	\$684,977	\$694,607	\$698,282	\$731,528	\$739,078	\$1,001,398	\$1,029,397	
Cumulative receipts	\$919,358	\$981,358	\$1,043,358	\$1,105,358	\$1,167,358	\$1,229,358	\$1,291,358	\$1,353,358	\$1,415,358	\$1,477,358	
Year	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	
Annual deposit	\$62,000	\$62,000	\$62,000	\$62,000	\$62,000	\$62,000	\$62,000	\$62,000	\$62,000	\$62,000	Expenditures: \$722,870 Receipts: \$620,000
Expenditures	\$312,190	\$0	\$6,200	\$333,913	\$0	\$26,750	\$19,938	\$0	\$16,330	\$7,550	
Year end balance	\$197,771	\$259,771	\$315,571	\$43,658	\$105,658	\$140,908	\$182,971	\$244,971	\$290,641	\$345,091	
Cumulative Expenditures	\$1,341,587	\$1,341,587	\$1,347,787	\$1,681,700	\$1,681,700	\$1,708,450	\$1,728,387	\$1,728,387	\$1,744,717	\$1,752,267	
Cumulative Receipts	\$1,539,358	\$1,601,358	\$1,663,358	\$1,725,358	\$1,787,358	\$1,849,358	\$1,911,358	\$1,973,358	\$2,035,358	\$2,097,358	

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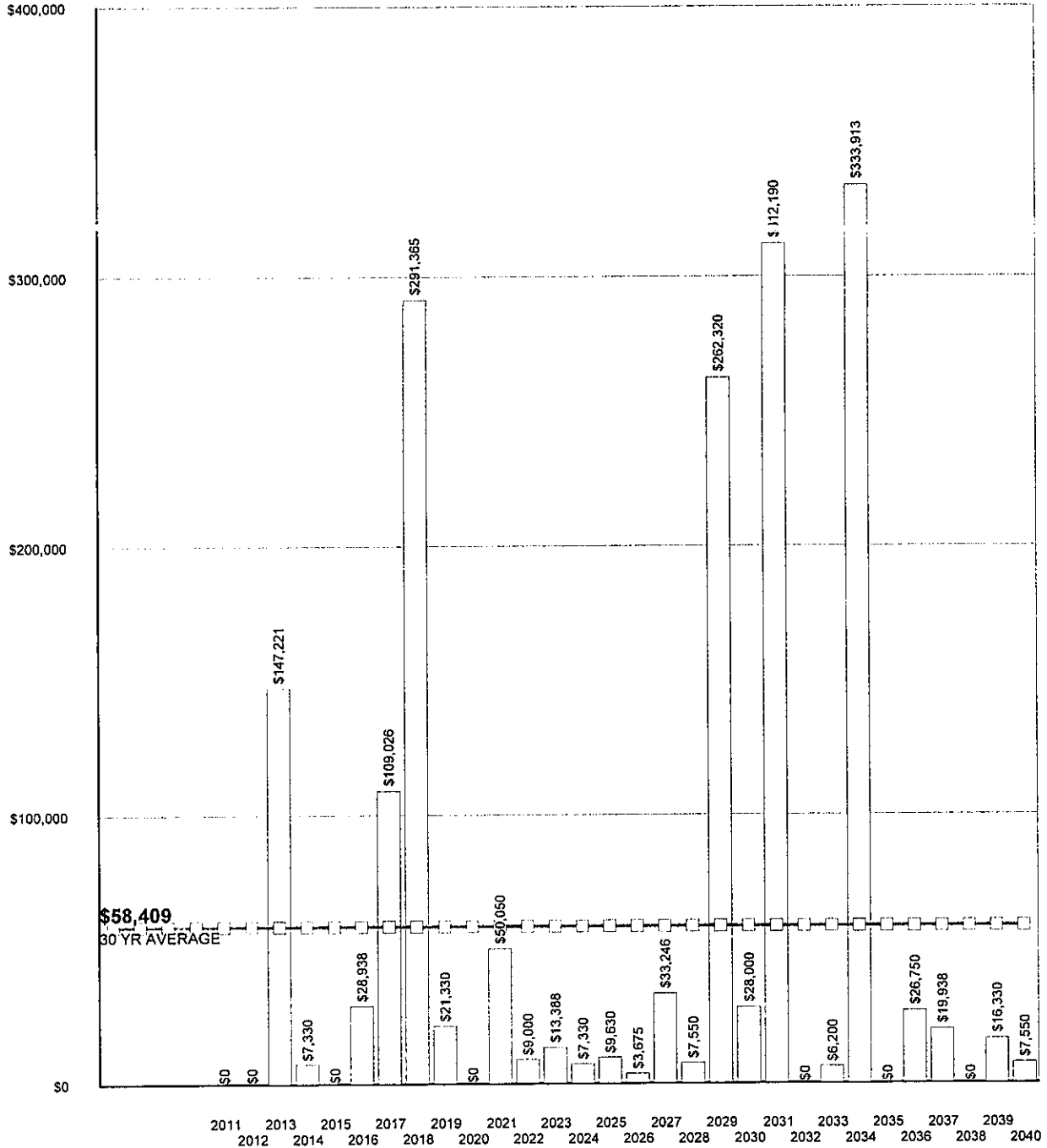
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# REPLACEMENT RESERVE ANALYSIS

Strathmeade Square

October 2010

Graph of Annual Replacement Expenditures



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# REPLACEMENT RESERVE INVENTORY

Strathmeade Square

October 2010

## INVENTORY OF COMPONENTS - NORMAL REPLACEMENT

ITEM #		UNIT	NUMBER OF UNITS	REPLACEMENT COST (\$)	NORMAL ECONOMIC LIFE (YRS)	REMAINING ECONOMIC LIFE (YRS)	TOTAL REPLACEMENT COST (\$)
PHASE ONE CONCRETE COMPONENTS & ASPHALT PAVEMENT							
1	P1 - Asphalt pavement - 30%	sf	62,292	\$1.52	16	2	\$94,684
2	P1 - Concrete & brick sidewalks - 3%	sf	2,178	\$8.25	80	2	\$17,966
3	P1 - Concrete & brick sidewalks - 4.5%	sf	3,267	\$8.25	80	18	\$26,949
4	P1 - Concrete & brick sidewalks - 6%	sf	4,355	\$8.25	80	34	\$35,932
5	P1 - Concrete & brick sidewalks - 7.5%	sf	5,444	\$8.25	80	50	\$44,915
6	P1 - Concrete & brick sidewalks - 9%	sf	6,533	\$8.25	80	66	\$53,898
7	P1 - Concrete curb & gutter - 3%	ft	365	\$33.50	80	2	\$12,221
8	P1 - Concrete curb & gutter - 4.5%	ft	547	\$33.50	80	18	\$18,331
9	P1 - Concrete curb & gutter - 6%	ft	730	\$33.50	80	34	\$24,442
10	P1 - Concrete curb & gutter - 7.5%	ft	912	\$33.50	80	50	\$30,552
11	P1 - Concrete curb & gutter - 9%	ft	1,094	\$33.50	80	66	\$36,662

### COMMENTS:

Asphalt pavement. The previous replacement project was done in 1999 (30%), 2001 (40%), and 2003 (30%). We have assumed that the next asphalt pavement replacement project will be done in two phases to achieve economies of scale. The cost shown above assumes that the pavement will be milled and that base repairs will be needed at less than 15 percent of the total area.

P1 - Asphalt pavement. We have assumed that 30 percent of the asphalt pavement will require replacement in 2013, based upon our visual evaluation.

P1 Concrete components. We have assumed that the concrete sidewalk and curb & gutter replacements will be done in conjunction with the asphalt pavement replacement project in 2013 and every 16 years thereafter. We have included increasing percentages of components for replacement to reflect the normal aging of the materials. Interim replacements will be needed and we have assumed that they will not be funded from Replacement Reserves.

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**REPLACEMENT RESERVE INVENTORY**

Strathmeade Square

October 2010

**INVENTORY OF COMPONENTS - NORMAL REPLACEMENT**

ITEM #		UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST (\$)	NORMAL ECONOMIC LIFE (YRS)	REMAINING ECONOMIC LIFE (YRS)	TOTAL REPLACEMENT COST (\$)
<b>PHASE TWO CONCRETE COMPONENTS &amp; ASPHALT PAVEMENT</b>							
12	P2 - Asphalt pavement - 70%	sf	145,348	\$1.52	16	7	\$220,929
13	P2 - Concrete & brick sidewalks - 7%	sf	5,081	\$8.25	80	7	\$41,921
14	P2 - Concrete & brick sidewalks - 10.5%	sf	7,622	\$8.25	80	23	\$62,881
15	P2 - Concrete & brick sidewalks - 14%	sf	10,163	\$8.25	80	20	\$83,911
16	P2 - Concrete & brick sidewalks - 17.5%	sf	12,703	\$8.25	80	55	\$104,802
17	P2 - Concrete & brick sidewalks - 21%	sf	15,244	\$8.25	80	71	\$125,762
18	P2 - Concrete curb & gutter - 7%	ft	851	\$33.50	80	7	\$28,515
19	P2 - Concrete curb & gutter - 10.5%	ft	1,277	\$33.50	80	23	\$42,773
20	P2 - Concrete curb & gutter - 14%	ft	1,702	\$33.50	80	39	\$57,030
21	P2 - Concrete curb & gutter - 17.5%	ft	2,128	\$33.50	80	55	\$71,288
22	P2 - Concrete curb & gutter - 21%	ft	2,554	\$33.50	80	71	\$85,546

P2 = Phase Two

**COMMENTS:**

Asphalt pavement. The previous replacement project was done in 1999 (30%), 2001 (40%), and 2003 (30%). We have assumed that the next asphalt pavement replacement project will be done in two phases to achieve economies of scale.

The cost shown above assumes that the pavement will be milled and that base repairs will be needed at less than 15 percent of the total area.

P2 - Asphalt pavement. We have assumed that 70 percent of the asphalt pavement will require replacement in 2018, based upon our visual evaluation.

P2 Concrete components. We have assumed that the concrete sidewalk and curb & gutter replacements will be done in conjunction with the asphalt pavement replacement project in 2018 and every 16 years thereafter. We have included increasing percentages of components for replacement to reflect the normal aging of the materials. Interim replacements will be needed and we have assumed that they will not be funded from Replacement Reserves.

**Richard J. Schuetz, AIA, Architect**

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1049.06

# REPLACEMENT RESERVE INVENTORY

Strathmeade Square

October 2010

## INVENTORY OF COMPONENTS - NORMAL REPLACEMENT

ITEM #		UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST (\$)	NORMAL ECONOMIC LIFE (YRS)	REMAINING ECONOMIC LIFE (YRS)	TOTAL REPLACEMENT COST (\$)
	GENERAL SITE IMPROVEMENTS						
23	Asphalt trails	sf	24,228	\$4.50	12	6	\$109,026
24	Wood stockade fencing (25%)	lf	125	\$22.00	5	3	\$2,750
25	Wood retaining walls (25%)	lf	65	\$42.00	5	3	\$2,730
26	Webley retaining wall & swale	ls	1	\$18,000.00	40	31	\$18,000

### COMMENTS:

Asphalt trails. Needed maintenance and repair of the asphalt trails is outlined in the List of Recommended Repairs.

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**REPLACEMENT RESERVE INVENTORY**

Strathmeade Square

October 2010

**INVENTORY OF COMPONENTS - NORMAL REPLACEMENT**

ITEM #		UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST (\$)	NORMAL ECONOMIC LIFE (YRS)	REMAINING ECONOMIC LIFE (YRS)	TOTAL REPLACEMENT COST (\$)
<b>COMMUNITY BUILDING &amp; SWIMMING POOLS</b>							
27	CB - exterior windows and doors	sf	217	\$38.00	30	16	\$8,246
28	CB - asphalt shingles	sf	1,500	\$2.45	20	15	\$3,675
29	Main pool - structure	sf	2,375	\$65.00	60	20	\$154,375
30	Main pool - white coat	sf	2,375	\$5.25	7	5	\$12,469
31	Main pool - coping & waterline tile	ft	231	\$52.00	21	19	\$12,012
32	Main pool - motor, pump, strainer	ea	1	\$4,800.00	12	2	\$4,800
33	Wading pool - structure	sf	175	\$65.00	60	20	\$11,375
34	Wading pool - white coat	sf	175	\$5.25	7	5	\$919
35	Wading pool - coping & waterline tile	ft	50	\$52.00	21	19	\$2,600
36	Wading pool - motor, pump, strainer	ea	1	\$1,200.00	12	10	\$1,200
37	Pool - guard stands, ladders, rails, etc.	ls	1	\$5,000.00	25	8	\$5,000
38	Pool - diving board	ea	1	\$1,850.00	5	3	\$1,850
39	Pool - equipment - valves, filters, etc.	ls	1	\$8,000.00	20	5	\$8,000
40	Pool - concrete deck	sf	8,800	\$10.75	35	20	\$94,600
41	Pool - retaining wall	sf	960	\$54.00	35	20	\$51,840
42	Pool - post lights	ea	6	\$1,800.00	35	2	\$10,800
43	Pool - perimeter metal fence	ft	410	\$18.00	20	10	\$7,380
44	Pool - wading pool fence	ft	130	\$14.00	20	10	\$1,820

**COMMENTS:**

Pool furniture. The Board of Directors reported in 2003 that it was their policy to fund the replacement and re-straping of the pool furniture from the operations budget of the community, not Replacement Reserves.

CB = Community Building

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**REPLACEMENT RESERVE INVENTORY**

Strathmeade Square

October 2010

**INVENTORY OF COMPONENTS - NORMAL REPLACEMENT**

ITEM #		UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST (\$)	NORMAL ECONOMIC LIFE (YRS)	REMAINING ECONOMIC LIFE (YRS)	TOTAL REPLACEMENT COST (\$)
<b>OTHER RECREATION FACILITIES</b>							
45	Tobin tot lot equipment - slide/MP	ls	1	\$25,000.00	20	16	\$25,000
46	Tobin tot lot equipment - spring	ls	2	\$1,500.00	20	18	\$3,000
47	Tobin tot lot - wood border	ft	200	\$12.50	12	5	\$2,500
48	Whipple tot lot equipment - swing	ls	1	\$5,000.00	20	10	\$5,000
49	Whipple tot lot equipment - gym	ls	1	\$3,700.00	20	10	\$3,700
50	Whipple tot lot - wood border	ft	154	\$12.50	12	5	\$1,925
51	DeCourcey tot lot equipment - swing	ls	1	\$5,000.00	20	10	\$5,000
52	DeCourcey tot lot equipment - slide	ls	1	\$7,200.00	20	10	\$7,200
53	DeCourcey tot lot equipment - spring	ls	2	\$1,500.00	20	18	\$3,000
54	DeCourcey tot lot - wood border	ft	250	\$12.50	12	5	\$3,125
55	Conquistador tot lot equipment - swing	ea	1	\$5,000.00	20	2	\$5,000
56	Conquistador Tot Lot - wood border	ea	140	\$12.50	12	2	\$1,750
57	DeCourcey gazebo	ea	1	\$9,000.00	20	8	\$9,000
58	Contessa gazebo	ea	1	\$9,000.00	20	11	\$9,000
59	Multipurpose court surface	sf	5,000	\$3.75	15	10	\$18,750
60	Multipurpose court fencing	sf	140	\$22.00	20	14	\$3,080

**COMMENTS:**

Tennis court. Since our last evaluation, the Association has removed the tennis court that was installed in the open space south of Breckenridge Court.

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**REPLACEMENT RESERVE INVENTORY**

Strathmeade Square

October 2010

**SCHEDULE OF REPLACEMENTS - YEARS ONE TO FIFTEEN**

2011	2012	2013
No Scheduled Replacements	No Scheduled Replacements	P1 - Asphalt pavement - 30% \$94,684 P1 - Concrete & brick sidewalks \$17,966 P1 - Concrete curb & gutter - 3% \$12,221 Pool - post lights \$10,800 Conquistador tot lot equipment - \$5,000 Main pool - motor, pump, straine \$4,800 Conquistador Tot Lot - wood bor \$1,750 Total Scheduled Replacements \$147,221
2014 Wood stockade fencing (25%) \$2,750 Wood retaining walls (25%) \$2,730 Pool - diving board \$1,850 Total Scheduled Replacements \$7,330	No Scheduled Replacements	2016 Main pool - white coat \$12,469 Pool - equipment - valves, filters, \$8,000 DeCourcey tot lot - wood border \$3,125 Tobin tot lot - wood border \$2,500 Whipple tot lot - wood border \$1,925 Wading pool - white coat \$919 Total Scheduled Replacements \$28,938
2017 Asphalt trails \$109,026 Total Scheduled Replacements \$109,026	2018 P2 - Asphalt pavement - 70% \$220,929 P2 - Concrete & brick sidewalks \$41,921 P2 - Concrete curb & gutter - 7% \$28,515 Total Scheduled Replacements \$291,365	2019 DeCourcey gazebo \$9,000 Pool - guard stands, ladders, rail \$5,000 Wood stockade fencing (25%) \$2,750 Wood retaining walls (25%) \$2,730 Pool - diving board \$1,850 Total Scheduled Replacements \$21,330
No Scheduled Replacements	2021 Multipurpose court surface \$18,750 Pool - perimeter metal fence \$7,380 DeCourcey tot lot equipment - sli \$7,200 DeCourcey tot lot equipment - sv \$5,000 Whipple tot lot equipment - swing \$5,000 Whipple tot lot equipment - gym \$3,700 Pool - wading pool fence \$1,820 Wading pool - motor, pump, stra: \$1,200 Total Scheduled Replacements \$50,050	2022 Contessa gazebo \$9,000 Total Scheduled Replacements \$9,000
2023 Main pool - white coat \$12,469 Wading pool - white coat \$919 Total Scheduled Replacements \$13,388	2024 Wood stockade fencing (25%) \$2,750 Wood retaining walls (25%) \$2,730 Pool - diving board \$1,850 Total Scheduled Replacements \$7,330	2025 Main pool - motor, pump, straine \$4,800 Multipurpose court fencing \$3,080 Conquistador Tot Lot - wood bor \$1,750 Total Scheduled Replacements \$9,630

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**REPLACEMENT RESERVE INVENTORY**

Strathmeade Square

October 2010

**SCHEDULE OF REPLACEMENTS - YEARS SIXTEEN TO THIRTY**

<p style="text-align: center;"><b>2026</b></p> <p>CB - asphalt shingles \$3,675</p>           <p>Total Scheduled Replacements \$3,675</p>	<p style="text-align: center;"><b>2027</b></p> <p>Tobin tot lot equipment - slide/MI \$25,000 CB - exterior windows and doors \$8,246</p>           <p>Total Scheduled Replacements \$33,246</p>	<p style="text-align: center;"><b>2028</b></p> <p>DeCourcey tot lot - wood border \$3,125 Tobin tot lot - wood border \$2,500 Whipple tot lot - wood border \$1,925</p>           <p>Total Scheduled Replacements \$7,550</p>
<p style="text-align: center;"><b>2029</b></p> <p>Asphalt trails \$109,026 P1 - Asphalt pavement - 30% \$94,684 P1 - Concrete &amp; brick sidewalks \$26,949 P1 - Concrete curb &amp; gutter - 4.5 \$18,331 DeCourcey tot lot equipment - sf \$3,000 Tobin tot lot equipment - spring \$3,000 Wood stockade fencing (25%) \$2,750 Wood retaining walls (25%) \$2,730 Other Replacements \$1,850 Total Scheduled Replacements \$262,320</p>	<p style="text-align: center;"><b>2030</b></p> <p>Main pool - white coat \$12,469 Main pool - coping &amp; waterline til \$12,012 Wading pool - coping &amp; waterline \$2,600 Wading pool - white coat \$919</p>           <p>Total Scheduled Replacements \$28,000</p>	<p style="text-align: center;"><b>2031</b></p> <p>Main pool - structure \$154,375 Pool - concrete deck \$94,600 Pool - retaining wall \$51,840 Wading pool - structure \$11,375</p>           <p>Total Scheduled Replacements \$312,190</p>
<p style="text-align: center;"><b>2032</b></p>           <p>No Scheduled Replacements</p>	<p style="text-align: center;"><b>2033</b></p> <p>Conquistador tot lot equipment - \$5,000 Wading pool - motor, pump, strai \$1,200</p>           <p>Total Scheduled Replacements \$6,200</p>	<p style="text-align: center;"><b>2034</b></p> <p>P2 - Asphalt pavement - 70% \$220,929 P2 - Concrete &amp; brick sidewalks \$62,881 P2 - Concrete curb &amp; gutter - 10. \$42,773 Wood stockade fencing (25%) \$2,750 Wood retaining walls (25%) \$2,730 Pool - diving board \$1,850</p>           <p>Total Scheduled Replacements \$333,913</p>
<p style="text-align: center;"><b>2035</b></p>           <p>No Scheduled Replacements</p>	<p style="text-align: center;"><b>2036</b></p> <p>Multipurpose court surface \$18,750 Pool - equipment - valves, filters, \$8,000</p>           <p>Total Scheduled Replacements \$26,750</p>	<p style="text-align: center;"><b>2037</b></p> <p>Main pool - white coat \$12,469 Main pool - motor, pump, straine \$4,800 Conquistador Tot Lot - wood bor \$1,750 Wading pool - white coat \$919</p>           <p>Total Scheduled Replacements \$19,938</p>
<p style="text-align: center;"><b>2038</b></p>           <p>No Scheduled Replacements</p>	<p style="text-align: center;"><b>2039</b></p> <p>DeCourcey gazebo \$9,000 Wood stockade fencing (25%) \$2,750 Wood retaining walls (25%) \$2,730 Pool - diving board \$1,850</p>           <p>Total Scheduled Replacements \$16,330</p>	<p style="text-align: center;"><b>2040</b></p> <p>DeCourcey tot lot - wood border \$3,125 Tobin tot lot - wood border \$2,500 Whipple tot lot - wood border \$1,925</p>           <p>Total Scheduled Replacements \$7,550</p>

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# LIST OF RECOMMENDED REPAIRS

## STRATHMEADE SQUARE

Annandale, Virginia

October 8, 2010

### REPAIR CATEGORY AND REPAIR DESCRIPTION

### PHOTOGRAPHS ESTIMATED REPAIR COST

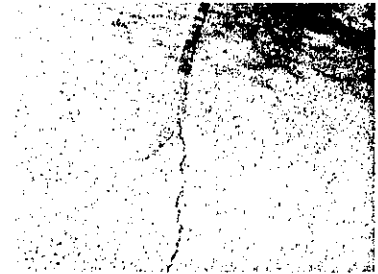
#### 1. Asphalt maintenance program

\$30,000 - 40,000

- Asphalt pavement maintenance. Establish a comprehensive maintenance program for the asphalt roads and parking areas. Funding for the initial year is included in the Estimated Repair Cost shown above. The maintenance program in the initial year of the Study should include the tasks outlined below. See Supplemental Photographs #33, 36, 56, 66, 74, 75, 89, 103.



- Clean all asphalt pavement. Clean areas that have been damaged by oil/gasoline and if cleaning is ineffective, the damaged areas should be cut out and replaced.
- Crack seal all cracks and small defects in the asphalt pavement. Cracks and defects that are too large for effective crack sealing should be cut out and replaced.
- After completion of the maintenance and repairs discussed above, the asphalt pavement should be seal coated and the parking places striped.
- Areas of asphalt pavement that impound water should be cut out and replaced with asphalt pavement that is properly graded. Note that this repair may require the replacement of adjacent segments of concrete curb & gutter.
- All areas of displaced asphalt should be evaluated and where the base materials or bearing soils have been damaged, the defective materials should be cut out and replaced.
- Properly set utility access points in the asphalt pavement so they do not impound water.



# LIST OF RECOMMENDED REPAIRS

- **Asphalt trail maintenance.** The asphalt pavement maintenance program should include the correction of defects in the asphalt trails. The focus of the asphalt trail maintenance program should be the correction of defects that are potential trip hazards including the large open cracks and displaced pavement. See Supplemental Photograph #26, 46, 90, 102.



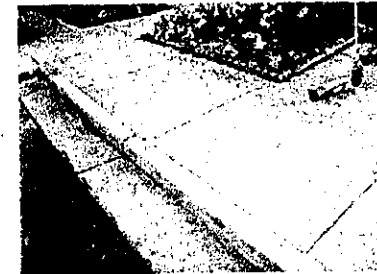
- **Extend the system of asphalt trails to connect with the sidewalks along Tobin Road.** See Supplemental Photographs #63, 117.



## 2. Concrete components

\$10,000 - 15,000

- **Concrete pavement.** In advance of the next major cycle of concrete replacements scheduled in conjunction with the asphalt replacement project in 2013, replace defective segments of concrete sidewalk that are potential safety hazards. The segments that require replacement have one or more of the defects outlined below. See Supplemental Photographs #9, 73, 82, 84, 86, 88, 98, 99, 108.



- **Displaced segments of concrete pavement (with a difference in elevation over 1 inch) which are trip hazards.**
- **Spalling segments of concrete pavement.** Segments with loose or very rough pavement are trip hazards.

- **Concrete curb & gutter.** In advance of the next major cycle of concrete replacements scheduled in conjunction with the asphalt replacement project in 2013, replace defective segments of concrete curb & gutter that are potential safety hazards or that have the defects outlined below. See Supplemental Photographs #32, 37, 42, 65, 74, 82, 85, 86, 94, 103, 104, 112.



- **Defects that are typical of concrete pavement and listed under concrete pavement above.**
- Segments with defects that allow water to penetrate into the base materials and bearing soils beneath the curb & gutter and adjacent asphalt pavement.
- Segments that prevent the proper grading of asphalt pavement repairs.

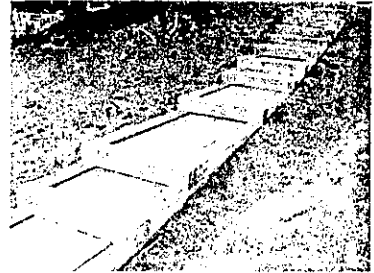
# LIST OF RECOMMENDED REPAIRS

- Concrete stairs. In advance of the next major cycle of concrete replacements scheduled in conjunction with the asphalt replacement project in 2013, replace defective concrete stairs that are potential safety hazards. The stairs that require replacement have one or more of the defects outlined below. See Supplemental Photographs #8, 22, 107.



- Defects that are typical of concrete pavement and listed under concrete pavement above.
- Steps with uneven risers or risers greater than 8.25 inches.

- Wood and flagstone stairs. Replace defective wood and flagstone stairs with proper concrete stairs that do not have uneven treads which are trip hazards. See Supplemental Photographs #69, 70.



### 3. Grading, drainage, and landscape.

\$10,000 - 15,000

- Correct defective grading at the Community Building that impounds water against the foundation wall. Establish proper grade at structure and modify the grade to provide a constant fall of at least 1 inch per foot away from the foundations for at least the first 6 feet. Grading operations should include the remove all organic materials in the areas to be addressed, including all top soil, ground cover, grass, mulch, plants, shrubs, trees, leaves, etc. Where necessary, the grade should be raised by the installation and compaction of a high clay content soil to prevent water penetration. Final grade should be achieved by the installation of a maximum of 2 inches of top soil, mulch, or decorative gravel. See Supplemental Photographs #4.

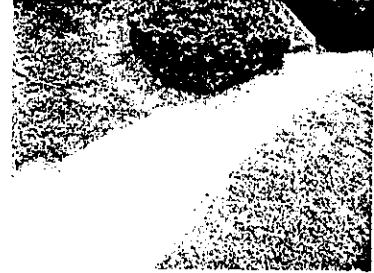


- Evaluate the sunken area near the Whipple Tot Lot and correct the defect causing the damage. See Supplemental Photographs #47.



## LIST OF RECOMMENDED REPAIRS

- Grade adjacent to concrete pavement, brick pavers, and asphalt trails to prevent water, silt, and debris from being impounded on the components. See Supplemental Photographs #25, 38, 55, 61, 107, 108.



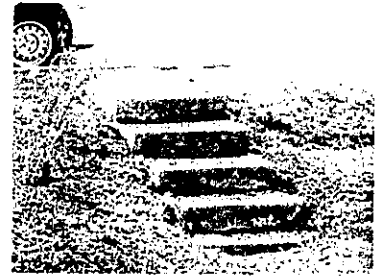
- Establish proper ground cover on property owned by the Association. Correct damage caused by erosion. See Supplemental Photographs #25, 38, 64, 95, 96, 117.



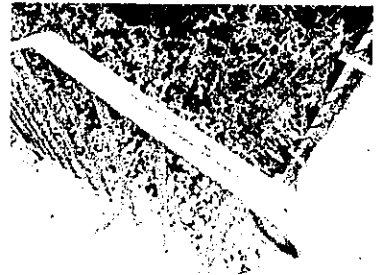
#### 4. Metal railings

\$3,000 - 5,000

- Install railings on all stairs with over 2 risers. See Supplemental Photographs #49.



- Restore and paint all damaged and/or deteriorated exterior metal railings. See Supplemental Photographs #8, 48, 61.
- Fill all rail attachment sockets with an epoxy grout, mounded to prevent water being impounded against the metal railing. If the concrete stair is too structurally damaged to properly support the railing attachment, the stair should be replaced. See Supplemental Photographs #8, 22, 52.



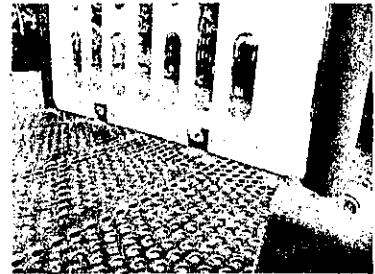
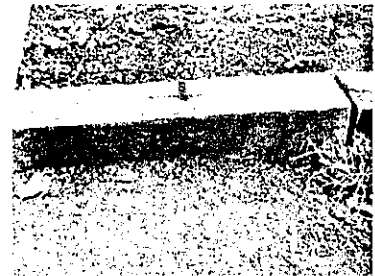
- Properly abandon unused railing attachment sockets. See Supplemental Photographs #9.

# LIST OF RECOMMENDED REPAIRS

## 5. Tot lot

\$2,000 - 3,000

- **All of the tot lots, including the tot lot borders, tot lot ground cover, and tot lot equipment should be evaluated by a playground safety specialist for compliance with the Consumer Product Safety Commission, Handbook for Public Playground Safety. Defects identified by the playground safety specialist should be resolved to avoid injury to children and potential liability to the Association. The defects include but are not limited to those discussed below. See Supplemental Photographs #44, 45, 72, 93.**
  - Steel reinforcing bars have been used to assemble the tot lot wood borders. Where the steel spikes extend above the wood borders, they have created a serious hazard.
  - Replace missing wood borders.
  - Rusty and deteriorated metal components should be evaluated to determine if they should be replaced or restored.
  - The paint finish on metal components has failed and the components are deteriorating.



## 6. Site Improvements - Miscellaneous

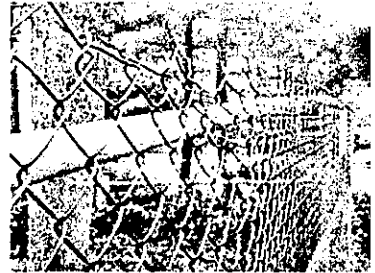
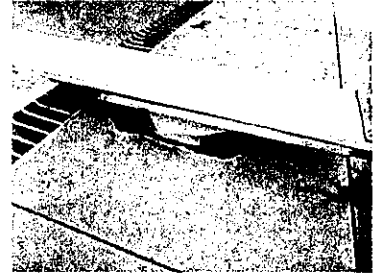
\$5,000 - 10,000

- **Reset defective brick paver installations. Defects that require correction include those outlined below. See Supplemental Photographs #60, 106.**
  - Displaced pavers impound water, silt, and debris creating a potential trip hazard.
  - Differences in elevation between the brick pavers and adjacent materials are potential trip hazards.



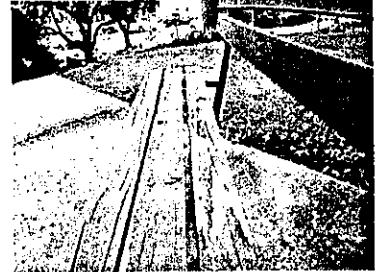
# LIST OF RECOMMENDED REPAIRS

- Restore deterioration of the diving board base. See Supplemental Photographs #17.
- Repair damage to the gazebos including structural damage to the Decourcey gazebo and damaged shingles at the Contessa Court. See Supplemental Photographs #35, 97.
- Replace missing signage. See Supplemental Photographs #79.
- Repair minor defects in the fence system at the swimming pools. Restore finish on the posts and top rails. See Supplemental Photographs #5, 21.
- Restore deteriorated paint finish on property identification signs and signs throughout the community. See Supplemental Photographs #114.



# LIST OF RECOMMENDED REPAIRS

- Replace deteriorated bench slats. See Supplemental Photographs #67.



- Remove unnecessary pavers and wood curbs that are potential trip hazards that have been installed on property owned by the Association. See Supplemental Photographs #59.



## 7. Community Building - Miscellaneous

\$5,000 - 10,000

- Install a waterproof traffic coat on the concrete walkway that extends around the perimeter of the Community Building. Restore the metal railings and railing attachment points. See Supplemental Photographs #1, 2, 3, 4.



- Monitor the cracks in the foundation walls for additional movement. See Supplemental Photographs #12.



- Restore deteriorated finishes in the restrooms that serve the swimming pool. See Supplemental Photographs #13.



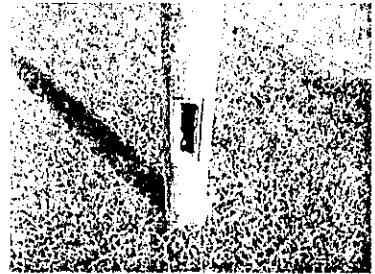


# LIST OF RECOMMENDED REPAIRS

## 8. Administrative

Nominal

- Notify the government agency responsible for the public roadways (Beverly Drive and Thompson Road) in the community of the failure of the asphalt pavement. Request that they make timely replacement. See Supplemental Photographs #109, 119, 120.
- Request those responsible for the fence installed along the east property boundary, make needed repairs. See Supplemental Photographs #83.
- Notify those responsible for the streetlights that the open electrical junction boxes are a serious safety hazard. See Supplemental Photographs #28, 30.



9. Replacement Reserves - The following projects listed in the Replacement Reserve Inventory and are scheduled for completion in the Study Year. Funding for these projects is assumed to be from Replacement Reserves and the costs are not included in the cost shown below for the defects cited in the Paragraphs above.

- Tot Lot Equipment. Replace the tot lot equipment and border at the Conquistador Tot Lot.

### TOTAL COST OF RECOMMENDED REPAIRS

\$65,000 - \$98,000

NOTE: Defects that are potential safety hazards should be repaired immediately to prevent personal injury and to protect the Association from potential liability. We have identified safety hazards in the above List of Recommended Repairs by printing them in **bold**.

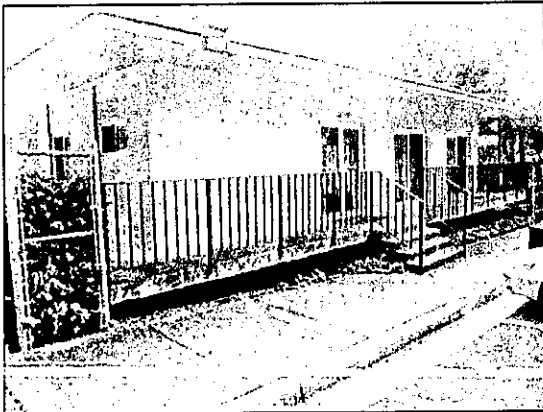


Photo #1. Photographs taken on August 21, 2010. General view of the Community Building.



Photo #2. Upper surface of the concrete walkway that surrounds the upper level of the Community Building has defects that allow water penetration into the structure.



Photo #3. Evidence of water penetration through the concrete structure.



Photo #4. Evidence of water penetration through the concrete structure.

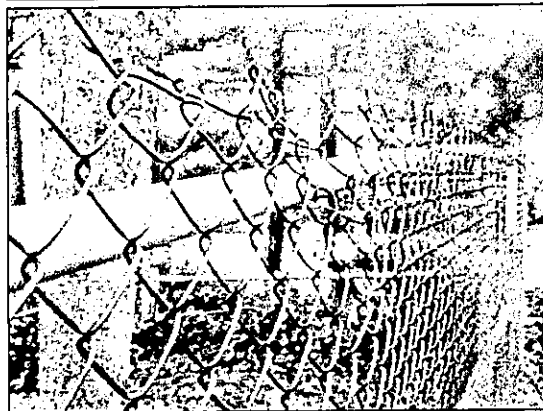


Photo #5. Minor damage to the fence surrounding the swimming pool.

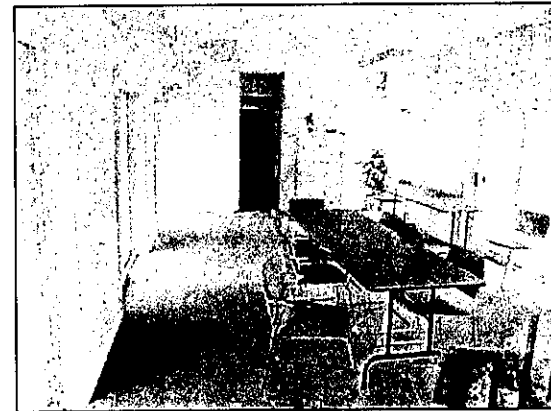


Photo #6. General view of the meeting room.

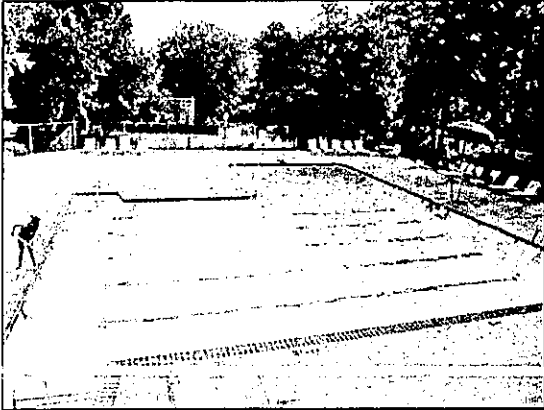


Photo #7. General view of the swimming pool.

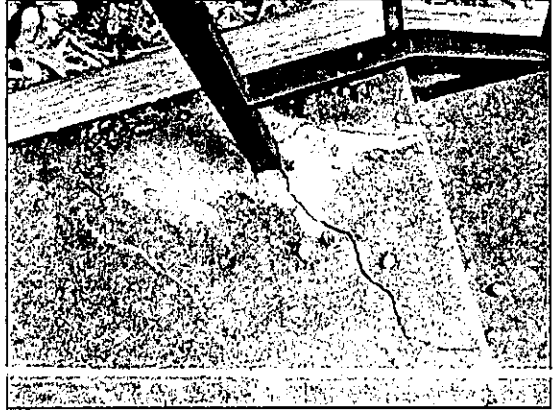


Photo #8. Failed stair railing socket. Note the failing paint finish on the metal railing.

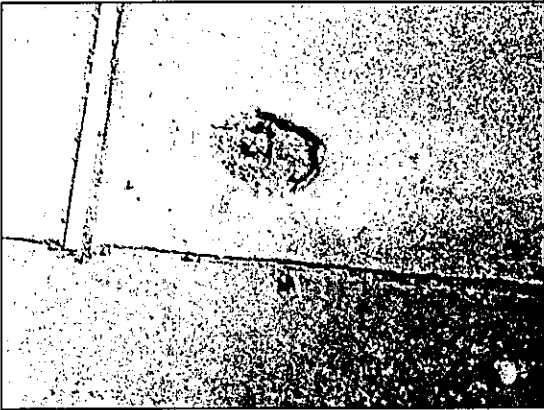


Photo #9. Defect in concrete pavement.

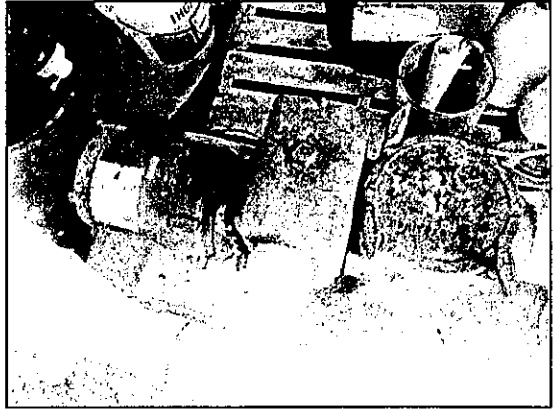


Photo #10. Pool Pump.

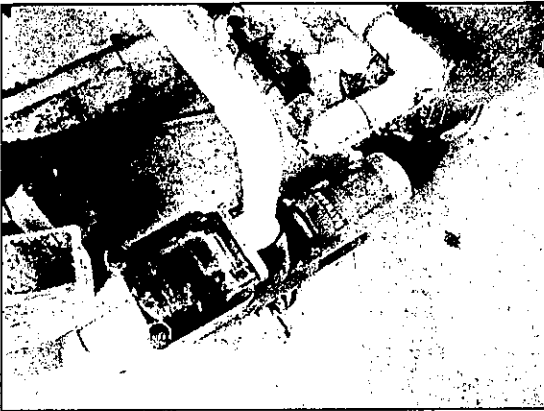


Photo #11. Wading pool pump.



Photo #12. Open crack in the foundation wall.

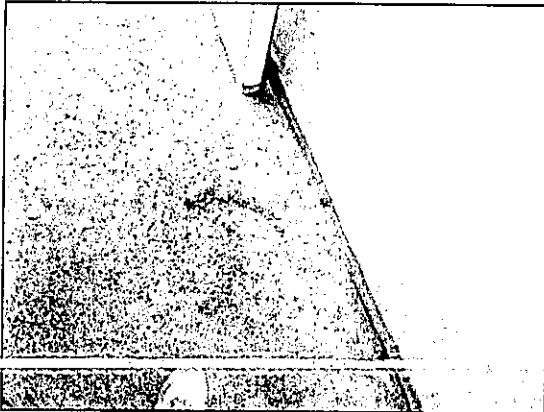


Photo #13. Floor finish.



Photo #14. General view of the restroom facilities.

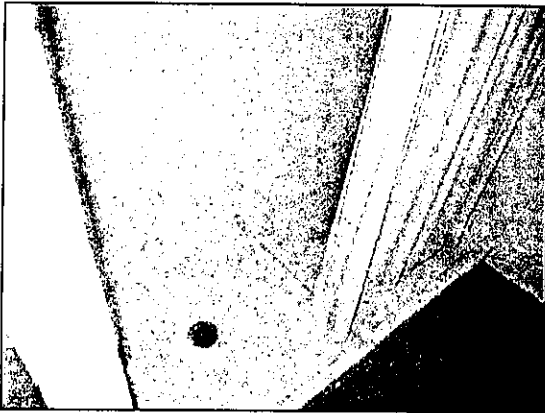


Photo #15. Shower facilities.

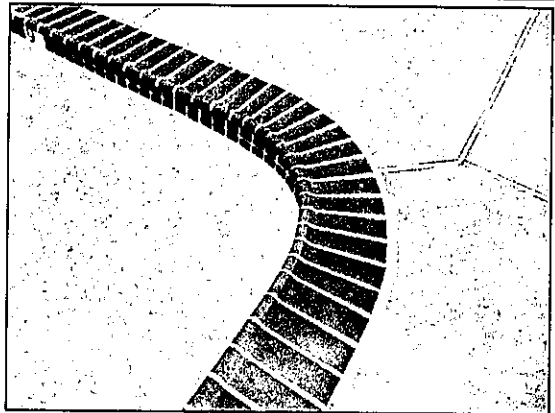


Photo #16. Swimming pool coping.

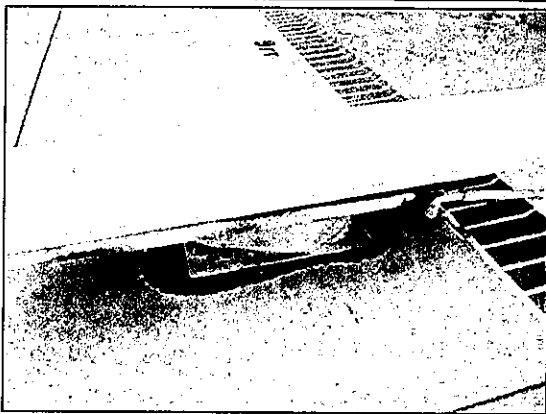


Photo #17. Diving board base and base attachment hardware is in rusting and deteriorated.



Photo #18. General view of the MP court adjacent to the swimming pool.

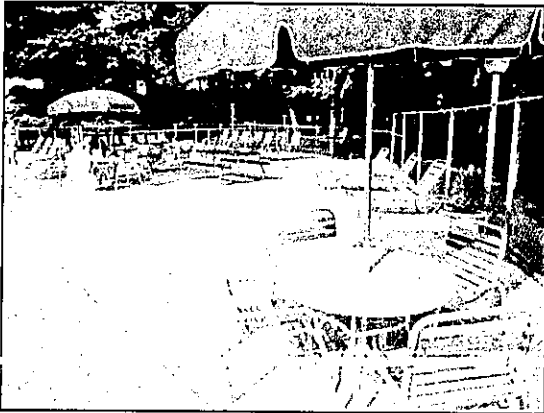


Photo #19. General view of the pool furniture.



Photo #20. Lights on the pool deck date to initial construction.

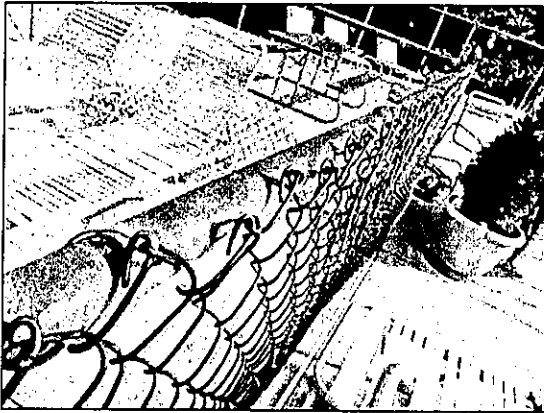


Photo #21. Top fence rail is rusting.

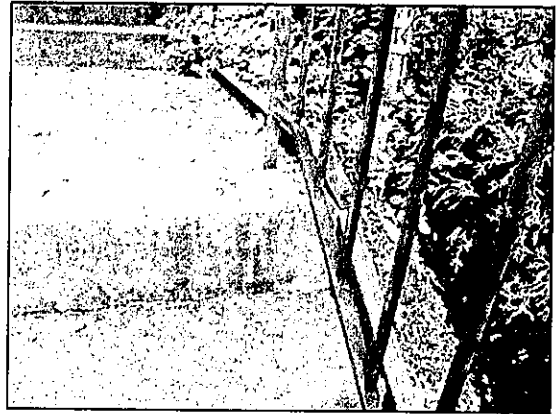


Photo #22. Concrete stair and railing is in poor condition.

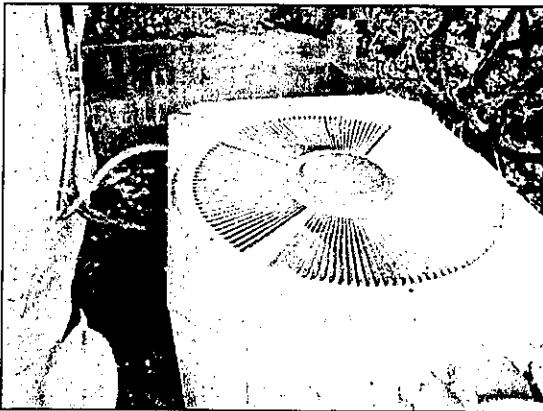


Photo #23. HVAC outdoor unit is installed in an area that may obstruct proper air flow.

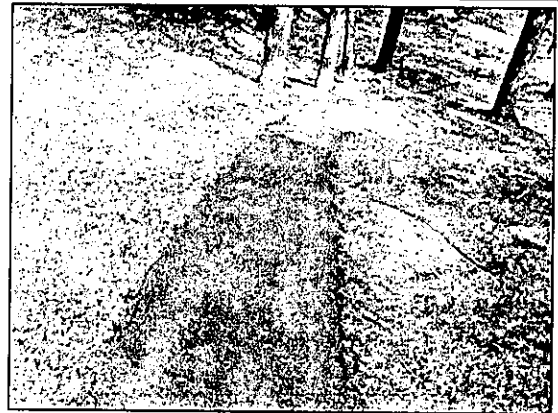


Photo #24. Asphalt trail near the swimming pool is very steep.



Photo #25. Typical open space owned by the Association that does not have proper ground cover.



Photo #26. Typical large open crack in the asphalt trail.

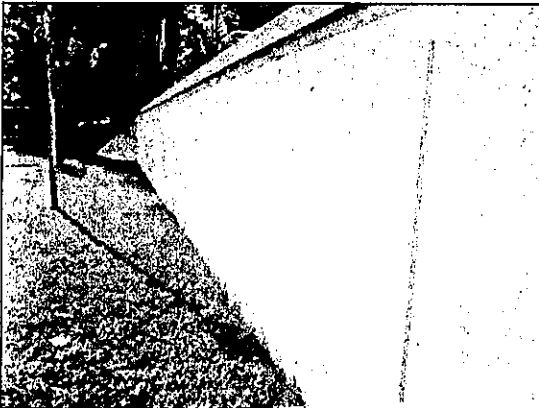


Photo #27. General view of the retaining wall that supports the swimming pools.

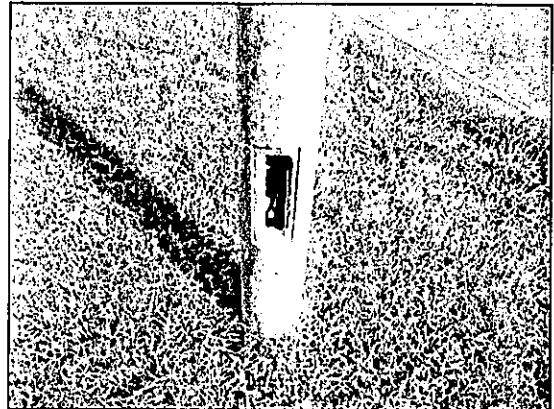


Photo #28. Open electrical junction box on the streetlight is a safety hazard.

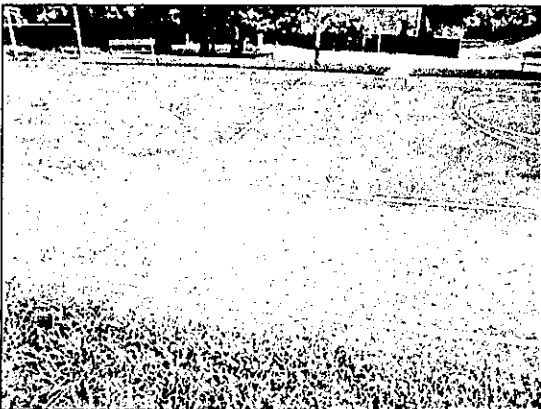


Photo #29. MP court surface exhibits some erosion but is generally in good condition.

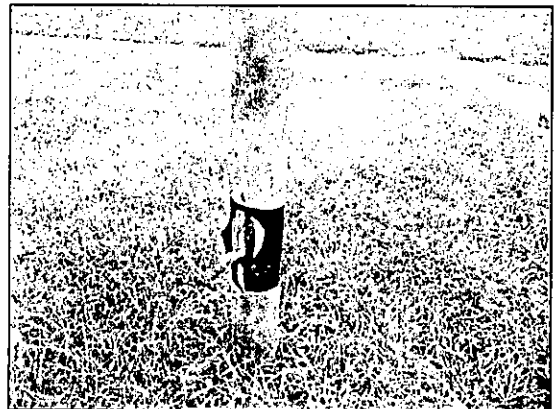


Photo #30. Open electrical junction box on the streetlight is a safety hazard.

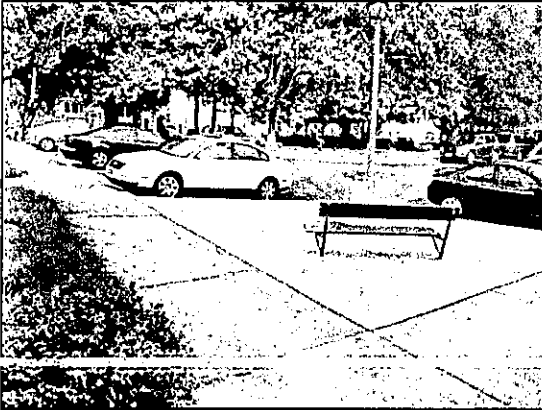


Photo #31. General view of Contessa Court.

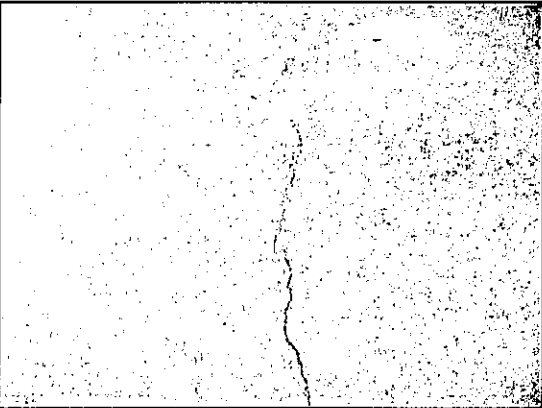


Photo #33. Crack has been sealed at some point but the sealant has failed and the crack has grown, Contessa.

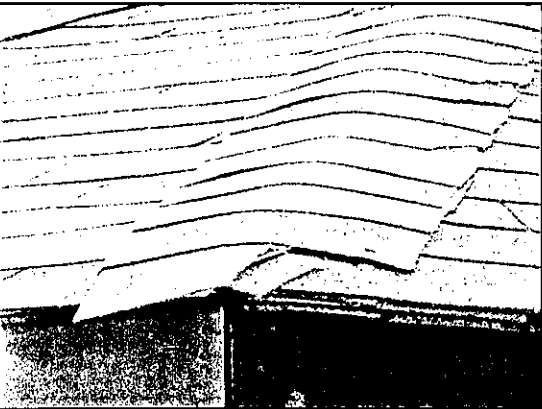


Photo #35. Typical damaged asphalt shingles on the gazebos, Contessa.

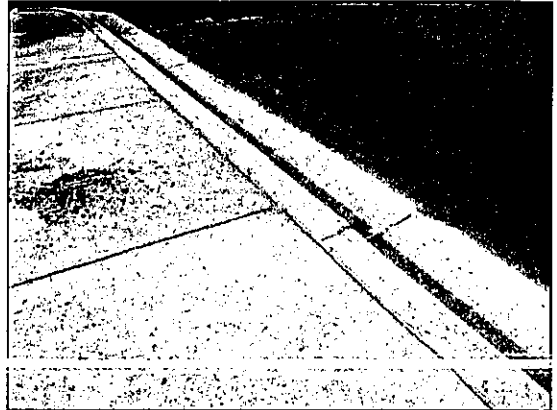


Photo #32. Typical displaced concrete components where a difference in elevation between the components has created a potential trip hazard.

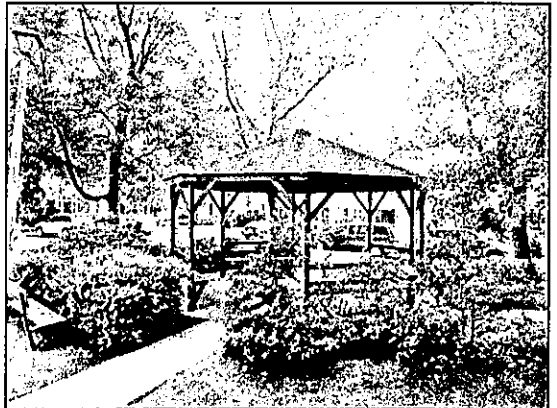


Photo #34. General view of the Contessa Gazebo.

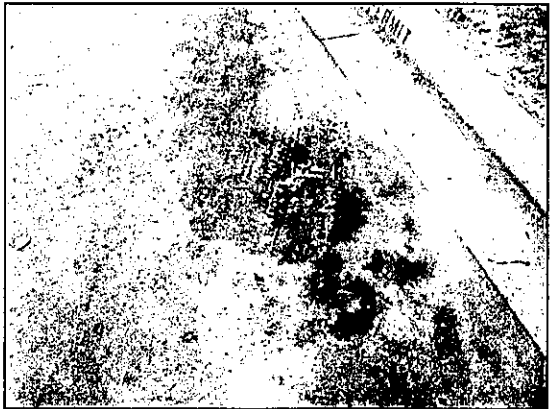


Photo #36. Typical oil/gasoline damaged asphalt pavement.

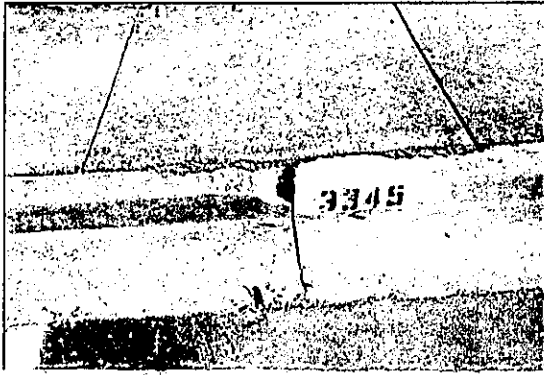


Photo #37. Typical damaged concrete curb & gutter.



Photo #38. Grade adjacent to the asphalt trail impounds water, silt and debris on the trail.



Photo #39. Gravel trail and wood retaining wall behind the units on the north side of Whipple Court.



Photo #40. Trail and swale between Whipple and Webley.

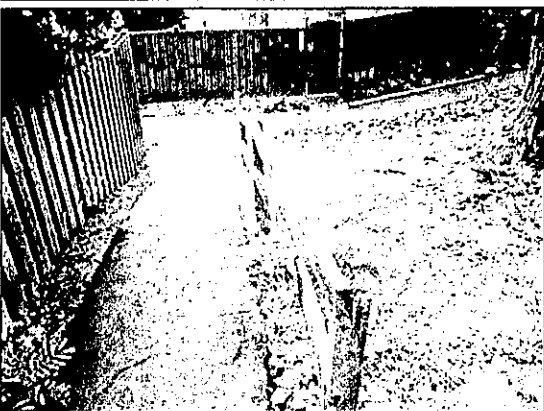


Photo #41. Railing along trail, Whipple Court.



Photo #42. Concrete curb & gutter is not properly pitched to move water to the storm water system, Whipple.





Photo #43. General view of Whipple Tot Lot.

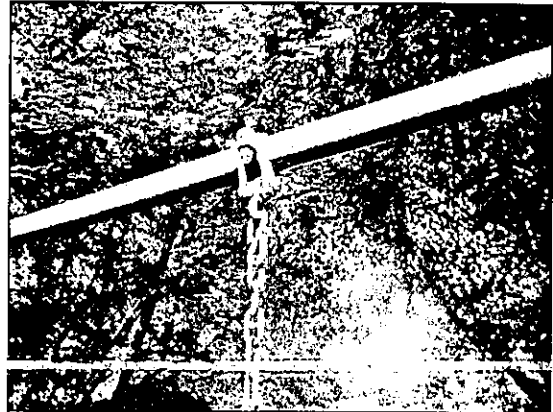


Photo #44. Fasteners are rusting, Whipple Tot Lot



Photo #45. Missing section of wood border, Whipple Tot Lot.

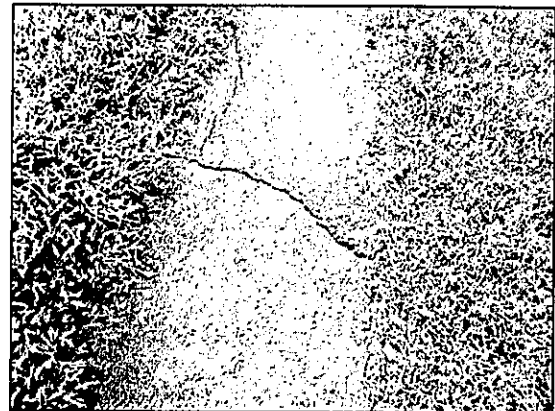


Photo #46. Typical large open crack in the asphalt trail, near the Whipple Tot Lot.

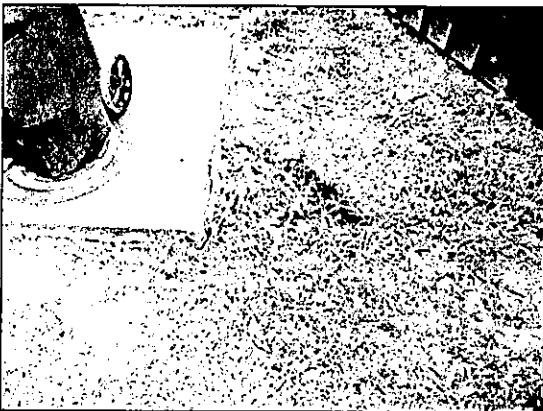


Photo #47. Erosion/sinkhole near the Whipple Tot Lot.



Photo #48. Typical damaged sign, and metal stair railing, Whipple Court.

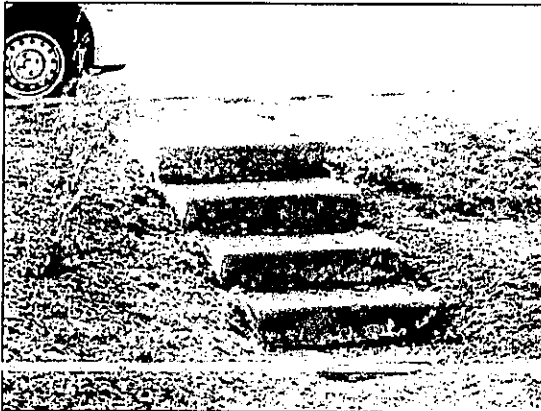


Photo #49. Concrete stair without a proper handrail, Whipple Court.



Photo #50. Decorative landscape feature in the open space at the southeast corner of Whipple Court.

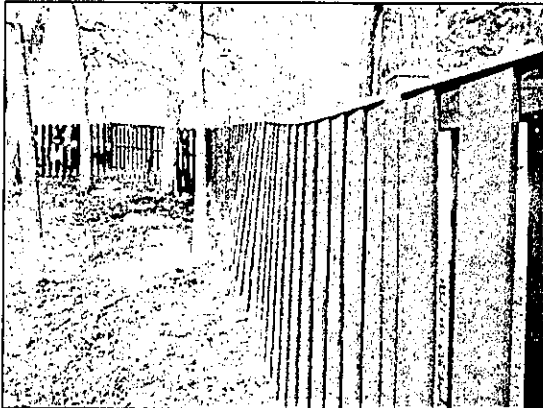


Photo #51. General view of the stockade fence.

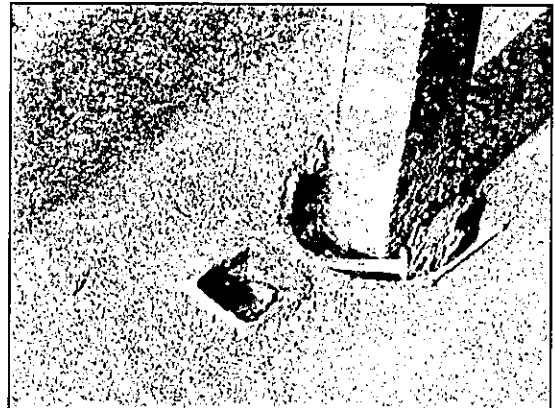


Photo #52. Railing sockets are not properly installed into the concrete whipple, near the corner of Tobin and Whipple.

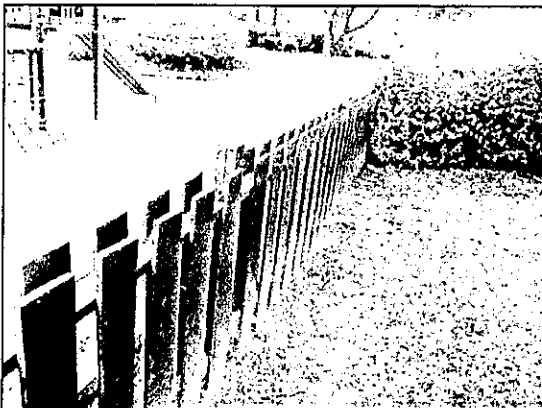


Photo #53. Fence at the Tobin Tot Lot.

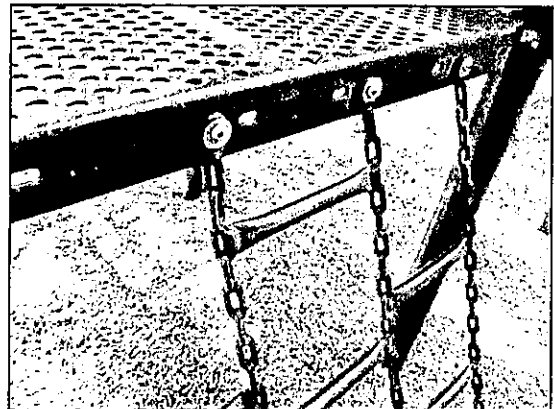


Photo #54. Finish on the tot lot equipment at the Tobin Tot Lot is not aging well.

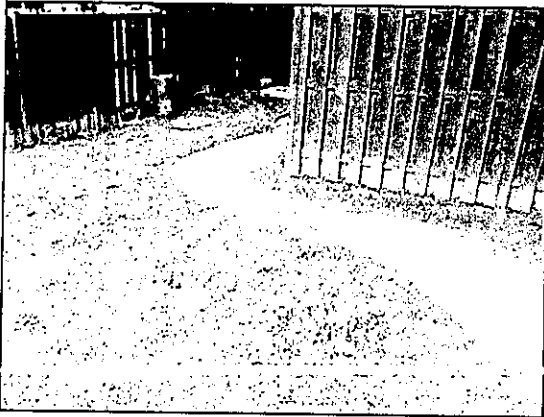


Photo #55. Grade adjacent to the asphalt trail impounds water, silt and debris on the trail.



Photo #56. General view of Webley Court.

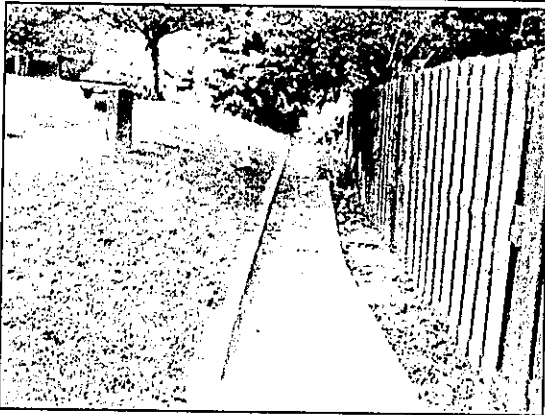


Photo #57. Concrete swale behind the Webley Court units that back to Beverly Drive.

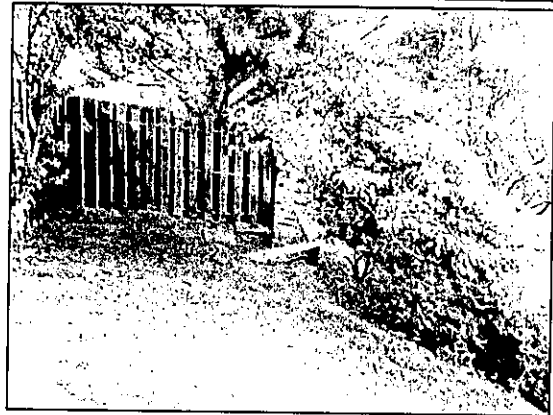


Photo #58. Wood retaining wall may be installed on property owned by the Association, Breckenridge Court.

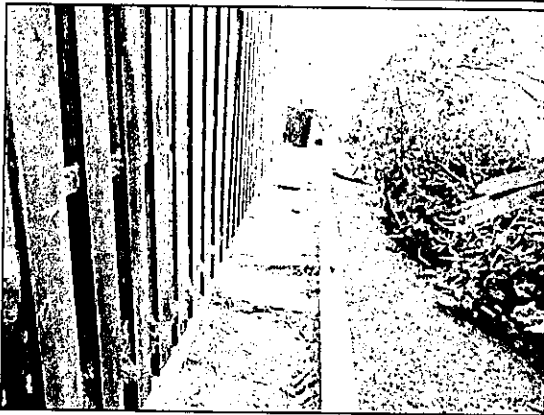


Photo #59. Pavers and wood curb maybe installed on property owned by the Association, Breckenridge Court.

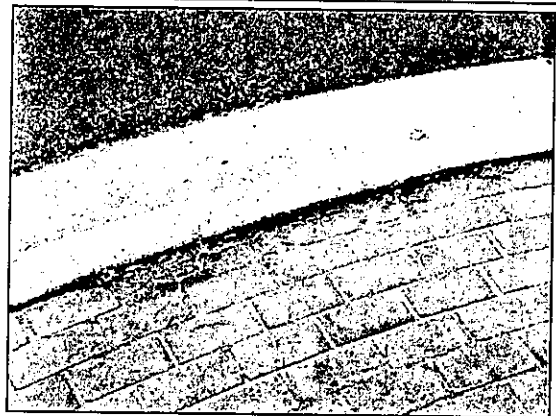


Photo #60. Displaced brick pavers are a potential trip hazard.

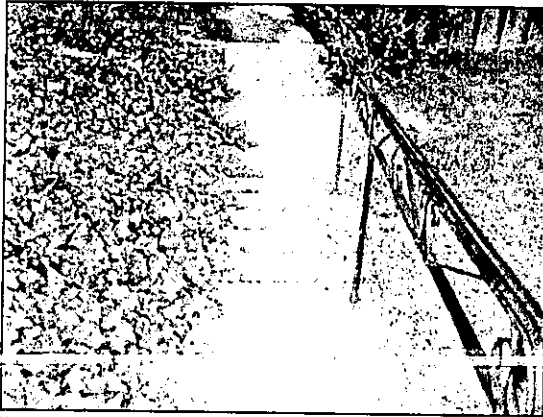


Photo #61. Railing is not properly installed into the concrete steps, Breckenridge Court.

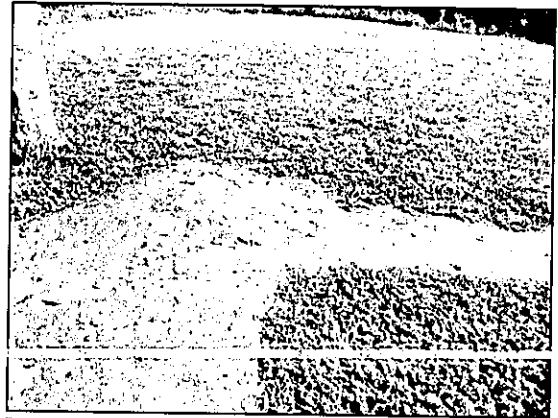


Photo #62. Asphalt trail that lead to the tennis court that has been removed.



Photo #63. Asphalt trail terminates at an unsafe slope at Tobin Road.

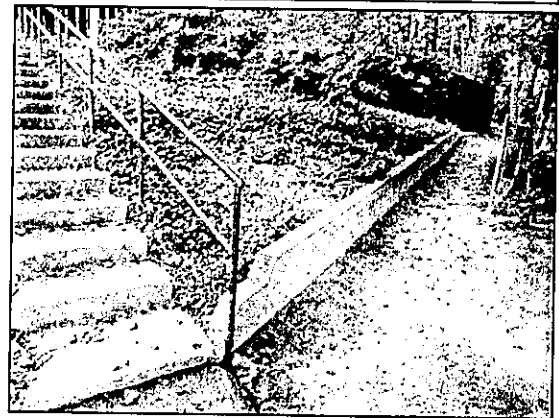


Photo #64. Small wood retaining wall, Breckenridge Court.



Photo #65. Displaced concrete curb & gutter, Breckenridge Court.

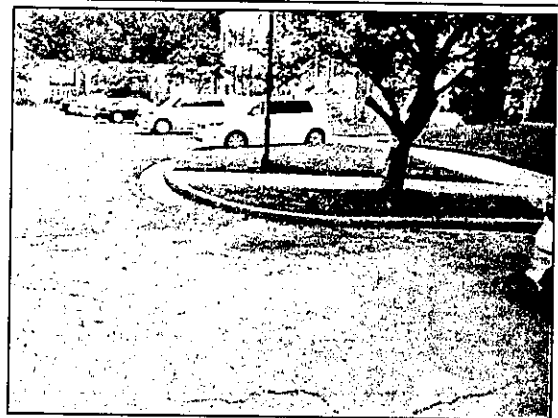


Photo #66. Depressed pavement indicating damage to the base materials and bearing soils, Breckenridge Court.

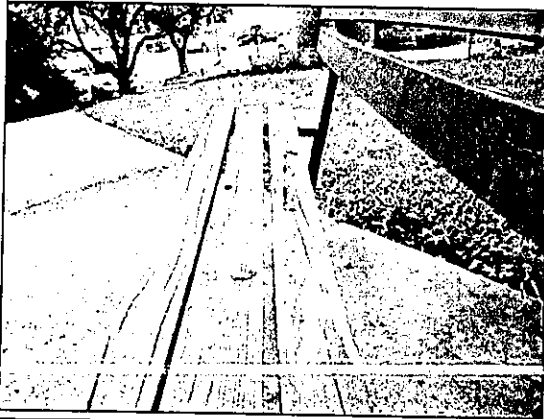


Photo #67. Typical checked wood bench slats and failed paint system.

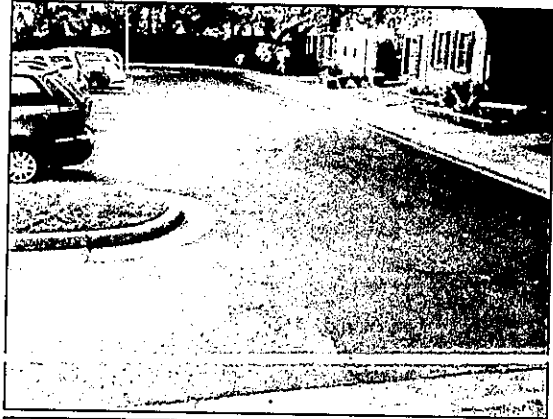


Photo #68. General view of the parking area off of Thompson Road.

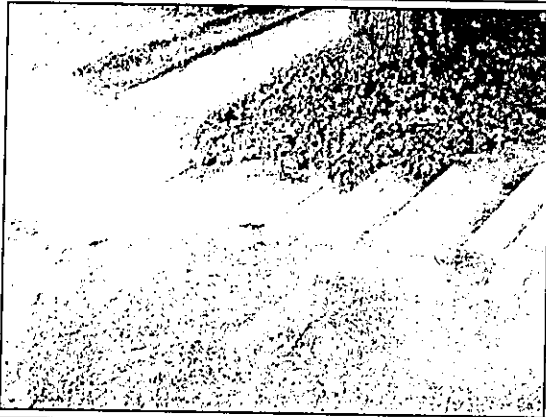


Photo #69. Poorly constructed stair with uneven treads connects to Beverly Drive from the parking area off of Thompson Road.

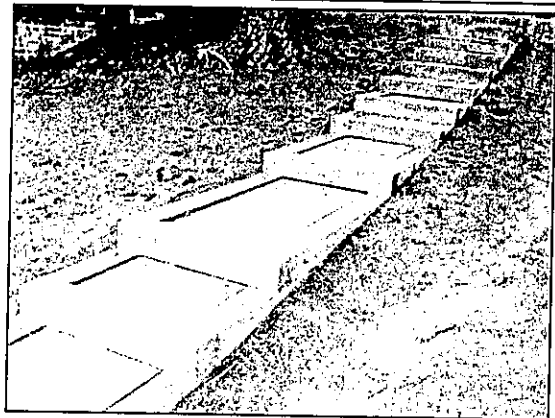


Photo #70. Poorly constructed stair with uneven treads connects Glastonbury Court and Beverly Drive.

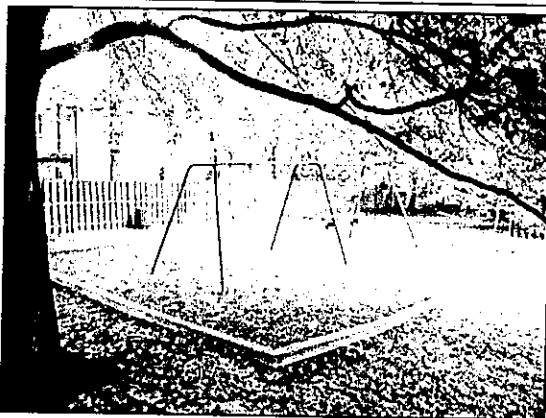


Photo #71. General view of the Conquistador Court Tot Lot.

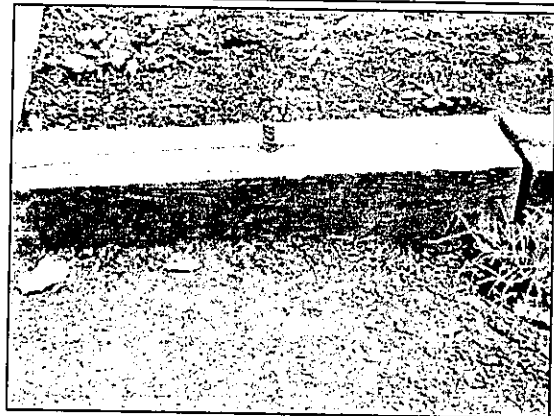


Photo #72. Improperly installed re-bar is a hazard, Conquistador Tot Lot.

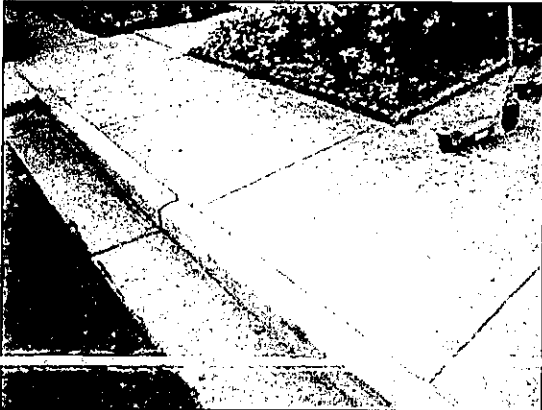


Photo #73. Severely deteriorated concrete pavement, Conquistador.

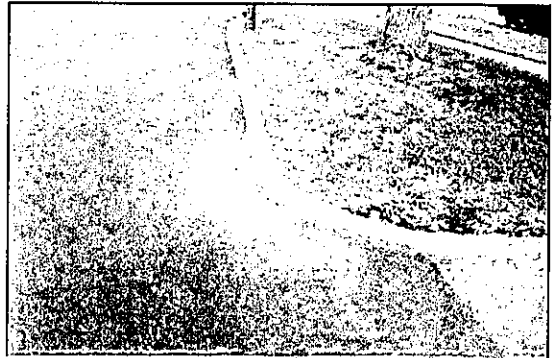


Photo #74. Asphalt pavement is not properly pitched to move water to the storm water system. Correction will require the replacement of the concrete curb.



Photo #75. Depressed asphalt pavement indicating damage to the base materials and bearing soils, Conquistador.

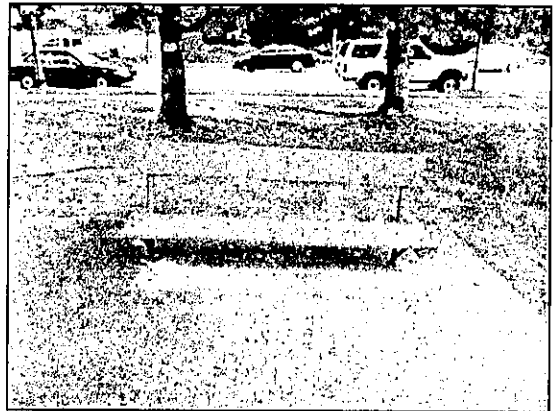


Photo #76. Typical bench.



Photo #77. Typical displaced lead walk.

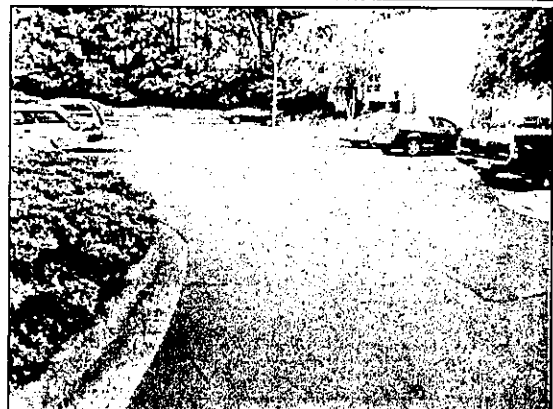


Photo #78. General view of Ledbury Court.



Photo #79. Missing street sign at Viscount Court.

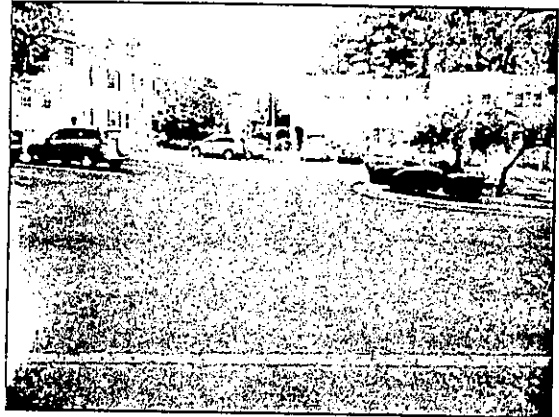


Photo #80. General view of Viscount Court.

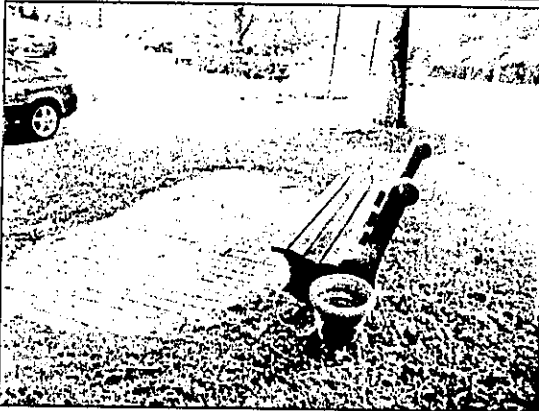


Photo #81. Small installation of brick pavers at bench along Beverly Drive.

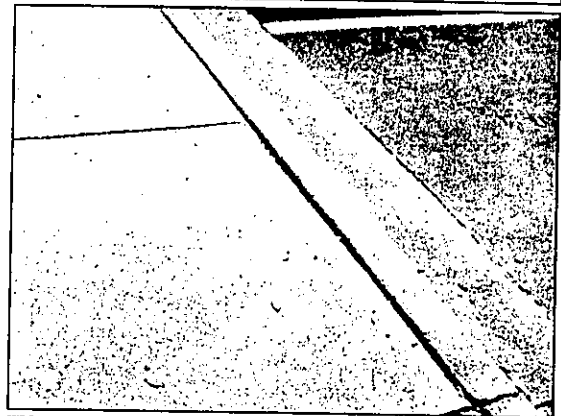


Photo #82. Typical displaced concrete components where a difference in elevation between the components has created a potential trip hazard.



Photo #83. Damaged fence installed along the east property boundary.

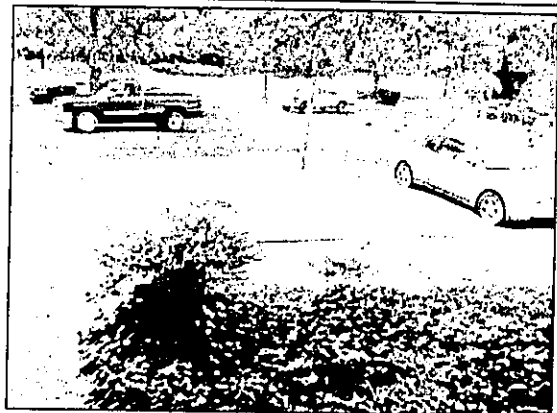


Photo #84. Displaced concrete pavement segments, Viscount.

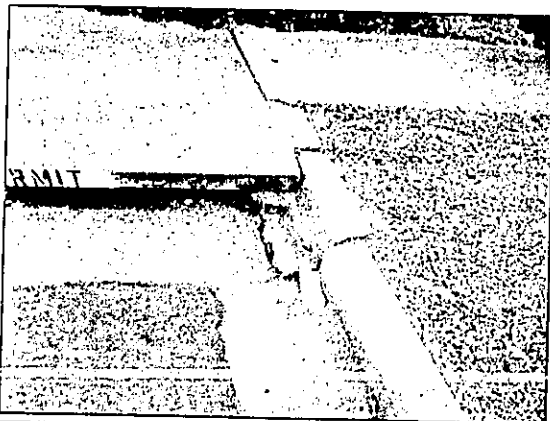


Photo #85. Damaged curb & gutter and storm water inlet apron.

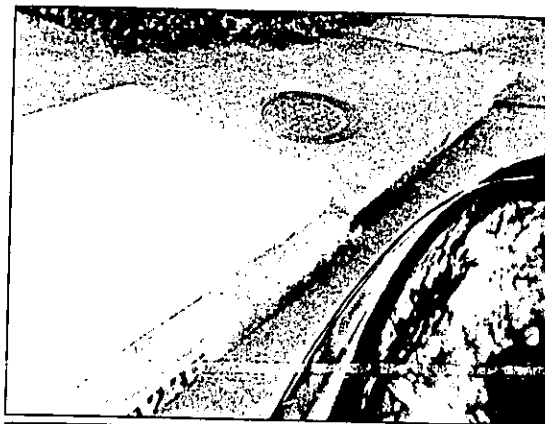


Photo #86. Concrete sidewalk replacement did not correct a potential trip hazard, Viscount.

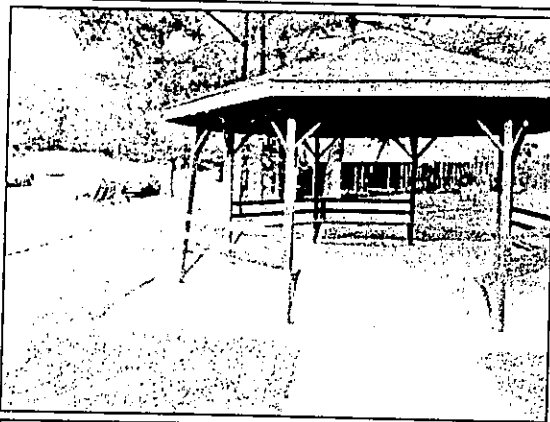


Photo #87. Damaged gazebo, Decourcey.

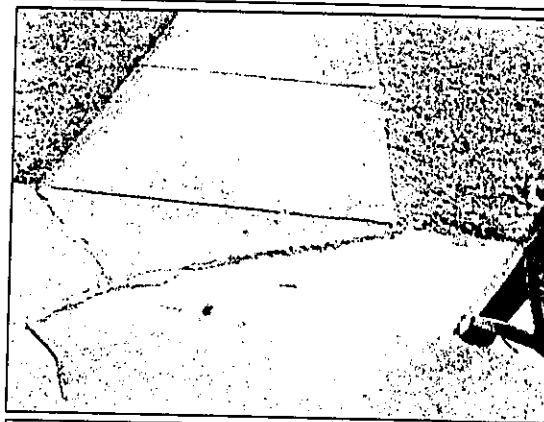


Photo #88. Damaged concrete pavement at the Decourcey gazebo.

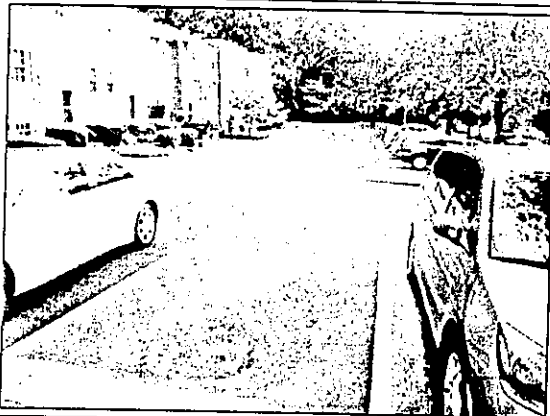


Photo #89. General view of Decourcey. Note gasoline/oil damage to the pavement.



Photo #90. Asphalt trail has extensive cracking and displacement.



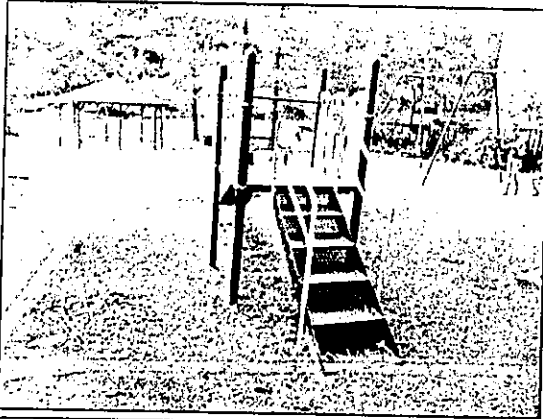


Photo #91. General view of Decourcey Tot Lot.

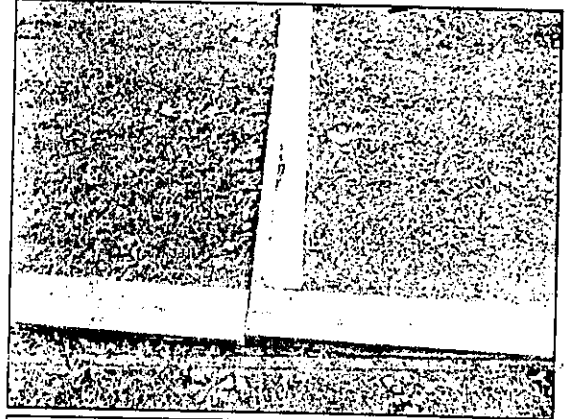


Photo #92. Decourcey Tot Lot wood border.

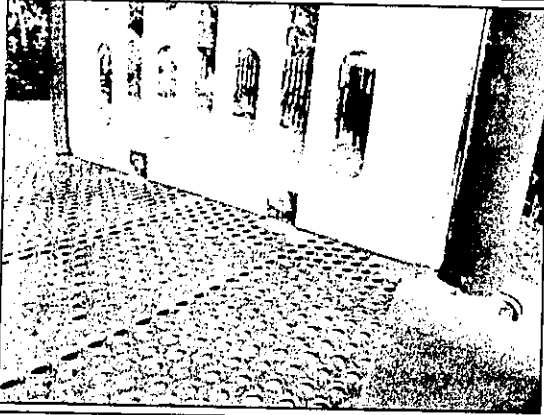


Photo #93. Failed finish on the clips using to assemble the tot lot equipment, Decourcey Tot Lot.

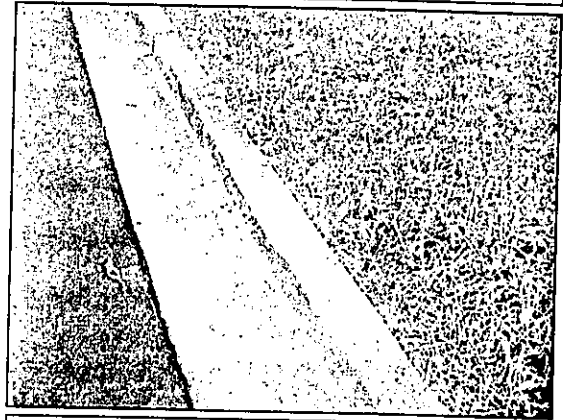


Photo #94. Damaged concrete curb, Decourcey.

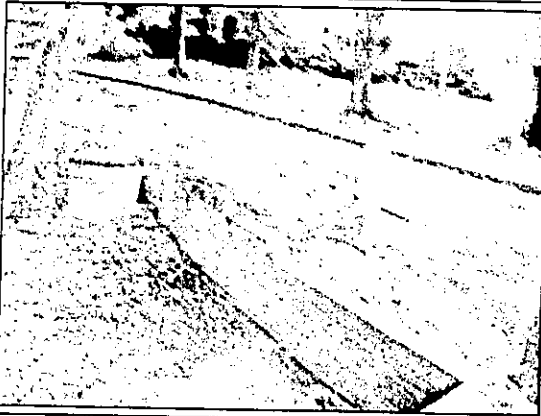


Photo #95. Wood retaining wall at a storm water inlet between Decourcey and Victor.

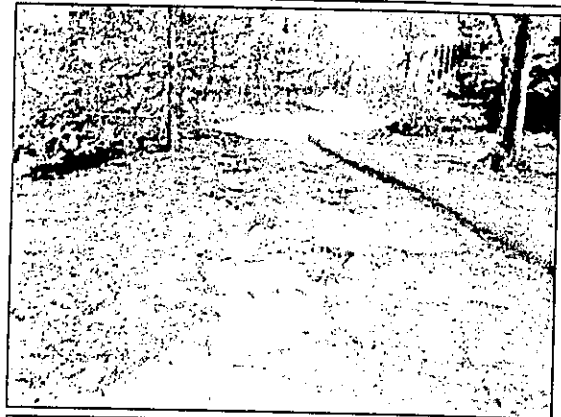


Photo #96. Property owned by the Association without proper ground cover and with erosion.



Photo #97. General view of Victor Circle.

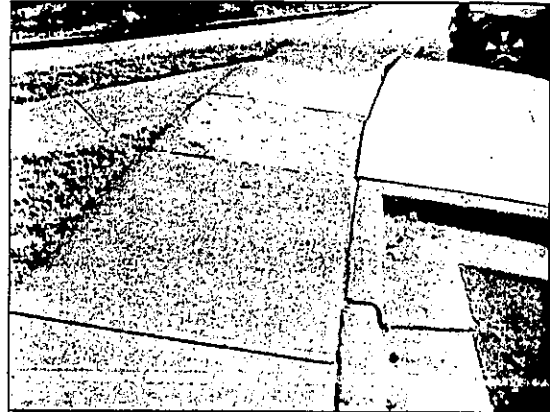


Photo #98. Concrete sidewalk is severely deteriorated and displaced, Victor Circle.

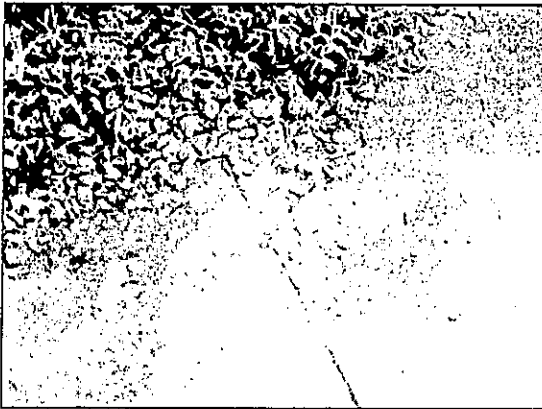


Photo #99. Severely deteriorated concrete pavement, Victor Circle.

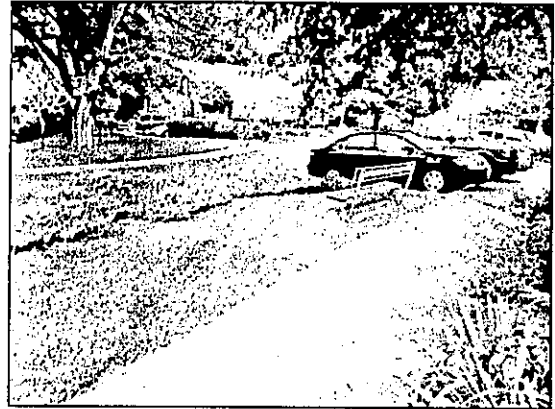


Photo #100. Small section of brick pavers, Victor Circle.

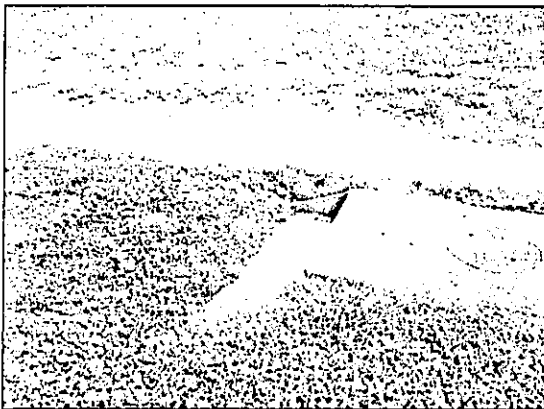


Photo #101. Grade adjacent to the asphalt trail is a potential trip hazard.

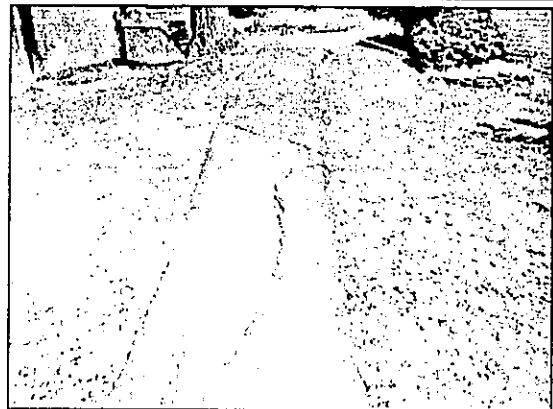


Photo #102. Large open cracks in the asphalt trail, Gastonbury.

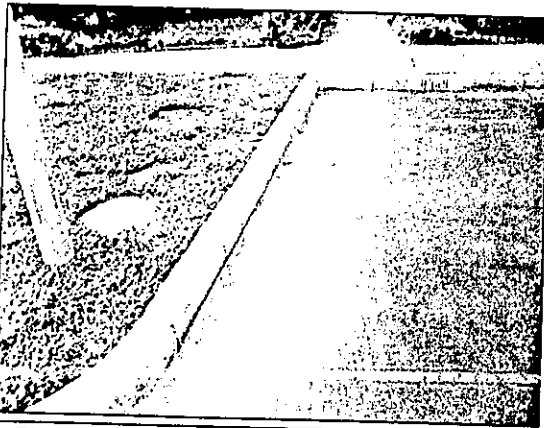


Photo #103. Concrete curb & gutter is not properly pitched to move water to the storm water system, Gastonbury.



Photo #104. Recently replaced concrete components are already damaged.

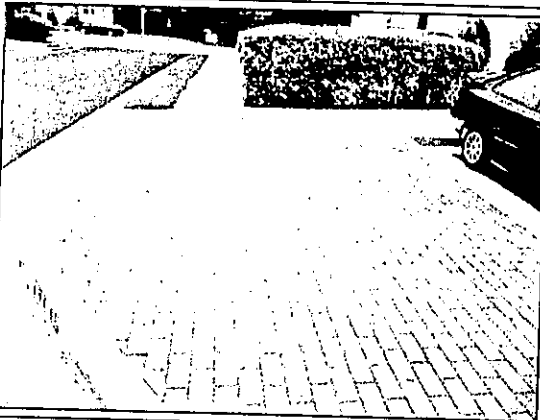


Photo #105. Several areas of brick pavers are installed throughout the community.

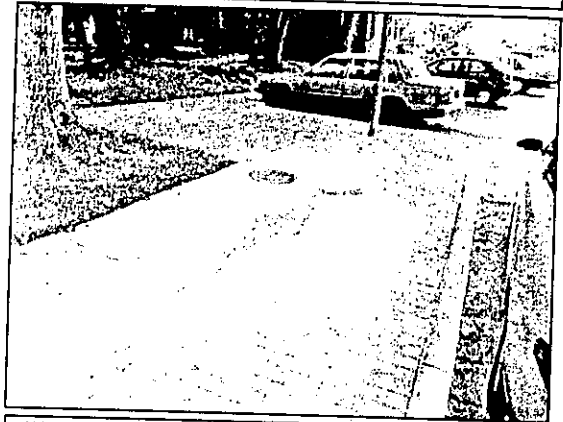


Photo #106. Brick pavers and concrete components are not properly pitched to move water to the storm water system.

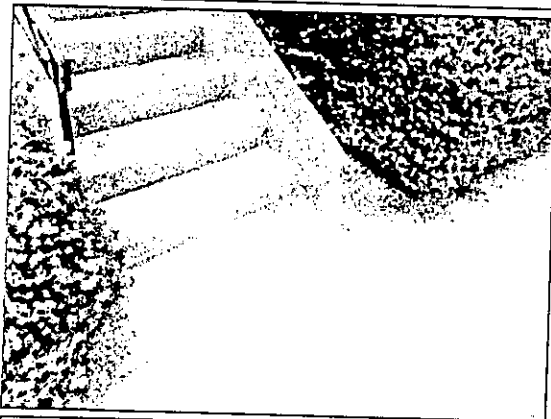


Photo #107. Water silt and debris is impounded at the base of the stair leading from Gastonbury to Thompson Road.

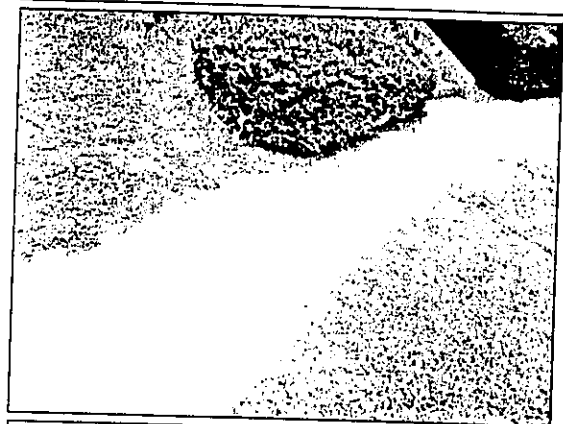


Photo #108. Sidewalk installed along Thompson Road impounds water and debris.



Photo #109. Thompson Road asphalt pavement is generally in poor condition.

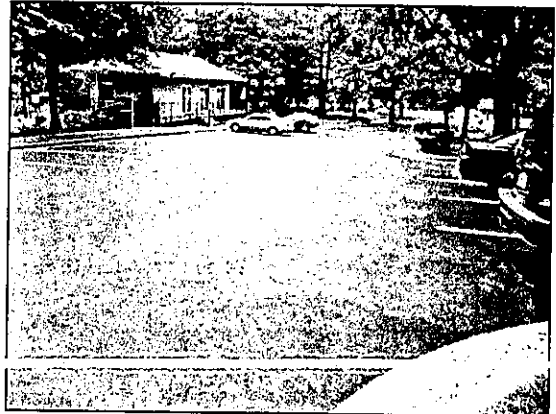


Photo #110. Community Building parking lot.

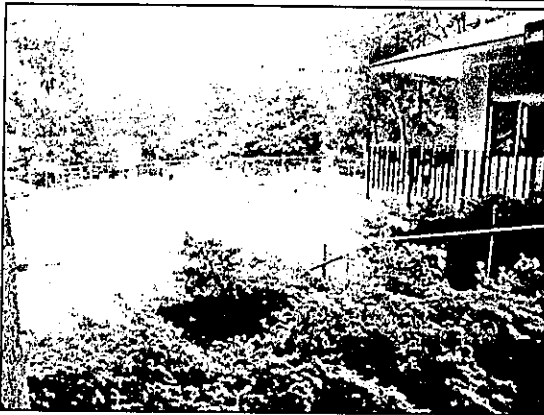


Photo #111. General view of the swimming pool.

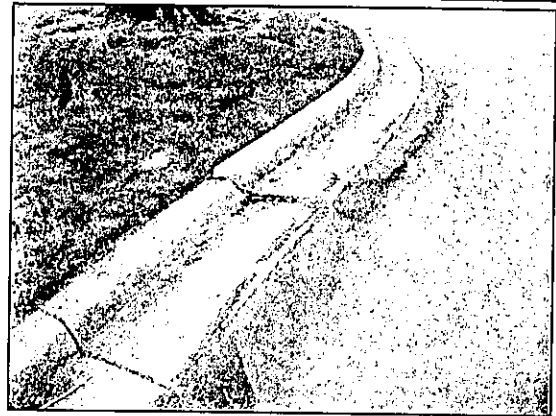


Photo #112. Displaced curb & gutter at Breckenridge Court.



Photo #113. Notice board.

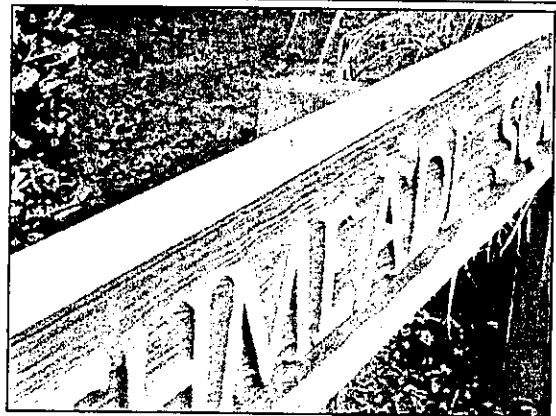


Photo #114. Property identification sign.

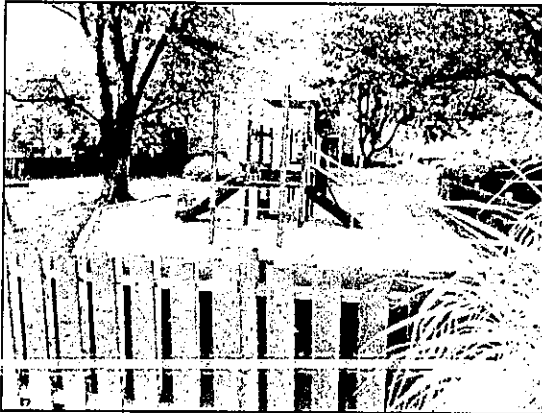


Photo #115. General view of the Tobin Tot Lot.

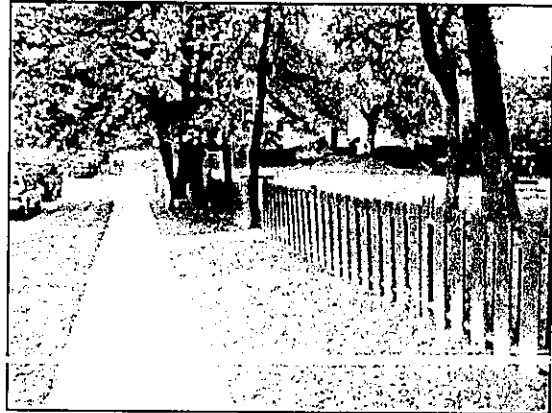


Photo #116. Wood fence along Tobin Road near the Tobin Tot Lot.

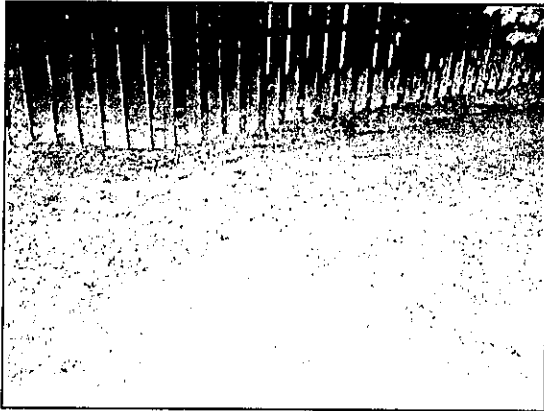


Photo #117. Asphalt trail terminates short of the Tobin Road sidewalk.

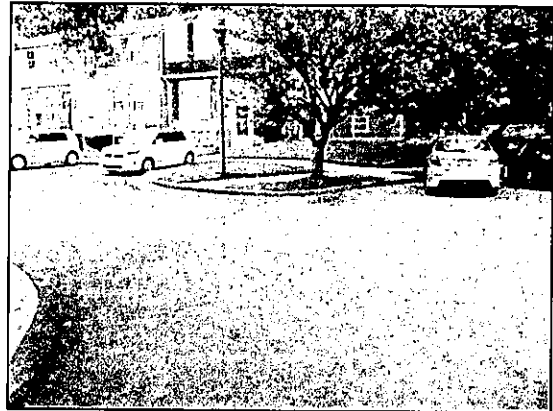


Photo #118. Depressed pavement, Breckenridge Court.

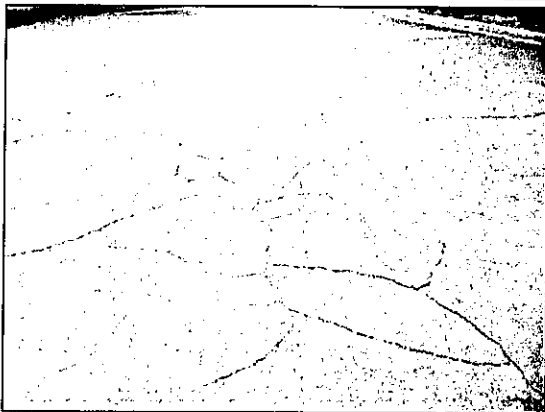


Photo #119. Asphalt pavement is generally in very poor condition, Breckenridge Court.

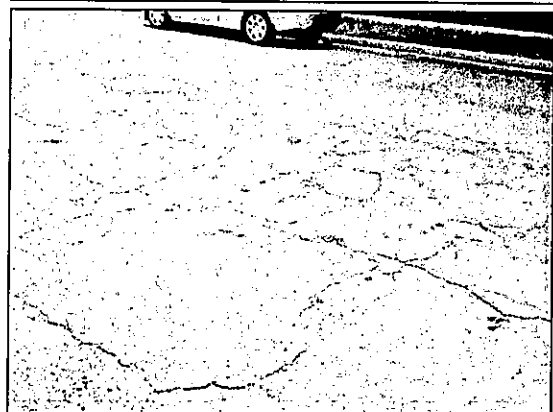


Photo #120. Beverly Drive asphalt pavement is generally in very poor condition.

# REPLACEMENT RESERVE ALLOCATION

Strathmeade Square

October 2010

## CASH FLOW METHOD - THREE YEAR ALLOCATION OF REPLACEMENT RESERVES

Item #	Component	Estimated Replacement Cost	Allocation of Reserves on Deposit	2011			2012			2013		
				Deposits	Expenses	Year End Balance	Deposits	Expenses	Year End Balance	Deposits	Expenses	Year End Balance
NORMAL COMPONENTS												
PHASE ONE CONCRETE CON												
1	P1 - Asphalt pavement - 30%	94,684	94,684			94,684			94,684			
2	P1 - Concrete & brick sidewalks	17,966	17,966			17,966			17,966			
3	P1 - Concrete & brick sidewalks	26,949										
4	P1 - Concrete & brick sidewalks	35,932										
5	P1 - Concrete & brick sidewalks	44,915										
6	P1 - Concrete & brick sidewalks	53,898										
7	P1 - Concrete curb & gutter - 3%	12,221	12,221			12,221			12,221			
8	P1 - Concrete curb & gutter - 4.5	18,331										
9	P1 - Concrete curb & gutter - 6%	24,442										
10	P1 - Concrete curb & gutter - 7.5	30,552										
11	P1 - Concrete curb & gutter - 9%	36,662										
PHASE TWO CONCRETE CON												
12	P2 - Asphalt pavement - 70%	220,929		6,896		6,896	48,718		55,614	48,718		104,332
13	P2 - Concrete & brick sidewalks	41,921		1,308		1,308	9,244		10,553	9,244		19,797
14	P2 - Concrete & brick sidewalks	62,881										
15	P2 - Concrete & brick sidewalks	83,841										
16	P2 - Concrete & brick sidewalks	104,802										
17	P2 - Concrete & brick sidewalks	125,762										
18	P2 - Concrete curb & gutter - 7%	28,515		890		890	6,288		7,178	6,288		13,466
19	P2 - Concrete curb & gutter - 10	42,773										
20	P2 - Concrete curb & gutter - 14'	57,030										
21	P2 - Concrete curb & gutter - 17	71,288										
22	P2 - Concrete curb & gutter - 21'	85,546										
GENERAL SITE IMPROVEME												
23	Asphalt trails	109,026	53,870	55,156		109,026			109,026			109,026
24	Wood stockade fencing (25%)	2,730	2,730			2,730			2,730			2,730
25	Wood retaining walls (25%)	2,730	2,730			2,730			2,730			2,730
26	Webley retaining wall & swale	18,000										
COMMUNITY BUILDING & S												
27	CB - exterior windows and doors	8,246										
28	CB - asphalt shingles	3,675										
29	Main pool - structure	154,375										
30	Main pool - white coat	12,469	12,469			12,469			12,469			12,469
31	Main pool - coping & waterline t	12,012										
32	Main pool - motor, pump, straine	4,800	4,800			4,800			4,800			
33	Wading pool - structure	11,375										
34	Wading pool - white coat	919	919			919			919			919
35	Wading pool - coping & waterlin	2,600										
36	Wading pool - motor, pump, stra	1,200										
37	Pool - guard stands, ladders, rails	5,000										
38	Pool - diving board	1,850	1,850			1,850			1,850			1,850
39	Pool - equipment - valves, filters	8,000	8,000			8,000			8,000			8,000
40	Pool - concrete deck	94,600										
41	Pool - retaining wall	51,840										
42	Pool - post lights	10,800	10,800			10,800			10,800			
43	Pool - perimeter metal fence	7,380										
44	Pool - wading pool fence	1,820										
OTHER RECREATION FACILI												
45	Tobin tot lot equipment - slide/M	25,000										
46	Tobin tot lot equipment - spring	3,000										
47	Tobin tot lot - wood border	2,500	2,500			2,500			2,500			2,500
48	Whipple tot lot equipment - swim	5,000										
49	Whipple tot lot equipment - gym	3,700										
50	Whipple tot lot - wood border	1,925	1,925			1,925			1,925			1,925
51	DeCourcy tot lot equipment - sw	5,000										

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# REPLACEMENT RESERVE ALLOCATION

Strathmeade Square

October 2010

## CASH FLOW METHOD - THREE YEAR ALLOCATION OF REPLACEMENT RESERVES

Item #	Component	Estimated Replacement Cost	Allocation of Reserves on Deposit	2011			2012			2013		
				Deposits	Expenses	Year End Balance	Deposits	Expenses	Year End Balance	Deposits	Expenses	Year End Balance
52	DeCourcey tot lot equipment - sl	7,200										
53	DeCourcey tot lot equipment - sq	3,000										
54	DeCourcey tot lot - wood border	3,125	3,125			3,125			3,125			
55	Conquistador tot lot equipment -	5,000	5,000			5,000			5,000			3,125
56	Conquistador Tot Lot - wood bor	1,750	1,750			1,750			1,750			
57	DeCourcey gazebo	9,000										
58	Confessa gazebo	9,000										
59	Multipurpose court surface	18,750										
60	Multipurpose court surface	18,750										

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# REPLACEMENT RESERVE ALLOCATION

Strathmeade Square

October 2010

## COMPONENT METHOD - THREE YEAR ALLOCATION OF REPLACEMENT RESERVES

Item #	Component	Estimated Replacement Cost	Allocation of Reserves on Deposit	2011			2012			2013		
				Deposits	Expenses	Year End Balance	Deposits	Expenses	Year End Balance	Deposits	Expenses	Year End Balance
NORMAL COMPONENTS												
PHASE ONE CONCRETE CON												
1	P1 - Asphalt pavement - 30%	94,684	20,377	24,769		45,146	24,769		69,915	24,769		
2	P1 - Concrete & brick sidewalks	17,966	4,580	4,462		9,042	4,462		13,504	4,462		
3	P1 - Concrete & brick sidewalks	26,949	5,443	1,132		6,575	1,132		7,707	1,132		8,839
4	P1 - Concrete & brick sidewalks	35,932	5,354	874		6,227	874		7,101	874		7,975
5	P1 - Concrete & brick sidewalks	44,915	4,313	796		5,109	796		5,905	796		6,701
6	P1 - Concrete & brick sidewalks	53,898	2,320	770		3,090	770		3,860	770		4,629
7	P1 - Concrete curb & gutter - 3%	12,321	3,116	3,035		6,151	3,035		9,186	3,035		
8	P1 - Concrete curb & gutter - 4.5	18,331	3,702	770		4,472	770		5,242	770		6,012
9	P1 - Concrete curb & gutter - 6%	24,442	3,642	594		4,236	594		4,830	594		5,425
10	P1 - Concrete curb & gutter - 7.5	30,552	2,934	542		3,475	542		4,017	542		4,558
11	P1 - Concrete curb & gutter - 9%	36,662	1,578	524		2,102	524		2,625	524		3,149
PHASE TWO CONCRETE CON												
12	P2 - Asphalt pavement - 70%	220,929	29,260	23,959		53,218	23,959		77,177	23,959		101,136
13	P2 - Concrete & brick sidewalks	41,921	9,994	3,991		13,984	3,991		17,975	3,991		21,966
14	P2 - Concrete & brick sidewalks	62,881	11,659	2,134		13,793	2,134		15,928	2,134		18,062
15	P2 - Concrete & brick sidewalks	83,841	11,104	1,818		12,922	1,818		14,741	1,818		16,559
16	P2 - Concrete & brick sidewalks	104,802	8,328	1,723		10,051	1,723		11,773	1,723		13,496
17	P2 - Concrete & brick sidewalks	125,762	3,331	1,700		5,032	1,700		6,732	1,700		8,432
18	P2 - Concrete curb & gutter - 7%	28,515	6,798	2,715		9,512	2,715		12,227	2,715		14,942
19	P2 - Concrete curb & gutter - 10.	42,773	7,931	1,452		9,382	1,452		10,834	1,452		12,286
20	P2 - Concrete curb & gutter - 14'	57,030	7,553	1,237		8,790	1,237		10,027	1,237		11,264
21	P2 - Concrete curb & gutter - 17.	71,288	5,665	1,172		6,837	1,172		8,008	1,172		9,180
22	P2 - Concrete curb & gutter - 21'	85,546	2,266	1,157		3,423	1,157		4,579	1,157		5,736
GENERAL SITE IMPROVEME												
23	Asphalt trails	109,026	12,033	13,856		25,889	13,856		39,745	13,856		53,601
24	Wood stockade fencing (25%)	2,750	146	651		797	651		1,448	651		2,099
25	Wood retaining walls (25%)	2,730	145	646		791	646		1,437	646		2,084
26	Wetley retaining wall & swale	18,000	954	533		1,486	533		2,019	533		2,552
COMMUNITY BUILDING & S												
27	CB - exterior windows and doors	8,246	946	429		1,376	429		1,805	429		2,235
28	CB - asphalt shingles	3,675	195	218		412	218		630	218		847
29	Main pool - structure	154,375	26,579	6,086		32,664	6,086		38,750	6,086		44,835
30	Main pool - white coat	12,469	472	1,999		2,471	1,999		4,471	1,999		6,470
31	Main pool - coping & waterline t	12,012	152	593		745	593		1,338	593		1,931
32	Main pool - motor, pump, straine	4,800	954	1,282		2,236	1,282		3,518	1,282		
33	Wading pool - structure	11,375	1,958	448		2,407	448		2,855	448		3,304
34	Wading pool - white coat	919	35	147		182	147		329	147		477
35	Wading pool - coping & waterlin	2,600	33	128		161	128		290	128		418
36	Wading pool - motor, pump, stra	1,200	26	107		133	107		240	107		347
37	Pool - guard stands, ladders, rails	5,000	848	461		1,309	461		1,770	461		2,232
38	Pool - diving board	1,850	98	438		536	438		974	438		1,412
39	Pool - equipment - valves, filters.	8,000	1,483	1,086		2,569	1,086		3,656	1,086		4,742
40	Pool - concrete deck	94,600	10,023	4,027		14,050	4,027		18,078	4,027		22,105
41	Pool - retaining wall	51,840	5,493	2,207		7,700	2,207		9,907	2,207		12,114
42	Pool - post lights	10,800	2,615	2,728		5,344	2,728		8,072	2,728		
43	Pool - perimeter metal fence	7,380	880	591		1,471	591		2,062	591		2,652
44	Pool - wading pool fence	1,820	217	146		363	146		508	146		654
OTHER RECREATION FACILI												
45	Tobin tot lot equipment - slide/M	25,000	993	1,412		2,405	1,412		3,818	1,412		5,230
46	Tobin tot lot equipment - spring	3,000	40	156		196	156		351	156		507
47	Tobin tot lot - wood border	2,500	331	361		693	361		1,054	361		1,416
48	Whipple tot lot equipment - swim	5,000	596	400		996	400		1,397	400		1,797
49	Whipple tot lot equipment - gym	3,700	441	296		737	296		1,034	296		1,330
50	Whipple tot lot - wood border	1,925	255	278		533	278		812	278		1,090
51	DeCourcey tot lot equipment - sv	5,000	596	400		996	400		1,397	400		1,797

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# REPLACEMENT RESERVE ALLOCATION

Strathmeade Square

October 2010

## COMPONENT METHOD - THREE YEAR ALLOCATION OF REPLACEMENT RESERVES

Item #	Component	Estimated Replacement Cost	Allocation of Reserves on Deposit	2011			2012			2013		
				Deposits	Expenses	Year End Balance	Deposits	Expenses	Year End Balance	Deposits	Expenses	Year End Balance
52	DeCourcey tot lot equipment - sl	7,200	858	577		1,435	577		2,011	577		2,588
53	DeCourcey tot lot equipment - sp	3,000	40	156		196	156		351	156		507
54	DeCourcey tot lot - wood border	3,125	414	452		866	452		1,318	452		1,769
55	Conquistador tot lot equipment -	5,000	1,126	1,291		2,417	1,291		3,709	1,291		
56	Conquistador Tot Lot - wood bot	1,750	348	467		815	467		1,283	467		
57	DeCourcey gazebo	9,000	1,311	854		2,165	854		3,020	854		3,874
58	Contessa gazebo	9,000	954	671		1,624	671		2,295	671		2,965
59	Multipurpose court surface	18,750	1,324	1,584		2,909	1,584		4,493	1,584		
60	Multipurpose court surface			192		398	192		587	192		779

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# REPLACEMENT RESERVE STUDY APPENDIX

## 1. COMMON INTEREST DEVELOPMENTS - AN OVERVIEW

Over the past 30 years, the responsibility for community facilities and infrastructure around many of our homes has shifted from the local government and private sector to Community Associations. Thirty years ago, a typical new town house abutted a public street on the front and a public alley on the rear. Open space was provided by a nearby public park and recreational facilities were purchased ala carte from privately owned country clubs, swim clubs, tennis clubs, and gymnasiums. Today, 60% of all new residential construction - townhouses, single family homes, condominiums, and cooperatives - is in Common Interest Developments (CID). In a CID, a homeowner is bound to a Community Association that owns, maintains, and is responsible for periodic replacements of the roads, curbs, sidewalks, playgrounds, street lights, recreational facilities, and other community facilities and infrastructure.

The growth of Community Associations has been explosive. In 1965 there were only 500 Community Associations in the United States. According to the U.S. Census, there were 130,000 Community Associations in 1990. Community Associations Institute (CAI), a national trade association, estimates there were more than 200,000 Community Associations in 2000, and the majority of new construction throughout the country is in CIDs.

The shift of responsibility for billions of dollars of community facilities and infrastructure from the local government and private sector to Community Associations has generated new and unanticipated problems. Although Community Associations have succeeded in solving many short term problems, many Associations have failed to properly plan for the tremendous expenses of replacing community facilities and infrastructure components with limited life. When inadequate funding results in less than timely replacements of failing components, homeowners are exposed to the burden of special assessments, major increases in Association fees, and a decline in property values.

## 2. REPLACEMENT RESERVE STUDY - RSTUDY+

The financial planning tool designed to provide an Association with the information to plan for the expenses of replacing community facilities and infrastructure components with limited life is a Replacement Reserve Study.

This Replacement Reserve Study format is called RSTUDY+. It is intended to provide an Association with the most effective financial planning tool available. RSTUDY+ consists of the following components:

- **Replacement Reserve Report.** The *Report* contains a summary the financial data calculated by the enclosed *Replacement Reserve Analysis*, a general description of the community, a summary of the conditions observed during our site evaluation, and information about the *Replacement Reserve Inventory*.

# REPLACEMENT RESERVE STUDY APPENDIX

- **Replacement Reserve Analysis.** The *Analysis* is a tabular and graphical presentation of current Association funding and the Cash Flow and Component Method Replacement Reserve Funding calculations.
- **Replacement Reserve Inventory.** The *Inventory* lists the common components of the community evaluated by the *Replacement Reserve Analysis*, and includes estimated replacement costs, normal economic life and the remaining economic life for each component evaluated.
- **List of Recommended Repairs.** The *Repair List* itemizes defects we observed during our site evaluation. The recommended repairs are categorized by building trade and include an estimated cost.
- **Photographs and a Log of Photographs.** The photographs document observations made during the site evaluation.
- **Appendix.** This Appendix contains general information, definitions, and standard procedures.

The intent of the RSTUDY+ Replacement Reserve Study is to provide the Association with an inventory of the common components of the community, a general view of the condition of these components, and an effective financial planning tool to address the costs associated with the replacement of community facilities and infrastructure components with limited life.

- **Inventory of commonly owned components.** The *Replacement Reserve Inventory* lists the common components of the community which we have scheduled for replacement from the Replacement Reserves. Section D of the *Replacement Reserve Report* provides information about the basis of the *Replacement Reserve Inventory* and the components excluded from the Inventory.
- **Condition of common components.** The *Replacement Reserve Inventory* includes our estimates of the normal economic life and the remaining economic life. Section C of the *Replacement Reserve Report* provides additional information on several of these components including recommendations for maintenance and replacements.
- **Financial Plan.** Because many of the components owned by the Association have limited life and will require periodic replacement, it is essential the Association have an effective financial plan to provide for the timely replacement of these components, to protect the appearance and value of the community. In conformance with American Institute of Certified Public Accountant guidelines, the *Replacement Reserve Analysis* has calculated the minimum recommended contribution to Replacement Reserves by both the Cash Flow Method and the Component Method. The *Analysis* includes a graphic presentation of these methods and the Association current funding.

# REPLACEMENT RESERVE STUDY APPENDIX

## 3. REPLACEMENT RESERVE INVENTORY

The work on a Replacement Reserve Study starts with the development of the Replacement Reserve Inventory. In theory, the Inventory is a detailed listing of each and every component that requires replacement, for which the Association is responsible. In function, the Inventory only includes components whose replacement will be funded from Replacement Reserves. Replacement of components not included in the Inventory should be funded from sources other than Replacement Reserves.

**Identification of Reserve Components.** The Reserve Analyst has only two methods of identifying Reserve Components, information provided by the Association and observations made at the site. It is important that the Reserve Analyst be provided with all available information detailing the components owned by the Association. It is our policy to request such information prior to bidding on a project and to meet with the individuals responsible for maintaining the community after acceptance of our proposal. After completion of the Study, the Study should be reviewed by the Board of Directors, individuals responsible for maintaining the community, and the Associations accounting professionals. We are dependent upon the Association for correct information, documentation, and drawings.

**Exclusion of Reserve Components.** Every effort has been made to identify all common components, which should be reasonably considered for inclusion in the Replacement Reserve Inventory. This may result in the inclusion of some components in the Inventory that may reasonably be deleted. We will make such deletions at the direction of the Board of Directors. The Board of Directors should understand that future replacement of the deleted components should be funded from sources other than the Replacement Reserves. Generally, three kinds of components are excluded from the Inventory:

- **Small components.** For ease of administration, relatively low cost components are normally funded from the annual operating budget rather than making disbursements from Replacement Reserves. An obvious example is a light bulb, but examples might also include benches, trash cans, or miscellaneous signage. Our policy is to assume the use of operating funds for replacement of any component with a replacement cost less than \$1,000, unless requested otherwise by the Association.
- **Long lasting components.** Some Inventories include components with estimated economic lives exceeding 40 years. Some analysts would omit these components from the schedule entirely on the basis that the economic life of these components approaches the property as a whole. We recommend these components remain in the Inventory because deletion would expose the Association to the potential of a large unfunded liability should the replacements be needed at some time in the future. An example of this type of component is a swimming pool shell.
- **Components incorrectly included.** In an effort to include all reserve components which could reasonably be considered as "common," it is possible some components have been incorrectly included.

# REPLACEMENT RESERVE STUDY APPENDIX

**Estimating.** The final step in the development of the Inventory is the estimation of replacement costs, normal economic life, and remaining economic life for each component listed in the Inventory. In addition to observations made during the site evaluation, government standards, published estimating manuals, our experience with similar properties, and engineering judgment is used to develop these estimates.

## 4. REPLACEMENT RESERVE ANALYSIS

A Replacement Reserve Analysis is the financial evaluation portion of a Replacement Reserve Study. The enclosed Replacement Reserve Analysis calculates the minimum Recommended Annual Deposit to Reserves by two different methods, the *Component Method* and the *Cash Flow Method*. We recommended the Board of Directors discuss with their accounting professional, which method is more suitable for use by the Association.

- **Component Analysis.** We first calculate a Current Objective, which is the reserve amount that would have been accumulated by now had all of the components on the schedule been included from initial construction at their current replacement costs. We then distribute the actual reserves on hand, as reported by the Association, to the components on the schedule in proportion to the current objective figures. The annual deposit for each component is equal to the difference between the replacement cost and the reserves on hand, divided by the years of life remaining. The analysis is then repeated for as many future years as are covered by the study, assuming that replacements occur as forecasted. The Component Analysis ensures a regular buildup of reserves for every component on the schedule, but usually results in an annual contribution higher than that calculated by the Cash Flow Method.
- **Cash Flow Analysis.** We first determine a recommended Minimum Recommended Reserve Funding Level (defined below). We then distribute the estimated replacement costs for the next 50 years to the future years in which they are projected to occur, and calculate the minimum constant yearly contribution to the reserves necessary to keep the reserves on hand above the minimum reserve level. The Cash Flow Method assumes that the Association has the authority to use all of the reserves on hand for replacements as the need actually occurs. The Cash Flow calculated for annual contribution is normally somewhat less than that developed by the Component Method.

**Interest and Inflation - Adjusted Component and Adjusted Cash Flow Analysis.** It is possible to modify the Replacement Reserve Analysis to include inflation and interest calculations. Attempting to forecast future inflation and interest rates and the impact of changing technology is highly tenuous and we recommend that the Analysis be updated periodically, rather than attempt to project far into the future. We do, however, have the capability to produce an Adjusted Analysis. The inflation and interest rates used must be specified by the Association. We will provide more information on this type of analysis upon your request.

# REPLACEMENT RESERVE STUDY APPENDIX

**Repair and maintenance.** The Replacement Reserve Analysis addresses replacements only, not repairs or maintenance. If we develop a repair list, the life left is based on the recommended repairs being accomplished within one year of the study.

**Revisions.** Revisions will be made to the Replacement Reserve Analysis in accordance with the written instructions of the Board of Directors. There is no fee for the first revision, if requested in writing within three months of the date of the Study.

**Updating.** We recommend the Replacement Reserve Analysis be updated annually by the Board of Directors, to identify replacements which have actually occurred, the cost of actual replacements, and current Reserves on Deposit.

The Analysis should also be updated annually with information on current construction costs and changes in building technology. This update should be performed by independent, qualified individuals, experienced in the process of updating a Replacement Reserve Analysis. Updating an Analysis after a major replacement is made usually results in a significant reduction in the Minimum Recommended Annual Contribution to Replacement Reserves as calculated by the Component Method.

We also recommend the Board of Directors commission a new Analysis every three to five years. This analysis should be performed by independent, qualified individuals, experienced in the process of developing a Replacement Reserve Analysis.

## 5. LIST OF RECOMMENDED REPAIRS

**List of Recommended Repairs.** The List of Recommended Repairs identifies defects observed during the site evaluation. The repairs required to correct these defects are listed by trade and include the estimated cost of the repair.

**Remaining Economic Life.** The "Remaining Economic Life" listed for each component in the Inventory assumes that all repairs will be completed within the next 12 months, unless specifically stated otherwise. Failure to make timely repairs may result in significant inaccuracies in the Analyses.

**Repair Funding.** The Replacement Reserve Analysis assumes the costs of the repairs listed in the List of Recommended Repairs will NOT be funded from the Replacement Reserves. If the Association intends to fund these repairs from Replacement Reserves, the Analysis should be adjusted with the Replacement Reserves reduced by the funding used for the repairs.

**Trade Grouping.** Repairs are grouped by trade and cost estimates assume that all work by a given trade will be done together as a single project. If repairs are done piecemeal, the costs would be significantly higher.

# REPLACEMENT RESERVE STUDY APPENDIX

**Completion of Repairs.** The Replacement Reserve Analysis assumes that all repairs will be completed within the next twelve months unless stated otherwise in the Study. Deletion of certain repairs or delays in the completion of the repairs may result in major inaccuracies in the Replacement Reserve Analysis.

**Estimated Costs.** We used standard estimating manuals. Contractor proposals or actual cost experience may be available to the Association. We will adjust the Inventory to conform to your proposals upon the written request of the Board of Directors.

**Safety issues.** Should be given the highest priority and repairs done immediately.

## Replacement Criteria for frequently observed defects:

- Concrete pavement:
  1. Tripping hazard (0.5" or more height difference)
  2. Severe cracking (numerous or over 1/8 inch wide)
  3. Severe spalling
  4. Uneven riser heights on steps
  5. Steps with risers in excess of 8.25"
  
- Asphalt pavement:
  1. Large cracks, settled or heaved areas. In relatively isolated areas, these should be patched by removing the affected asphalt, inspecting and repairing the substrate, and pouring a new top coat. If extensive (more than 60% of the pavement affected), it is probably more economical to replace the entire section. This situation would be the basis for an early projected replacement in the Replacement Reserve Schedule.
  2. Minor cracking. These cracks should be cleaned of debris and plant growth and then filled with an appropriate sealing compound to prevent water infiltration through the asphalt into the base. This repair should be done now and then on a yearly basis. Note that this is a different process from seal coating discussed below.
  3. Crankcase oil. Long term exposure to oil or gasoline breaks down asphalt. Spill areas should be cleaned, or if deterioration has penetrated the asphalt, patched.
  4. Seal coating. Seal coating should be done every three to five years. To be effective in extending the life of the asphalt, the repairs described above need to be done first. Seal coating is a maintenance item and is not normally included in the Replacement Reserve Inventory or on the List of Recommended Repairs.
  
- Roofing:
  1. Missing, badly worn or limited life shingles or surfaces
  2. Deteriorated fire resistant treated (FRT) sheathing
  3. Inadequate attic ventilation and insulation
  4. Problem gutters, roof drains and downspouts

# REPLACEMENT RESERVE STUDY APPENDIX

## 6. DEFINITIONS

**Complete Cycle - Years.** (Interval Replacement only) The number of years after Initial Replacement required to achieve 100% replacement.

**Current Objective.** As of the study date, the dollars that would have been accumulated in the designated account of a component, had that component been included in the Replacement Reserve Inventory from the time of construction at the current replacement cost. Calculation:

$$\text{Total Replacement Cost} \times \left[ \frac{\text{Normal Economic Life} - \text{Remaining Economic Life}}{\text{Normal Economic Life}} \right]$$

Note that all three elements of this calculation are estimated.

The Total Current Objective is the sum of the current objectives for each component included in the Inventory and would be the Association's Replacement Reserve if they were fully funded by the Component Method.

**Initial Replacement - Years.** (Interval Replacement only) Estimated number of years until the replacement cycle is expected to begin.

**Interval Replacement Component.** An Interval Replacement Component is not replaced as a whole, but portions of the component are replaced at intervals.

**Minimum Recommended Annual Contribution to Replacement Reserves.** The requirement for annual contribution to reserves calculated by both the Component and Cash Flow Method.

**Minimum Recommended Reserve Funding Level (Cash Flow Analysis only).** The Cash Flow Analysis calculates a Minimum Recommended Annual Contribution to Replacement Reserves that will, based upon the Inventory, prevent Reserves from dropping below this prescribed level. This value is established as a percentage of the Estimated Value of All Reserves Components included in this Analysis by the Reserve Consultant, based on the conditions of the community and considering the effects of a high cost component having a shorter than estimated Remaining Economic Life.

**Normal Economic Life.** Estimated number of years that a new component should last until it has to be replaced.

**Normal Replacement Component.** A component of the property that, after an expected economic life, is replaced in its entirety.

**Number of Years of the Study.** In the Component and Cash Flow Methods, number of years into the future for which expenditures are projected and reserve levels calculated. This number should be large enough to include the projected replacement of every component on the schedule at least once. The RSTUDY+ Analysis projects data over a 50 year period. The graphical presentation includes the first 30 years of this data.



# REPLACEMENT RESERVE STUDY APPENDIX

**Remaining Economic Life.** Estimated number of years from the Study Year until the component is expected to require replacement. In theory, this should be the difference between the Normal Economic Life and the age of the component. It may vary because of maintenance practices, solar orientation, technological development, regulatory action, acts of God, or other reasons.

**Replacement Reserves Reported to be on Deposit.** Amount of accumulated reserves available to the Association.

**Replacement Reserve Study.** An analysis of the components of the common property of the Association for which a need for replacement should be anticipated within the economic life of the property as a whole. The analysis involves estimation for each component of its replacement cost, economic life, and life remaining. The objective of the study is to calculate a recommended annual contribution to the Association's Replacement Reserves.

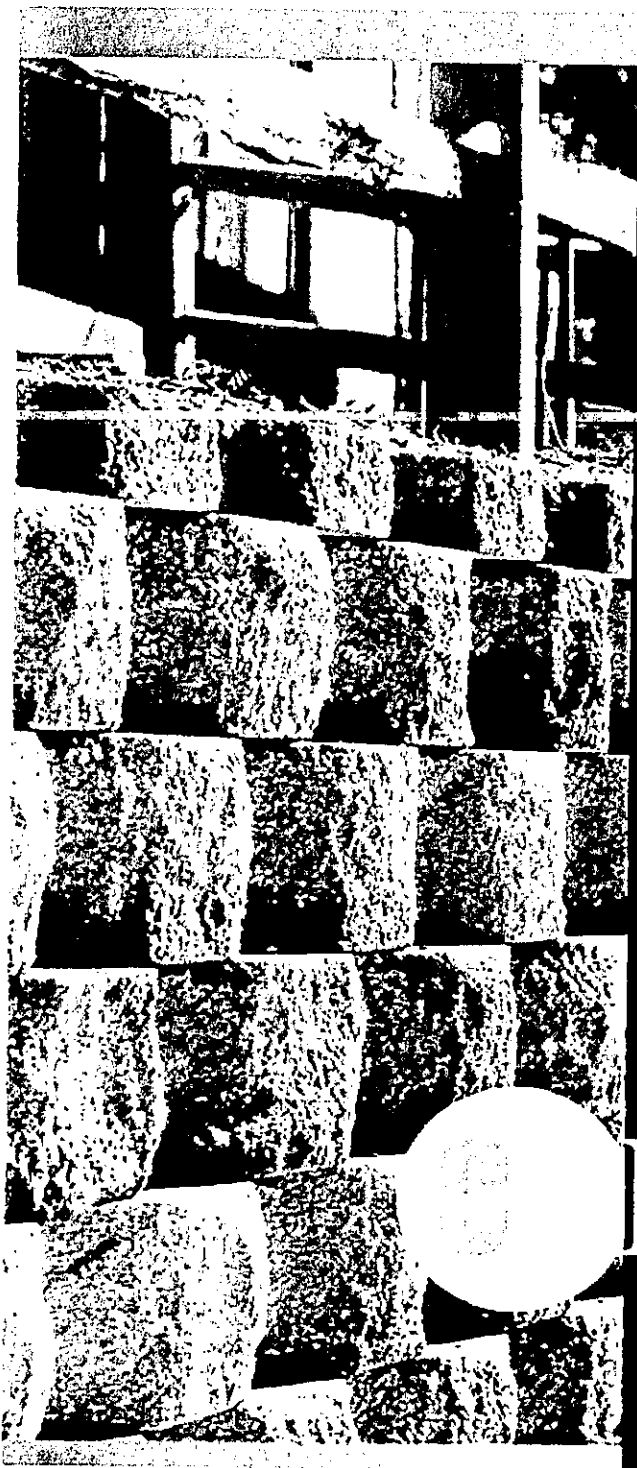
**Total Replacement Cost.** Total of the Estimated Replacement Costs for all components on the schedule.

**Transition Year.** In the cash flow analysis, a year in which the reserves on hand are projected to fall to the Minimum Recommended Replacement Reserve Funding Level.

**Unit Cost.** Estimated replacement cost for a single unit of a given component on the schedule. We use standard estimating manuals and judgement.

**Unit of Measure.** We use the following abbreviations:

EA: each            LF: lineal feet            LS: lump sum            SF: square feet



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Concrete masonry walls have always been known for their durability. Now concrete masonry segmental retaining walls (SRWs) are laying claim to that fame as well. With increased use in various applications, SRWs have proven their strength and longevity. They also provide an attractive solution, especially when compared with treated timber wall alternatives. Rotting and collapsing walls, common with timber, are avoided with segmental retaining walls. Proper design and installation of SRWs make a maintenance-free, long-lasting wall a reality.

Whether used to replace failing timber or on new construction, concrete masonry segmental retaining walls are an economical, durable solution to all types of earth retention.



# Profiles

Segmental Retaining Walls:  
The Total Solution

## Penn Oaks Hill Apartments

When the existing timber retaining walls at Penn Oaks Hill Apartments in Drumright, Oklahoma, needed replacement, SRWs were a clear choice. "The system was the only solution for providing an aesthetically pleasing, durable, and economical wall for the owner," stated project architect, Mike Chas. MA, of Chase Letters Hewitt Architects. "The contractor was able to save a variety of existing trees by leaving them in place and installing segmental units at different locations. As a result, this wall is not only an eyesore to the community.

The old retaining walls were built with concrete and built in the center. The old walls showed signs of rotting, over time, and collapse despite having been built with post-tension reinforcement as well. Both new and SRWs were considered as replacements.

The Drumright Housing Authority chose the SRW system after considering several factors: aesthetics, durability, and longevity, life cycle costs, and design flexibility.

### Aesthetic

The textured face and integral color of SRW units provide a classic, natural stone look that lasts a lifetime. Timber on the other hand begins to change appearance immediately, especially if not cleaned and treated annually. The timber walls at Penn Oaks Hill were seriously

### Durability and Longevity

SRW units do not decay or splinter like timber walls. Nor do SRWs need replacement approximately every ten years. Industry standards for compressive strength and density of SRW units are more stringent than those for standard concrete masonry units. The result is a product which should last beyond the 50-year lifetime of concrete masonry, according to an SRW historian. The timber walls at Penn Oaks Hill were only 12 years old.

### Cost

SRWs provide a permanent, attractive, maintenance-free appearance in a cost-effective manner. The installed cost of the SRWs at the Penn Oaks Hill Apartments is \$16 per sq. ft. The average installed cost for treated wood walls is slightly over \$14 per sq. ft. When annual costs of recommended cleaning and treating timber walls are added to the installed cost, the total cost of SRWs, when life cycle costs are considered, segmental retaining walls are the clear winner.

### Life-Cycle Cost Analysis

	Treated Timber	SRW
Expected Life Span	10 years	50 years
Initial Installed Cost	\$14/sf	\$16/sf
Replacement Cost for 50-year life	\$42/sf	\$0/sf
Life-Cycle Cost (50 years)	\$56/sf	\$16/sf

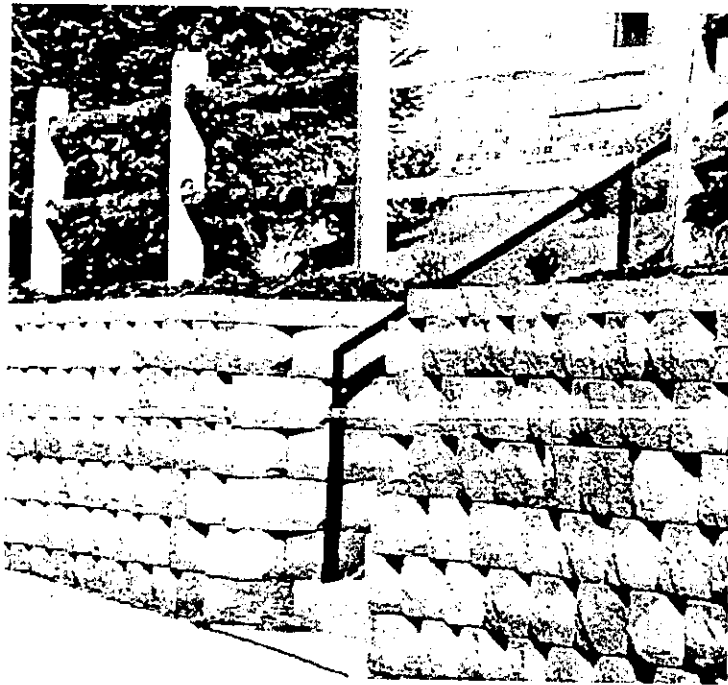
The cost is an estimate of cost to last annual maintenance costs are added with timber walls and do not include other items. The actual life span of segmental retaining walls could be much longer.

The cost is based on the following:

### Design Flexibility

The segmental retaining walls also easily accommodated the incremental changes in grade and curves of Penn Oaks Hill. The serpentine walls, possible only with SRWs, gave an interesting look to the project and allowed many trees to be saved.





## Battery Heights Condominiums

Property manager, Jeff Draper became concerned when the concrete segmental retaining walls at the Battery Heights Condominium complex began to lean and buckle. Although the walls were only 20-30 years old, Armstrong Management was unable to replace the walls before an accident occurred.

The walls extended roughly 185 ft and averaged four feet high. Bids were initially taken for replacement of the fail-

ing timber walls with another timber retaining wall. A local segmental retaining wall manufacturer also submitted a bid for the project. Draper was pleasantly surprised by the price of the system. Due to the increased cost of lumber, the installed costs of a treated timber wall and a segmental retaining wall were nearly the same. The SRW, however, provided long-term durability unmatched by the timber wall system.

Average Bid Prices	Treated Timber Walls	SRW
Estimated Life Span	25 years	80-100 years
Initial Installed Cost	\$17,000-\$18,000	\$21,000-\$22,000
Replacement Cost for 100-year life	\$34,000-\$36,000	minimal
Life Cycle Cost (100 years)	\$51,000-\$54,000	\$21,000-\$22,000

*Armstrong Management, Inc. is a full-service property management firm. This comparative estimate does not include the cost of the SRW system, which is available in a variety of sizes and colors for under \$1 million.*

"People like the aesthetics and are favorably impressed [with the new segmental retaining wall]." With minimal maintenance, the residents of Battery Heights will have an attractive wall that lasts a lifetime."

-Jeff Draper,  
property manager

Above:

Building an SRW was not only more economical than timber in the short run, but long-term maintenance costs of SRWs are far lower as well.

Opposite, above:

Decaying timber walls at the Penn Oaks Hill Apartments needed repair or replacement.

Opposite, below:

The new SRW is expected to last well over 75 years.

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## Prince George's County, Maryland discourages the use of timber retaining walls

Complaints from homeowners and property managers regarding the failure of treated timber walls, and the high costs associated with replacing the walls, particularly for those walls of significant height, prompted the Prince George's County, Maryland, code officials to act. In many cases, timber retaining walls were failing after only ten years or less, long before the manufacturer's estimated service life. Homeowners and property managers were left with high costs to replace the walls, according to plan reviewers with the Prince George's County Code Office. "Permits have been required for (retaining) walls over two feet high" for a long time. But in 1994, code officials began to interpret this requirement to discourage the use of timber retaining walls over two feet in height. "Segmental retaining walls provide a reasonably priced alternative, and they last much longer," says one plan reviewer.



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