



Report of
Reserve Study Update
for

**WESTERLEY HOMEOWNERS
ASSOCIATION**
Sterling, Virginia



FEA Report No.01.2008.005561
June 9, 2008

Facility Engineering Associates, P.C.



June 9, 2008

Westerley Homeowners Association
46845 Northbrook Way
Sterling, Virginia 20164

ATTENTION: Mr. Bill Reynolds

SUBJECT: REPORT OF CONDITION ASSESSMENT AND RESERVE STUDY
Westerley Homeowners Association
Sterling, Virginia
FEA Project No.: R01.2008.005561

Dear Mr. Reynolds:

Facility Engineering Associates, P.C. (FEA) has completed this draft report of our Reserve Study Update for the Westerley Homeowners Association (HOA) in Sterling, Virginia.

The Westerley HOA maintains three separate reserve funds. The Common Reserves are used to fund repairs and replacements of common elements used by the entire community, including swimming pool, pool bathhouse, fencing and entrance signage. The Townhouse Reserves include elements within the townhouse sections such as asphalt pavement, sidewalks, curb and gutter, street signage, and lighting. The Single-Family Home Reserve Fund elements include the sidewalks and curb and gutter lining the single-family home areas.

According to information provided by Legum & Norman, estimated reserve fund balances and annual contributions to each fund to date are as follows:

Reserve Fund	August 1, 2008 Projected Starting Balance	Fiscal Year Ending (FYE) 2008 Contribution
Common	\$81,191	\$16,090
Townhouse	\$97,186	\$18,240
Single-family Home	\$40,370	\$7,380

An average interest rate of 3% is earned on the community's reserve investments, and the interest rate earnings are put into the reserve fund.

Currently, there is an annual contribution of \$16,090 to the common reserve fund. Our analysis indicates that a planned annual increase of 4% to the reserve fund contribution beginning in FYE 2010 should provide sufficient funding to meet projected expenditures.

The annual contribution toward the townhouse reserve fund is currently \$18,240. Our analysis indicates that this contribution level should adequately fund projected expenditures.

The single-family home reserve fund currently has an annual contribution of \$7,380. Based on our analysis, this contribution level will result in reserve balances which will significantly exceed projected expenditures. The Board may wish to consider a reduced annual contribution for the single-family home reserves.

Updates to the Reserve Study are recommended every three to five years, so adjustments to funding can be made pending the results of those updates.

If you have any questions about the report or would like to schedule a meeting with the Board, please contact us at your convenience. We will submit a final report following receipt of comments on this draft report. If no comments are received within 90 days, the report will be issued as a final report.

Very truly yours,
FACILITY ENGINEERING ASSOCIATES, P.C.

Natasha Jurakhan, FMP
Facility Management Consultant

Thomas W. Larson, P.E., R.S.
Principal

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INTRODUCTORY SUMMARY

Westerley is a residential community of townhomes and single-family homes, off of Augusta Drive in Sterling, Virginia. Development of the community began in 1997 and was completed in 2001. The community includes a total of 313 residential lots: 123 single-family homes and 190 townhouses. Community pool facilities are located off Augusta Drive near the entrance to the community.

Westerley maintains three separate reserve funds. The Common Reserves are used for repair and replacement of community elements used by the residents, including such amenities the swimming pool facilities, children's playground, site fencing, and entrance sign. The Townhouse Reserves are used to fund repairs to the streets, sidewalks, curb and gutter, and storm water drainage features in the townhome sections of the community. The Single-Family Reserves are used to fund such elements as the sidewalks, and curb and gutter.

Facility Engineering Associates, P.C. (FEA) was requested to perform a Reserve Study Update of the initial Condition Assessment and Reserve Study performed in 2004. This effort included an evaluation of the condition of the common elements of the community, and an estimate of life-cycle costs and reserve expenditures for the common elements. This report summarizes our findings, provides recommendations for repairs and replacements, and includes a Reserve Fund Plan for anticipation of future spending needs.

Tom Larson and Natasha Jurakhan of FEA visited the community on April 24th, 2008 to assess the condition of the elements under the responsibility of the community association. The survey was visual in nature, and involved no destruction to gain access to hidden conditions. Mr. Mike Marcolla, the community manager, provided access to the pool area and information regarding previous expenditures.

This report summarizes our findings, provides brief descriptions of the components, describes their condition, provides recommendations for corrective action, and includes an update to the initial Reserve Fund Plan performed in 2004 for anticipating future spending needs. Photographs of observed conditions are provided in the attached appendix. All information presented is based on the condition of common elements at the time our survey was conducted. Reserve Fund Plan cost data is based on published construction cost data, conversations with local contractors, cost information provided by the Community Manager for previous and planned expenditures, and experience with similar projects. Actual construction costs can vary significantly due to time of season, material costs, material availability, unforeseen conditions, and other factors beyond our control.

COMMON RESERVES

The Common Reserve fund covers expenditures for the swimming pool facilities, as well as site features throughout the community such as foot paths, fencing, retaining walls, storm water management ponds, and some site signage. Since the community was developed between 1997 and 2001, we have assumed that a majority of the common elements included with the Common Reserves were installed around 1997, with the exception of two of the four storm water retention ponds located in the single-family home division.

1.0 Swimming Pool Facilities

Features discussed in this section include both the large swimming pool and the smaller wading pool, as well as the bathhouse and all equipment related to the operation of the pools.

1.1 Description

Pool Area

The pool area at Westerley is surrounded by a vinyl-covered, 6-foot-high chain-link fence. FEA measured approximately 380 linear feet of this fencing. This fencing includes one 8-foot-wide double gate. A 4-foot-high chain-link fence, also vinyl-covered, surrounds the wading pool, with a swinging gate and is approximately 40 feet long.

The concrete deck surrounding both the main swimming pool and the wading pool consists of rectangular sections typically 10 feet by 14 feet in size. Based on our measurements, we estimated a total concrete area of 5,750 square feet. Penetrating the deck are five small metal storm water drains.

The main pool is rectangular in shape, with approximate dimensions of 75 feet by 42 feet, for a total surface area of about 3,150 square feet (reference Photograph 1 in Appendix D). The linear perimeter of the main pool is roughly 235 feet. The wading pool is circular in shape, with an approximate circumference of 50 feet and surface area of roughly 200 square feet (reference Photograph 2 in Appendix D).

Coping stones surround the edge of the main pool. These stones are typically 24 inches wide and 12 inches deep. According to the markings on the coping stones, the main pool depth varies from three and a half feet to five feet.

The pools are constructed of whitecoated concrete with some decorative inlaid tiles. Tiled lane markers are in place at the bottom of the main pool.

The main pool has a Merlin brand cover with tiebacks anchored into the concrete pool deck. A similar cover is provided for the wading pool.

Outdoor furniture in the pool area includes nine circular picnic tables with plastic tops, three rectangular plastic picnic tables with metal bases, and three wood picnic tables with

metal bases. There are also three garbage can holders made of metal tubing with green and white vinyl strapping. Chairs and loungers with the same green and white vinyl strapping are also located on the pool deck (reference Photograph 3 in Appendix D). We counted about 50 chairs and 50 loungers. We also noted that two aluminum-framed lifeguard stands have been installed near the main pool.

Bathhouse

Adjacent to the pool is a small bathhouse structure where changing rooms are located (reference Photograph 4 in Appendix D). The bathhouse has vinyl siding and a moderately-pitched asphalt-shingled roof. About 150 linear feet of aluminum gutters and half a dozen downspouts provide for drainage off the roof.

Within the bathhouse are eight metal doors, typically 3 feet wide and 6'-8" tall. The front entrance and main rear exit doors are double-paneled 15-lite wood and glass entry doors. These units are each 6 feet wide and 6'-8" tall. Vinyl double-hung windows with frosted glass are used to bring natural light into the bathhouse. There are two 2-foot-wide by 4-foot-high windows at the rear of the bathhouse, and four 2½-foot-wide by 5-foot-high windows in other locations.

The walls of the bathhouse were painted drywall. Floors in the bathhouse were painted concrete. Interior furnishings included an upper and lower row of cabinets in the office area.

Mechanical

We observed one exhaust fan in each bathroom, located above the toilet stalls.

The main pool is serviced by three Purex Triton Triton II Commercial TR-100 C sand filters, a Sta-Rite PKG-184 strainer, and a 7.5 horsepower Sta-Rite pump/motor assembly. Location of the pump/motor assembly next to a wall prevented further identification of this item. This system utilizes a series of seven valves. The wading pool is serviced by a Purex Triton Triton II sand filter, a Purex Triton PAC-FAB 2" Hi-Flow strainer, and a Purex Triton Challenger pump with a ¾ horsepower Centurion motor by Magnatec. There are only 2 valves for this system, a skimmer valve and a return valve. Operating instructions for both systems are posted on the wall of the equipment room.

Both pools are treated with a 10% sodium hypochlorite mixture. This agent is stored in 55-gallon drums and is added to the pool water through Mec-O-Matic inflow regulators. There are separate supply tanks and flow regulators for each pool.

Electrical

Lighting in the bathhouse consisted of about 23 circular ceiling-mounted fixtures. There are fluorescent tube-style fixtures in the pool filter room as well. We noted six sets of emergency lights. Five of these included illuminated exit signs.

Site lighting included exterior and walkway lighting. Exterior lighting consisted of circular wall-mounted fixtures; five of these are located on the rear side of the building, and two are located on the front side of the building. Along the sidewalk in front of the pool house are two lights consisting of spherical glass globes mounted on 8-foot-tall metal poles.

Underwater pool lights were also observed.

Plumbing

A 119-gallon State Sandblaster, self-cleaning, electric domestic water heater is located in the mechanical room in the bathhouse. The water heater was installed around 2000.

Each bathroom includes one handicapped-access shower, one general use shower, two sinks, and two toilets. The men's bathroom also includes one urinal. There is a small janitor's closet accessible from the men's bathroom which includes one utility sink. On the exterior of the building are two wall-mounted drinking fountains. Between the picnic area and the pool area are two small foot showers. The replacement of the plumbing fixtures in the bathhouse and around the pool area are included in the renovation costs budgeted for 2022.

1.2 Condition

Pool Area

Fencing around the pool appeared to be in good condition. The chain link fence installed around the tot lot area adjacent to the pool was reportedly installed in 2007. Concrete surrounding the pool was in fair condition. We observed one area of severe deterioration near one of the fence posts that was in the same condition as our last visit in 2004 (reference Photograph 5 in Appendix D). No settling of the pool deck was observed. Coping stones around the edges of both pools appeared to be in good condition.

The pool furniture appeared to be in fair condition. The vinyl strapping on the pool furniture was faded or discolored due to either sun exposure or dirt. The bases of the tables have started to rust, causing some staining on the pool deck (reference Photograph 6 in Appendix D).

The picnic tables and garbage cans were in good condition. The lifeguard stands were observed to be in good condition.

Our experience indicates that swimming pools typically undergo a major renovation after approximately 30 to 35 years of service life.

Bathhouse

A renovation in 2007 to the bathhouse included repairs to the exterior siding, ceiling, drywall, and lock replacement. No leaks or staining were visible on the exterior of the building, the bathhouse roof was in good condition, and gutters and downspouts appeared to be functional. The vinyl siding appeared to be in good condition as well. Overall, the bathhouse was in good condition.

The bathhouse interior walls were painted in 2007 and were in good condition. However, paint on the concrete floor was peeling in some areas. Metal doors and wood entry doors were in good condition.

Mechanical

New bathroom exhaust fans were reportedly installed in 2007 and appeared to be in good condition.

It was reported that all pool filters were recently replaced in 2007 and pool equipment was in good condition showing no signs of distress.

Electrical

Generally, electrical systems and equipment have a typical service life of from 40 to 50 years with minimal maintenance. A preventive maintenance program would involve inspection of all switchgear, panelboards and connections, cleaning (where required) and retorquing connections. *(It is important to note that arcing failures occur where connections have loosened as a result of thermal cycling.)* The preventive maintenance program is considered an operational issue, and is not included in the reserve tables.

Exterior wall-mounted lights were discolored and in fair condition. Other exterior walkway lighting and interior lighting appeared to be in good condition.

Plumbing

The electric water heater was in good condition.

Plumbing fixtures appeared to be in good condition.

1.3 Recommended Repairs/Replacements

The following repairs or replacements have been scheduled in the tables in the attached appendices.

Pool Area

- 1.3.a - The chain-link fences at the pool area should have an estimated useful life of 20 years. The reserve tables include a lump sum of \$10,500 to replace the fences in 2017.
- 1.3.b - The reserve tables include an allowance of \$4,500 every five years to repair or replace cracked, damaged, or settled sections of the concrete pool deck. The first cycle of repairs is projected in 2012. This is based on replacing about 10% of the total concrete area every five years. Periodic routing and sealing of cracks that develop is considered a maintenance issue.
- 1.3.c - Both pools should be budgeted for whitecoating every eight years, starting in 2010. Our opinion of cost for whitecoating both pools is \$16,500. This includes an allowance to replace tiles if necessary at the time of whitecoating.
- 1.3.d - Pool coping has an expected service life of at least 15 years. Replacement of the pool coping stones will probably occur on an as-needed basis, rather than all at once. We have included an allowance of \$2,000 every five years starting in 2010 for coping stone replacements.
- 1.3.e - The reserve tables include an allowance of \$7,000 to purchase new pool covers for the main and wading pools every 10 years.
- 1.3.f - We have included a sum of \$100,000 for a major renovation of both pools. This work is shown in 2031 in the tables and may include repair of cracks in the pool structures, replacement of piping under the deck, and other major repairs.
- 1.3.g - We recommend replacement of the picnic tables and garbage cans at the pool area every 15 years. Our opinion of cost to replace the tables and garbage cans is \$7,000.
- 1.3.h - Pool furniture should be replaced or restrapped on an as-needed basis. We have included an allowance of \$5,000 every five years to replace or re-strap furniture, starting in 2009.
- 1.3.i - Replacement of lifeguard stands and ladders into the pool should be anticipated every 20 years. Our opinion of cost to replace these items is \$6,000, which is based on \$2,000 for each lifeguard stand and a total of \$2,000 for the ladders.

Bathhouse

- 1.3.j - The reserve tables include an allowance of \$4,200 to replace the vinyl siding of the bathhouse after 30 years. This expenditure is projected in 2027.
- 1.3.k - The roofs should have an estimated useful life of 20 years. Our opinion of cost to replace the roof is \$6,600, including replacement of gutters and downspouts. Our opinion of cost also includes removal of the existing roof.

- 1.3.l - We have included an allowance of \$4,000 for replacement of the interior and exterior doors at the bathhouse, every 20 years starting in 2022.
- 1.3.m - We have included an allowance of \$1,600 to replace the windows at the bathhouse. For reserve funding purposes, we recommend budgeting for this project after 30 years of service life, to coincide with vinyl siding replacement.
- 1.3.n - We recommend budgeting for another bathhouse renovation around 2022. We have included \$35,000 for the bathhouse renovation, which incorporates such items as replacing plumbing fixtures, lighting fixtures, bathroom partitions and floor coverings.

Mechanical

- 1.3.o - Replacement of pool filtration equipment will mostly likely occur on an as-needed basis rather than all at once. We have included an allowance of \$2,500 every five years for pool equipment repairs and replacements.

Electrical

- 1.3.p - The reserve tables include a cost of \$2,800 in 2011 for the replacement of the wall-mounted exterior lighting at the bathhouse. The reserve tables include a cost of \$2,000 in 2022 for the replacement of the pole-mounted fixtures. Replacement of lamps is considered routine maintenance. Interior lighting fixtures are changed due to aesthetic preferences, rather than failure, and would be included in the bathhouse renovation.

Plumbing

- 1.3.q - The 119-gallon electric water heater in the bath house has a typical service life of 15 years, and is scheduled for replacement in 2015. Our opinion of cost to replace the water heater is \$5,000.

2.0 Amenities and Site Features

2.1 Description

Common elements at the community include footpaths, site fencing, a retaining wall, and storm water retention ponds. The Common Reserves fund the repairs and replacements for the pool area parking area, the sidewalk running along Augusta Drive, and the wood fence along the northeast side of the community off of Colby Court. Additional items that are the responsibility of the community include the entrance monument, the community information board, and “pet stations”.

Asphalt foot paths approximately four feet wide are found throughout the community. A total of about 1,350 linear feet of pathways were observed during our site visits.

Fencing at the site includes approximately 725 feet of split-rail fencing around the storm water retention ponds and 1,000 linear feet of sound-attenuation fencing along Route 7.

The split-rail fencing consists of weathered timbers pocketed into round posts (reference Photograph 7 in Appendix D). The sound-attenuation fence is 6 to 8 feet high.

The retaining wall that is the responsibility of the HOA is a modular block retaining wall roughly 130 feet in length with a height of roughly 3 feet; the wall is located behind the storm water retention pond on the west side of Backwater Drive (reference Photograph 8 in Appendix D).

Four storm water retention ponds are located throughout the community. Concrete overflow risers are located in each of the retention ponds (reference Photograph 9 in Appendix D).

The Common Reserves fund the repairs and maintenance of the pool parking area. The paved area is approximately 595 square yards, and is lined with concrete curb and gutter. There are lined parking spaces for the pool area with one accessible parking space. There is a concrete sidewalk running along the southwest side of Augusta Drive, which was measured to be approximately 1,250 linear feet, or a total of 5,000 square feet.

There is a 6-foot-high wood fence that runs along the northeast of the Westerley property behind Colby Court and Antioch Place. The length of the fence is approximately 555 linear feet.

The entrance feature for the community is a curved stone wall roughly 35 feet in length. The feature has a stone inset carved with 'WESTERLEY' and is surrounded by stone masonry (reference Photograph 10 in Appendix D). The feature is situated on a heavily-landscaped area with stone masonry columns lining the community footpath. The masonry columns connect with wood three-rail fencing.

The community information board stands near the pool parking lot with a plastic viewing window (reference Photograph 11 in Appendix D). The information board is mounted on metal posts and has a metal frame.

There is an aluminum bike rack by the pool parking lot.

We observed six "pet stations" within the community. Each pet station consists of a pole-mounted wastebasket, above which is mounted a dispenser providing plastic baggies (reference Photograph 12 in Appendix D).

2.2 Condition

Asphalt walking paths in the community were in fair condition. Several areas with cracking and minor signs of deterioration were visible.

The split-rail fencing lining the storm water retention ponds was observed to be in fair condition. Instances of some splitting in the wood and missing rails were observed (reference Photograph 13 in Appendix D).

The sound-attenuation fence was in fair to good condition. However, there were some instances where we noticed missing boards.

Typically, minor expenditures are anticipated for the storm water management ponds beyond normal maintenance costs, which should include removal of excessive vegetation, and re-seeding of eroded areas. Repairs to the concrete overflow structures may be required in the future.

The pool parking area was in fair condition, as was the concrete curb and gutter surrounding the asphalt pavement. Instances of some cracking in the asphalt were observed (reference Photograph 14 in Appendix D). We observed that the paint on the fire lanes was faded and peeled (reference Photograph 15 in Appendix D). The sidewalk lining Augusta Drive was in overall good condition with the exception of some cases where some the sidewalk sections have settled, causing a potential trip hazard (reference Photograph 16 in Appendix D).

The 6-foot-high wood fence that runs along the northeast of the Westerley property was in overall fair condition. It appeared that the fence was installed before the Westerley community was developed. A significant amount of split wood was observed and sections of the fence were leaning.

The entrance feature appeared to be in fair condition. Occasional repairs to deteriorated mortar joints or damaged stone should be anticipated. The entrance feature appeared discolored and there were instances of dislodged stones from the stone base that encased the sign (reference Photograph 17 in Appendix D).

The metal community information board appeared to be in fair condition. Some corrosion was noted on the metal posts, and the viewing window appeared to have some discoloration.

The bike rack was in good condition.

Pet stations appeared to be in good condition; however, there were instances of minor rusting.

2.3 Recommended Repairs/Replacements

The following repairs/replacements have been scheduled in the tables in the attached appendices.

- 2.3.a - Rather than scheduling a full replacement of the asphalt footpath, we have included an allowance in the reserve tables for periodic repairs or replacements to the footpath. The reserve tables include an allowance of \$2,000 every three years for necessary asphalt repairs.
- 2.3.b - The reserve tables include a sum of \$10,875 to replace the split-rail fencing throughout the community in 2017. Minor repairs to the fencing are considered an operational expense.
- 2.3.c - The reserve tables include an allowance for repairs and sealing and painting of the sound-attenuation fence. Our opinion of cost for the painting and repairs is \$7,500, and we have included it in the reserve tables every five years.
- 2.3.d - The reserve tables include a sum of \$25,000 to replace the sound-attenuation fence in 2017.
- 2.3.e - The reserve tables include a sum of \$11,700 for replacement of the modular block retaining wall in 2027.
- 2.3.f - We have included a sum of \$10,000 in the reserve tables for major maintenance and repairs to the storm water management ponds every 10 years. This sum would cover the costs of re-grading, removal of vegetation, and repair of concrete structures, as necessary, starting in 2010.
- 2.3.g - The pool parking area should be seal coated and re-stripped every five years. Our opinion of cost to seal coat and re-stripe the parking area is \$744, provided the work is scheduled at the same time as other pavement work in the townhome sections. Otherwise, the cost will be significantly higher due to mobilization costs for a small area. We recommend budgeting for this project beginning in 2009 and every five years thereafter, except when an overlay is placed. This cost should cover minor patching and crack filling.
- 2.3.h - Periodic full-depth asphalt repairs are included in the reserve tables every five years. These repairs typically involve removing failed pavement, improving the sub-grade if necessary, and replacing the failed asphalt. The tables include an allowance to repair approximately 30 square yards of pavement, or about 5% of the total pavement area, every five years. Our opinion of cost for the full-depth repairs is \$1,050, or \$35 per square yard, provided the work is scheduled at the same time as other pavement work in the townhome sections.
- 2.3.i - Pavements should normally last 20 years before resurfacing (mill and overlay) is required, based on expected service life. Our opinion of cost to overlay the asphalt parking area at the pool in 2017 is \$7,140.

- 2.3.j - Concrete curb and gutter sections along the pool parking area will typically be replaced on an as-needed basis rather than all at once. The reserve tables include an allowance of \$300 to replace damaged or settled concrete curb and gutter sections, provided this work is scheduled in conjunction with other concrete repair work done at the property.
- 2.3.k - The sidewalk along Augusta Drive will typically be replaced on an as-needed basis rather than all at once. The reserve tables include an allowance of \$650 to replace damaged or settled concrete sidewalk sections, provided this work is scheduled in conjunction with other concrete repair work done at the property.
- 2.3.l - We recommend budgeting for the replacement of the wood fence located at the northeast end of the property within the next two years. Our opinion of cost to replace the fence is \$13,875.
- 2.3.m - An allowance of \$2,000 is included in the reserve tables every 10 years, for repairs to the entrance features. Repairs would include cleaning, tuckpointing, and replacement of damaged or cracked stone elements. The first repair cycle is projected in 2012.
- 2.3.n - An allowance of \$2,200 is included in the reserve tables every 15 years, for the replacement of the community information board, starting in 2009.
- 2.3.o - An allowance of \$2,400 is included in the reserve tables for replacement of pet stations after 15 years of use.

3.0 Tot Lot

3.1 Description

The tot lot, adjacent to the pool, was added to the property after the reserve study completed in 2005. The playground equipment consists of one metal and plastic combination playground structure, one metal frame double swing set, and one miniature climbing wall (reference Photograph 18 in Appendix D). Plastic landscape curbing encloses a woodchip surface.

Chain-link fence surrounds the tot lot and separates it from the pool area. Approximately 121 linear feet of this fence are 6 feet high, and approximately 51 linear feet are 4 feet high.

3.2 Condition

The tot lot was observed to be in good condition. No sign of deterioration or discoloration was observed. The chain-link fence was also in good condition.

3.3 Recommended Repairs/Replacements

The following repairs/replacements have been scheduled in the tables in the attached appendices.

- 3.3.a - The reserve tables include a sum of \$15,000 to replace the tot lot every 10 years, with the next replacement in 2016. Minor repairs to the playground structure and periodic addition of wood chips are considered operational expenses.
- 3.3.b - The chain-link fence should last at least 20 years. Replacement is projected in 2027. Our opinion of cost to replace the fence is \$4,000.

TOWNHOUSE RESERVES

The Townhouse Reserve fund covers expenditures that are the responsibility of the 190 townhouses in the Westerley Homeowners Association. The townhouse community has asphalt streets, lined with concrete sidewalk and concrete curb and gutter, and various parking areas. The Townhouse Reserves fund the replacement and repair of such features as the asphalt pavement, concrete sidewalk and curb and gutter, community lighting, street signs, and metal enforcement signs. The Townhouse section also includes two timber retaining walls along Tamarach Ridge Drive.

4.0 Asphalt Pavement

4.1 Description

The streets in the townhouse sections of Westerley are accessed from either side of Augusta Drive near the intersection of Route 7. The townhouse community has nine asphalt-paved streets with several parking areas along the streets. There are a total of approximately 10,800 square yards of street asphalt area and approximately 1,100 square yards of parking areas. We counted about 87 parking spaces within the townhouse sections.

The repair and replacement of the asphalt pavement area for the swimming pool parking is included in the Common Reserves.

4.2 Condition

The Townhouse community asphalt paved areas were in good condition. No major cracking or failures were observed. Some minor cracking was seen along the joints of the various sections of the streets. It did not appear that the any major work on the pavements had been performed since the 2005 reserve study.

4.3 Recommended Repairs/Replacements

The following repairs or replacements are included in the tables in the attached appendices.

- 4.3.a - The townhouse community pavement should be seal coated and re-stripped every five years. Our opinion of cost to seal coat and re-stripe the townhouse streets and parking areas is \$14,875. We recommend budgeting for this project beginning in 2009 and every five years thereafter. This cost should cover minor patching and crack filling. Seal coating and re-stripping is not scheduled in 2017 due to the projected asphalt overlay project.
- 4.3.b - Periodic full-depth asphalt repairs are included in the reserve tables every five years. These repairs typically involve removing failed pavement, improving the sub-grade if necessary, and replacing the failed asphalt. The tables include an allowance to repair approximately 595 square yards of pavement, or about 5% of the total pavement area, every five years. Our opinion of cost for the full-depths repairs is \$20,825.

- 4.3.c - Pavements should normally last 20 years before resurfacing (mill and overlay) is required, based on expected service life. Our opinion of cost to overlay the asphalt-paved areas of the townhouse community in 2017 is \$142,800.

5.0 Concrete Features

5.1 Description

The asphalt-paved streets and parking areas in the townhouse community are lined with concrete sidewalks, and curbs and gutters. The concrete sidewalk panels are typically 4-foot by 4-foot sections. FEA measured a total of approximately 34,000 square feet of concrete sidewalk area. The curbs in the townhouse community were measured to be approximately 8 inches high and 4 inches wide, and the gutters were about 24 inches wide. A total of approximately 9,300 linear feet of curb and gutter is included in the townhouse areas.

The repair and replacement of the sidewalk sections along Augusta Drive is included in the Common Reserves.

5.2 Condition

Sidewalks were in overall good condition. The curb and gutter is in good condition. Several sections of both sidewalk and curb and gutter appeared to have been replaced since the community's development. Minor cracking was observed in such areas as the curb surrounding the storm water drainage inlets.

5.3 Recommended Repairs/Replacements

The following repairs or replacements are included in the tables in the attached appendices.

- 5.3.a - Concrete sidewalks will typically be replaced on an as-needed basis rather than all at once. The reserve tables include an allowance of \$4,900 every three years to replace damaged or settled concrete sidewalk sections in the townhouse community. The allowance is scheduled to begin in 2009.

- 5.3.b - Concrete curb and gutter are also typically replaced on an as-needed basis rather than all at once. The reserve tables include an allowance of \$6,000 every three years to replace damaged or settled concrete curb and gutter sections in the townhouse community. The allowance is scheduled to begin in 2011.

6.0 Townhouse Site Drainage

Site drainage responsibilities for the townhouse community are limited to incidental repairs to storm water drainage inlets.

6.1 Description

Storm drainage is routed by curbs and gutters to inlet structures along the streets.

6.2 Condition

Storm water drainage inlets appeared to be in overall good condition.

6.3 Recommended Repairs/Replacements

6.3.a - The reserve tables include an allowance of \$2,500 every ten years for periodic repairs to storm water drainage inlets.

7.0 Townhouse Community Site Features

7.1 Description

The townhouse community site lighting is provided by 15-foot-high, woven fiberglass pole-mounted plastic ornamental light fixtures (reference Photograph 19 in Appendix D). FEA was informed that there were 21 street lights.

The townhouse community has numerous street signs, located at the street intersections, and various types of directional and enforcement metal signs. Most of the signs are mounted on metal poles and the stop signs in the community are mounted on wood posts.

Two timber retaining walls are located in the townhouse community along Tamarach Ridge Drive. The retaining walls are each about 60 to 70 feet long and range in height from about 1 foot to 2 feet high.

7.2 Condition

The townhouse section site lighting appeared to be in good condition. Lamp replacements are not included in the reserve study; however, budgeting for the replacement of the poles and fixtures is included in the reserve tables.

The metal signage in the community was in good condition. Replacement of the signage, along with the mounting poles, will most likely be on an as-needed basis. We recommend budgeting for an allowance for sign replacement every 3 years.

The wood retaining walls in the townhouse community were in good condition. No splitting in the wood was observed during our on-site visit.

7.3 Recommended Repairs/Replacements

The following repairs or replacements are included in the tables in the attached appendices.

7.3.a - We recommend budgeting for the replacement of the townhouse community light poles and fixtures in 2022, after 25 years of service life. Our opinion of cost to replace the lighting is \$31,500.

- 7.3.b - The reserve tables include an allowance of \$2,000 to replace worn or damaged signage every five years. This cost includes the replacement of both street signage and directional/enforcement signage.

- 7.3.c - We recommend budgeting for the replacement of the wood retaining walls in 2017, after 20 years of service life. Our opinion of cost to replace the timber walls is \$6,500.

SINGLE-FAMILY HOME RESERVES

The single-family home reserve fund covers expenditures for the single-family homes in Westerley Homeowners Association, which includes concrete sidewalks and driveway aprons, and concrete curbs and gutters.

8.0 Concrete Features

8.1 Description

Concrete sidewalks in the single-family home areas typically consist of 4-foot by 4-foot panels. Streets in this section of the community generally have sidewalks located on one side. Concrete driveway aprons are a feature of the single-family homes. On the side of the road which has sidewalks, the aprons have a width at the curb of about 20 feet, a width at the start of the driveway of 16 feet, and a length of 8 feet from curb to driveway. On the side of the road without sidewalks, apron dimensions vary. Most of these aprons are the same size as those previously mentioned. However, in some instances, the length of the apron was as little as 2 to 4 feet. The approximate total concrete sidewalk and driveway apron area of the single-family home community is 55,738 square feet.

Street	Sidewalk (SF)	Aprons (SF)
Hollow Mountain	3,890	7,142
Cliff Haven	820	1,494
Maple Hollow	820	1,494
Backwater 1	1,940	3,547
North Brook	1,970	3,617
Augusta	3,180	5,835
Kenyon	640	1,167
Antioch	2,750	5,041
Backwater 2	1,410	2,591
Colby	1,070	1,960
Wesleyan	1,190	2,170
TOTAL		55,738

Concrete curbs and gutters line the streets of the single-family home sections. Curbs are typically 6 inches high, and gutters are 24 inches wide. FEA measured approximately 14,040 linear feet of curb and gutter in the single-family home sections.

Street	Length (LF)
Hollow Mountain	3,060
Cliff Haven	560
Maple Hollow	560
Backwater 1	1,520
North Brook	1,550
Augusta	1,250
Kenyon	500
Antioch	2,160
Backwater 2	1,110
Colby	840
Wesleyan	930
TOTAL	14,040

8.2 Condition

Sidewalks were generally in overall good condition. However, we noted some sidewalk sections that had settled relative to adjacent sections. We observed that several sections of sidewalk have been replaced since their original installation.

Curbs and gutters generally appeared to be in good condition as well. The overall condition of curbs and gutters and concrete sidewalks was consistent with their age. Minor deterioration of paint was observed throughout the community.

8.3 Recommended Repairs/Replacements

The following repairs or replacements are included in the tables in the attached appendices.

- 8.3.a - The reserve tables include an allowance of \$7,000 to replace concrete sidewalk and driveway apron sections every three years, starting in 2009. Our opinion of cost is based on the replacement of about 1,000 square feet of concrete each cycle.
- 8.3.b - The reserve tables include an allowance of \$9,000 every three years for repairs to concrete curb and gutter. The first cycle of repairs is projected in 2011. Our opinion of cost is based on the replacement of about 300 linear feet of curb and gutter each cycle.

9.0 Single-Family Home Site Drainage

Site drainage responsibilities for the single-family home community are limited to incidental repairs to storm water drainage inlets.

9.1 Description

Storm drainage is routed by curbs and gutters to inlet structures along the streets. Inlets are generally located in pairs, one on each side of the street, at low points along the roads.

9.2 Condition

Storm water drainage inlets appeared to be in good condition. We observed over 30 inlets in the single-family home community. The inlets we observed were similar in design.

9.3 Recommended Repairs/Replacements

9.3.a - The reserve tables include an allowance of \$5,000 every ten years for periodic repairs to storm water drainage inlets.

APPENDIX A
COMMON RESERVES TABLES

RESERVE FUND PLAN MODEL EXPLANATION

Tables assume a 2.2% inflation rate. This is the average annual CPI increase for the period 2008 - 2013, as projected by the Congressional Budget Office. Tables assume a 3.00% interest rate, based which was provided by Legum & Norman for the reserve fund investments of the Westerly Homeowners Association.

Table 1 - Expenditure Summary by System

This table lists the components surveyed as part of the study, and presents a summary of the cost data used for developing the reserve fund plan. A description of the columns in the table follows:

- Column 1. **Text Section No.** refers to the section in the report text which describes the repairs listed in table.
- Column 2. **Item Description** is a brief description of the component.
- Column 3. **Typical Useful Life**, which shows the life expectancy of similar components in average conditions, and does not necessarily reflect the conditions observed during the study.
- Column 4. **Target Replacement/Repair** gives the year in which capital expenditure is anticipated. Cycles are used if an item will require replacement more than once during the study period, or if a phased repair approach is required.
- Column 5. **Quantity** of the component studied, which may be an exact number, a rough estimate, or simply a (1) if the expenditure forecast is a lump sum allowance for replacement of an unquantified component.
- Column 6. **Units** used to quantify the component.
- Column 7. **Unit Cost** used to calculate the required expenditure. This unit cost includes demolition or removal of existing components and installation of new components, including materials, labor, and overhead and profit for the contractor. These costs can vary significantly due to time of season, material costs, material availability, and other factors beyond our control.
- Column 8. **Cost to Replace/Repair** the component, in 2008 dollars. Some items may show only a fraction of the total cost, which is referred to as "Partial Replacement." This is because wholesale replacement of such items is not likely, and partial replacement has been programmed in the model.

COMMON RESERVES
TABLE 1
EXPENDITURE SUMMARY BY SYSTEM

Study Period:	2009 2028	Inflation Rate:	2.20%	Reserve Balance (August 2008):	\$81,191	Investment Rate:	3.00%	Annual Contribution (2009 budget):	\$16,090		
Text Section No.	Item Description	Typical Useful Life (yrs)	Target Replacement/Repair (year)					Quantity	Units	Unit Cost	Cost to Replace/Repair** (present worth)
			Cycle 1	Cycle 2	Cycle 3	Cycle 4	Cycle 5				
	SITE FEATURES										
1.0	Pool Facilities										
1.3.a	Replace Chain-Link Fence @ Pool	20	2017	2037				1	lump sum	\$10,500	\$10,500
1.3.b	Repair/Replace Concrete Pool Deck Sections	5	2012	2017	2022	2027	2032	1	lump sum	\$4,500	\$4,500
1.3.c	Whitecoat Both Pools	8	2010	2018	2026	2034		1	lump sum	\$16,500	\$16,500
1.3.d	Repair/Replace Pool Coping	5	2010	2015	2020	2025	2030	1	lump sum	\$2,000	\$2,000
1.3.e	Replace Pool Covers	10	2014	2024	2032			1	lump sum	\$7,000	\$7,000
1.3.f	Major Pool Renovation	30	2031					1	lump sum	\$100,000	\$100,000
1.3.g	Replace Picnic Tables and Garbage Cans	15	2012	2027	2042			1	lump sum	\$7,000	\$7,000
1.3.h	Replace or Re-strap Pool Furniture	5	2009	2014	2019	2024	2029	1	lump sum	\$5,000	\$5,000
1.3.i	Replace Lifeguard Stands and Ladders	20	2017	2037				1	lump sum	\$6,000	\$6,000
1.3.j	Replace Vinyl Siding on Bathhouse	30	2027	2057				1	lump sum	\$4,200	\$4,200
1.3.k	Replace Bathhouse Roof, Gutters & Downspouts	20	2017	2037				1	lump sum	\$6,600	\$6,600
1.3.l	Replace Bathhouse Doors	20	2022	2042				1	lump sum	\$4,000	\$4,000
1.3.m	Replace Bathhouse Windows	30	2027	2057				1	lump sum	\$1,600	\$1,600
1.3.n	Bathhouse Renovation	15	2022	2037				1	lump sum	\$35,000	\$35,000
1.3.o	Pool Equipment Repairs and Replacements	5	2012	2017	2022	2027	2032	1	lump sum	\$2,500	\$2,500
1.3.p	Replace Wall-Mounted Exterior Lights	20	2011	2031				7	each	\$400	\$2,800
1.3.p	Replace Pole-Mounted Exterior Lights	25	2022	2047				2	each	\$1,000	\$2,000
1.3.q	Replace Water Heater	15	2015	2030				1	lump sum	\$5,000	\$5,000
2.0	Amenities and Site Features										
2.3.a	Asphalt Footpath Repairs	3	2009	2012	2015	2018	2021	1	lump sum	\$2,000	\$2,000
2.3.b	Replace Split-Rail Fencing around Storm Water Ponds	20	2017	2037				725	lin. ft.	\$15	\$10,875
2.3.c	Paint & Repair Sound Attenuation Fence	5	2009	2014	2024	2029		3,000	lump sum	\$3,000	\$3,000
2.3.d	Replace Sound-Attenuation Fence	20	2019	2039				1,000	lin. ft.	\$25	\$25,000
2.3.e	Replace Modular Block Retaining Wall	30	2027	2057				390	sq. ft.	\$30	\$11,700
2.3.f	Stormwater Management Pond Allowance	10	2010	2020	2030			1	lump sum	\$10,000	\$10,000
2.3.g	Seal Coat and Re-stripe Asphalt and Crack Filling	5	2009	2014	2022	2027	2032	595	sq. yds.	\$1.25	\$744
2.3.h	Asphalt Full-depth Repairs	5	2009	2014	2022	2027	2032	30	sq. yds.	\$35	\$1,050
2.3.i	Asphalt Resurfacing (Mill and Overlay)	20	2017	2039				595	sq. yds.	\$12	\$7,140
2.3.j	Curb and Gutter Section Replacement Allowance	3	2009	2012	2015	2018	2021	10	lin. ft.	\$35	\$350
2.3.k	Sidewalk Section Replacement Allowance	3	2009	2012	2015	2018	2021	100	sq. ft.	\$7	\$650
2.3.l	Wood Fence Replacement	15	2010	2025	2040			555	lin. ft.	\$25	\$13,875
2.3.m	Repair Entrance Feature	5	2012	2013	2018	2023	2028	1	lump sum	\$2,000	\$2,000
2.3.n	Replace Community Information Board	15	2009	2024				1	lump sum	\$2,200	\$2,200
2.3.o	Replace Pet Stations	15	2019	2034				6	each	\$400	\$2,400
3.0	Tot Lot										
3.3.a	Replace Tot Lot	10	2017	2027	2037			1	each	\$15,000	\$15,000
3.3.a	Replace Chain-Link Fence @ Tot Lot	20	2027	2047				1	lump sum	\$4,000	\$4,000
										\$334,184	

RESERVE FUND PLAN MODEL EXPLANATION

Tables assume a 2.2% inflation rate. This is the average annual CPI increase for the period 2008 - 2013, as projected by the Congressional Budget Office. Tables assume a 3.00% interest rate, which was provided by Legum & Norman for the reserve fund investments of the Westerly Homeowners Association.

Table 2 - Expenditure Forecast By Year

This table lists components that are scheduled for replacement during a given year. A description of the columns in the table follows:

- Column 1. **Text Section No.** refers to the section in the report text which describes in detail the repairs listed in table.
- Column 2. **Item Description** is a brief description of the component.
- Column 3. **Cost to Replace/Repair** the component, in 2008 dollars (present worth).
- Column 4. **Cost to Replace/Repair** the component in the given year (future worth).
- Column 5. **Yearly Contribution** for the component.
- Column 6. **Total Contribution** for only those components being replaced in the given year.
- Column 7. **Total Expenditures** for all components being replaced in the given year.

COMMON RESERVES
TABLE 2
EXPENDITURE FORECAST BY YEAR

Text Section No.	Item Description	Cost to Replace/Repair (present worth)	Cost to Replace/Repair (future worth)	Total Expenditures
2009				
1.3.h	Replace or Re-strap Pool Furniture	\$5,000	\$5,000	
2.3.a	Asphalt Footpath Repairs	\$2,000	\$2,000	
2.3.c	Paint & Repair Sound Attenuation Fence	\$3,000	\$3,000	
2.3.g	Seal Coat and Re-stripe Asphalt and Crack Filling	\$744	\$744	
2.3.h	Asphalt Full-depth Repairs	\$1,050	\$1,050	
2.3.j	Curb and Gutter Section Replacement Allowance	\$350	\$350	
2.3.k	Sidewalk Section Replacement Allowance	\$650	\$650	
2.3.n	Replace Community Information Board	\$2,200	\$2,200	\$14,994
2010				
1.3.c	Whitecoat Both Pools	\$16,500	\$16,863	
1.3.d	Repair/Replace Pool Coping	\$2,000	\$2,044	
2.3.f	Stormwater Management Pond Allowance	\$10,000	\$10,220	
2.3.l	Wood Fence Replacement	\$13,875	\$14,180	\$43,307
2011				
1.3.p	Replace Wall-Mounted Exterior Lights	\$2,800	\$2,925	\$2,925
2012				
1.3.b	Repair/Replace Concrete Pool Deck Sections	\$4,500	\$4,804	
1.3.g	Replace Picnic Tables and Garbage Cans	\$7,000	\$7,472	
1.3.o	Pool Equipment Repairs and Replacements	\$2,500	\$2,669	
2.3.m	Repair Entrance Feature	\$2,000	\$2,135	
2.3.a	Asphalt Footpath Repairs	\$2,000	\$2,135	
2.3.j	Curb and Gutter Section Replacement Allowance	\$350	\$374	
2.3.k	Sidewalk Section Replacement Allowance	\$650	\$694	\$20,282
2013				
2.3.m	Repair Entrance Feature	\$2,000	\$2,182	\$2,182
2014				
1.3.e	Replace Pool Covers	\$7,000	\$7,805	
1.3.h	Replace or Re-strap Pool Furniture	\$5,000	\$5,575	
2.3.c	Paint & Repair Sound Attenuation Fence	\$3,000	\$3,345	
2.3.g	Seal Coat and Re-stripe Asphalt and Crack Filling	\$744	\$829	
2.3.h	Asphalt Full-depth Repairs	\$1,050	\$1,171	\$18,724
2015				
1.3.q	Replace Water Heater	\$5,000	\$5,697	
1.3.d	Repair/Replace Pool Coping	\$2,000	\$2,279	
2.3.a	Asphalt Footpath Repairs	\$2,000	\$2,279	
2.3.j	Curb and Gutter Section Replacement Allowance	\$350	\$399	
2.3.k	Sidewalk Section Replacement Allowance	\$650	\$741	\$11,395
2016				
2017				
1.3.a	Replace Chain-Link Fence @ Pool	\$10,500	\$12,497	
1.3.i	Replace Lifeguard Stands and Ladders	\$6,000	\$7,141	
1.3.k	Replace Bathhouse Roof, Gutters & Downspouts	\$6,600	\$7,855	
2.3.b	Replace Split-Rail Fencing around Storm Water Ponds	\$10,875	\$12,943	
2.3.i	Asphalt Resurfacing (Mill and Overlay)	\$7,140	\$8,498	
3.3.a	Replace Tot Lot	\$15,000	\$17,852	
1.3.b	Repair/Replace Concrete Pool Deck Sections	\$4,500	\$5,356	
1.3.o	Pool Equipment Repairs and Replacements	\$2,500	\$2,975	\$75,117
2018				
1.3.c	Whitecoat Both Pools	\$16,500	\$20,070	
2.3.m	Repair Entrance Feature	\$2,000	\$2,433	
2.3.a	Asphalt Footpath Repairs	\$2,000	\$2,433	
2.3.j	Curb and Gutter Section Replacement Allowance	\$350	\$426	
2.3.k	Sidewalk Section Replacement Allowance	\$650	\$791	\$26,152
2019				
2.3.d	Replace Sound-Attenuation Fence	\$25,000	\$31,078	
2.3.o	Replace Pet Stations	\$2,400	\$2,983	
1.3.h	Replace or Re-strap Pool Furniture	\$5,000	\$6,216	\$40,277

COMMON RESERVES
TABLE 2
EXPENDITURE FORECAST BY YEAR

Text Section No.	Item Description	Cost to Replace/Repair (present worth)	Cost to Replace/Repair (future worth)	Total Expenditures
2020				
2.3.f	Stormwater Management Pond Allowance	\$10,000	\$12,705	
1.3.d	Repair/Replace Pool Coping	\$2,000	\$2,541	\$15,245
2021				
2.3.a	Asphalt Footpath Repairs	\$2,000	\$2,597	
2.3.j	Curb and Gutter Section Replacement Allowance	\$350	\$454	
2.3.k	Sidewalk Section Replacement Allowance	\$650	\$844	\$3,895
2022				
1.3.l	Replace Bathhouse Doors	\$4,000	\$5,308	
1.3.n	Bathhouse Renovation	\$35,000	\$46,444	
1.3.p	Replace Pole-Mounted Exterior Lights	\$2,000	\$2,654	
1.3.b	Repair/Replace Concrete Pool Deck Sections	\$4,500	\$5,971	
1.3.o	Pool Equipment Repairs and Replacements	\$2,500	\$3,317	
2.3.g	Seal Coat and Re-stripe Asphalt and Crack Filling	\$744	\$987	
2.3.h	Asphalt Full-depth Repairs	\$1,050	\$1,393	\$66,075
2023				
2.3.m	Repair Entrance Feature	\$2,000	\$2,712	
2.3.j	Curb and Gutter Section Replacement Allowance	\$350	\$475	
2.3.k	Sidewalk Section Replacement Allowance	\$650	\$882	\$4,069
2024				
1.3.e	Replace Pool Covers	\$7,000	\$9,702	
2.3.n	Replace Community Information Board	\$2,200	\$3,049	
2.3.c	Paint & Repair Sound Attenuation Fence	\$3,000	\$4,158	
1.3.h	Replace or Re-strap Pool Furniture	\$5,000	\$6,930	
2.3.a	Asphalt Footpath Repairs	\$2,000	\$2,772	\$26,611
2025				
2.3.l	Wood Fence Replacement	\$13,875	\$19,654	
1.3.d	Repair/Replace Pool Coping	\$2,000	\$2,833	\$22,487
2026				
1.3.c	Whitecoat Both Pools	\$16,500	\$23,886	
2.3.j	Curb and Gutter Section Replacement Allowance	\$350	\$507	
2.3.k	Sidewalk Section Replacement Allowance	\$650	\$941	\$25,334
2027				
1.3.j	Replace Vinyl Siding on Bathhouse	\$4,200	\$6,214	
1.3.m	Replace Bathhouse Windows	\$1,600	\$2,367	
2.3.e	Replace Modular Block Retaining Wall	\$11,700	\$17,310	
3.3.a	Replace Chain-Link Fence @ Tot Lot	\$4,000	\$5,918	
1.3.g	Replace Picnic Tables and Garbage Cans	\$7,000	\$10,357	
3.3.a	Replace Tot Lot	\$15,000	\$22,193	
1.3.b	Repair/Replace Concrete Pool Deck Sections	\$4,500	\$6,658	
1.3.o	Pool Equipment Repairs and Replacements	\$2,500	\$3,699	
2.3.g	Seal Coat and Re-stripe Asphalt and Crack Filling	\$744	\$1,100	
2.3.h	Asphalt Full-depth Repairs	\$1,050	\$1,553	
2.3.a	Asphalt Footpath Repairs	\$2,000	\$2,959	\$80,328
2028				
2.3.m	Repair Entrance Feature	\$2,000	\$3,024	\$3,024

RESERVE FUND PLAN MODEL EXPLANATION

Table 3 - Component Contribution By Year

This table lists each studied component requiring replacement, and gives the contribution which would be required in each year for each component under the *component method* of analysis. The total contribution given in the bottom row of the table is the “Component Method Contribution” given in column 5 of Table 4.

The spreadsheet allocates a portion of the existing reserve balance to each component listed in the table based on a ratio of the individual component value to the total value of all components, as well as the next replacement date for the component. Any required expenditures in the first year are fully funded from the existing balance before the remaining balance is allocated to the components.

COMMON RESERVES
TABLE 3
COMPONENT CONTRIBUTION BY YEAR

Text Section No.	Item Description	1 Contribution 2009	2 Contribution 2010	3 Contribution 2011	4 Contribution 2012	5 Contribution 2013	6 Contribution 2014	7 Contribution 2015	8 Contribution 2016	9 Contribution 2017	10 Contribution 2018
	SITE FEATURES										
1.0	Pool Facilities										
1.3.a	Replace Chain-Link Fence @ Pool	\$1,103	\$1,103	\$1,103	\$1,103	\$1,103	\$1,103	\$1,103	\$1,103	\$719	\$719
1.3.b	Repair/Replace Concrete Pool Deck Sections	\$1,243	\$1,243	\$1,243	\$1,009	\$1,009	\$1,009	\$1,009	\$1,009	\$1,125	\$1,125
1.3.c	Whitecoat Both Pools	\$13,589	\$2,257	\$2,257	\$2,257	\$2,257	\$2,257	\$2,257	\$2,257	\$2,257	\$2,686
1.3.d	Repair/Replace Pool Coping	\$1,647	\$429	\$429	\$429	\$429	\$429	\$479	\$479	\$479	\$479
1.3.e	Replace Pool Covers	\$1,168	\$1,168	\$1,168	\$1,168	\$1,168	\$846	\$846	\$846	\$846	\$846
1.3.f	Major Pool Renovation	\$3,910	\$3,910	\$3,910	\$3,910	\$3,910	\$3,910	\$3,910	\$3,910	\$3,910	\$3,910
1.3.g	Replace Picnic Tables and Garbage Cans	\$1,934	\$1,934	\$1,934	\$557	\$557	\$557	\$557	\$557	\$557	\$557
1.3.h	Replace or Re-strap Pool Furniture	\$1,050	\$1,050	\$1,050	\$1,050	\$1,050	\$1,171	\$1,171	\$1,171	\$1,171	\$1,171
1.3.i	Replace Lifeguard Stands and Ladders	\$631	\$631	\$631	\$631	\$631	\$631	\$631	\$631	\$411	\$411
1.3.j	Replace Vinyl Siding on Bathhouse	\$200	\$200	\$200	\$200	\$200	\$200	\$200	\$200	\$200	\$200
1.3.k	Replace Bathhouse Roof, Gutters & Downspouts	\$694	\$694	\$694	\$694	\$694	\$694	\$694	\$694	\$452	\$452
1.3.l	Replace Bathhouse Doors	\$262	\$262	\$262	\$262	\$262	\$262	\$262	\$262	\$262	\$262
1.3.m	Replace Bathhouse Windows	\$76	\$76	\$76	\$76	\$76	\$76	\$76	\$76	\$76	\$76
1.3.n	Bathhouse Renovation	\$2,289	\$2,289	\$2,289	\$2,289	\$2,289	\$2,289	\$2,289	\$2,289	\$2,289	\$2,289
1.3.o	Pool Equipment Repairs and Replacements	\$691	\$691	\$691	\$560	\$560	\$560	\$560	\$560	\$625	\$625
1.3.p	Replace Wall-Mounted Exterior Lights	\$1,157	\$1,157	\$168	\$168	\$168	\$168	\$168	\$168	\$168	\$168
1.3.p	Replace Pole-Mounted Exterior Lights	\$131	\$131	\$131	\$131	\$131	\$131	\$131	\$131	\$131	\$131
1.3.q	Replace Water Heater	\$697	\$697	\$697	\$697	\$697	\$697	\$425	\$425	\$425	\$425
2.0	Amenities and Site Features										
2.3.a	Asphalt Footpath Repairs	\$691	\$691	\$691	\$737	\$737	\$737	\$787	\$787	\$787	\$840
2.3.b	Replace Split-Rail Fencing around Storm Water Ponds	\$1,143	\$1,143	\$1,143	\$1,143	\$1,143	\$1,143	\$1,143	\$1,143	\$744	\$744
2.3.c	Paint & Repair Sound Attenuation Fence	\$630	\$630	\$630	\$630	\$630	\$363	\$363	\$363	\$363	\$363
2.3.d	Replace Sound-Attenuation Fence	\$2,112	\$2,112	\$2,112	\$2,112	\$2,112	\$2,112	\$2,112	\$2,112	\$2,112	\$2,112
2.3.e	Replace Modular Block Retaining Wall	\$557	\$557	\$557	\$557	\$557	\$557	\$557	\$557	\$557	\$557
2.3.f	Stormwater Management Pond Allowance	\$8,236	\$1,108	\$1,108	\$1,108	\$1,108	\$1,108	\$1,108	\$1,108	\$1,108	\$1,108
2.3.g	Seal Coat and Re-stripe Asphalt and Crack Filling	\$156	\$156	\$156	\$156	\$156	\$111	\$111	\$111	\$111	\$111
2.3.h	Asphalt Full-depth Repairs	\$221	\$221	\$221	\$221	\$221	\$157	\$157	\$157	\$157	\$157
2.3.i	Asphalt Resurfacing (Mill and Overlay)	\$750	\$750	\$750	\$750	\$750	\$750	\$750	\$750	\$449	\$449
2.3.j	Curb and Gutter Section Replacement Allowance	\$121	\$121	\$121	\$129	\$129	\$129	\$138	\$138	\$138	\$147
2.3.k	Sidewalk Section Replacement Allowance	\$224	\$224	\$224	\$240	\$240	\$240	\$256	\$256	\$256	\$273
2.3.l	Wood Fence Replacement	\$11,427	\$1,057	\$1,057	\$1,057	\$1,057	\$1,057	\$1,057	\$1,057	\$1,057	\$1,057
2.3.m	Repair Entrance Feature	\$553	\$553	\$553	\$2,182	\$458	\$458	\$458	\$458	\$458	\$511
2.3.n	Replace Community Information Board	\$164	\$164	\$164	\$164	\$164	\$164	\$164	\$164	\$164	\$164
2.3.o	Replace Pet Stations	\$203	\$203	\$203	\$203	\$203	\$203	\$203	\$203	\$203	\$203
3.0	Tot Lot										
3.3.a	Replace Tot Lot	\$1,576	\$1,576	\$1,576	\$1,576	\$1,576	\$1,576	\$1,576	\$1,576	\$1,936	\$1,936
3.3.a	Replace Chain-Link Fence @ Tot Lot	\$190	\$190	\$190	\$190	\$190	\$190	\$190	\$190	\$190	\$190
		\$61,426	\$31,377	\$30,388	\$30,345	\$28,622	\$28,045	\$27,896	\$27,896	\$26,890	\$27,451

COMMON RESERVES
TABLE 3
COMPONENT CONTRIBUTION BY YEAR

Text Section No.	Item Description	11 Contribution 2019	12 Contribution 2020	13 Contribution 2021	14 Contribution 2022	15 Contribution 2023	16 Contribution 2024	17 Contribution 2025	18 Contribution 2026	19 Contribution 2027	20 Contribution 2028
	SITE FEATURES										
1.0	Pool Facilities										
1.3.a	Replace Chain-Link Fence @ Pool	\$719	\$719	\$719	\$719	\$719	\$719	\$719	\$719	\$719	\$719
1.3.b	Repair/Replace Concrete Pool Deck Sections	\$1,125	\$1,125	\$1,125	\$1,254	\$1,254	\$1,254	\$1,254	\$1,254	\$1,398	\$1,398
1.3.c	Whitecoat Both Pools	\$2,686	\$2,686	\$2,686	\$2,686	\$2,686	\$2,686	\$2,686	\$3,197	\$3,197	\$3,197
1.3.d	Repair/Replace Pool Coping	\$479	\$534	\$534	\$534	\$534	\$534	\$595	\$595	\$595	\$595
1.3.e	Replace Pool Covers	\$846	\$846	\$846	\$846	\$846	\$1,299	\$1,299	\$1,299	\$1,299	\$1,299
1.3.f	Major Pool Renovation	\$3,910	\$3,910	\$3,910	\$3,910	\$3,910	\$3,910	\$3,910	\$3,910	\$3,910	\$3,910
1.3.g	Replace Picnic Tables and Garbage Cans	\$557	\$557	\$557	\$557	\$557	\$557	\$557	\$557	\$772	\$772
1.3.h	Replace or Re-strap Pool Furniture	\$1,305	\$1,305	\$1,305	\$1,305	\$1,305	\$1,455	\$1,455	\$1,455	\$1,455	\$1,455
1.3.i	Replace Lifeguard Stands and Ladders	\$411	\$411	\$411	\$411	\$411	\$411	\$411	\$411	\$411	\$411
1.3.j	Replace Vinyl Siding on Bathhouse	\$200	\$200	\$200	\$200	\$200	\$200	\$200	\$200	\$251	\$251
1.3.k	Replace Bathhouse Roof, Gutters & Downspouts	\$452	\$452	\$452	\$452	\$452	\$452	\$452	\$452	\$452	\$452
1.3.l	Replace Bathhouse Doors	\$262	\$262	\$262	\$305	\$305	\$305	\$305	\$305	\$305	\$305
1.3.m	Replace Bathhouse Windows	\$76	\$76	\$76	\$76	\$76	\$76	\$76	\$76	\$96	\$96
1.3.n	Bathhouse Renovation	\$2,289	\$2,289	\$2,289	\$3,461	\$3,461	\$3,461	\$3,461	\$3,461	\$3,461	\$3,461
1.3.o	Pool Equipment Repairs and Replacements	\$625	\$625	\$625	\$697	\$697	\$697	\$697	\$697	\$777	\$777
1.3.p	Replace Wall-Mounted Exterior Lights	\$168	\$168	\$168	\$168	\$168	\$168	\$168	\$168	\$168	\$168
1.3.p	Replace Pole-Mounted Exterior Lights	\$131	\$131	\$131	\$125	\$125	\$125	\$125	\$125	\$125	\$125
1.3.q	Replace Water Heater	\$425	\$425	\$425	\$425	\$425	\$425	\$425	\$425	\$425	\$425
2.0	Amenities and Site Features										
2.3.a	Asphalt Footpath Repairs	\$840	\$840	\$897	\$897	\$897	\$957	\$957	\$957	\$1,022	\$1,022
2.3.b	Replace Split-Rail Fencing around Storm Water Ponds	\$744	\$744	\$744	\$744	\$744	\$744	\$744	\$744	\$744	\$744
2.3.c	Paint & Repair Sound Attenuation Fence	\$363	\$363	\$363	\$363	\$363	\$873	\$873	\$873	\$873	\$873
2.3.d	Replace Sound-Attenuation Fence	\$1,787	\$1,787	\$1,787	\$1,787	\$1,787	\$1,787	\$1,787	\$1,787	\$1,787	\$1,787
2.3.e	Replace Modular Block Retaining Wall	\$557	\$557	\$557	\$557	\$557	\$557	\$557	\$557	\$699	\$699
2.3.f	Stormwater Management Pond Allowance	\$1,108	\$1,378	\$1,378	\$1,378	\$1,378	\$1,378	\$1,378	\$1,378	\$1,378	\$1,378
2.3.g	Seal Coat and Re-stripe Asphalt and Crack Filling	\$111	\$111	\$111	\$207	\$207	\$207	\$207	\$207	\$231	\$231
2.3.h	Asphalt Full-depth Repairs	\$157	\$157	\$157	\$293	\$293	\$293	\$293	\$293	\$326	\$326
2.3.i	Asphalt Resurfacing (Mill and Overlay)	\$449	\$449	\$449	\$449	\$449	\$449	\$449	\$449	\$449	\$449
2.3.j	Curb and Gutter Section Replacement Allowance	\$147	\$147	\$234	\$234	\$164	\$164	\$164	\$175	\$175	\$175
2.3.k	Sidewalk Section Replacement Allowance	\$273	\$273	\$434	\$434	\$304	\$304	\$304	\$325	\$325	\$325
2.3.l	Wood Fence Replacement	\$1,057	\$1,057	\$1,057	\$1,057	\$1,057	\$1,057	\$1,465	\$1,465	\$1,465	\$1,465
2.3.m	Repair Entrance Feature	\$511	\$511	\$511	\$511	\$570	\$570	\$570	\$570	\$570	\$570
2.3.n	Replace Community Information Board	\$164	\$164	\$164	\$164	\$164					
2.3.o	Replace Pet Stations	\$222	\$222	\$222	\$222	\$222	\$222	\$222	\$222	\$222	\$222
3.0	Tot Lot										
3.3.a	Replace Tot Lot	\$1,936	\$1,936	\$1,936	\$1,936	\$1,936	\$1,936	\$1,936	\$1,936	\$2,406	\$2,406
3.3.a	Replace Chain-Link Fence @ Tot Lot	\$190	\$190	\$190	\$190	\$190	\$190	\$190	\$190	\$340	\$340
		\$27,281	\$27,605	\$27,910	\$29,554	\$29,413	\$30,422	\$30,892	\$31,434	\$32,828	\$32,259

CASH FLOW SUMMARY EXPLANATION

The following table presents the cash flow over the twenty-year study period for the Common Reserve Fund.

Table 4 shows the cash flow impact of increasing the *current annual reserve contribution of \$16,090 by 4% and a projected starting balance of \$81,191 on August 1st, 2008*, which is the beginning of the Fiscal Year Ending (FYE) 2009.

The table is followed by a bar chart showing expenditures vs. reserve balance.

Tables assume a 2.2% inflation rate. This is the average annual CPI increase for the period 2008 - 2013, as projected by the Congressional Budget Office. Tables assume a 3.00% interest rate, which was provided by Legum & Norman for the reserve fund investments of the Westerly Homeowners Association.

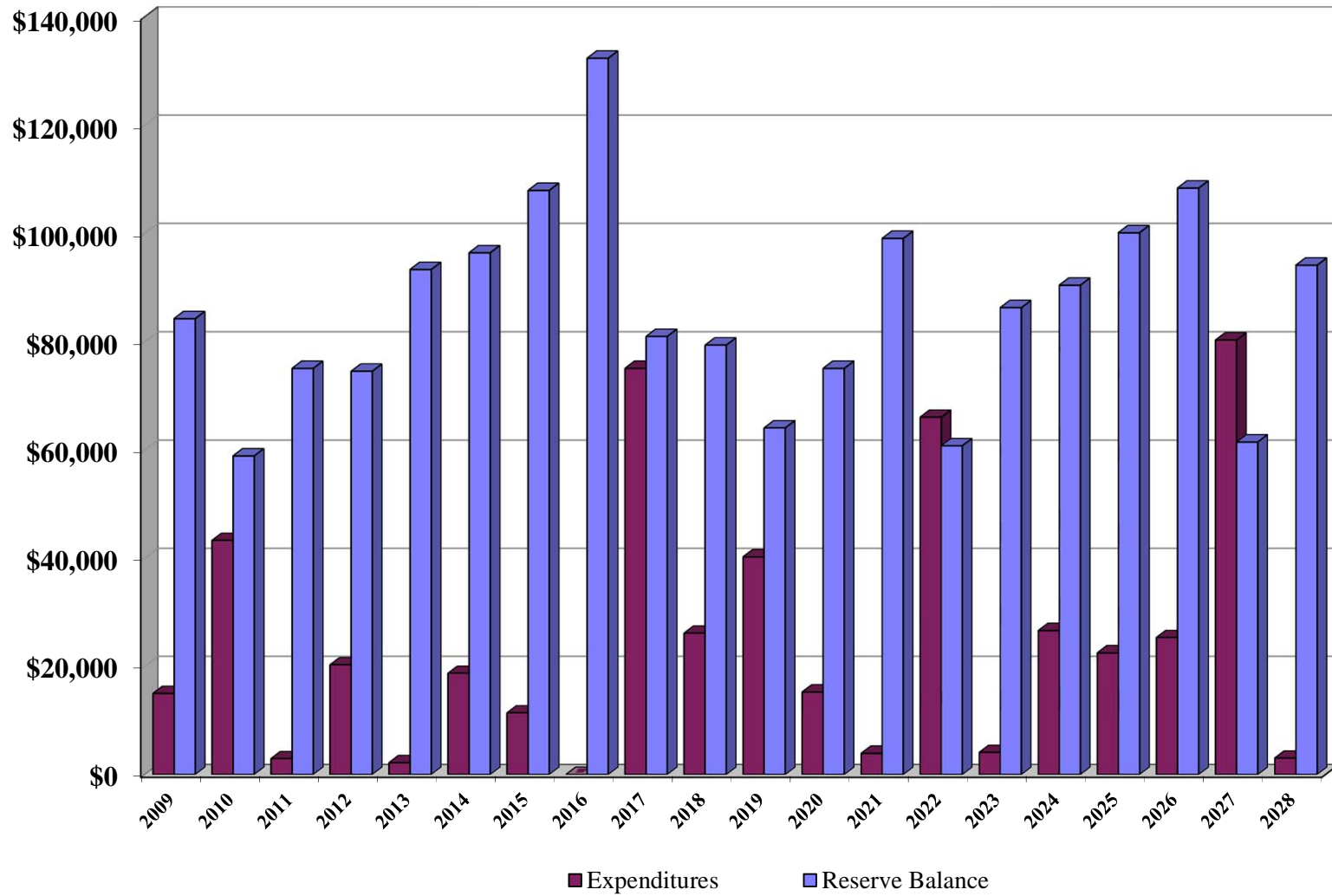
Individual columns in each table contain the following information:

- Column 1. **Year**
- Column 2. **Total Component Value - total worth** of all reserve component repair/replacement costs in that year
- Column 3. **Beginning Reserve Balance**, which shows the amount after all activity in the prior year is completed
- Column 4. **Yearly Contribution**
- Column 5. **Component Method Contribution**, which represents the sum of all component contributions required for each year
- Column 6. **Interest** Paid on Reserve Balance (if applicable). This is the interest paid on the reserve balance calculated as if the annual expenditures were paid at the beginning of the year.
- Column 7. **Capital Expenditures**. This is the sum of all replacement reserve projects that need to be completed in a given year.
- Column 8. **Ending Reserve Balance**. This is the result of the beginning reserve balance, plus annual contribution, plus interest income, less expenditures made during the year.
- Column 9. **% Total Component Value**. Ratio of the ending reserve balance to the total component value, expressed as a percentage.

**COMMON RESERVES
TABLE 4
CASH FLOW SUMMARY
(Recommended Funding)**

WESTERLEY HOMEOWNERS ASSOCIATION									
Initial Contribution:		\$16,090					Begin Study Period:		2009
Projected Increase:		4.00%					End Study Period:		2028
Beginning Balance		\$81,191							
Year	Total Component Value	Beginning Reserve Balance	Yearly Contribution	Component Method Contribution	Interest Paid On Reserve Balance	Capital Expenditures	Ending Reserve Balance	% Total Component Value	
2009	\$334,184	\$81,191	\$16,090	\$61,426	\$1,986	\$14,994	\$84,273	25%	
2010	\$341,536	\$84,273	\$16,734	\$31,377	\$1,229	\$43,307	\$58,928	17%	
2011	\$349,050	\$58,928	\$17,403	\$30,388	\$1,680	\$2,925	\$75,087	22%	
2012	\$356,729	\$75,087	\$18,099	\$30,345	\$1,644	\$20,282	\$74,548	21%	
2013	\$364,577	\$74,548	\$18,823	\$28,622	\$2,171	\$2,182	\$93,361	26%	
2014	\$372,597	\$93,361	\$19,576	\$28,045	\$2,239	\$18,724	\$96,451	26%	
2015	\$380,795	\$96,451	\$20,359	\$27,896	\$2,552	\$11,395	\$107,967	28%	
2016	\$389,172	\$107,967	\$21,173	\$27,896	\$3,239		\$132,380	34%	
2017	\$397,734	\$132,380	\$22,020	\$26,890	\$1,718	\$75,117	\$81,001	20%	
2018	\$406,484	\$81,001	\$22,901	\$27,451	\$1,645	\$26,152	\$79,396	20%	
2019	\$415,427	\$79,396	\$23,817	\$27,281	\$1,174	\$40,277	\$64,110	15%	
2020	\$424,566	\$64,110	\$24,770	\$27,605	\$1,466	\$15,245	\$75,100	18%	
2021	\$433,906	\$75,100	\$25,761	\$27,910	\$2,136	\$3,895	\$99,101	23%	
2022	\$443,452	\$99,101	\$26,791	\$29,554	\$991	\$66,075	\$60,808	14%	
2023	\$453,208	\$60,808	\$27,863	\$29,413	\$1,702	\$4,069	\$86,305	19%	
2024	\$463,179	\$86,305	\$28,977	\$30,422	\$1,791	\$26,611	\$90,462	20%	
2025	\$473,369	\$90,462	\$30,136	\$30,892	\$2,039	\$22,487	\$100,150	21%	
2026	\$483,783	\$100,150	\$31,342	\$31,434	\$2,244	\$25,334	\$108,402	22%	
2027	\$494,426	\$108,402	\$32,595	\$32,828	\$842	\$80,328	\$61,512	12%	
2028	\$505,304	\$61,512	\$33,899	\$32,259	\$1,755	\$3,024	\$94,142	19%	

Cash Flow Summary
Table 4 (Recommended Funding)
COMMON RESERVES



APPENDIX B
TOWNHOUSE RESERVES TABLES

RESERVE FUND PLAN MODEL EXPLANATION

Tables assume a 2.2% inflation rate. This is the average annual CPI increase for the period 2008 - 2013, as projected by the Congressional Budget Office. Tables assume a 3.00% interest rate, based which was provided by Legum & Norman for the reserve fund investments of the Westerly Homeowners Association.

Table 1 - Expenditure Summary by System

This table lists the components surveyed as part of the study, and presents a summary of the cost data used for developing the reserve fund plan. A description of the columns in the table follows:

- Column 1. **Text Section No.** refers to the section in the report text which describes the repairs listed in table.
- Column 2. **Item Description** is a brief description of the component.
- Column 3. **Typical Useful Life**, which shows the life expectancy of similar components in average conditions, and does not necessarily reflect the conditions observed during the study.
- Column 4. **Target Replacement/Repair** gives the year in which capital expenditure is anticipated. Cycles are used if an item will require replacement more than once during the study period, or if a phased repair approach is required.
- Column 5. **Quantity** of the component studied, which may be an exact number, a rough estimate, or simply a (1) if the expenditure forecast is a lump sum allowance for replacement of an unquantified component.
- Column 6. **Units** used to quantify the component.
- Column 7. **Unit Cost** used to calculate the required expenditure. This unit cost includes demolition or removal of existing components and installation of new components, including materials, labor, and overhead and profit for the contractor. These costs can vary significantly due to time of season, material costs, material availability, and other factors beyond our control.
- Column 8. **Cost to Replace/Repair** the component, in 2008 dollars. Some items may show only a fraction of the total cost, which is referred to as "Partial Replacement." This is because wholesale replacement of such items is not likely, and partial replacement has been programmed in the model.

TOWNHOME RESERVES
TABLE 1
EXPENDITURE SUMMARY BY SYSTEM

Study Period:	2009 2028	Inflation Rate:	2.20%	Investment Rate:	3.00%	Reserve Balance (August 2008):	\$97,186	Annual Contribution (2009 budget):	\$18,240		
Text Section No.	Item Description	Typical Useful Life (yrs)	Target Replacement/Repair (year)					Quantity	Units	Unit Cost	Cost to Replace/Repair** (present worth)
			Cycle 1	Cycle 2	Cycle 3	Cycle 4	Cycle 5				
	SITE FEATURES										
4.0	Pavements										
4.3.a	Seal Coat and Re-stripe Asphalt	5	2009	2014	2022	2027	2032	11,900	sq. yds.	\$1.25	\$14,875
4.3.b	Asphalt Full-depth Repairs	5	2009	2014	2017	2022	2027	595	sq. yds.	\$35	\$20,825
4.3.c	Asphalt Resurfacing (Mill and Overlay)	20	2017	2037				11,900	sq. yds.	\$12	\$142,800
5.0	Concrete Site Features										
5.3.a	Sidewalk Section Replacement Allowance	3	2009	2012	2015	2018	2021	700	sq. ft.	\$7	\$4,900
5.3.b	Curb & Gutter Section Replacement Allowance	3	2011	2014	2017	2020	2023	200	lin. ft.	\$30	\$6,000
6.0	Townhouse Community Site Features										
6.3.a	Stormwater Drainage System Repairs	10	2011	2021	2031			1	lump sum	\$2,500	\$20,000
7.0	Townhouse Community Site Features										
7.3.a	Replace Community Lighting	25	2022	2047				21	each	\$1,500	\$31,500
7.3.b	Replace Community Signage	5	2010	2015	2020	2025	2030	1	lump sum	\$2,000	\$2,000
7.3.c	Replace Wood Timber Retaining Walls	20	2017	2037				260	sq. ft.	\$25	\$6,500
\$249,400											

RESERVE FUND PLAN MODEL EXPLANATION

Tables assume a 2.2% inflation rate. This is the average annual CPI increase for the period 2008 - 2013, as projected by the Congressional Budget Office. Tables assume a 3.00% interest rate, which was provided by Legum & Norman for the reserve fund investments of the Westerly Homeowners Association.

Table 2 - Expenditure Forecast By Year

This table lists components that are scheduled for replacement during a given year. A description of the columns in the table follows:

- Column 1. **Text Section No.** refers to the section in the report text which describes in detail the repairs listed in table.
- Column 2. **Item Description** is a brief description of the component.
- Column 3. **Cost to Replace/Repair** the component, in 2008 dollars (present worth).
- Column 4. **Cost to Replace/Repair** the component in the given year (future worth).
- Column 5. **Yearly Contribution** for the component.
- Column 6. **Total Contribution** for only those components being replaced in the given year.
- Column 7. **Total Expenditures** for all components being replaced in the given year.

TOWNHOME RESERVES
TABLE 2
EXPENDITURE FORECAST BY YEAR

Text Section No.	Item Description	Cost to Replace/Repair (present worth)	Cost to Replace/Repair (future worth)	Total Expenditures
2009				
4.3.a	Seal Coat and Re-stripe Asphalt	\$14,875	\$14,875	
4.3.b	Asphalt Full-depth Repairs	\$20,825	\$20,825	
5.3.a	Sidewalk Section Replacement Allowance	\$4,900	\$4,900	\$40,600
2010				
7.3.b	Replace Community Signage	\$2,000	\$2,044	\$2,044
2011				
5.3.b	Curb & Gutter Section Replacement Allowance	\$6,000	\$6,267	
6.3.a	Stormwater Drainage System Repairs	\$20,000	\$20,890	\$27,157
2012				
5.3.a	Sidewalk Section Replacement Allowance	\$4,900	\$5,231	\$5,231
2013				
2014				
4.3.a	Seal Coat and Re-stripe Asphalt	\$14,875	\$16,585	
4.3.b	Asphalt Full-depth Repairs	\$20,825	\$23,219	
5.3.b	Curb & Gutter Section Replacement Allowance	\$6,000	\$6,690	\$46,493
2015				
7.3.b	Replace Community Signage	\$2,000	\$2,279	
5.3.a	Sidewalk Section Replacement Allowance	\$4,900	\$5,583	\$7,862
2016				
2017				
4.3.c	Asphalt Resurfacing (Mill and Overlay)	\$142,800	\$169,956	
7.3.c	Replace Wood Timber Retaining Walls	\$6,500	\$7,736	
4.3.b	Asphalt Full-depth Repairs	\$20,825	\$24,785	
5.3.b	Curb & Gutter Section Replacement Allowance	\$6,000	\$7,141	\$209,618
2018				
5.3.a	Sidewalk Section Replacement Allowance	\$4,900	\$5,960	\$5,960
2019				
2020				
7.3.b	Replace Community Signage	\$2,000	\$2,541	
5.3.b	Curb & Gutter Section Replacement Allowance	\$6,000	\$7,623	\$10,164
2021				
6.3.a	Stormwater Drainage System Repairs	\$20,000	\$25,968	
5.3.a	Sidewalk Section Replacement Allowance	\$4,900	\$6,362	\$32,330
2022				
7.3.a	Replace Community Lighting	\$31,500	\$41,800	
4.3.a	Seal Coat and Re-stripe Asphalt	\$14,875	\$19,739	
4.3.b	Asphalt Full-depth Repairs	\$20,825	\$27,634	\$89,173
2023				
5.3.b	Curb & Gutter Section Replacement Allowance	\$6,000	\$8,137	\$8,137
2024				
5.3.a	Sidewalk Section Replacement Allowance	\$4,900	\$6,791	\$6,791
2025				
7.3.b	Replace Community Signage	\$2,000	\$2,833	\$2,833
2026				
5.3.b	Curb & Gutter Section Replacement Allowance	\$6,000	\$8,686	\$8,686
2027				
4.3.a	Seal Coat and Re-stripe Asphalt	\$14,875	\$22,008	
4.3.b	Asphalt Full-depth Repairs	\$20,825	\$30,811	
5.3.a	Sidewalk Section Replacement Allowance	\$4,900	\$7,250	\$60,068
2028				
				

RESERVE FUND PLAN MODEL EXPLANATION

Table 3 - Component Contribution By Year

This table lists each studied component requiring replacement, and gives the contribution which would be required in each year for each component under the *component method* of analysis. The total contribution given in the bottom row of the table is the “Component Method Contribution” given in column 5 of Table 4.

The spreadsheet allocates a portion of the existing reserve balance to each component listed in the table based on a ratio of the individual component value to the total value of all components, as well as the next replacement date for the component. Any required expenditures in the first year are fully funded from the existing balance before the remaining balance is allocated to the components.

TOWNHOME RESERVES
TABLE 3
COMPONENT CONTRIBUTION BY YEAR

Text Section No.	Item Description	1 Contribution 2009	2 Contribution 2010	3 Contribution 2011	4 Contribution 2012	5 Contribution 2013	6 Contribution 2014	7 Contribution 2015	8 Contribution 2016	9 Contribution 2017	10 Contribution 2018
	SITE FEATURES										
4.0	Pavements										
4.3.a	Seal Coat and Re-stripe Asphalt	\$3,124	\$3,124	\$3,124	\$3,124	\$3,124	\$2,220	\$2,220	\$2,220	\$2,220	\$2,220
4.3.b	Asphalt Full-depth Repairs	\$4,373	\$4,373	\$4,373	\$4,373	\$4,373	\$8,019	\$8,019	\$8,019	\$5,205	\$5,205
4.3.c	Asphalt Resurfacing (Mill and Overlay)	\$13,597	\$13,597	\$13,597	\$13,597	\$13,597	\$13,597	\$13,597	\$13,597	\$9,774	\$9,774
5.0	Concrete Site Features										
5.3.a	Sidewalk Section Replacement Allowance	\$1,692	\$1,692	\$1,692	\$1,806	\$1,806	\$1,806	\$1,928	\$1,928	\$1,928	\$2,058
5.3.b	Curb & Gutter Section Replacement Allowance	\$2,270	\$2,270	\$2,164	\$2,164	\$2,164	\$2,310	\$2,310	\$2,310	\$2,466	\$2,466
6.0	Townhouse Community Site Features										
6.3.a	Stormwater Drainage System Repairs	\$7,567	\$7,567	\$2,265	\$2,265	\$2,265	\$2,265	\$2,265	\$2,265	\$2,265	\$2,265
7.0	Townhouse Community Site Features										
7.3.a	Replace Community Lighting	\$1,848	\$1,848	\$1,848	\$1,848	\$1,848	\$1,848	\$1,848	\$1,848	\$1,848	\$1,848
7.3.b	Replace Community Signage	\$1,511	\$429	\$429	\$429	\$429	\$429	\$479	\$479	\$479	\$479
7.3.c	Replace Wood Timber Retaining Walls	\$619	\$619	\$619	\$619	\$619	\$619	\$619	\$619	\$445	\$445
		\$36,601	\$35,519	\$30,112	\$30,226	\$30,226	\$33,113	\$33,284	\$33,284	\$26,630	\$26,760

TOWNHOME RESERVES
TABLE 3
COMPONENT CONTRIBUTION BY YEAR

Text Section No.	Item Description	11 Contribution 2019	12 Contribution 2020	13 Contribution 2021	14 Contribution 2022	15 Contribution 2023	16 Contribution 2024	17 Contribution 2025	18 Contribution 2026	19 Contribution 2027	20 Contribution 2028
	SITE FEATURES										
4.0	Pavements										
4.3.a	Seal Coat and Re-stripe Asphalt	\$2,220	\$2,220	\$2,220	\$4,145	\$4,145	\$4,145	\$4,145	\$4,145	\$4,622	\$4,622
4.3.b	Asphalt Full-depth Repairs	\$5,205	\$5,205	\$5,205	\$5,803	\$5,803	\$5,803	\$5,803	\$5,803	\$6,470	\$6,470
4.3.c	Asphalt Resurfacing (Mill and Overlay)	\$9,774	\$9,774	\$9,774	\$9,774	\$9,774	\$9,774	\$9,774	\$9,774	\$9,774	\$9,774
5.0	Concrete Site Features										
5.3.a	Sidewalk Section Replacement Allowance	\$2,058	\$2,058	\$2,197	\$2,197	\$2,197	\$2,345	\$2,345	\$2,345	\$2,504	\$2,504
5.3.b	Curb & Gutter Section Replacement Allowance	\$2,466	\$2,633	\$2,633	\$2,633	\$2,810	\$2,810	\$2,810	\$3,000	\$3,000	\$3,000
6.0	Townhouse Community Site Features										
6.3.a	Stormwater Drainage System Repairs	\$2,265	\$2,265	\$2,816	\$2,816	\$2,816	\$2,816	\$2,816	\$2,816	\$2,816	\$2,816
7.0	Townhouse Community Site Features										
7.3.a	Replace Community Lighting	\$1,848	\$1,848	\$1,848	\$1,975	\$1,975	\$1,975	\$1,975	\$1,975	\$1,975	\$1,975
7.3.b	Replace Community Signage	\$479	\$534	\$534	\$534	\$534	\$534	\$595	\$595	\$595	\$595
7.3.c	Replace Wood Timber Retaining Walls	\$445	\$445	\$445	\$445	\$445	\$445	\$445	\$445	\$445	\$445
		\$26,760	\$26,982	\$27,671	\$30,322	\$30,500	\$30,648	\$30,709	\$30,899	\$32,201	\$32,201

CASH FLOW SUMMARY EXPLANATION

The following table presents the cash flow over the twenty-year study period for the Townhouse Reserve Fund.

Table 4 shows the cash flow impact of using the *current annual reserve contribution of \$18,240 and a projected starting balance of \$97,186 on August 1st, 2008*, which is the beginning of the Fiscal Year Ending (FYE) 2009.

The table is followed by a bar chart showing expenditures vs. reserve balance.

Tables assume a 2.2% inflation rate. This is the average annual CPI increase for the period 2008 - 2013, as projected by the Congressional Budget Office. Tables assume a 3.00% interest rate, which was provided by Legum & Norman for the reserve fund investments of the Westerly Homeowners Association.

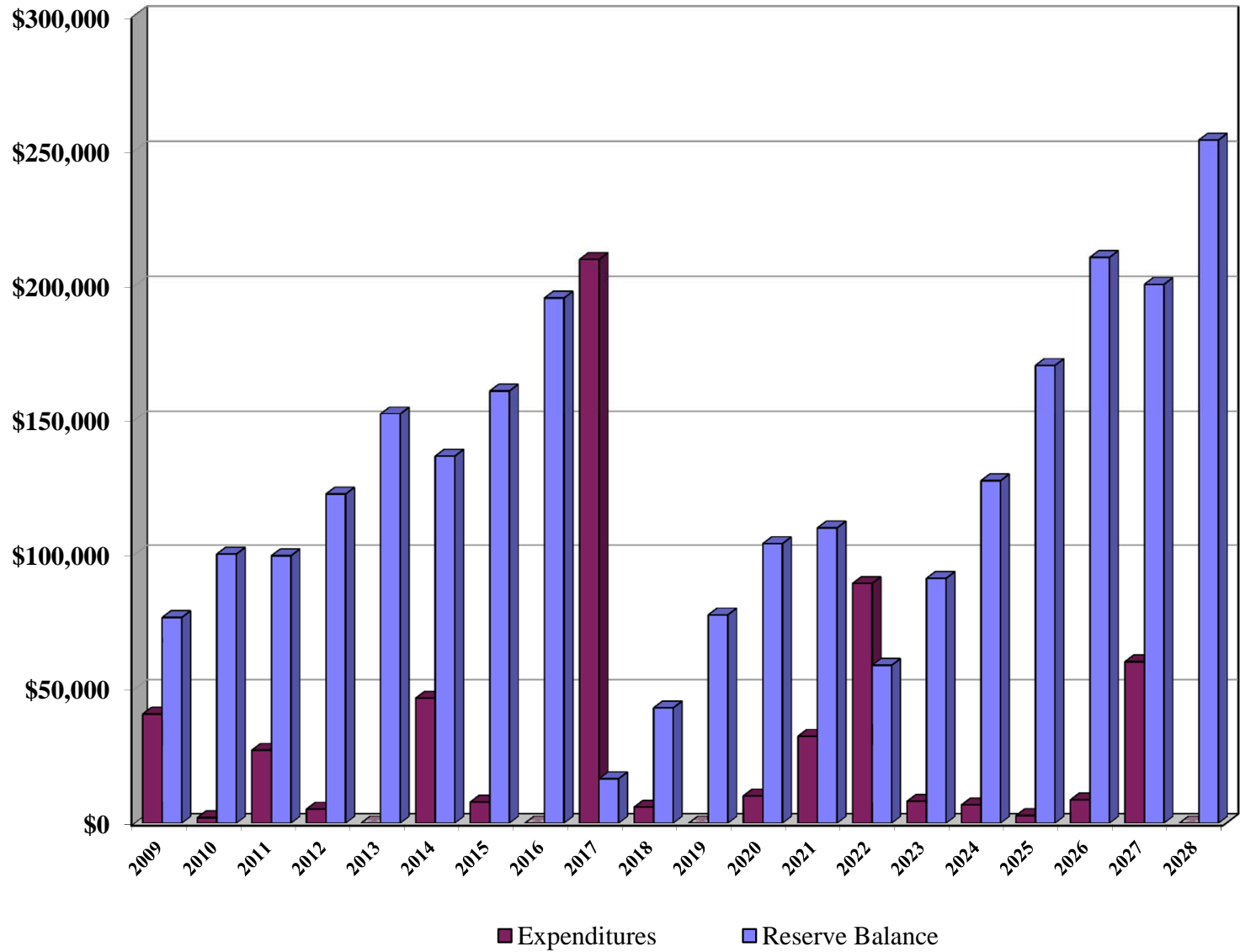
Individual columns in each table contain the following information:

- Column 1. **Year**
- Column 2. **Total Component Value - total worth** of all reserve component repair/replacement costs in that year
- Column 3. **Beginning Reserve Balance**, which shows the amount after all activity in the prior year is completed
- Column 4. **Yearly Contribution**
- Column 5. **Component Method Contribution**, which represents the sum of all component contributions required for each year
- Column 6. **Interest** Paid on Reserve Balance (if applicable). This is the interest paid on the reserve balance calculated as if the annual expenditures were paid at the beginning of the year.
- Column 7. **Capital Expenditures**. This is the sum of all replacement reserve projects that need to be completed in a given year.
- Column 8. **Ending Reserve Balance**. This is the result of the beginning reserve balance, plus annual contribution, plus interest income, less expenditures made during the year.
- Column 9. **% Total Component Value**. Ratio of the ending reserve balance to the total component value, expressed as a percentage.

**TOWNHOME RESERVES
TABLE 4
CASH FLOW SUMMARY
(Current Funding)**

WESTERLY HOMEOWNERS ASSOCIATION									
Initial Contribution:		\$18,240					Begin Study Period:		2009
Projected Increase:		4.00%					End Study Period:		2028
Beginning Balance		\$97,186							
Year	Total Component Value	Beginning Reserve Balance	Yearly Contribution	Component Method Contribution	Interest Paid On Reserve Balance	Capital Expenditures	Ending Reserve Balance	% Total Component Value	
2009	\$249,400	\$97,186	\$18,240	\$36,601	\$1,698	\$40,600	\$76,524	31%	
2010	\$254,887	\$76,524	\$23,400	\$35,519	\$2,234	\$2,044	\$100,114	39%	
2011	\$260,494	\$100,114	\$24,336	\$30,112	\$2,189	\$27,157	\$99,482	38%	
2012	\$266,225	\$99,482	\$25,309	\$30,226	\$2,828	\$5,231	\$122,389	46%	
2013	\$272,082	\$122,389	\$26,322	\$30,226	\$3,672		\$152,382	56%	
2014	\$278,068	\$152,382	\$27,375	\$33,113	\$3,177	\$46,493	\$136,440	49%	
2015	\$284,185	\$136,440	\$28,470	\$33,284	\$3,857	\$7,862	\$160,905	57%	
2016	\$290,438	\$160,905	\$29,608	\$33,284	\$4,827		\$195,340	67%	
2017	\$296,827	\$195,340	\$30,793	\$26,630		\$209,618	\$16,515	6%	
2018	\$303,357	\$16,515	\$32,025	\$26,760	\$317	\$5,960	\$42,896	14%	
2019	\$310,031	\$42,896	\$33,305	\$26,760	\$1,287		\$77,489	25%	
2020	\$316,852	\$77,489	\$34,638	\$26,982	\$2,020	\$10,164	\$103,983	33%	
2021	\$323,823	\$103,983	\$36,023	\$27,671	\$2,150	\$32,330	\$109,825	34%	
2022	\$330,947	\$109,825	\$37,464	\$30,322	\$620	\$89,173	\$58,736	18%	
2023	\$338,228	\$58,736	\$38,963	\$30,500	\$1,518	\$8,137	\$91,080	27%	
2024	\$345,669	\$91,080	\$40,521	\$30,648	\$2,529	\$6,791	\$127,338	37%	
2025	\$353,273	\$127,338	\$42,142	\$30,709	\$3,735	\$2,833	\$170,383	48%	
2026	\$361,045	\$170,383	\$43,828	\$30,899	\$4,851	\$8,686	\$210,375	58%	
2027	\$368,988	\$210,375	\$45,581	\$32,201	\$4,509	\$60,068	\$200,398	54%	
2028	\$377,106	\$200,398	\$47,404	\$32,201	\$6,012		\$253,814	67%	

Cash Flow Summary
Table 4 (Current Funding)
COMMON RESERVES



APPENDIX C
SINGLE-FAMILY HOME RESERVES TABLES

RESERVE FUND PLAN MODEL EXPLANATION

Tables assume a 2.2% inflation rate. This is the average annual CPI increase for the period 2008 - 2013, as projected by the Congressional Budget Office. Tables assume a 3.00% interest rate, based which was provided by Legum & Norman for the reserve fund investments of the Westerly Homeowners Association.

Table 1 - Expenditure Summary by System

This table lists the components surveyed as part of the study, and presents a summary of the cost data used for developing the reserve fund plan. A description of the columns in the table follows:

- Column 1. **Text Section No.** refers to the section in the report text which describes the repairs listed in table.
- Column 2. **Item Description** is a brief description of the component.
- Column 3. **Typical Useful Life**, which shows the life expectancy of similar components in average conditions, and does not necessarily reflect the conditions observed during the study.
- Column 4. **Target Replacement/Repair** gives the year in which capital expenditure is anticipated. Cycles are used if an item will require replacement more than once during the study period, or if a phased repair approach is required.
- Column 5. **Quantity** of the component studied, which may be an exact number, a rough estimate, or simply a (1) if the expenditure forecast is a lump sum allowance for replacement of an unquantified component.
- Column 6. **Units** used to quantify the component.
- Column 7. **Unit Cost** used to calculate the required expenditure. This unit cost includes demolition or removal of existing components and installation of new components, including materials, labor, and overhead and profit for the contractor. These costs can vary significantly due to time of season, material costs, material availability, and other factors beyond our control.
- Column 8. **Cost to Replace/Repair** the component, in 2008 dollars. Some items may show only a fraction of the total cost, which is referred to as "Partial Replacement." This is because wholesale replacement of such items is not likely, and partial replacement has been programmed in the model.

SINGLE-FAMILY HOME RESERVES
TABLE 1
EXPENDITURE SUMMARY BY SYSTEM

Study	2009	Inflation Rate:	2.20%	Reserve Balance (August 2008):	\$40,370
Period:	2028	Investment Rate:	3.00%	Annual Contribution (2009 budget):	\$7,380

Text Section No.	Item Description	Typical Useful Life (yrs)	Target Replacement/Repair (year)					Quantity	Units	Unit Cost	Cost to Replace/Repair** (present worth)
			Cycle 1	Cycle 2	Cycle 3	Cycle 4	Cycle 5				
8.0	Concrete Site Features										
8.3a	Replace Sidewalk and Apron Sections	3	2009	2012	2015	2018	2021	1,000	sq. ft.	\$7	\$7,000
8.3b	Replace Curb & Gutter Sections	3	2011	2014	2017	2020	2023	300	lin. ft.	\$30	\$9,000
9.0	Site Drainage										
9.3a	Stormwater and Sanitary Sewer Repairs	10	2010	2020	2030			1	lump sum	\$5,000	\$5,000
											\$21,000

RESERVE FUND PLAN MODEL EXPLANATION

Tables assume a 2.2% inflation rate. This is the average annual CPI increase for the period 2008 - 2013, as projected by the Congressional Budget Office. Tables assume a 3.00% interest rate, which was provided by Legum & Norman for the reserve fund investments of the Westerly Homeowners Association.

Table 2 - Expenditure Forecast By Year

This table lists components that are scheduled for replacement during a given year. A description of the columns in the table follows:

- Column 1. **Text Section No.** refers to the section in the report text which describes in detail the repairs listed in table.
- Column 2. **Item Description** is a brief description of the component.
- Column 3. **Cost to Replace/Repair** the component, in 2008 dollars (present worth).
- Column 4. **Cost to Replace/Repair** the component in the given year (future worth).
- Column 5. **Yearly Contribution** for the component.
- Column 6. **Total Contribution** for only those components being replaced in the given year.
- Column 7. **Total Expenditures** for all components being replaced in the given year.

SINGLE-FAMILY HOME RESERVES
TABLE 2
EXPENDITURE FORECAST BY YEAR

Text Section No.	Item Description	Cost to Replace/Repair (present worth)	Cost to Replace/Repair (future worth)	Total Expenditures
2009				
8.3a	Replace Sidewalk and Apron Sections	\$7,000	\$7,000	\$7,000
2010				
9.3a	Stormwater and Sanitary Sewer Repairs	\$5,000	\$5,110	\$5,110
2011				
8.3b	Replace Curb & Gutter Sections	\$9,000	\$9,400	\$9,400
2012				
8.3a	Replace Sidewalk and Apron Sections	\$7,000	\$7,472	\$7,472
2013				
2014				
8.3b	Replace Curb & Gutter Sections	\$9,000	\$10,035	\$10,035
2015				
8.3a	Replace Sidewalk and Apron Sections	\$7,000	\$7,976	\$7,976
2016				
2017				
8.3b	Replace Curb & Gutter Sections	\$9,000	\$10,711	\$10,711
2018				
8.3a	Replace Sidewalk and Apron Sections	\$7,000	\$8,514	\$8,514
2019				
2020				
9.3a	Stormwater and Sanitary Sewer Repairs	\$5,000	\$6,352	
8.3b	Replace Curb & Gutter Sections	\$9,000	\$11,434	\$17,786
2021				
8.3a	Replace Sidewalk and Apron Sections	\$7,000	\$9,089	\$9,089
2022				
2023				
8.3b	Replace Curb & Gutter Sections	\$9,000	\$12,205	
8.3a	Replace Sidewalk and Apron Sections	\$7,000	\$9,493	\$21,699
2024				
2025				
2026				
8.3b	Replace Curb & Gutter Sections	\$9,000	\$13,029	
8.3a	Replace Sidewalk and Apron Sections	\$7,000	\$10,134	\$23,162
2027				
2028				

RESERVE FUND PLAN MODEL EXPLANATION

Table 3 - Component Contribution By Year

This table lists each studied component requiring replacement, and gives the contribution which would be required in each year for each component under the *component method* of analysis. The total contribution given in the bottom row of the table is the “Component Method Contribution” given in column 5 of Table 4.

The spreadsheet allocates a portion of the existing reserve balance to each component listed in the table based on a ratio of the individual component value to the total value of all components, as well as the next replacement date for the component. Any required expenditures in the first year are fully funded from the existing balance before the remaining balance is allocated to the components.

SINGLE-FAMILY HOME RESERVES
TABLE 3
COMPONENT CONTRIBUTION BY YEAR

Text Section No.	Item Description	1 Contribution 2009	2 Contribution 2010	3 Contribution 2011	4 Contribution 2012	5 Contribution 2013	6 Contribution 2014	7 Contribution 2015	8 Contribution 2016	9 Contribution 2017	10 Contribution 2018
8.0	Concrete Site Features										
8.3a	Replace Sidewalk and Apron Sections	\$2,417	\$2,417	\$2,417	\$2,581	\$2,581	\$2,581	\$2,755	\$2,755	\$2,755	\$2,941
8.3b	Replace Curb & Gutter Sections			\$3,246	\$3,246	\$3,246	\$3,465	\$3,465	\$3,465	\$3,699	\$3,699
9.0	Site Drainage										
9.3a	Stormwater and Sanitary Sewer Repairs		\$554	\$554	\$554	\$554	\$554	\$554	\$554	\$554	\$554
		\$2,417	\$2,972	\$6,218	\$6,381	\$6,381	\$6,600	\$6,774	\$6,774	\$7,008	\$7,194

SINGLE-FAMILY HOME RESERVES
TABLE 3
COMPONENT CONTRIBUTION BY YEAR

Text Section No.	Item Description	11 Contribution 2019	12 Contribution 2020	13 Contribution 2021	14 Contribution 2022	15 Contribution 2023	16 Contribution 2024	17 Contribution 2025	18 Contribution 2026	19 Contribution 2027	20 Contribution 2028
8.0	Concrete Site Features										
8.3a	Replace Sidewalk and Apron Sections	\$2,941	\$2,941	\$4,676	\$4,676	\$3,279	\$3,279	\$3,279	\$3,500	\$3,500	\$3,500
8.3b	Replace Curb & Gutter Sections	\$3,699	\$3,949	\$3,949	\$3,949	\$4,215	\$4,215	\$4,215	\$4,500	\$4,500	\$4,500
9.0	Site Drainage										
9.3a	Stormwater and Sanitary Sewer Repairs	\$554	\$689	\$689	\$689	\$689	\$689	\$689	\$689	\$689	\$689
		\$7,194	\$7,578	\$9,314	\$9,314	\$8,183	\$8,183	\$8,183	\$8,688	\$8,688	\$8,688

CASH FLOW SUMMARY EXPLANATION

The following table presents the cash flow over the twenty-year study period for the Single-Family Home Reserve Fund.

Table 4 shows the cash flow impact of using the *current annual reserve contribution of \$7,380 and a starting balance of \$40,370*, which reflects a projected reserve balance for Fiscal Year 2009.

The table is followed by a bar chart showing expenditures vs. reserve balance.

Tables assume a 2.2% inflation rate. This is the average annual CPI increase for the period 2008 - 2013, as projected by the Congressional Budget Office. Tables assume a 3.00% interest rate, which was provided by Legum & Norman for the reserve fund investments of the Westerly Homeowners Association.

Individual columns in each table contain the following information:

- Column 1. **Year**
- Column 2. **Total Component Value - total worth** of all reserve component repair/replacement costs in that year
- Column 3. **Beginning Reserve Balance**, which shows the amount after all activity in the prior year is completed
- Column 4. **Yearly Contribution**
- Column 5. **Component Method Contribution**, which represents the sum of all component contributions required for each year
- Column 6. **Interest** Paid on Reserve Balance (if applicable). This is the interest paid on the reserve balance calculated as if the annual expenditures were paid at the beginning of the year.
- Column 7. **Capital Expenditures**. This is the sum of all replacement reserve projects that need to be completed in a given year.
- Column 8. **Ending Reserve Balance**. This is the result of the beginning reserve balance, plus annual contribution, plus interest income, less expenditures made during the year.
- Column 9. **% Total Component Value**. Ratio of the ending reserve balance to the total component value, expressed as a percentage.

SINGLE-FAMILY HOME RESERVES

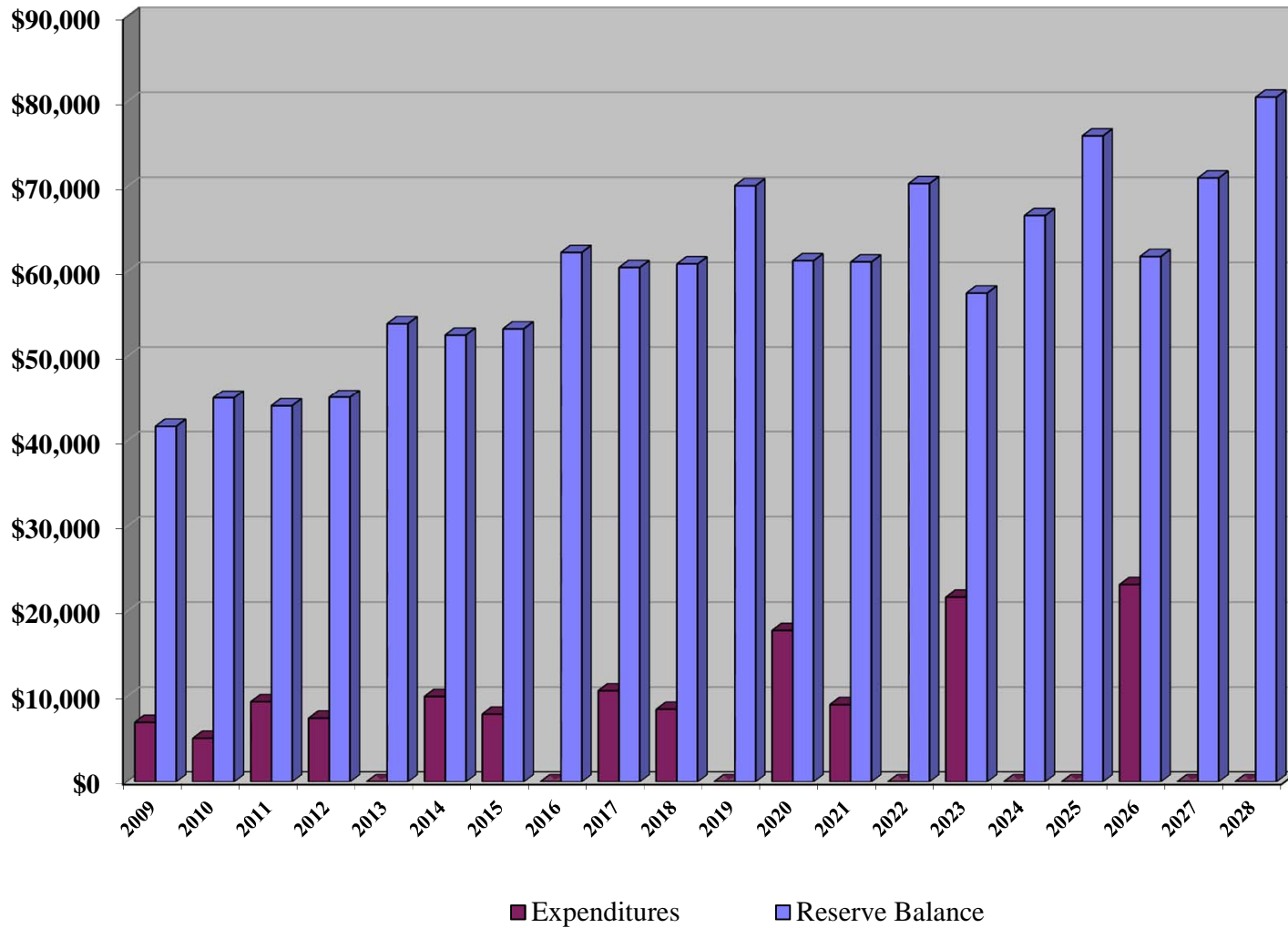
TABLE 4

CASH FLOW SUMMARY

(Current Funding)

WESTERLY HOMEOWNERS ASSOCIATION									
Initial Contribution:		\$7,380					Begin Study Period:		2009
Projected Increase:							End Study Period:		2028
Beginning Balance		\$40,370							
Year	Total Component Value	Beginning Reserve Balance	Yearly Contribution	Component Method Contribution	Interest Paid On Reserve Balance	Capital Expenditures	Ending Reserve Balance	% Total Component Value	
2009	\$21,000	\$40,370	\$7,380	\$2,417	\$1,001	\$7,000	\$41,751	199%	
2010	\$21,462	\$41,751	\$7,380	\$2,972	\$1,099	\$5,110	\$45,120	210%	
2011	\$21,934	\$45,120	\$7,380	\$6,218	\$1,072	\$9,400	\$44,172	201%	
2012	\$22,417	\$44,172	\$7,380	\$6,381	\$1,101	\$7,472	\$45,180	202%	
2013	\$22,910	\$45,180	\$7,380	\$6,381	\$1,355		\$53,916	235%	
2014	\$23,414	\$53,916	\$7,380	\$6,600	\$1,316	\$10,035	\$52,578	225%	
2015	\$23,929	\$52,578	\$7,380	\$6,774	\$1,338	\$7,976	\$53,319	223%	
2016	\$24,455	\$53,319	\$7,380	\$6,774	\$1,600		\$62,299	255%	
2017	\$24,993	\$62,299	\$7,380	\$7,008	\$1,548	\$10,711	\$60,515	242%	
2018	\$25,543	\$60,515	\$7,380	\$7,194	\$1,560	\$8,514	\$60,941	239%	
2019	\$26,105	\$60,941	\$7,380	\$7,194	\$1,828		\$70,149	269%	
2020	\$26,680	\$70,149	\$7,380	\$7,578	\$1,571	\$17,786	\$61,313	230%	
2021	\$27,267	\$61,313	\$7,380	\$9,314	\$1,567	\$9,089	\$61,171	224%	
2022	\$27,866	\$61,171	\$7,380	\$9,314	\$1,835		\$70,386	253%	
2023	\$28,479	\$70,386	\$7,380	\$8,183	\$1,461	\$21,699	\$57,528	202%	
2024	\$29,106	\$57,528	\$7,380	\$8,183	\$1,726		\$66,634	229%	
2025	\$29,746	\$66,634	\$7,380	\$8,183	\$1,999		\$76,013	256%	
2026	\$30,401	\$76,013	\$7,380	\$8,688	\$1,586	\$23,162	\$61,816	203%	
2027	\$31,070	\$61,816	\$7,380	\$8,688	\$1,854		\$71,051	229%	
2028	\$31,753	\$71,051	\$7,380	\$8,688	\$2,132		\$80,562	254%	

Cash Flow Summary
Table 4 (Current Funding)
SINGLE-FAMILY HOME RESERVES



APPENDIX D
PHOTOGRAPHS



TAMARACK RIDGE ST
MOUNTAIN LAUREL TE

JYZ-6079