

# **Property Site Elements**

## **Asphalt Pavement, Repaving**

*Line Items:* 4.020 and 4.040

Quantity: Approximately 63,600 square yards at the streets

*History:* Most of the pavement is presumed original, the Association repaved portions of Old Tree Line Trail approximately 10- to 15- years ago. Black willow has never been done. Management and the Board report pavement patches on an as needed basis.

**Condition:** Fair overall with frequent areas of deterioration including cracks, pothole formation and raveling. We note frequent areas of patch repairs.



Pavement overview near English Brick Trail



Extensive deterioration at Trail by the Lake



Pothole formation near 10 Autumnwood Trail



**Cracks along Lone Tree Trail** 





Pothole formation near 810 Shady Branch Trail



Extensive deterioration near 807 Shady Branch Trail



Deterioration at previous patch repairs



Extensive cracks near clubhouse at Shady Branch Trail



Isolated patch near clubhouse



Pavement at clubhouse parking area





**Extensive cracks at Black Willow Trail** 



**Pavement overview at Black Willow Trail** 



Vehicular stains at clubhouse parking area



Washout along Black Bear Trail



Raveling and organic growth evident along Crooked Tree Trail



Fill patch at Rosewood Trail







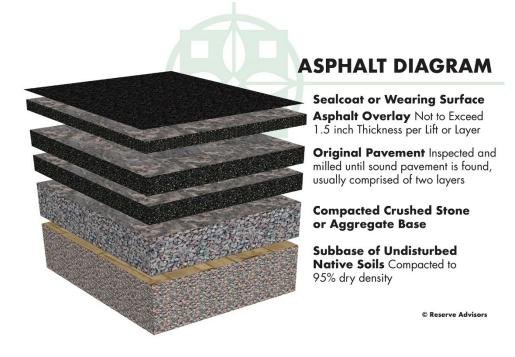
Top layer deterioration at Rollingwood Trail

**Pavement overview at Woodridge Trail** 

**Useful Life:** 15- to 20-years with the benefit of patch repairs events every three- to five-years

**Component Detail Notes:** Patch repairs are conducted at areas exhibiting settlement, potholes, or excessive cracking. These conditions typically occur near high traffic areas, catch basins, and pavement edges.

The initial installation of asphalt uses at least two lifts, or two separate applications of asphalt, over the base course. The first lift is the binder course. The second lift is the wearing course. The wearing course comprises a finer aggregate for a smoother more watertight finish. The following diagram depicts the typical components although it may not reflect the actual configuration at Trails West:



Page 4.18 - Reserve Component Detail



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

**Preventative Maintenance Notes:** We note the following select recommended preventative maintenance activities to maximize the remaining useful life:

- Annually:
  - o Inspect for settlement, large cracks and trip hazards, and ensure proper drainage
  - o Repair areas which could cause vehicular damage such as potholes
- As needed:
  - o Perform crack repairs and patching

**Priority/Criticality:** Defer only upon opinion of independent professional or engineer

**Expenditure Detail Notes:** Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3. Our cost for milling and overlayment includes area patching of up to ten percent (10%).

# **Basketball Court, Replacement**

**Line Item:** 4.051

History: Installed in 2019

**Condition:** Good overall







**Basketball court overview** 

**Basketball court overview** 

*Useful Life:* Up to 30 years although interim deterioration of areas is common

Priority/Criticality: Per Board discretion

**Expenditure Detail Notes:** Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3.

# Bridge, Wood, Pedestrian

**Line Item:** 4.098

**Quantity:** One bridge located at the waterfall over the south pond

History: Repairs and partial replacements were conducted in 2020 including

replacement of the deck boards

Condition: Good to fair overall







Deck boards fastened with screws

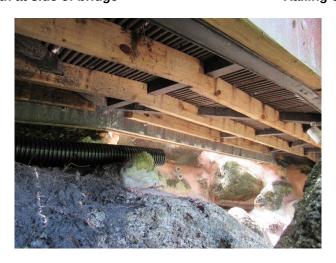






Organic growth at side of bridge

Railing overview



Pedestrian bridge underside

Useful Life: Up to 25 years

Priority/Criticality: Defer only upon opinion of independent professional or engineer

Expenditure Detail Notes: Expenditure timing and costs are depicted in the Reserve

Expenditures table in Section 3.

#### **Catch Basins**

**Line Item:** 4.100

*Quantity:* 40 catch basins<sup>2</sup>

*History:* Management informs us that the catch basins are cleaned on an annual basis

<sup>&</sup>lt;sup>2</sup> We utilize the terminology catch basin to refer to all stormwater collection structures including curb inlets.



**Condition:** Good to fair overall, we note that the catch basin grate near the entrance to the clubhouse is severely corroded and should be replaced, funded by the operating budget.





Catch basin

Concrete deterioration leading to catch basin



Debris accumulation at catch basin along Woodridge Trail



Extensive corrosion at catch basin grate at clubhouse

**Useful Life:** The useful life of catch basins is up to 65 years. However, achieving this useful life usually requires interim capital repairs or partial replacements every 15- to 20-years.

**Component Detail Notes:** Erosion causes settlement around the collar of catch basins. Left unrepaired, the entire catch basin will shift and need replacement.

Priority/Criticality: Defer only upon opinion of independent professional or engineer

**Expenditure Detail Notes:** Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3. We recommend the Association plan for inspections and capital repairs to the catch basins in conjunction with repaving.



### **Concrete Curbs and Gutters**

**Line Item:** 4.110

**Quantity:** Approximately 26,000 linear feet of ribbon curbs at the roadsides and approximately 10,000 feet of standard curbs at the landscape islands within roads

**Condition:** Good to fair overall with areas of cracks and deterioration





**Curb deterioration at Wildwood Trail** 

**Gutter deterioration along Lone Tree Trail** 



**Gutter replacements evident** 

**Useful Life:** Up to 65 years although interim deterioration of areas is common

Priority/Criticality: Per Board discretion

**Expenditure Detail Notes:** Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3. We estimate that up to 9,000 linear feet of curbs and gutters, or twenty-five percent (25%) of the total, will require replacement during the next 30 years.



# Irrigation System, Replacement

**Line Item:** 4.420

**Quantity:** Approximately 95 total zones at various locations:

Location	Approximate Quantity (Zones)
Roadway Landscape Islands	50
North Entrance	6
West Entrance	7
Clubhouse Area	8
Cul De Sacs	24

*History:* The irrigation system is original. Capital repairs amounting to approximately \$25,000 in 2020.

**Condition:** Reported satisfactory.



Irrigation equipment at Autumnwood Trail

**Useful Life:** Up to 40 years

**Component Detail Notes:** Irrigation systems typically include the following components:

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

Trails West should anticipate interim and partial replacements of the system network supply pipes and other components as normal maintenance to maximize the useful life



of the irrigation system. The Association should fund these ongoing seasonal repairs through the operating budget.

Priority/Criticality: Defer only upon opinion of independent professional or engineer

**Expenditure Detail Notes:** Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3. Our estimate of zone quantities is based on information provided by the Association's irrigation vendor during our 2020 inspection.

# **Playground Equipment**

**Line Item:** 4.660

History: Installed in 2019

**Condition:** Good overall



Organic growth at swings



Playground equipment overview



Play surface



Playground equipment overview







Slide Spring riders

Useful Life: 15- to 20-years

**Component Detail Notes:** Safety is the major purpose for maintaining playground equipment. We recommend an annual inspection of the playground equipment to identify and repair as normal maintenance loose connections and fasteners or damaged elements. We suggest the Association learn more about the specific requirements of playground equipment at PlaygroundSafety.org. We recommend the use of a specialist for the design or replacement of the playground equipment environment.

Priority/Criticality: Defer only upon opinion of independent professional or engineer

**Expenditure Detail Notes:** Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3. Our estimate for cost of replacement is based on historical data provided by Management.

### Pond, Aerator

**Line Item:** 4.700

**Quantity:** One pond fountain with a 5-HP pump

History: Replaced in 2020.

**Condition:** Reported satisfactory







5-HP pond fountain aerator pump

Pond fountain aerator

**Useful Life:** 10- to 15-years

**Component Detail Notes:** The use of small pumps, motors and aerators circulates pond water and increases the amount of entrained oxygen in the water, increasing water quality and reducing algae growths.

**Priority/Criticality:** Defer only upon opinion of independent professional or engineer

**Expenditure Detail Notes:** Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3.

### **Ponds, Sediment Removal and Erosion Control**

**Line Items:** 4.710 and 4.730

**Quantity:** Approximately 3,000 square yards of water surface area and approximately 1,350 linear feet of shoreline with natural vegetation at both ponds.

*History:* The history of erosion control measures and sediment removal was unavailable at the time of our inspection.

**Condition:** Fair overall. We note extensive vegetation and organic growth at the north pond.







Extensive vegetation at pond north of playground

Extensive vegetation at pond north of playground



South pond overview

**Useful Life:** Based on the visual condition, construction, adjacent deciduous trees and visibly apparent erosion, we recommend the Association anticipate the need to remove pond sediment up to every 30 years.

Shorelines are subject to fluctuations in water levels, increased plant growth and migrating storm and ground water resulting in the need for erosion control measures up to every 15 years.

Component Detail Notes: The gradual build-up of natural debris, including tree leaves, branches and silt, may eventually change the topography of areas of the pond. Silt typically accumulates at inlets, outlets and areas of shoreline erosion. Sediment removal of ponds becomes necessary if this accumulation alters the quality of pond water or the functionality of the ponds as storm water management structures. Sediment removal is the optimal but also the most capital intensive method of pond management. Excavation equipment used for sediment removal includes clamshells, draglines and suction pipe lines. Sediment removal can also include shoreline regrading. Regrading includes removal of collapsed and eroded soil, and redefining the shoreline.



The steep shoreline embankments are likely to exacerbate soil movement and erosion. The use and maintenance of landscape, natural vegetation and/or stone rip rap along the pond shoreline will help maintain an attractive appearance and prevent soil erosion.

Shoreline plantings are referred to as buffer zones. Buffer zones provide the following advantages:

- Control insects naturally
- · Create an aesthetically pleasing shoreline
- · Enhance water infiltration and storage
- Filter nutrients and pollutants
- · Increase fish and wildlife habitat
- · Reduce lawn maintenance
- Stabilize shoreline and reduce erosion
- Trap sediments

**Preventative Maintenance Notes:** We note the following select recommended preventative maintenance activities to maximize the remaining useful life:

- Annually:
  - o Inspect and remediate shoreline erosion and areas of sediment accumulation
  - o Clear and remove debris and vegetation overgrowth at pond edges, and inlet and outlet structures
  - o Inspect for algae blooms and remedy as needed through a chemical treatment program or aeration

Priority/Criticality: Defer only upon opinion of independent professional or engineer

**Expenditure Detail Notes:** Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3. We recommend the Association plan to install a combination of plantings and stabilization around the pond along 204 linear feet, or approximately fifteen percent (15%), of the shoreline per event.

For reserve budgeting purposes, we estimate the need to remove an average depth of one yard from approximately fifty percent (50%) of the surface area. However, the actual volume of material to remove may vary dependent upon an invasive analysis at the time of removal. A visual inspection of a body of water cannot reveal the amount of accumulated silt. This is especially true on larger bodies of water. It is therefore inaccurate to assume an entire body of water will require sediment removal. It is more cost effective to spot remove in areas of intense silt accumulation as noted through bathymetric surveys. The amount or depth of silt is determined through prodding into the silt until a relatively solid base is found or through bathymetric surveys. A bathymetric survey establishes a base of data about the depth of the body of water over many locations against which the data of future surveys is compared. These invasive procedures are beyond the scope of a Reserve Study and require multiple visits to the site. We recommend the Association contract with a local engineer for periodic bathymetric surveys. Future updates of the Reserve Study can incorporate future anticipated expenditures based on the results of the bathymetric surveys.



Unit costs per cubic yard to remove can vary significantly based on the type of equipment used, quantity of removed material and disposal of removed material. Sediment removal costs must also include mobilization, or getting the equipment to and from the site. Also, the portion of the overall cost to remove associated with mobilization varies based on the volume removed. Costs for sediment disposal also vary depending on the site. Compact sites will require hauling and in some cases disposal fees.

### **Retaining Walls, Timber**

**Line Item:** 4.760

Quantity: Approximately 440 square feet of retaining walls at the playground and at the

path to the wooden walkway

History: Unknown

**Condition:** Fair Condition with weathered timber evident





Playground retaining wall overview

Playground retaining wall with weathered timber

Useful Life: 15- to 20-years

Priority/Criticality: Defer only upon opinion of independent professional or engineer

**Expenditure Detail Notes:** Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3.

# **Security System**

**Line Item:** 4.785

Quantity: Trails West utilizes the following security system components:



Cameras (15)

Monitor (1)

Recording equipment

*History:* The security system was likely installed within the last 5- to 10- years.

**Condition:** Reported satisfactory



Security system camera

Useful Life: Up to 10 years

**Preventative Maintenance Notes:** We recommend the Association obtain and adhere to the manufacturer's recommended maintenance plan. The required preventative maintenance may vary in frequency and scope based on the unit's age, operational condition, or changes in technology. We note the following select recommended preventative maintenance activities to maximize the remaining useful life:

- Weekly:
  - Clean card readers and other frequently used equipment of dust and other materials that may prevent proper operation
- Monthly:
  - Check access points for proper operation
  - Check cameras for proper focus, fields of view are unobstructed and camera and lenses are clean and dust-free
  - Check recording equipment for proper operation
  - Verify monitors are free from distortion with correct brightness and contrast
- Annually:
  - Check exposed wiring and cables for wear, proper connections and signal transmission
  - Check power connections, and if applicable, functionality of battery power supply systems

Priority/Criticality: Per Board discretion



**Expenditure Detail Notes:** Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3.

### **Shuffleboard Courts, Replacement**

**Line Item:** 4.805

*History:* Color coated in 2019, the play surface is presumed original.

**Condition:** Good to fair overall with stains to the playing surface





Drainage at shuffleboard court

**Exposed concrete reinforcement** 



**Shuffleboard courts** 

*Useful Life:* Up to 40 years although interim deterioration of areas is common

Priority/Criticality: Per Board discretion

Expenditure Detail Notes: Expenditure timing and costs are depicted in the Reserve

**Expenditures** table in Section 3.



# Signage, Street and Traffic

**Line Item:** 4.810

Quantity: Approximately 54 wood signs throughout the community

*History:* Unknown. Management informs us of plans to replace the signs this year.

**Condition:** Fair to poor overall with areas of finish deterioration and wood rot



Street and traffic sign overview



Street and traffic sign with wood rot



Street and traffic sign with finish deterioration



Street and traffic sign with wood rot and finish deterioration

**Useful Life:** 15- to 20-years

**Component Detail Notes:** The community signs contribute to the overall aesthetic appearance of the property to owners and potential buyers. Replacement of community signs is often predicated upon the desire to "update" the perceived identity of the community rather than for utilitarian concerns. Therefore, the specific time for replacement of the signs is discretionary.



Priority/Criticality: Per Board discretion

**Expenditure Detail Notes:** Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3.

### **Site Furniture**

**Line Item:** 4.820

Quantity:

Benches (6)

• Picnic tables (5)

*History:* Unknown with repairs to the picnic tables evident

Condition: Good to fair overall





Bench and shuffleboard storage

Picnic tables



Repairs to picnic tables evident

Useful Life: 15- to 20-years



Priority/Criticality: Per Board discretion

**Expenditure Detail Notes:** Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3.

### **Tennis Courts**

*Line Items:* 4.830 and 4.860

**Quantity:** 1,600 square yards of asphalt comprising two tennis courts

History: The timing of the most recent color coat is unknown and the play surface is

presumed original

Condition: Fair overall faded color coat, stains, and play surface cracks evident.





**Tennis court overview** 



Surface edge

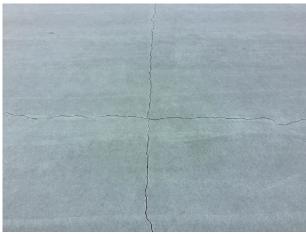


**Surface cracks** 

Surface cracks with vegetation







Surface cracks Surface cracks

**Useful Life:** 25- to 30-years for replacement of the surface with the benefit of color coat applications and repairs every four- to six-years

**Preventative Maintenance Notes:** Prior to the application of the color coat, the Association should require the contractor to rout and fill all cracks with hot emulsion. This deters water infiltration and further deterioration of the asphalt playing surface. We note the following select recommended preventative maintenance activities to maximize the remaining useful life:

- Annually:
  - Inspect and repair large cracks, trip hazards and possibly safety hazards
  - o Verify gate and fencing is secure
  - o Verify lighting is working properly if applicable
  - o Inspect and repair standards and windscreens as needed

Priority/Criticality: Defer only upon opinion of independent professional or engineer

**Expenditure Detail Notes:** Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3.

### **Tennis Courts, Fence**

**Line Item:** 4.840

Quantity: 320 linear feet of full size fence and 120 linear feet of three-foot fence

History: Original

**Condition:** Fair overall with warped webbing and finish deterioration evident.







Chain link fence

Fence warped webbing with finish deterioration



Fence warped webbing

Useful Life: 25- to 30- years

Priority/Criticality: Per Board discretion

Expenditure Detail Notes: Expenditure timing and costs are depicted in the Reserve

*Expenditures* table in Section 3.



# **Pool Elements**





**Pool overview** 

**Pool overview** 

### **Deck, Pavers**

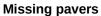
**Line Item:** 6.200

Quantity: Approximately 3,300 square feet

*History:* The pavers were replaced within the past ten years.

**Condition:** Good to fair overall condition with isolated damaged and displaced pavers evident. We note stains and vegetative growth as well.







Paver pool deck overview







Vegetative growth evident

Weathered and stained pavers

Useful Life: Up to 25 years

Priority/Criticality: Defer only upon opinion of independent professional or engineer

**Expenditure Detail Notes:** Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3. We recommend the Association fund interim inspections, partial replacements and repairs through the operating budget.

# **Fence, Aluminum**

**Line Item:** 6.400

**Quantity:** 260 linear feet

*History:* Replaced in 2020

Condition: Good overall condition



Pool fence overview



Useful Life: Up to 25 years

Priority/Criticality: Not recommended to defer

**Expenditure Detail Notes:** Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3. Our estimate of cost is provided by Management.

### **Furniture**

**Line Item:** 6.500

**Quantity:** The pool furniture includes the following:

Chairs (13)

• Lounges (15)

Tables (5)

Ladders and life safety equipment

*History:* Management informs us of the intent to replace the furniture in the near term

**Condition:** Fair overall with isolated damaged straps and stains





**Pool furniture overview** 

Stained pool furniture





Various styles

Useful Life: Up to 12 years

Priority/Criticality: Per Board discretion

**Expenditure Detail Notes:** Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3. We recommend interim re-strapping, refinishing, cushion replacements, reupholstering and other repairs to the furniture as normal maintenance to maximize its useful life.

# **Mechanical Equipment**

**Line Item:** 6.600

**Quantity:** The mechanical equipment includes the following:

- · Automatic chlorinator
- Controls
- Filters
- Interconnected pipe, fittings and valves
- Pumps

*History:* Varied. The filters were replaced in 2019.

**Condition:** We were unable to inspect the pool mechanical equipment due to lack of access to the pool mechanical room.

**Useful Life:** Up to 15 years

Priority/Criticality: Defer only upon opinion of independent professional or engineer

**Expenditure Detail Notes:** Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3. Failure of the pool mechanical equipment as a single event is unlikely. Therefore, we include replacement of up to fifty percent (50%) of the



equipment per event. We consider interim replacement of motors and minor repairs as normal maintenance.

### **Pool Finishes, Plaster**

**Line Item:** 6.800

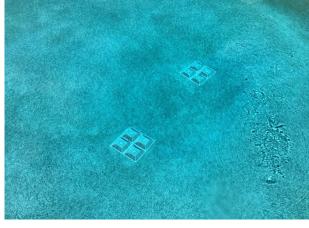
Quantity: Approximately 2,100 square feet of plaster based on the horizontal surface

area and approximately 190 linear feet of tile

*History:* The plaster and tile finishes were replaced in 2018

**Condition:** Good overall





Coping overview



**Pool drains** 



Stair entry

Tile overview

*Useful Life:* 8- to 12-years for the plaster and 15- to 25-years for the tile. We include the tile in line item 6.900 Structure, Total Replacement.



**Component Detail Notes:** Removal and replacement provides the opportunity to inspect the pool structure and to allow for partial repairs of the underlying concrete surfaces as needed. To maintain the integrity of the pool structure, we recommend the Association budget for the following:

- Removal and replacement of the plaster finish
- Partial replacements of the scuppers and coping as needed
- Replacement of tiles as needed
- · Replacement of joint sealants as needed
- · Concrete structure repairs as needed

Priority/Criticality: Defer only upon opinion of independent professional or engineer

**Expenditure Detail Notes:** Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3. We recommend the Association budget for full tile replacement every other plaster replacement event.

### **Structure and Deck**

*Line Item:* 6.900

Quantity: Approximately 2,100 square feet of horizontal surface area

History: Original

**Conditions:** Visually appears in good condition. The concrete floor and walls have a plaster finish. This finish makes it difficult to thoroughly inspect the concrete structure during a noninvasive visual inspection.

**Useful Life:** Up to 65 years

Component Detail Notes: The need to replace a pool structure depends on the condition of the concrete structure, the condition of the embedded or concealed water circulation piping, possible long term uneven settlement of the structure, and the increasing cost of repair and maintenance. Deterioration of any one of these component systems could result in complete replacement of the pool. For example, deferral of a deteriorated piping system could result in settlement and cracks in the pool structure. This mode of failure is more common as the system ages and deterioration of the piping system goes undetected. For reserve budgeting purposes, we recommend Trails West plan to replace the following components:

- Pool structure
- Subsurface piping

**Priority/Criticality:** Defer only upon opinion of independent professional or engineer

**Expenditure Detail Notes:** Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3.



# **Reserve Study Update**

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

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

Periodic updates incorporate these variable changes since the last Reserve Study or Update. The Association can expense the fee for an Update with site visit from the reserve account. This fee is included in the Reserve Funding Plan. We base this budgetary amount on updating the same property components and quantities of this Reserve Study report. We recommend the Board budget for an Update to this Reserve Study in two- to three-years. Budgeting for an Update demonstrates the Board's objective to continue fulfilling its fiduciary responsibility to maintain the commonly owned property and to fund reserves appropriately.



### 5. METHODOLOGY

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

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

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

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

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

- The Cash Flow Method to compute, project and illustrate the 30-year Reserve Funding Plan
- Local<sup>2</sup> costs of material, equipment and labor
- Current and future costs of replacement for the Reserve Components
- Costs of demolition as part of the cost of replacement
- Local economic conditions and a historical perspective to arrive at our estimate of long-term future inflation for construction costs in DeLand,

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

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



Florida at an annual inflation rate<sup>3</sup>. Isolated or regional markets of greater construction (development) activity may experience slightly greater rates of inflation for both construction materials and labor.

- The past and current maintenance practices of Trails West and their effects on remaining useful lives
- Financial information provided by the Association pertaining to the cash status of the reserve fund and budgeted reserve contribution
- The anticipated effects of appreciation of the reserves over time in accord with a return or yield on investment of your cash equivalent assets. (We did not consider the costs, if any, of Federal and State Taxes on income derived from interest and/or dividend income).
- The Funding Plan excludes necessary operating budget expenditures. It is our understanding that future operating budgets will provide for the ongoing normal maintenance of Reserve Components.

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

<sup>&</sup>lt;sup>3</sup> Derived from Marshall & Swift, historical costs and the Bureau of Labor Statistics.



#### 6. CREDENTIALS

#### HISTORY AND DEPTH OF SERVICE

**Founded in 1991,** Reserve Advisors is the leading provider of reserve studies, insurance appraisals, developer turnover transition studies, expert witness services, and other engineering consulting services. Clients include community associations, resort properties, hotels, clubs, non-profit organizations, apartment building owners, religious and educational institutions, and office/commercial building owners in 48 states, Canada and throughout the world.

The **architectural engineering consulting firm** was formed to take a leadership role in helping fiduciaries, boards, and property managers manage their property like a business with a long-range master plan known as a Reserve Study.

Reserve Advisors employs the **largest staff of Reserve Specialists** with bachelor's degrees in engineering dedicated to Reserve Study services. Our founders are also founders of Community Associations Institute's (CAI) Reserve Committee that developed national standards for reserve study providers. One of our founders is a Past President of the Association of Professional Reserve Analysts (APRA). Our vast experience with a variety of building types and ages, on-site examination and historical analyses are keys to determining accurate remaining useful life estimates of building components.

**No Conflict of Interest** - As consulting specialists, our **independent opinion** eliminates any real or perceived conflict of interest because we do not conduct or manage capital projects.

#### TOTAL STAFF INVOLVEMENT

Several staff members participate in each assignment. The responsible advisor involves the staff through a Team Review, exclusive to Reserve Advisors, and by utilizing the experience of other staff members, each of whom has served hundreds of clients. We conduct Team Reviews, an internal quality assurance review of each assignment, including: the inspection; building component costing; lifing; and technical report phases of the assignment. Due to our extensive experience with building components, we do not have a need to utilize subcontractors.

#### **OUR GOAL**

To help our clients fulfill their fiduciary responsibilities to maintain property in good condition.

#### **VAST EXPERIENCE WITH A VARIETY OF BUILDINGS**

Reserve Advisors has conducted reserve studies for a multitude of different communities and building types. We've analyzed thousands of buildings, from as small as a 3,500-square foot day care center to a 2,600,000-square foot 98-story highrise. We also routinely inspect buildings with various types of mechanical systems such as simple electric heat, to complex systems with air handlers, chillers, boilers, elevators, and life safety and security systems.

We're familiar with all types of building exteriors as well. Our well-versed staff regularly identifies optimal repair and replacement solutions for such building exterior surfaces such as adobe, brick, stone, concrete, stucco, EIFS, wood products, stained glass and aluminum siding, and window wall systems.

#### **OLD TO NEW**

Reserve Advisors' experience includes ornate and vintage buildings as well as modern structures. Our specialists are no strangers to older buildings. We're accustomed to addressing the unique challenges posed by buildings that date to the 1800's. We recognize and consider the methods of construction employed into our analysis. We recommend appropriate replacement programs that apply cost effective technologies while maintaining a building's character and appeal.



#### Brandon L. Bloomer, MBA, RS Responsible Advisor

#### **CURRENT CLIENT SERVICES**

Brandon Bloomer is an Associate Engineer for Reserve Advisors, LLC. Mr. Bloomer is responsible for the inspection and analysis of the condition o clients' property, and recommending engineering solutions to prolong the lives of the components. He also forecasts capital expenditures for the repair and/or replacement of the property components and prepares technical reports on assignments. He is responsible for conducting Life Cycle Cost Analysis and Capital Replacement Forecast services and the preparation of Reserve Studies for condominiums, townhomes and homeowners associations.



The following is a partial list of clients served by Brandon Bloomer demonstrating his breadth of experiential knowledge of community associations in construction and related buildings systems.

- The Sawgrass Players Club Association, Inc. Located in Ponte Vedra, Florida, this Master Association is comprised of over 1,800 homes at the historic TPC Sawgrass golf course. The Master Association maintains multiple pool and recreation areas, streets, gate houses, and concrete bridges. The Association also maintains an extensive stormwater management system including weirs, dams, pipes, and high-volume pump stations.
- The Palms at Marsh Landing Condominium Association This condominium association located in Jacksonville Beach, Florida was constructed from 1995-1998. The community is comprised of 419 units in 34 buildings. The buildings are comprised of painted stucco exterior walls, asphalt shingle roofs, exterior staircases, and breezeways located on the front and centers of the buildings. Additionally the property has a clubhouse, a pool house, multiple ponds with bulkheads, and two swimming pools.
- Wekiva Fairway Condominium Association, Inc. This townhome association was built in 1981 and is located in Longwood, Florida. The community consists of 12 buildings which contain 48 units along the fairways of Wekiva Golf Club. The buildings are comprised of a combination of painted plywood siding and stucco. The community also features a pool and pool house for their residents.
- **Bronson's Landing Homeowners Association, Inc.** This single family home community contains 126 residential homes and is located in Winter Garden, Florida. The Association maintains the shared common elements including a beautiful common area pergola, a pond with multiple fountains, and nearly half a mile of masonry brick perimeter wall.
- **Willowcove Master Association, Inc.** This homeowners' association is located in Ponte Vedra, Florida features 342 single family homes, multiple ponds, and multiple playgrounds throughout the community.

#### PRIOR RELEVANT EXPERIENCE

Before joining Reserve Advisors, LLC, Mr. Bloomer successfully completed the bachelors program in Industrial Engineering from Texas A&M University-Commerce. He was the sole proprietor of UQSC Solutions, where he contracted with numerous companies in the oil & gas industry implementing quality management systems (QMS) and intuitive inventory tracking systems throughout supply chains. He also served honorably in the United States Marine Corps for six years as an Engineer Equipment Operator, as a Sergeant he was the foreman of IRT Old Harbor, Alaska where he and his Marines completed the extension of an airplane runway for the village of Old Harbor.

#### **EDUCATION**

Texas A&M University-Commerce - B.S. Industrial Engineering Western Governor's University - Master of Business Administration

#### PROFESSIONAL AFFILIATIONS/DESIGNATIONS

Reserve Specialist (RS) - Community Associations Institute

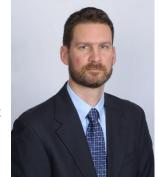


# ALAN M. EBERT, P.E., PRA, RS Director of Quality Assurance

#### **CURRENT CLIENT SERVICES**

Alan M. Ebert, a Professional Engineer, is the Director of Quality Assurance for Reserve Advisors. Mr. Ebert is responsible for the management, review and quality assurance of reserve studies. In this role, he assumes the responsibility of stringent report review analysis to assure report accuracy and the best solution for Reserve Advisors' clients.

Mr. Ebert has been involved with thousands of Reserve Study assignments. The following is a partial list of clients served by Alan Ebert demonstrating his breadth of experiential knowledge of community associations in construction and related buildings systems.



- Brownsville Winter Haven Located in Brownsville, Texas, this unique homeowners association contains 525 units. The Association maintains three pools and pool houses, a community and management office, landscape and maintenance equipment, and nine irrigation canals with associated infrastructure.
- **Rosemont Condominiums** This unique condominium is located in Alexandria, Virginia and dates to the 1940's. The two mid-rise buildings utilize decorative stone and brick masonry. The development features common interior spaces, multi-level wood balconies and common asphalt parking areas.
- Stillwater Homeowners Association Located in Naperville, Illinois, Stillwater Homeowners Association maintains four tennis courts, an Olympic sized pool and an upscale ballroom with commercial-grade kitchen. The community also maintains three storm water retention ponds and a detention basin.
- **Birchfield Community Services Association** This extensive Association comprises seven separate parcels which include 505 townhome and single family homes. This Community Services Association is located in Mt. Laurel, New Jersey. Three lakes, a pool, a clubhouse and management office, wood carports, aluminum siding, and asphalt shingle roofs are a few of the elements maintained by the Association.
- Oakridge Manor Condominium Association Located in Londonderry, New Hampshire, this Association includes 104 units at 13 buildings. In addition to extensive roads and parking areas, the Association maintains a large septic system and significant concrete retaining walls.
- **Memorial Lofts Homeowners Association** This upscale high rise is located in Houston, Texas. The 20 luxury units include large balconies and decorative interior hallways. The 10-story building utilizes a painted stucco facade and TPO roof, while an on-grade garage serves residents and quests.

#### PRIOR RELEVANT EXPERIENCE

Mr. Ebert earned his Bachelor of Science degree in Geological Engineering from the University of Wisconsin-Madison. His relevant course work includes foundations, retaining walls, and slope stability. Before joining Reserve Advisors, Mr. Ebert was an oilfield engineer and tested and evaluated hundreds of oil and gas wells throughout North America.

#### **EDUCATION**

University of Wisconsin-Madison - B.S. Geological Engineering

#### PROFESSIONAL AFFILIATIONS/DESIGNATIONS

Professional Engineering License – Wisconsin, North Carolina, Illinois, Colorado Reserve Specialist (RS) - Community Associations Institute Professional Reserve Analyst (PRA) - Association of Professional Reserve Analysts



#### **RESOURCES**

Reserve Advisors utilizes numerous resources of national and local data to conduct its Professional Services. A concise list of several of these resources follows:

Association of Construction Inspectors, (ACI) the largest professional organization for those involved in construction inspection and construction project management. ACI is also the leading association providing standards, guidelines, regulations, education, training, and professional recognition in a field that has quickly become important procedure for both residential and commercial construction, found on the web at www.iami.org.

American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc., (ASHRAE) the American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc., devoted to the arts and sciences of heating, ventilation, air conditioning and refrigeration; recognized as the foremost, authoritative, timely and responsive source of technical and educational information, standards and guidelines, found on the web at www.ashrae.org. Reserve Advisors actively participates in its local chapter and holds individual memberships.

<u>Community Associations Institute</u>, (CAI) America's leading advocate for responsible communities noted as the only national organization dedicated to fostering vibrant, responsive, competent community associations. Their mission is to assist community associations in promoting harmony, community, and responsible leadership.

<u>Marshall & Swift / Boeckh,</u> (MS/B) the worldwide provider of building cost data, co-sourcing solutions, and estimating technology for the property and casualty insurance industry found on the web at www.marshallswift.com.

**R.S. Means CostWorks**, North America's leading supplier of construction cost information. As a member of the Construction Market Data Group, Means provides accurate and up-to-date cost information that helps owners, developers, architects, engineers, contractors and others to carefully and precisely project and control the cost of both new building construction and renovation projects found on the web at www.rsmeans.com.

Reserve Advisors' library of numerous periodicals relating to reserve studies, condition analyses, chapter community associations, and historical costs from thousands of capital repair and replacement projects, and product literature from manufacturers of building products and building systems.



#### 7. DEFINITIONS

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

- **Cash Flow Method** A method of calculating Reserve Contributions where contributions to the reserve fund are designed to offset the variable annual expenditures from the reserve fund. Different Reserve Funding Plans are tested against the anticipated schedule of reserve expenses until the desired funding goal is achieved.
- **Component Method** A method of developing a Reserve Funding Plan with the total contribution is based on the sum of the contributions for individual components.
- Current Cost of Replacement That amount required today derived from the quantity of a Reserve Component and its unit cost to replace or repair a Reserve Component using the most current technology and construction materials, duplicating the productive utility of the existing property at current local market prices for materials, labor and manufactured equipment, contractors' overhead, profit and fees, but without provisions for building permits, overtime, bonuses for labor or premiums for material and equipment. We include removal and disposal costs where applicable.
- **Fully Funded Balance** The Reserve balance that is in direct proportion to the fraction of life "used up" of the current Repair or Replacement cost similar to Total Accrued Depreciation.
- **Funding Goal (Threshold)** The stated purpose of this Reserve Study is to determine the adequate, not excessive, minimal threshold reserve balances.
- **Future Cost of Replacement** Reserve Expenditure derived from the inflated current cost of replacement or current cost of replacement as defined above, with consideration given to the effects of inflation on local market rates for materials, labor and equipment.
- **Long-Lived Property Component** Property component of Trails West responsibility not likely to require capital repair or replacement during the next 30 years with an unpredictable remaining Useful Life beyond the next 30 years.
- **Percent Funded** The ratio, at a particular point of time (typically the beginning of the Fiscal Year), of the actual (or projected) Reserve Balance to the Fully Funded Balance, expressed as a percentage.
- **Remaining Useful Life** The estimated remaining functional or useful time in years of a *Reserve Component* based on its age, condition and maintenance.
- **Reserve Component** Property elements with: 1) Trails West responsibility; 2) limited Useful Life expectancies; 3) predictable Remaining Useful Life expectancies; and 4) a replacement cost above a minimum threshold.
- **Reserve Component Inventory** Line Items in **Reserve Expenditures** that identify a Reserve Component.
- **Reserve Contribution** An amount of money set aside or *Reserve Assessment* contributed to a *Reserve Fund* for future *Reserve Expenditures* to repair or replace *Reserve Components*.
- Reserve Expenditure Future Cost of Replacement of a Reserve Component.
- **Reserve Fund Status** The accumulated amount of reserves in dollars at a given point in time, i.e., at year end.
- **Reserve Funding Plan** The portion of the Reserve Study identifying the *Cash Flow Analysis* and containing the recommended Reserve Contributions and projected annual expenditures, interest earned and reserve balances.
- **Reserve Study** A budget planning tool that identifies the current status of the reserve fund and a stable and equitable Funding Plan to offset the anticipated future major common area expenditures.
- **Useful Life** The anticipated total time in years that a *Reserve Component* is expected to serve its intended function in its present application or installation.



#### 8. PROFESSIONAL SERVICE CONDITIONS

**Our Services** - Reserve Advisors, LLC (RA) performs its services as an independent contractor in accordance with our professional practice standards and its compensation is not contingent upon our conclusions. The purpose of our reserve study is to provide a budget planning tool that identifies the current status of the reserve fund, and an opinion recommending an annual funding plan to create reserves for anticipated future replacement expenditures of the property.

Our inspection and analysis of the subject property is limited to visual observations, is noninvasive and is not meant to nor does it include investigation into statutory, regulatory or code compliance. RA inspects sloped roofs from the ground and inspects flat roofs where safe access (stairs or ladder permanently attached to the structure) is available. The report is based upon a "snapshot in time" at the moment of inspection. RA may note visible physical defects in our report. The inspection is made by employees generally familiar with real estate and building construction but in the absence of invasive testing RA cannot opine on, nor is RA responsible for, the structural integrity of the property including its conformity to specific governmental code requirements for fire, building, earthquake, and occupancy, or any physical defects that were not readily apparent during the inspection.

RA is not responsible for conditions that have changed between the time of inspection and the issuance of the report. RA does not investigate, nor assume any responsibility for any existence or impact of any hazardous materials, such as asbestos, urea-formaldehyde foam insulation, other chemicals, toxic wastes, environmental mold or other potentially hazardous materials or structural defects that are latent or hidden defects which may or may not be present on or within the property. RA does not make any soil analysis or geological study as part of its services; nor does RA investigate water, oil, gas, coal, or other subsurface mineral and use rights or such hidden conditions. RA assumes no responsibility for any such conditions. The Report contains opinions of estimated costs and remaining useful lives which are neither a guarantee of the actual costs of replacement nor a guarantee of remaining useful lives of any property element.

RA assumes, without independent verification, the accuracy of all data provided to it. You agree to indemnify and hold RA harmless against and from any and all losses, claims, actions, damages, expenses or liabilities, including reasonable attorneys' fees, to which we may become subject in connection with this engagement, because of any false, misleading or incomplete information which we have relied upon supplied by you or others under your direction, or which may result from any improper use or reliance on the Report by you or third parties under your control or direction. Your obligation for indemnification and reimbursement shall extend to any director, officer, employee, affiliate, or agent of RA. Liability of RA and its employees, affiliates, and agents for errors and omissions, if any, in this work is limited to the amount of its compensation for the work performed in this engagement.

**Report -** RA completes the services in accordance with the Proposal. The Report represents a valid opinion of RA's findings and recommendations and is deemed complete. RA, however, considers any additional information made available to us within 6 months of issuing the Report if a timely request for a revised Report is made. RA retains the right to withhold a revised Report if payment for services was not tendered in a timely manner. All information received by RA and all files, work papers or documents developed by RA during the course of the engagement shall remain the property of RA and may be used for whatever purpose it sees fit.

**Your Obligations -** You agree to provide us access to the subject property for an on-site visual inspection You agree to provide RA all available, historical and budgetary information, the governing documents, and other information that we request and deem necessary to complete the Report. You agree to pay actual attorneys' fees and any other costs incurred to collect on any unpaid balance for RA's services.

Use of Our Report and Your Name - Use of this Report is limited to only the purpose stated herein. You hereby acknowledge that any use or reliance by you on the Report for any unauthorized purpose is at your own risk and you shall hold RA harmless from any consequences of such use. Use by any unauthorized third party is unlawful. The Report in whole or in part *is not and cannot be used* as a design specification for design engineering purposes or as an appraisal. You may show our Report in its entirety to the following third parties: members of your organization, your accountant, attorney, financial institution and property manager who need to review the information contained herein. Without the written consent of RA, you shall not disclose the Report to any other third party. The Report contains intellectual property developed by RA and *shall not be reproduced or distributed to any party that conducts reserve studies without the written consent of RA.* 

RA will include your name in our client lists. RA reserves the right to use property information to obtain estimates of replacement costs, useful life of property elements or otherwise as RA, in its sole discretion, deems appropriate.

Payment Terms, Due Dates and Interest Charges - Retainer payment is due upon authorization and prior to inspection. The balance is due net 30 days from the report shipment date. Any balance remaining 30 days after delivery of the Report shall accrue an interest charge of 1.5% per month. Any litigation necessary to collect an unpaid balance shall be venued in Milwaukee County Circuit Court for the State of Wisconsin.