Reserve Fund Study

BEN ENGINEERING

Environmental and Building Engineering

Hawkestone Yacht Club

215 Mill Street
Hawkestone, Ontario

June 29, 2016

Professional Engineers Ontario

BBB

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Prepared for:	Hawkestone Yacht Club
Located at:	215 Mill Street, Hawkestone, Ontario
Date:	June 29, 2016

File Number: 554240160301

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1.0 GENERAL INFORMATION

1.1 Introduction

Ben Engineering, Inc. was authorized by Hawkestone Yacht Club to prepare a Reserve Fund Study regarding the marina and the club facilities located at 215 Mill Street, Hawkestone, Ontario. The purpose of the Reserve Fund Study is to prepare a financial plan for a 30-year period covering major repairs and/or replacements of the common elements of the yacht club.

A site visit was carried out by Yosi Ben Horin, P.Eng. on March 30, 2016 in order to assess the general condition, life expectancy, and quantities of the common elements.

The study refers to the common elements related to the buildings and marina of the property.

This study is divided into the following sections:

- General information
- Inventory description of the common elements, life expectancies, replacement costs, and current conditions
- Reserve fund calculations

1.2 Scope of Work

The scope of work for this study is limited to the following:

- Review and evaluate the condition and life expectancy of the major common elements
- Identify common elements that need to be repaired or replaced due to building deterioration, poor durability, and necessary modifications due to the loss of the internal seal
- Estimate the repair or replacement costs of the common elements
- Provide detailed calculations and predict an adequate size for the reserve fund to enable accommodation of the predicted expenditures and mitigate the risk of a future deficit

1.3 Documents and Information provided

No related documents were provided for review.

1.4 Limitations

- The reserve fund schedule is merely used for the purpose of the financial calculation and is based on assumptions and component conditions observed on the inspection day. No decision to repair or replace should be based on the reserve fund schedule. Any future decisions should be based on an inventory engineering assessment of specific elements to determine the most urgent need in terms of repairs or replacements.
- All engineering assessments are based on a visual inspection of the common elements and no destructive tests were conducted. All assumptions made for the purpose of this report are based on the observed conditions on the day of the site visit, the previously mentioned documents, and the general official publications. Hidden conditions within the construction, such as structural elements, may not be identified by a visual inspection and is thus not considered in the calculations.

Therefore, in the event that troublesome hidden conditions are identified, the reserve fund study should be re-evaluated to account for this need.

- Although the study is calculated for a period of 30 years, estimations beyond a five year range are not accurate; therefore, a periodic update of the study is required.
- Assumptions are made based on the information and regulations that are known at the date of the report. Future factors, such as economic fluctuations and changing codes and standards may impact the calculations in this study.
- Only the information that was previously specified has been reviewed. The scope of the work does not include identifying any mistakes or verifying the accuracy of the information.
- Expenses might arise in the future that have not been anticipated due to unseen conditions and/or unexpected deterioration. The study does not eliminate the risk for potential unpredicted future expenses, hazards or losses. No structural analysis and no destructive tests were performed.

1.5 Procedures

The preparation of this study includes the following procedures:

- Obtaining data and information regarding the present and past financial condition of the Corporation, history of repairs, and future plans
- Reviewing the available documents, as listed above.
- Carrying out an on-site visual inspection of the accessible common elements of the site
- Analysing the available information and findings
- Writing of this study

1.6 Definitions:

Category: A group of associated reserve items.

Cash Flow: The collection and expenditure of money over time.

Cash Flow Method: A method used to develop a Reserve Fund Study where contributions to the Reserve fund are designed to offset the variable annual expenditures from the Reserve fund.

Component: A part of the building or site that is one of the items and systems comprising the corporation.

Effective Age: The difference between the expected life and remaining life; typically differs from the chronological age.

Financial Analysis: The portion of the Reserve Fund Study that evaluates both the present and future reserve funds of the association. Recommended reserve contributions are calculated, and the projected reserve income and expenses are presented over time.

Inflation Rate: The predicted rate for the near and long-term future, based on forecasts published by the Bank of Canada, commercial banks, and other financial institutes. As these forecasts are normally not accurate, the rate should be reviewed at least every three years, when a new Reserve Fund Study is carried out. The rate is used in the study to project future costs of repair or replacements, based on current values.

Interest Rate: The interest rate refers to the interest earned on the Reserve Fund in each of the fiscal years during the 30-year period of the study. The assumed rate is based on current and forecasted rates provided by financial institutes, such as banks, for a low-risk long-term savings. As the financial markets are dynamic and subject to change, a review of the interest rate is required periodically, at least every three years when a new Reserve Fund Study is carried out.

Normal Life Expectancy: The estimated average number of years of usability starting from the date of the original construction, installation or repair of a particular item. Life Expectancy relative to Reserve Items may be based upon industry or governmental sources, other general construction related resources, observed life expectancy, and/or any combination thereof. The life expectancy is based on the assumption that proper and regular service and maintenance will be carried out throughout the period.

Operating Budget: The Operating Budget is managed under a separate account and is mainly used for funding the ongoing operation costs of the corporation. However, some of the maintenance costs, including the repairs or replacements of items that cost less than $500 in value are also assumed to be funded from this budget, and not from the reserve fund account.

Remaining Life: The estimated number of years that a reserve item will serve its intended function, starting at the time of the study. The assumptions are based on a visual inspection of the item, the type of the item, type of installation, quality of materials, our previous experience with similar items, and based on the assumption that proper and regular service and maintenance will be carried out throughout the period. This estimation has to be reviewed and updated at least every three years when a new Reserve Fund Study is carried out.

Replacement & Repair Cost: An estimated cost for replacing a reserve item with a new item with a similar quality as the existing, or repairing an existing item by a qualified person(s) and materials. The estimated cost is based on our experience with previous work with a similar nature, actual costs paid by the corporation (when applicable), and market prices known at the time when the study is carried out. All costs listed in this study are in Canadian dollars and include HST. The cash flow of the study is based on current repair or replacement costs, projected to the future at the assumed inflation rate.

Reserve Closing Balance: Actual or projected funds at year's end that is available to the association to defray future expenses. Also known as Reserves, Reserve Accounts, or Cash Reserves.

Reserve Item: An element in the reserve category. A Reserve Item consists of association facilities and items that must be maintained or replaced by the association. Also known as a Component.

Reserve Fund Study:	A budget planning tool that analyses the current reserve fund and expected future expenses. A Reserve Fund Study consists of a Physical Inspection of the facilities and a Financial Analysis of the reserve fund.
Reserve Fund Study Analyst:	A qualified individual that prepares Reserve Fund Studies.
Site Inspection	The portion of the scope-of-work of the Class 1 or Class 2 Reserve Fund Studies that generates the reserve item inventory and the condition of the reserve items. The inspection is based on a visual examination of the various items that are accessible at the time of the site visit. The inspection does not include any tasting, samplings or operation of any of the systems that are part of the common elements of the corporation.
Special Assessment:	An assessment levied on the members of an association in addition to regular assessments. Special Assessments are often regulated by governing documents or local statutes.

2.0 GENERAL DESCRIPTION OF CORPORATION

2.1 Site Description

- Hawkestone Yacht Club is a marina located at 215 Mill Street, Hawkestone, Ontario.
- The site consists of a marina with boat docks and wooden walkways, a house, a washroom/outhouse, a storage building, two foot bridges, a lighthouse, a beach area, a boat ramp, and a gravel road with some patches of asphalt.
- The house is a three-storey building with the main and second floors operating as a club and an upper floor serving as a rental residential apartment. Based on the information provided, it was developed before 1975. The house has a wooden and concrete block structure, sloped asphalt shingled roof, and exterior walls that are finished with a combination of concrete block and vinyl sidings
- The outhouse consists of a sink, toilets, a urinal and showers. The outhouse is constructed with a wooden structure, concrete foundation, and exterior walls of concrete block masonry. The outhouse has a mansard roof with asphalt shingles
- The storage building is located north of the marina and house. It is constructed with a wooden structure, concrete foundation, and exterior walls of concrete block masonry. The storage building has a mono-pitched roof with galvanized sheets and an asphalt cover.
- The marina is constructed with a wood deck that overlays the steel support system. Much of the marina is also supported by steel and stone break walls. According to the information provided, the break walls were developed in the mid-1980s. There are electrical outlets for recharging the boat.
- There are three water systems on the property:
  - Potable water system, using a drilled water well and a UV treatment system for use of the club at designated faucets, in the club house, and in the rental apartment.
  - Lake water system for the outside toilets and non-drinking use
  - Lake water irrigation system for the lawn.

- The buildings are serviced by both municipal water system (potable water) and water wells (non-potable water). The non-potable water for the building is extracted from water wells, which go through a filtration system for treatment.
- The site's sanitary system is serviced by a septic system. Waste water and storm water get pumped into the septic system via sump pumps that travel through underground piping.
- The site's components include the marina, a steel bridge with a wooden deck, storage sheds, lighthouse, beacon, fences, guardrails, tractor, gazeebo, site furniture, stone and steel break walls, irrigation system, concrete pavement and underground common services. The landscaping consists of lawns, trees and shrubs.

2.2 Shared Facilities

- According to the provided information, Hawkestone Yacht Club does not share any facilities with other adjacent properties.

3.0 COMMON ELEMENTS

3.1 Common Elements Description

The common elements description listed in this report is based on the above listed documents and a visual inspection of the readily accessible areas of the site and building as observed on the day of the inspection. No destructive tests were done.

The common elements and expenses relating to the Reserve Fund Study, which are listed in this report, are divided into the following groups:

- Building components of the House
- Building components of the Outhouse
- Building components of the Storage Building
- Site Components
- Mechanical components
- Electrical components
- Miscellaneous items

The following section includes a detailed description of each of the common elements that are considered in this study. The detailed description includes quantities, costs, life expectancy, remaining life estimation, a general description, and comments on the general condition as found on the day of the inspection.

3.2 The House

Item 01. Building Structure

This section covers the structural elements of the building, the footing, and the foundation walls.

The replacement of structural elements likely will not be necessary during the lifetime of the building if periodic maintenance is undertaken. It is assumed that an additional Special Assessment is required should irregular damage to the building happens. An allowance has been made for a regular maintenance program that includes periodic inspections and repairs of any deterioration.

Item 02. Asphalt Shingles

The house has a pitched wood framed roof with asphalt shingles and plywood boards that cover the slope of the roof. Pre-painted aluminium eavestroughs and downspouts provide drainage from the roofs. The roof shingles were replaced in 2012 and appear to be in good condition. The roof's wood components are part of the building's structure and will unlikely need replacement during the lifetime of the building.

The life expectancy of the shingles depends on the quality of materials, on time local repairs, and care. Development of frequent leaks, multiple leaks at various locations of the roof, large scale leaks, and leaks that cannot accurately be identified will indicate the need to replace the roof system, which at such stage will be more economic in the long term than conducting local repairs. The asphalt shingles are exposed to weather impacts such as snow, rain, humidity, sun radiation, and heat. Over time, the shingles may be damaged and could possibly crack. They will become brittle and dry, and the edges will curl. The normal life expectancy of asphalt shingles is approximately 25 years.

Item 03. Eavestroughs, Downspouts and Roof Soffits

Pre-painted aluminium eavestroughs, downspouts and soffit panels are installed on the roof of the house. The eavestroughs, downspouts, and soffits were found in a satisfactory condition.

A complete replacement is typically required every 25 to 30 years. Periodic leaf removal is required to prevent clogging, but this is considered part of the general maintenance and therefore not included in this study.

Item 04. Masonry Walls

Concrete block masonry provides part of the primary exterior finish of the building. Based on a cursory visual non-destructive inspection, the block masonry appears to be in good condition.

Complete replacement of the walls during the normal lifetime of the building is unlikely, and the block masonry is expected to remain serviceable for the entire service life of the building. However, local repairs are normally expected.

An allowance has been made for local repairs at 20-year intervals for major rehabilitation work, including replacement or repair of damaged blocks, repairs to the foundation walls, and repairs to deteriorated mortar joints.

Item 05. **Exterior Caulking**

The seams along the exterior wall components are sealed and caulked. The sealant improves thermal insulation and prevents water from penetrating the walls while allowing some free movement of the wall components due to thermal deflection of different materials and due to differential settling that might occur in the foundations.

The sealant was implemented in the following locations:

- Around the window perimeters
- Around the door perimeters
- Along the seams between the wall components

Based on a cursory visual inspection, the caulking of the other elements appears to be in good condition.

Item 06. **Vinyl Siding**

The exterior finish of the upper section and some parts of the lower sections of the house is vinyl siding.

Based on a cursory visual non-destructive inspection, the siding appears to be in good condition. It is evident that recent work has been done with the vinyl siding of the house.

Over time, exposure to the solar radiation and other inclement conditions will lead to brittleness, deflection, cracks, and other damages as a result of deterioration. The life expectancy of the siding is estimated at 35-40 years, and then a complete replacement will be required. However, some local repairs may be required over time. Periodic visual reviews to detect any deterioration, movement, or other damage are recommended.

Item 07. **Exterior Windows and Sliding Doors**

The window and sliding door systems of the building consist of an Insulating Glass Unit (IGU) system with argon gas and double sliders. Some of the windows are fixed in place or combined with slider windows. Access to the patio is provided via sliding glass doors.

Over time, the perimeter seal around the panes will dry and fail. As a result, the gas dissipates and moisture gets into the cavity between the panes to the extent that condensation restricts visibility and reduces the thermal insulation efficiency of the window.

Local replacement of the hardware is also required from time to time. This includes replacement of locks and slider wheels, along with other adjustments.

It was reported that the windows of the house were installed 20 years ago. These windows are made of a durable material and can last many years before replacement. The service life of this system is up to 40 years before complete replacement. However, some of the windows might fail before this time. Local replacement (when required) will be within the general operating budget.

Item 08. **Wooden Balcony**

There is a pressure-treated wood balcony located on the rear side of the house's upper floor. The balcony appears to be in fair condition; no significant deficiencies were reported or observed at the time of the site inspection. However, it should be noted that the actual structural condition cannot be inspected and is beyond the scope of this report.

An allowance has been made for local repairs at 20-year intervals for major rehabilitation work, including replacement or repair of damaged components. In addition, periodic staining is required to minimise the deterioration pace.

Item 09. Balcony Guardrails

Wooden guardrails with vertical wooden poles, glass panels and wooden top railing are installed along the balcony edges. The current condition is fair.

Item 10. Patio Deck and Pergola

A wooden patio deck is located at the rear of the house. The patio is sheltered by a wooden pergola that is attached to the wooden balcony. The pergola has a lattice and is supported by wooden beams. The current condition of the patio and pergola is fair.

Item 11. Wood Stairs

Timber steps with wooden handrails are located at the side entrance (north side) of the house leading to the residential apartment. The stairs appear to be of the original construction and are generally in fair condition; however, the paint on the steps appears to be worn.

Item 12. Entrance Doors

Pre-painted wooden entrance door and an aluminum-framed storm door are installed at the main entrances to the house and to the apartment on the west and north sides. The current condition is good. The life expectancy of such doors is generally around 35 years, mainly due to the frequent and extensive use or occasional vandalism.

Item 13. Apartment Unit (Interior)

The building occupies a one-bedroom apartment on the upper floor of the house. The apartment was renovated approximately 10 years ago, and consists of a bedroom, a living room, a bathroom, a laundry room, a kitchen, an entrance area and a staircase leading to the apartment from the entrance area.

The finishes of the apartment include hardwood flooring, painted walls and ceilings, all of which appear to be in good condition. The appliances include laundry dryer and washer, refrigerator, range and a dishwasher.

For the purposes of this study, an allowance has been made for cyclical repairs or replacements to the finishes, fixtures and appliances on an as needed basis. This budget can be adjusted as necessary based on actual spending.

Item 14. Club (Interior)

This budget is for the club which occupies the first and second floors of the house. The main floor includes a washroom, a kitchen, a clubroom divided into two sections, and a mechanical that includes the hot water tank, the electrical panel, and the well system. The upper floor includes a clubroom, office rooms and a balcony. The heating furnace is installed on the second floor.

The washroom is in good condition; it was renovated approximately 10 years ago together with the apartment. The kitchen includes a few appliances: a refrigerator, a range, a microwave oven, and coffee machines. The kitchen cabinets are obsolete, but in functioning condition.

The current flooring of the main floor of the club room is primarily vinyl flooring and carpeting, and ceramic flooring in the washroom and the entrance areas. The vinyl flooring and the carpeting will be replaced with laminated flooring.

Item 15. Plumbing

There are several individual plumbing systems that run throughout the house. Those systems include the hot and cold water supply pipes and sanitary lines. The water is provided from a drilled well and treated with a UV and filtration system.

The water supply pipes in the house are made of copper and appear to be of the original installation. No particular deficiencies or leakages have been reported. However, problems become more frequent as the system ages. Leakages and clogs may occur due to corrosion and failing valves.

A complete and concurrent replacement probably will not be required throughout the building. Periodic repairs, including the replacement of worn, rusted or clogged parts, should be sufficient.

Item 16. Hot Water Tank

An electric hot water tank is installed within the mechanical room. The tanks appears to be new.

Item 17. Heating Furnace

A heating furnace for general heating is located in the second floor of the house and serves only the apartment on the second floor. No current problems with their function have been reported.

The replacement cost might vary depending on the type and model of a new system; therefore, it is difficult to determine the exact replacement cost.

The system has to be inspected on a periodic basis. Regular maintenance costs (such as cleaning, flushing, and inspections) are assumed to be regular maintenance expenses and are separate from this budget.

tem 18. Electrical System

The electrical system of the house includes a network of electrical wires and a circuit breaker panel. The life expectancy of the different components varies: some elements, such as the wiring, can last throughout the entire life of the building, while other components, such as circuit breakers wear more rapidly and require periodic replacement or repairs.

It is unlikely that replacing large parts of the equipment at the same time would be required; however, local repairs may be needed from time to time.

Item 19. Electrical Heat

Electric baseboard heaters are located on both floors of the club. Occasional repairs are prone to become more frequent as the equipment becomes older, and its heating efficiency is concurrently reduced. A complete replacement would most likely not be required throughout the building at the same time, and occasional replacement as necessary is more likely to occur.

Item 20. **Interior and Exterior Lighting**

The interior and exterior light fixtures of the house appear to be in fair condition. No known issues were reported.

Item 21. **Foundation Waterproofing**

Repairing the foundation waterproofing of the house may be required over time. However, it is unlikely that the entire waterproofing system needs to be replaced. An allowance has been made for local repairs every five years and this is expected to be sufficient.

Item 22. **Miscellaneous Building Components**

This section is an allowance for an additional reserve fund for general unpredicted deficiencies that under normal operating conditions would require a repair or replacement of any additional component related to the building components.

3.3 Washrooms Structure

Item 23. **Structure and Exterior**

This section covers the structural elements of the building, including the concrete block masonry and the concrete floor.

Apart from the rear wall that is finished with parging, the exterior of the structure is architectural concrete blocks.

An allowance has been made for a regular maintenance including the repairs of any deterioration.

Item 24. **Roof**

The washroom structure has a pitched wood framed roof with asphalt shingles with aluminum soffit. The roof shingles and the soffit appear to be in good condition. The roof's wood components are part of the building's structure and will unlikely need replacement during the lifetime of the building.

Item 25. **Wood Deck and Partitions**

A wooden deck and separation portions are installed at the front entrances to the men and women washrooms. Additional wooden partitions are installed at the back of the building.

The items were found in fair condition.

Item 26. **Exterior Windows and Doors**

The exterior doors include the main entrance of each washroom. The windows consist of two rectangular aluminum windows: one fixed and another with a single slider.

The service life of this system is up to 30 years before complete replacement.

Item 27. **Interior**

This budget is for interior components, which include ceramic tile flooring, painted concrete block walls, ceramic tiles on the walls in the shower areas, metal ceiling soffit, wooden doors and partitions between toilets, a double-sink vanity in each of the washrooms and mirrors. This section also includes the sanitary fixtures, the faucets, the sanitary and water piping and light fixtures.

The interior finish of both washrooms is obsolete, primarily the two double-sink vanities. Interior paining is also required.

3.4 Supplementary Storage Structure

Item 28. **Structure and Exterior**

This section covers the structural elements of the building, including the painted concrete block masonry and the concrete floor.

Some cracks in the walls were noted. An allowance has been made for a regular maintenance including the repairs of any deterioration.

Item 29. **Roof**

The structure has a mono-pitched wood framed roof with galvanized steel sheets that cover the slope of the roof.

The roof is in poor to fair condition; the roof's steel sheets are rusty, the wood is cracked and a downspout at the back is missing.

Item 30. **Exterior Windows and Doors**

There are two wooden doors at the front to each of the storage rooms and a window on each side of the building. The current condition is fair.

3.5 Site Components

Item 31. **Stone Breakwalls**

Stone breakwalls are located as break walls facing the lake and the creek as armouring to protect the banks from erosion. Some of the stone breakwalls have metal wiring (gabions) to prevent stones from loosening.

The current condition is good. It is unlikely that complete replacement will be required, but, local repairs could be required from time to time.

Item 32. **Steel Breakwalls**

Steel breakwalls are installed along large sections of the marina. These walls are constructed of steel sheets and act as shoring walls. According to the information provided, these walls were constructed between 1985 and 1990.

Rust and local deterioration were observed at some sections of the steel break walls; however, subject to the limitations of this study, the overall condition of the marina is in a satisfactory condition. Local repairs assumed to be sufficient at this stage; however, further monitoring and periodic inspections are recommended.

Item 33. **Wooden Walkways**

The majority of the site consists of a marina that serves as a walkway and a dock for boats on the property. The walkways consist of pressure-treated wood decks on top of a steel break wall acting as a support system. Steel ladders are also placed at various points of the marina. The marina deck and break walls were constructed in the mid-1980s.

Some sections of the wooden decks have been replaced due to deterioration. An allowance for local repairs and replacement has been allotted for the wooden deck of the marina.

Item 34. **Steel Bridge**

A steel bridge with a wooden deck and railing is located across the creek close to the boat ramp.

Subject to the limitations of this study, the steel structural elements, the wooden deck and the railing appear to be in satisfactory condition. Periodic inspections are recommended.

Item 35. **Wood Bridge**

A small wood bridge is located at the northern side of the marina area. The bridge consists of wooden logs with no railing and is also used for moving boats from one bank of the creek to the other. Subject to the limitations of this study, the bridge appears to be in satisfactory condition. Periodic inspections are recommended.

Item 36. **Concrete Pavers**

Precast concrete pavers are observed underneath the beach area's gazeebo and the stairwell connecting the gravel road and marina deck.

The concrete pavers appear to be in good condition. Complete pavement replacement is rarely required; however, re-levelling and local repairs might be needed from time to time.

Item 37. **Mast Crane**

A steel mast crane is located near the water in the area between the boat ramp and the house. Subject to the limitations of this study, the steel structural elements of the crane appear to be in satisfactory condition. Periodic inspections are recommended.

Item 38. **Bubbler System**

An allowance has been made for replacing the harbor bubbler system.

Item 39. **Lighthouse and Beacon**

A small steel-framed lighthouse with an electrical light beacon is located at the southern end of the property and faces Lake Simcoe in order to mark the shoreline. An additional steel mast with a light beacon is located in the beach area. Both light beacons appear to be in good condition.

Item 40. **Landscaping and Planting**

The landscaped areas throughout the complex mainly include lawns, trees and shrubs. Currently most of the areas are wild vegetation. However, the marina dock at the northern end needs some soil fill and releveling the lawn with the wooden decks due to erosion of he soil.

An allowance for replacing the soil in this area and general landscape maintenance should be allocated.

Item 41. **Wood Fences**

Wooden fences, most of which are pressure-treated, throughout the site include:

1. Fencing next to the storage building which surrounds the septic system.
2. Lattice fencing beside the patio deck.
3. Privacy fence between men and women's washroom entrances
4. Wooden fencing covering the water boiler.
5. Wooden country fencing (not treated) at the entrance of the property.

Most of the fences appear to be in fair to good condition. An allowance for replacing the fences over time has been made. Some local repairs may be required from time to time.

Item 42. **Gates**

There are two chain-link steel gates on the east side of the site that restrict access from the road.

The current condition of these gates is fair; however, the gates appear to be leaning and may need to be levelled.

Item 43. **Irrigation system**

An irrigation system is installed in the lawn area on the east bank of the marina. No known issues were reported.

Item 44. **Gazeebo and Site Furniture**

A wooden gazeebo for community events is located in the outdoor beach area of the site. It consists of a wood-shingled and wood-framed roof supported by wooden beams. The flooring consists of concrete pavers. There are also wooden benches and a concrete block structure (likely a fireplace) located underneath the gazeebo. The wooden structure appears to be in fair condition. The roof has wooden shingles and although worn, they appear to be in fair condition.

Wooden picnic tables and benches are seen in the outdoor beach area of the marina. The current condition is fair; however, local repairs and replacement of the wooden furniture may be required from time to time.

Item 45. **Storage Sheds**

Two storage sheds are located at the site and are used for storing equipment. They appear to have been built recently and are in good condition.

Item 46. **Marina Water Extraction System**

The marina has three water systems on the property:

- Potable water system, using a drilled water well and a UV treatment system for use of the club at designated faucets, in the club house, and in the rental apartment.
- Lake water system for the outside toilets and non-drinking use
- Lake water irrigation system for the lawn.

Much of these systems are concealed; thus the actual current condition is unknown. However, no damage to the visible parts is noted and there are no current problems.

Item 47. **Water Well System**

A water well and a water filtration system are located within the mechanical room of the house and at the rear of the outhouse. The system consists of a pressurized well tank and a pump with piping that extracts water from the well. In the house, there is also a cylindrical tank for the treatment system designed to remove chemicals from water to prevent corrosion and scale formation, is installed on the piping line connected to the cooling tower.

The system was operational at the time of the site inspection and no current problems with their function have been reported.

Item 48. **Septic System**

This section includes the budget allowance for future possible repairs or partial replacement of the septic system, which is used for used as the sanitary system on the property. The septic system is located next to the storage building. It consists of inground concrete treatment chambers and a sump a pump that collects waste water from the site via underground piping. The water is pumped uphill via an underground service pipe into a septic tank with leaching beds.

The pumps and the pits should be maintained on a periodic basis. As the majority of this system is concealed, the actual current condition and age are unknown. However, no damage to the visible parts is noted and there are no current problems.

Item 49. **Dock Power Outlets**

The marina has power outlets throughout the edges of the marina's dock for recharging power to docked boats. Some of the outlets have a receptacle box or circuit breakers. Each outlet post has weather covers to protect the receptacles from exposure to weather. The system also includes a number of circuit breakers panels located around the club to serve the boat outlets as well as pumps and other equipment.

The current condition appears to be fair; no known issues were reported. Local repairs and replacement may be needed from time to time.

Item 50. **Site Contingency**

This section is an allowance for an additional reserve fund for general unpredicted deficiencies that under normal operating conditions would require a repair or replacement of any additional component throughout the site.

3.6 Miscellaneous

Item 51. Tractor

This section is for a tractor used to haul boats across the property. It appears to be in good condition. An allowance has been for replacing the tractor over time.

Item 52. Reserve Fund Study

The property is not a condominium and as such, does not fall under the Condominium Act. For budgeting purposes, an update can be done every three years– alternating between a Type 3 (Reserve Fund Study without a Site Visit) and a Type 2 (Reserve Fund Study with a Site Visit).

Furthermore, some of the common element conditions might deteriorate faster than predicted due to improper maintenance, the use of low-quality construction materials, or low-quality workmanship. Therefore, a comprehensive Reserve Fund Study is recommended every 9 years.

4.0 FINANCIAL ANALYSIS

4.1 Financial Assumptions:

Based on the information provided and the public information that was available on the date of the study, the following assumptions were made for the purpose of the report:

Assumed inflation rate	2.0%
Assumed interest rate	2.0%
Fiscal Year End	September 30st
Current annual contribution	$0.00
Reserve Fund balance on December 31, 2015	$0.00

4.2 Analysis Tables

The analysis results for the 30-year Reserve Fund Study are summarized in the tables found in the appendix, and include the following:

4.2.1 Reserve Fund Items Table

This table itemizes the common elements of the marina that were taken into consideration for the study, their quantities, the present cost, the estimated life expectancy, and the estimated remaining life.

4.2.2 30-Year Maintenance Plan Tables

This table lists the contribution of each of the common element items for each year of the study, adjusted to the estimated future cost.

4.2.3 Cash Flow Table and Chart

The tables include the expected annual interest, the predicted annual total expense, the projected reserve balance, the expense ratio and the funding ratio. The cash flow of 30 years for each of the scenarios is presented graphically as a chart adjusted to each of the tables.

The suggested scenario is not the only scenario available, and there may be other ways to manage the funding.

4.3 General Assumptions

4.3.1 The interest rate assumed in this report is an average number that was taken over a long period, and the predicted inflation rate was taken from government sources.

4.3.2 The costs considered for this study are estimates. Actual costs may vary significantly according to method of repair, type of material, differences between contractors, and unpredictable changes in material costs.

4.3.3 The life expectancy for the common element items are general estimations, and may change depending on the quality of maintenance, materials, workmanship, and any other unexpected deterioration. Any predictions that extend beyond five years are unreliable.

4.3.4 A Reserve Fund Study Update without a Site Inspection (Class 3) should be completed within three years of the date of this study, an update study with a Site Inspection (Class 2) within three years of that study, and a Comprehensive Reserve Fund Study (Class 1) should be done after nine years of the this study.

5.0 SUMMARY

- The recommended initial annual contribution is $28,800 in the first year of the study, increased by 3.00% every year thereafter.
- This scenario shows that the cash flow during the 30-year course of the study is always positive, with a minimum of $16,700 in the first year of the study and a maximum of $295,751 in the 18th year of the study (in current values). This scenario represents the optimum balance between the different criteria considered for this study and therefore is recommended.
- The summary provides the board of directors the required forms for informing unit owners about the different funding options that are presented in this study.

Ben Engineering, Inc.

Prepared by:

Yosi Ben Horin, P.Eng.

June 29, 2016

APPENDIX A

TABLES AND CHARTS

Reserve Fund Items Table

Item		Normal Life Expectancy	Estimated Remaining Life	Current Total Cost
House				
Building Structure	Local Repairs	25	15	$4,500
Asphalt Shingles	Replacement	25	20	$8,500
Eavestroughs, Downspouts and Roof Soffits	Replacement	25	20	$4,200
Masonry Walls	Local Repairs	20	15	$2,500
Exterior Caulking		15	10	$500
Vinyl Siding	Replacement	35	25	$7,500
Exterior Windows and Sliding Doors	Replacement	40	20	$11,000
Wooden Balcony	Major rehabilitation work	20	8	$2,200
Balcony Guardrails	Local Repairs	10	8	$1,100
Patio Deck and Pergola	Replacement	20	8	$4,800
Wood Stairs	Major rehabilitation work	20	12	$1,800
Entrance Doors	Local Repairs	35	20	$2,100
Apartment Unit (Interior)				
	Local Repairs and maintenance	5	4	$2,000
	Complete Renovation	25	18	$22,000
Club (Interior)				
	Local Repairs and maintenance	5	3	$3,000
	Main floor club room	15	0	$4,500
	Second floor club room and offices	15	12	$4,500
	Washroom	25	15	$7,500
	kitchen	25	5	$6,000
	Appliances	15	7	$1,200
	Furniture	10	3	$2,200
Plumbing	Local Repairs	10	5	$2,500
Hot Water Tank	Replacement	15	14	$700
Heating Furnace	Replacement	15	10	$9,500
Electrical System	Local Repairs	5	3	$1,200
Electrical Heat	Local Repairs	5	3	$1,100
Interior and Exterior Lighting	Local Repairs	5	3	$800
Foundation Waterproofing		20	10	$1,500
Miscellaneous Building Components		5	3	$500
Washrooms Structure				
Structure and Exterior	Local Repairs	15	10	$1,000
Roof	Replacement	25	20	$2,500
Wood Deck and Partitions	Replacement	20	13	$2,100
Exterior Windows and Doors	Replacement	35	18	$2,700
Interior				
	Phase I	25	1	$3,500
	Phase II	25	10	$9,500
Supplementary Storage Structure				
Structure and Exterior	Local Repairs	15	10	$1,000
Roof	Replacement	25	1	$1,100
Exterior Windows and Doors		35	16	$2,700

Item		Normal Life Expectancy	Estimated Remaining Life	Current Total Cost
Site Components				
Stone Breakwalls	Maintenance	50	30	$11,000
Steel Breakwalls				
	Periodic Inspections	5	3	$3,000
	Local repairs	15	2	$6,500
	Replacement - Section 1	50	19	$50,000
	Replacement - Section 2	50	20	$50,000
	Replacement - Section 3	50	21	$50,000
	Replacement - Section 4	50	22	$50,000
	Replacement - Section 5	50	23	$50,000
	Replacement - Section 6	50	24	$50,000
Wooden Walkways				
	Local repairs	5	2	$1,500
	Replacement of sections	10	8	$7,000
Steel Bridge				
	Periodic Inspections	10	5	$1,500
	Local repairs	10	8	$4,500
	Replacement	70	60	$35,000
Wood Bridge				
	Periodic Inspections	10	5	$1,500
	Local repairs	10	6	$1,500
	Replacement	50	25	$11,000
Concrete Pavers	Local Repairs	5	3	$900
Mast Crane	Replacement	25	20	$10,000
Bubbler System	Replacement	20	12	$8,000
Lighthouse and Beacon	Replacement	25	20	$10,000
Landscaping and Planting	Maintenance	5	0	$3,500
Wood Fences				
	Local repairs	10	6	$500
	Replacement of sections	25	20	$3,500
Gates				
	Local repairs	10	2	$400
	Replacement	30	20	$2,400
Irrigation system	Maintenance	5	4	$500
Gazeebo and Site Furniture	Replacement	20	10	$2,000
Storage Sheds	Replacement	20	15	$1,800
Marina Water Extraction System				
	Local Repairs	5	4	$1,000
	Replacement	25	20	$6,500
Water Well System	Repairs and equipment replacement	10	8	$7,500
Septic System	Repairs and equipment replacement	10	8	$8,000
Dock Power Outlets	Local Repairs	5	3	$2,500
Site Contingency		5	4	$3,000

Item	Normal Life Expectancy	Estimated Remaining Life	Current Total Cost
Miscellaneous			
Tractor	20	15	$20,000
Reserve Fund Study			
Update with a site visit	6	6	$4,100
Update without a site visit	6	3	$2,100

30-Year Maintenance Plan Tables

Item	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15
	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Annual Contribution	$28,800	$29,664	$30,554	$31,471	$32,415	$33,387	$34,389	$35,420	$36,483	$37,577	$38,705	$39,866	$41,062	$42,294	$43,563
Special Assessment															
Closing Balance	$16,700	$42,006	$64,654	$79,042	$105,976	$124,891	$154,866	$190,233	$174,103	$204,809	$212,801	$256,842	$277,212	$302,570	$342,575
Annual Expenses (Current Cost)	$12,100	$4,600	$8,400	$17,300	$6,500	$15,000	$6,100	$2,700	$48,100	$8,600	$28,500		$20,300	$17,300	$7,200
Annual Expenses (Inflation Adjusted)	$12,100	$4,692	$8,739	$18,359	$7,036	$16,561	$6,870	$3,101	$56,357	$10,278	$34,741		$25,745	$22,379	$9,500
House															
Building Structure	Local Repairs														
Asphalt Shingles	Replacement														
Eavestroughs, Downspouts and Roof	Replacement														
Masonry Walls	Local Repairs														
Exterior Caulking											$500				
Vinyl Siding	Replacement														
Exterior Windows and Sliding Doors	Replacement														
Wooden Balcony	Major rehabilitation work								$2,200						
Balcony Guardrails	Local Repairs								$1,100						
Patio Deck and Pergola	Replacement								$4,800						
Wood Stairs	Major rehabilitation work												$1,800		
Entrance Doors	Local Repairs														
Apartment Unit (Interior)															
	Local Repairs and maintenance					$2,000				$2,000					$2,000
	Complete Renovation														
Club (Interior)															
	Local Repairs and maintenance				$3,000				$3,000					$3,000	
	Main floor club room	$4,500													
	Second floor club room and offices												$4,500		
	Washroom														
	kitchen						$6,000								
	Appliances								$1,200						
	Furniture				$2,200									$2,200	
Plumbing	Local Repairs						$2,500								
Hot Water Tank	Replacement														$700
Heating Furnace	Replacement										$9,500				
Electrical System	Local Repairs				$1,200				$1,200					$1,200	
Electrical Heat	Local Repairs				$1,100				$1,100					$1,100	
Interior and Exterior Lighting	Local Repairs				$800				$800					$800	
Foundation Waterproofing											$1,500				
Miscellaneous Building Components					$500				$500					$500	

Item	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15
	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Annual Contribution	$28,800	$29,664	$30,554	$31,471	$32,415	$33,387	$34,389	$35,420	$36,483	$37,577	$38,705	$39,866	$41,062	$42,294	$43,563
Special Assessment															
Closing Balance	$16,700	$42,006	$64,654	$79,042	$105,976	$124,891	$154,866	$190,233	$174,103	$204,809	$212,801	$256,842	$277,212	$302,570	$342,575
Annual Expenses (Current Cost)	$12,100	$4,600	$8,400	$17,300	$6,500	$15,000	$6,100	$2,700	$48,100	$8,600	$28,500		$20,300	$17,300	$7,200
Annual Expenses (Inflation Adjusted)	$12,100	$4,692	$8,739	$18,359	$7,036	$16,561	$6,870	$3,101	$56,357	$10,278	$34,741		$25,745	$22,379	$9,500
Washrooms Structure															
Structure and Exterior — Local Repairs											$1,000				
Roof — Replacement															
Wood Deck and Partitions — Replacement														$2,100	
Exterior Windows and Doors — Replacement															
Interior															
Phase I		$3,500													
Phase II											$9,500				
Supplementary Storage Structure															
Structure and Exterior — Local Repairs											$1,000				
Roof — Replacement		$1,100													
Exterior Windows and Doors															
Site Components															
Stone Breakwalls — Maintenance															
Steel Breakwalls															
Periodic Inspections				$3,000					$3,000					$3,000	
Local repairs			$6,500												
Replacement - Section 1															
Replacement - Section 2															
Replacement - Section 3															
Replacement - Section 4															
Replacement - Section 5															
Replacement - Section 6															
Wooden Walkways															
Local repairs			$1,500					$1,500					$1,500		
Replacement of sections									$7,000						
Steel Bridge															
Periodic Inspections						$1,500									
Local repairs									$4,500						
Replacement															

Item	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15
	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Annual Contribution	$28,800	$29,664	$30,554	$31,471	$32,415	$33,387	$34,389	$35,420	$36,483	$37,577	$38,705	$39,866	$41,062	$42,294	$43,563
Special Assessment															
Closing Balance	$16,700	$42,006	$64,654	$79,042	$105,976	$124,891	$154,866	$190,233	$174,103	$204,809	$212,801	$256,842	$277,212	$302,570	$342,575
Annual Expenses (Current Cost)	$12,100	$4,600	$8,400	$17,300	$6,500	$15,000	$6,100	$2,700	$48,100	$8,600	$28,500		$20,300	$17,300	$7,200
Annual Expenses (Inflation Adjusted)	$12,100	$4,692	$8,739	$18,359	$7,036	$16,561	$6,870	$3,101	$56,357	$10,278	$34,741		$25,745	$22,379	$9,500
Wood Bridge															
Periodic Inspections						$1,500									
Local repairs							$1,500								
Replacement															
Concrete Pavers — Local Repairs				$900					$900					$900	
Mast Crane — Replacement															
Bubbler System — Replacement													$8,000		
Lighthouse and Beacon — Replacement															
Landscaping and Planting — Maintenance	$3,500					$3,500					$3,500				
Wood Fences															
Local repairs							$500								
Replacement of sections															
Gates															
Local repairs			$400										$400		
Replacement															
Irrigation system — Maintenance					$500					$500					$500
Gazeebo and Site Furniture — Replacement											$2,000				
Storage Sheds — Replacement															
Marina Water Extraction System															
Local Repairs					$1,000					$1,000					$1,000
Replacement															
Water Well System — Repairs and equipment replacement									$7,500						
Septic System — Repairs and equipment replacement									$8,000						
Dock Power Outlets — Local Repairs				$2,500					$2,500					$2,500	
Site Contingency					$3,000					$3,000					$3,000
Miscellaneous															
Tractor															
Reserve Fund Study															
Update with a site visit	$4,100						$4,100						$4,100		
Update without a site visit				$2,100						$2,100					

Item	Year 16	Year 17	Year 18	Year 19	Year 20	Year 21	Year 22	Year 23	Year 24	Year 25	Year 26	Year 27	Year 28	Year 29	Year 30
	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045
Annual Contribution	$44,869	$46,216	$47,602	$49,030	$50,501	$52,016	$53,576	$55,184	$56,839	$58,544	$60,301	$62,110	$63,973	$65,892	$67,869
Special Assessment															
Closing Balance	$324,326	$370,442	$414,123	$371,456	$346,913	$236,027	$215,222	$192,527	$150,319	$114,323	$112,048	$165,310	$218,719	$205,177	$264,278
Annual Expenses (Current Cost)	$51,900	$4,700	$8,000	$69,900	$56,500	$114,200	$52,100	$53,100	$65,200	$60,600	$39,500	$6,600	$8,100	$48,100	$7,200
Annual Expenses (Inflation Adjusted)	$69,851	$6,452	$11,202	$99,834	$82,310	$169,695	$78,966	$82,092	$102,814	$97,471	$64,804	$11,045	$13,826	$83,743	$12,786
House															
Building Structure	Local Repairs	$4,500													
Asphalt Shingles	Replacement						$8,500								
Eavestroughs, Downspouts and Roof	Replacement						$4,200								
Masonry Walls	Local Repairs	$2,500													
Exterior Caulking											$500				
Vinyl Siding	Replacement										$7,500				
Exterior Windows and Sliding Doors	Replacement						$11,000								
Wooden Balcony	Major rehabilitation work													$2,200	
Balcony Guardrails	Local Repairs				$1,100									$1,100	
Patio Deck and Pergola	Replacement													$4,800	
Wood Stairs	Major rehabilitation work														
Entrance Doors	Local Repairs						$2,100								
Apartment Unit (Interior)															
	Local Repairs and maintenance					$2,000				$2,000					$2,000
	Complete Renovation				$22,000										
Club (Interior)															
	Local Repairs and maintenance				$3,000				$3,000					$3,000	
	Main floor club room	$4,500													
	Second floor club room and offices												$4,500		
	Washroom	$7,500													
	kitchen														
	Appliances							$1,200							
	Furniture								$2,200						
Plumbing	Local Repairs	$2,500									$2,500				
Hot Water Tank	Replacement														$700
Heating Furnace	Replacement										$9,500				
Electrical System	Local Repairs				$1,200				$1,200					$1,200	
Electrical Heat	Local Repairs				$1,100				$1,100					$1,100	
Interior and Exterior Lighting	Local Repairs				$800				$800					$800	
Foundation Waterproofing															
Miscellaneous Building Components					$500				$500					$500	

Item	Year 16	Year 17	Year 18	Year 19	Year 20	Year 21	Year 22	Year 23	Year 24	Year 25	Year 26	Year 27	Year 28	Year 29	Year 30
	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045
Annual Contribution	$44,869	$46,216	$47,602	$49,030	$50,501	$52,016	$53,576	$55,184	$56,839	$58,544	$60,301	$62,110	$63,973	$65,892	$67,869
Special Assessment															
Closing Balance	$324,326	$370,442	$414,123	$371,456	$346,913	$236,027	$215,222	$192,527	$150,319	$114,323	$112,048	$165,310	$218,719	$205,177	$264,278
Annual Expenses (Current Cost)	$51,900	$4,700	$8,000	$69,900	$56,500	$114,200	$52,100	$53,100	$65,200	$60,600	$39,500	$6,600	$8,100	$48,100	$7,200
Annual Expenses (Inflation Adjusted)	$69,851	$6,452	$11,202	$99,834	$82,310	$169,695	$78,966	$82,092	$102,814	$97,471	$64,804	$11,045	$13,826	$83,743	$12,786
Washrooms Structure															
Structure and Exterior — Local Repairs											$1,000				
Roof — Replacement						$2,500									
Wood Deck and Partitions — Replacement															
Exterior Windows and Doors — Replacement				$2,700											
Interior															
Phase I												$3,500			
Phase II															
Supplementary Storage Structure															
Structure and Exterior — Local Repairs											$1,000				
Roof — Replacement												$1,100			
Exterior Windows and Doors		$2,700													
Site Components															
Stone Breakwalls — Maintenance															
Steel Breakwalls															
Periodic Inspections				$3,000					$3,000					$3,000	
Local repairs			$6,500												
Replacement - Section 1					$50,000										
Replacement - Section 2						$50,000									
Replacement - Section 3							$50,000								
Replacement - Section 4								$50,000							
Replacement - Section 5									$50,000						
Replacement - Section 6										$50,000					
Wooden Walkways															
Local repairs			$1,500					$1,500					$1,500		
Replacement of sections				$7,000										$7,000	
Steel Bridge															
Periodic Inspections	$1,500										$1,500				
Local repairs				$4,500										$4,500	
Replacement															

Item	Year 16	Year 17	Year 18	Year 19	Year 20	Year 21	Year 22	Year 23	Year 24	Year 25	Year 26	Year 27	Year 28	Year 29	Year 30
	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045
Annual Contribution	$44,869	$46,216	$47,602	$49,030	$50,501	$52,016	$53,576	$55,184	$56,839	$58,544	$60,301	$62,110	$63,973	$65,892	$67,869
Special Assessment															
Closing Balance	$324,326	$370,442	$414,123	$371,456	$346,913	$236,027	$215,222	$192,527	$150,319	$114,323	$112,048	$165,310	$218,719	$205,177	$264,278
Annual Expenses (Current Cost)	$51,900	$4,700	$8,000	$69,900	$56,500	$114,200	$52,100	$53,100	$65,200	$60,600	$39,500	$6,600	$8,100	$48,100	$7,200
Annual Expenses (Inflation Adjusted)	$69,851	$6,452	$11,202	$99,834	$82,310	$169,695	$78,966	$82,092	$102,814	$97,471	$64,804	$11,045	$13,826	$83,743	$12,786

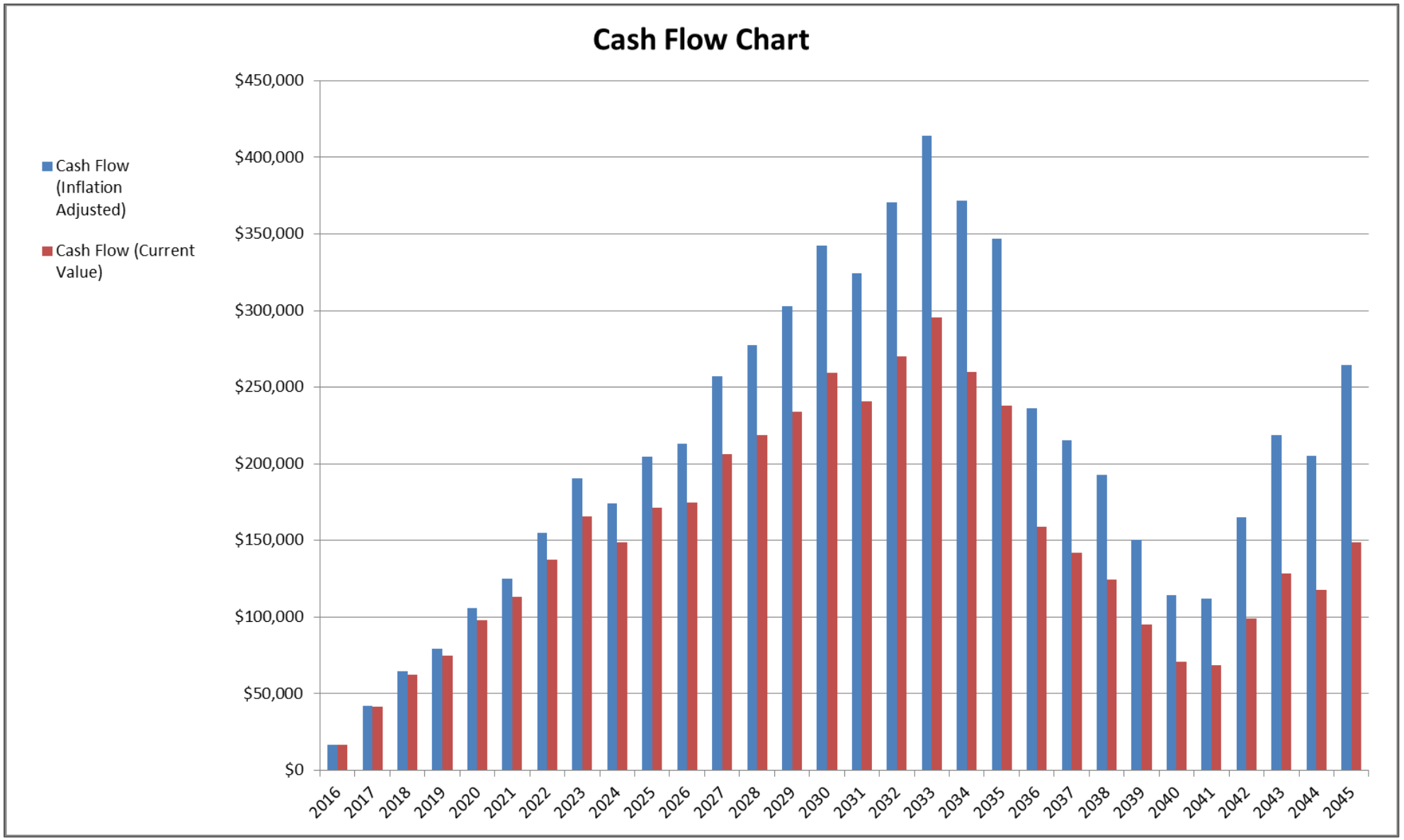
Wood Bridge															
Periodic Inspections	$1,500										$1,500				
Local repairs		$1,500										$1,500			
Replacement											$11,000				
Concrete Pavers — Local Repairs				$900					$900					$900	
Mast Crane — Replacement						$10,000									
Bubbler System — Replacement															
Lighthouse and Beacon — Replacement						$10,000									
Landscaping and Planting — Maintenance	$3,500					$3,500					$3,500				
Wood Fences															
Local repairs		$500										$500			
Replacement of sections						$3,500									
Gates															
Local repairs								$400							
Replacement						$2,400									
Irrigation system — Maintenance					$500					$500					$500
Gazeebo and Site Furniture — Replacement															
Storage Sheds — Replacement	$1,800														
Marina Water Extraction System															
Local Repairs					$1,000					$1,000					$1,000
Replacement						$6,500									
Water Well System — Repairs and equipment replacement				$7,500										$7,500	
Septic System — Repairs and equipment replacement				$8,000										$8,000	
Dock Power Outlets — Local Repairs				$2,500					$2,500					$2,500	
Site Contingency					$3,000					$3,000					$3,000

Miscellaneous															
Tractor	$20,000														
Reserve Fund Study															
Update with a site visit				$4,100						$4,100					
Update without a site visit	$2,100						$2,100						$2,100		

Cash Flow Table

Annual Contribution in the first year	$28,800
Opening Balance	$0
Annual Increase Rate for the first year	

Year	Increase from Previous Year	Annual Contribution	Annual Expense (Inflation Adjusted)	Net Interest Collected	Cash Flow (Current Value)	Cash Flow (Inflation Adjusted)
2016		$28,800	$12,100	$0	$16,700	**$16,700**
2017	3.00%	$29,664	$4,692	$334	$41,182	$42,006
2018	3.00%	$30,554	$8,739	$833	$62,143	$64,654
2019	3.00%	$31,471	$18,359	$1,276	$74,483	$79,042
2020	3.00%	$32,415	$7,036	$1,555	$97,906	$105,976
2021	3.00%	$33,387	$16,561	$2,088	$113,117	$124,891
2022	3.00%	$34,389	$6,870	$2,456	$137,516	$154,866
2023	3.00%	$35,420	$3,101	$3,048	$165,609	$190,233
2024	3.00%	$36,483	$56,357	$3,744	$148,595	$174,103
2025	3.00%	$37,577	$10,278	$3,407	$171,375	$204,809
2026	3.00%	$38,705	$34,741	$4,028	$174,571	$212,801
2027	3.00%	$39,866	$0	$4,175	$206,569	$256,842
2028	3.00%	$41,062	$25,745	$5,053	$218,580	$277,212
2029	3.00%	$42,294	$22,379	$5,443	$233,896	$302,570
2030	3.00%	$43,563	$9,500	$5,943	$259,629	$342,575
2031	3.00%	$44,869	$69,851	$6,733	$240,979	$324,326
2032	3.00%	$46,216	$6,452	$6,352	$269,847	$370,442
2033	3.00%	$47,602	$11,202	$7,282	$295,751	**$414,123**
2034	3.00%	$49,030	$99,834	$8,137	$260,078	$371,456
2035	3.00%	$50,501	$82,310	$7,266	$238,132	$346,913
2036	3.00%	$52,016	$169,695	$6,793	$158,840	$236,027
2037	3.00%	$53,576	$78,966	$4,585	$141,998	$215,222
2038	3.00%	$55,184	$82,092	$4,213	$124,534	$192,527
2039	3.00%	$56,839	$102,814	$3,766	$95,326	$150,319
2040	3.00%	$58,544	$97,471	$2,931	$71,077	$114,323
2041	3.00%	$60,301	$64,804	$2,228	$68,297	$112,048
2042	3.00%	$62,110	$11,045	$2,196	$98,786	$165,310
2043	3.00%	$63,973	$13,826	$3,262	$128,139	$218,719
2044	3.00%	$65,892	$83,743	$4,309	$117,849	$205,177
2045	3.00%	$67,869	$12,786	$4,017	$148,818	$264,278


Cash Flow Chart
Cash Flow (Inflation Adjusted)
Cash Flow (Current Value)
$450,000
$400,000
$350,000
$300,000
$250,000
$200,000
$150,000
$100,000
$50,000
$0
2016
2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
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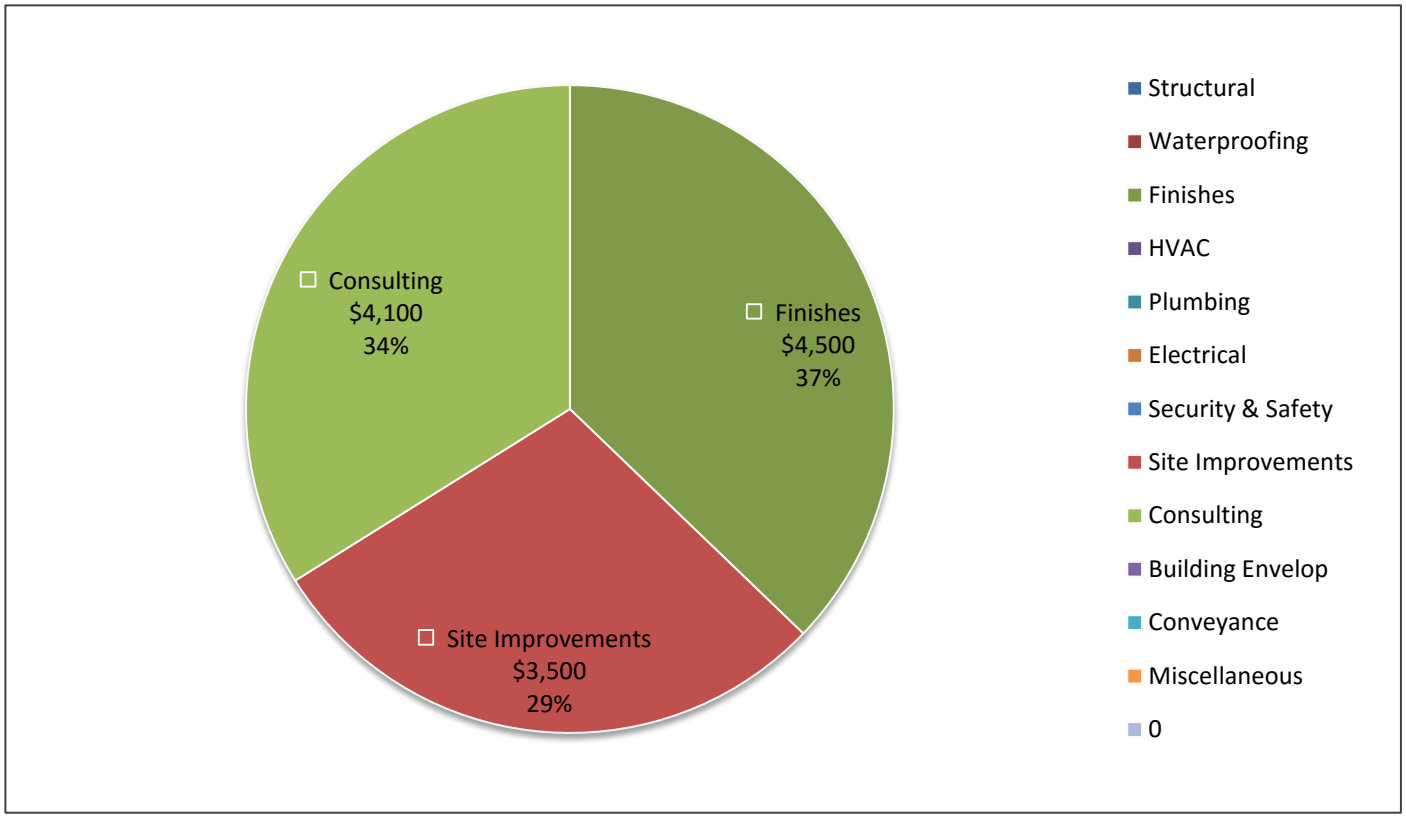
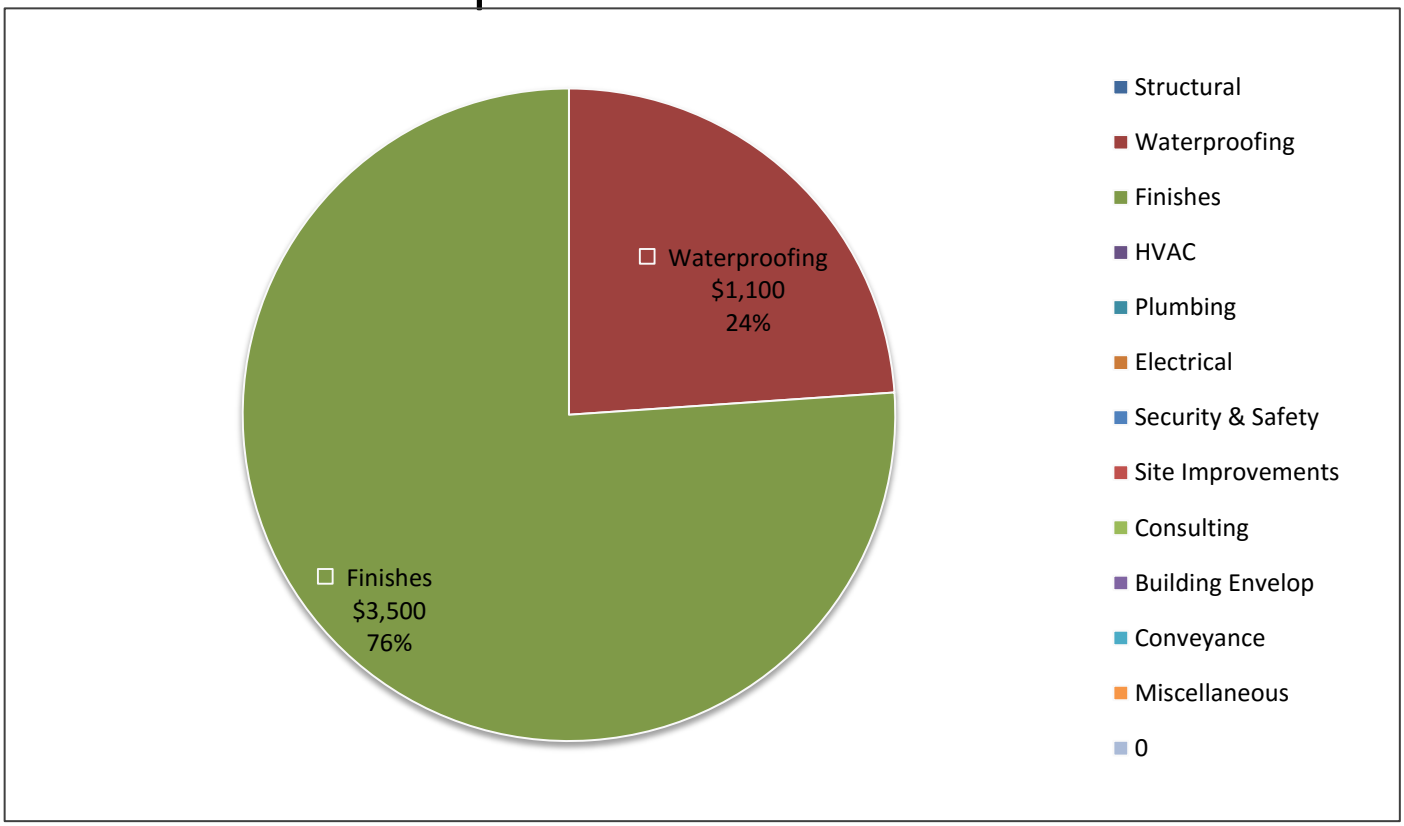
2040
2041
2042
2043
2044
2045

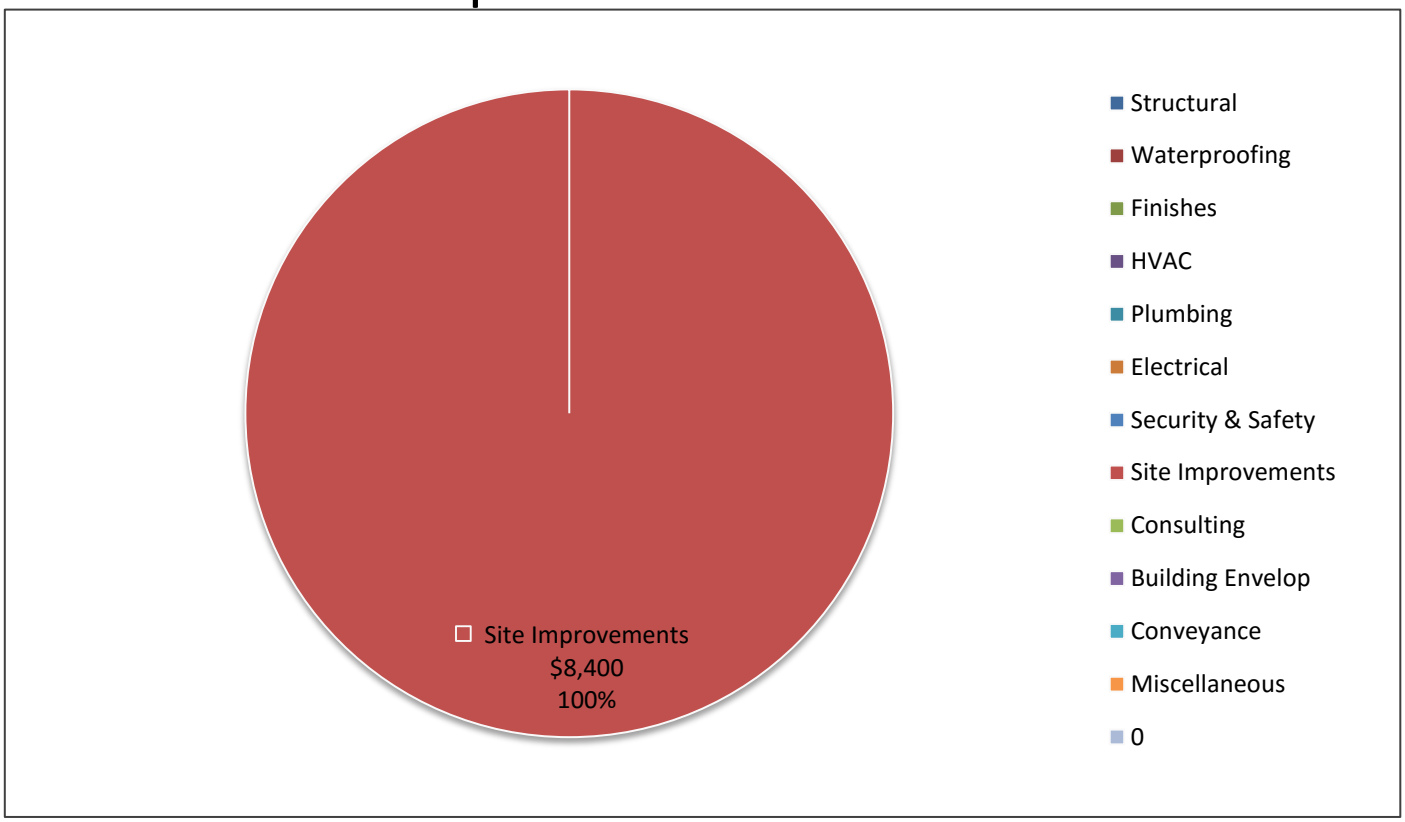
Annual Expenditure Deviation in 2016



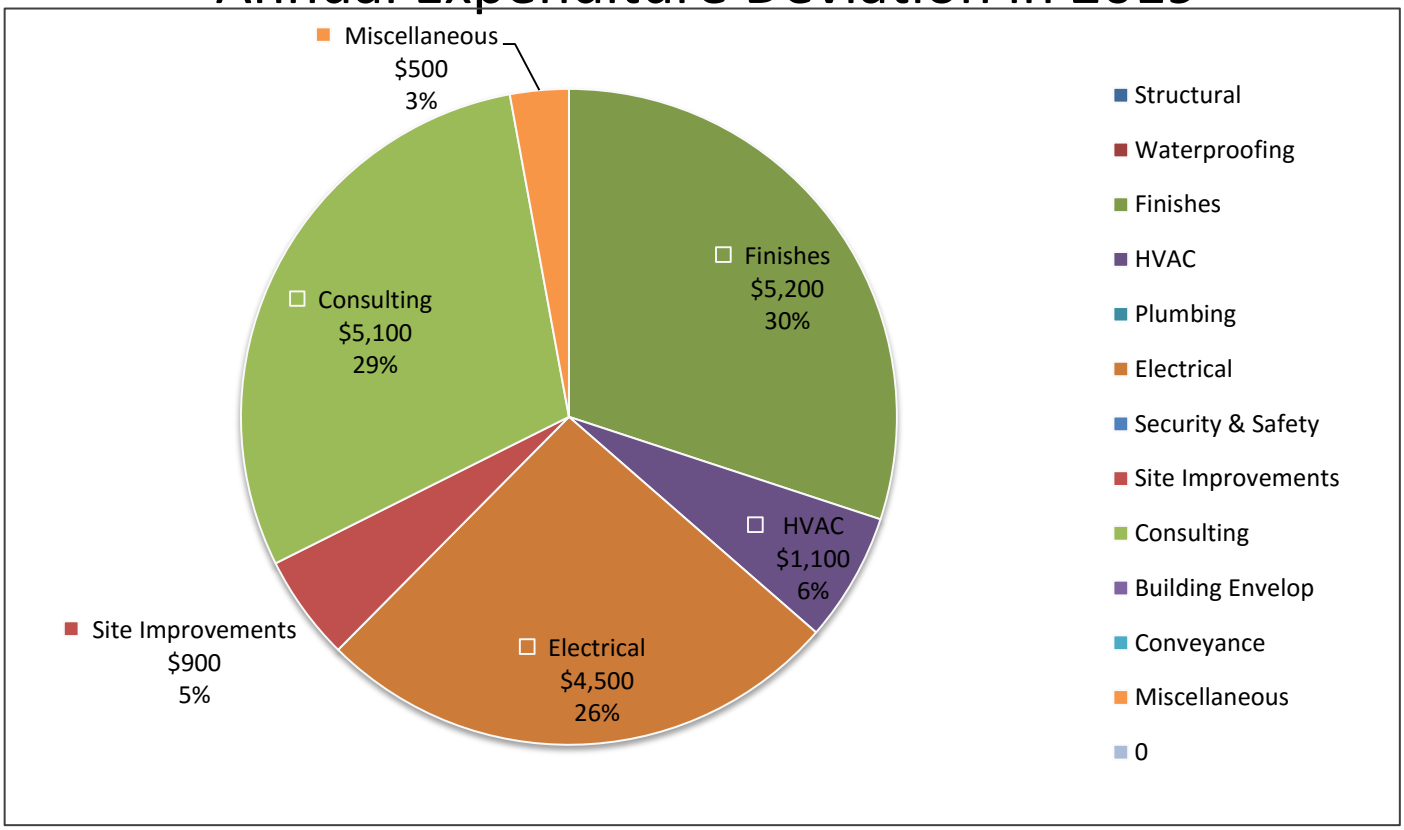
Annual Expenditure Deviation in 2017



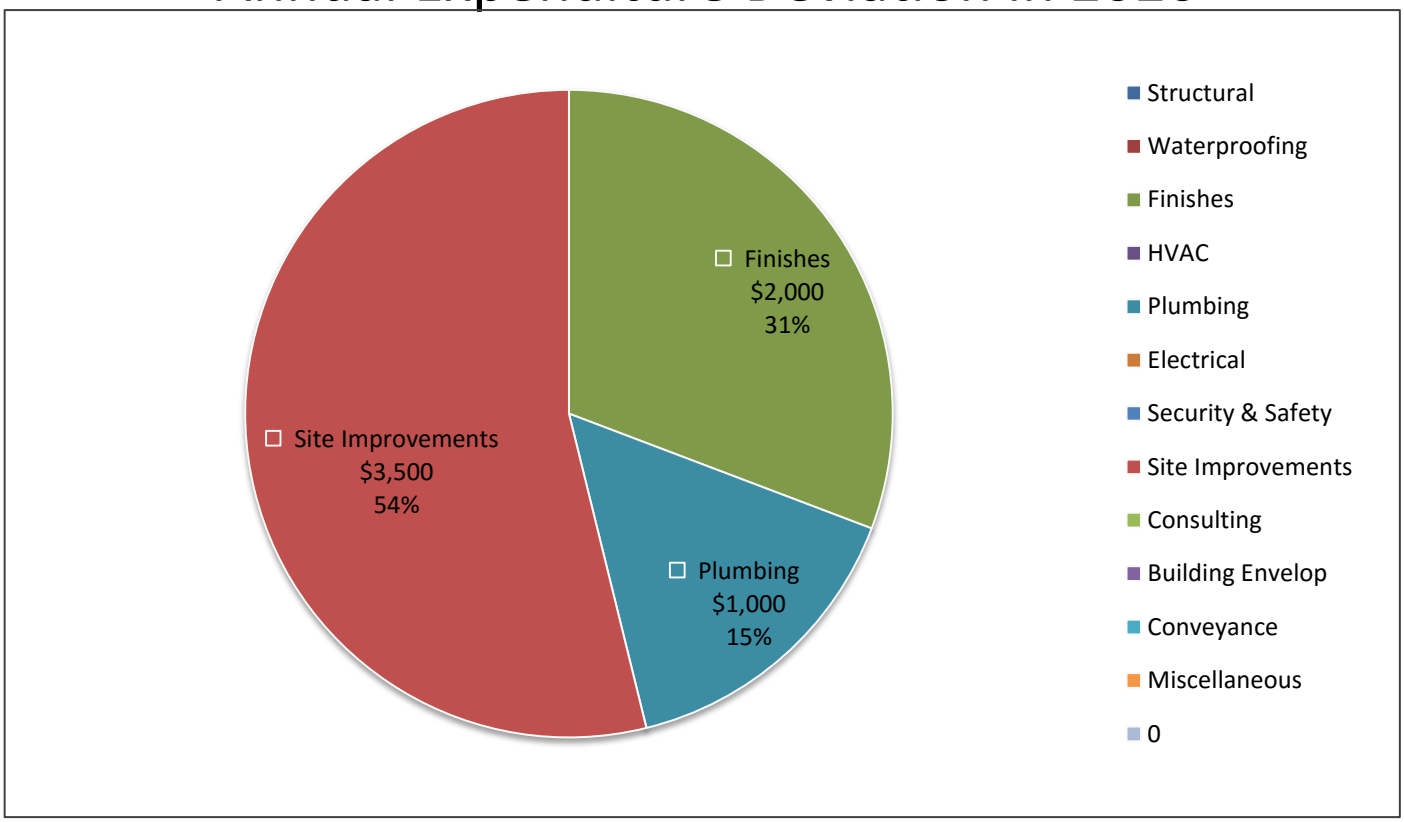
Annual Expenditure Deviation in 2018



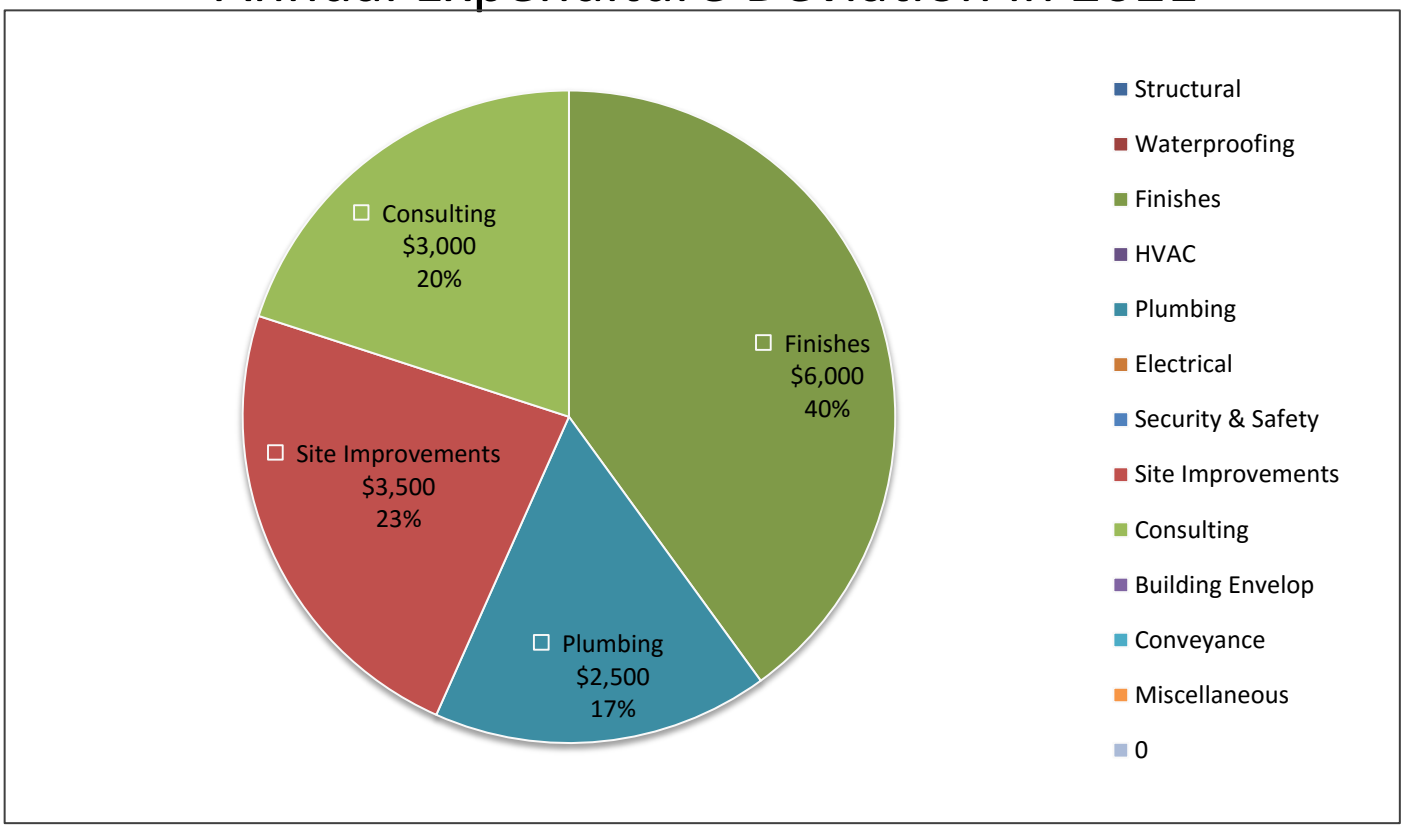
Annual Expenditure Deviation in 2019



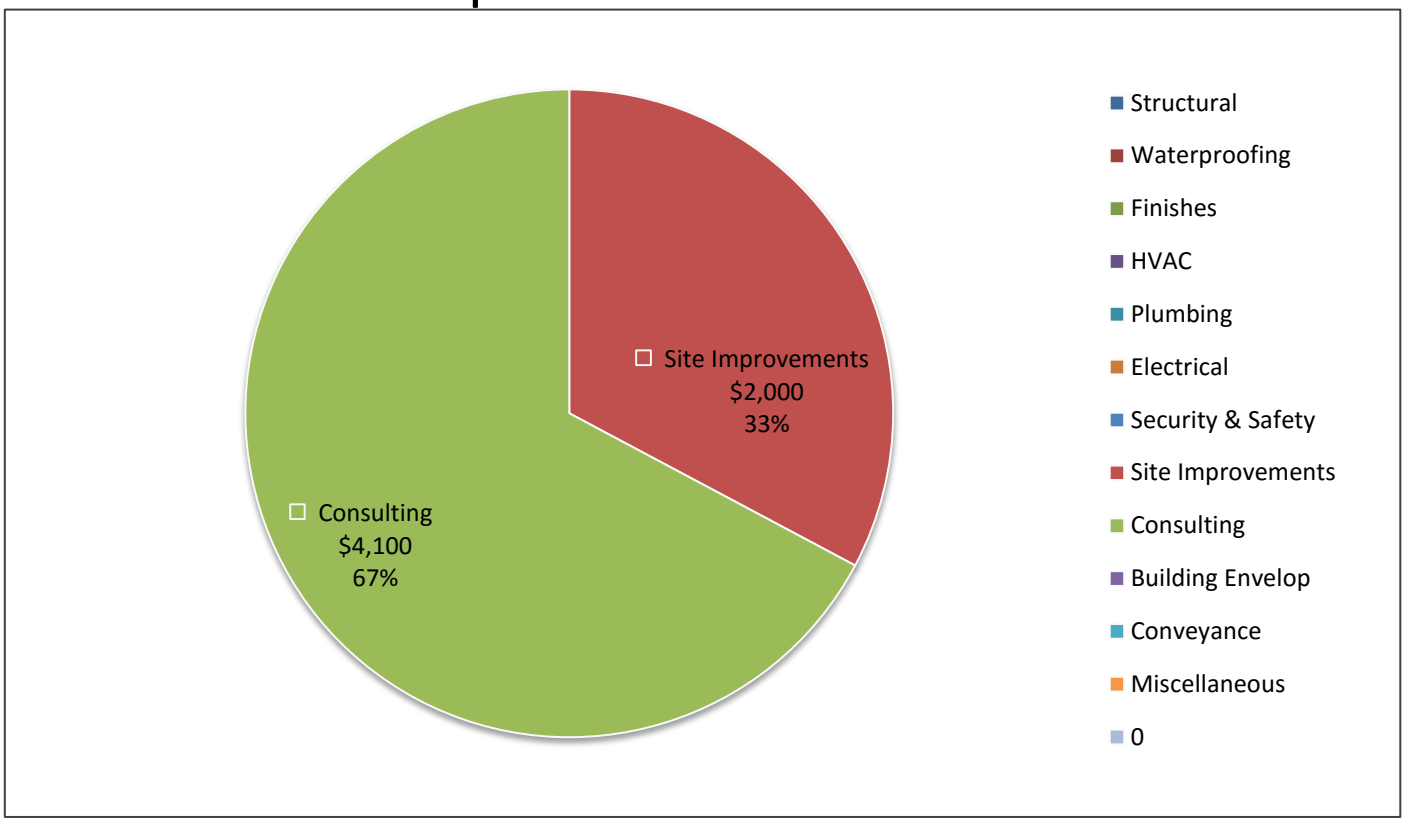
Annual Expenditure Deviation in 2020



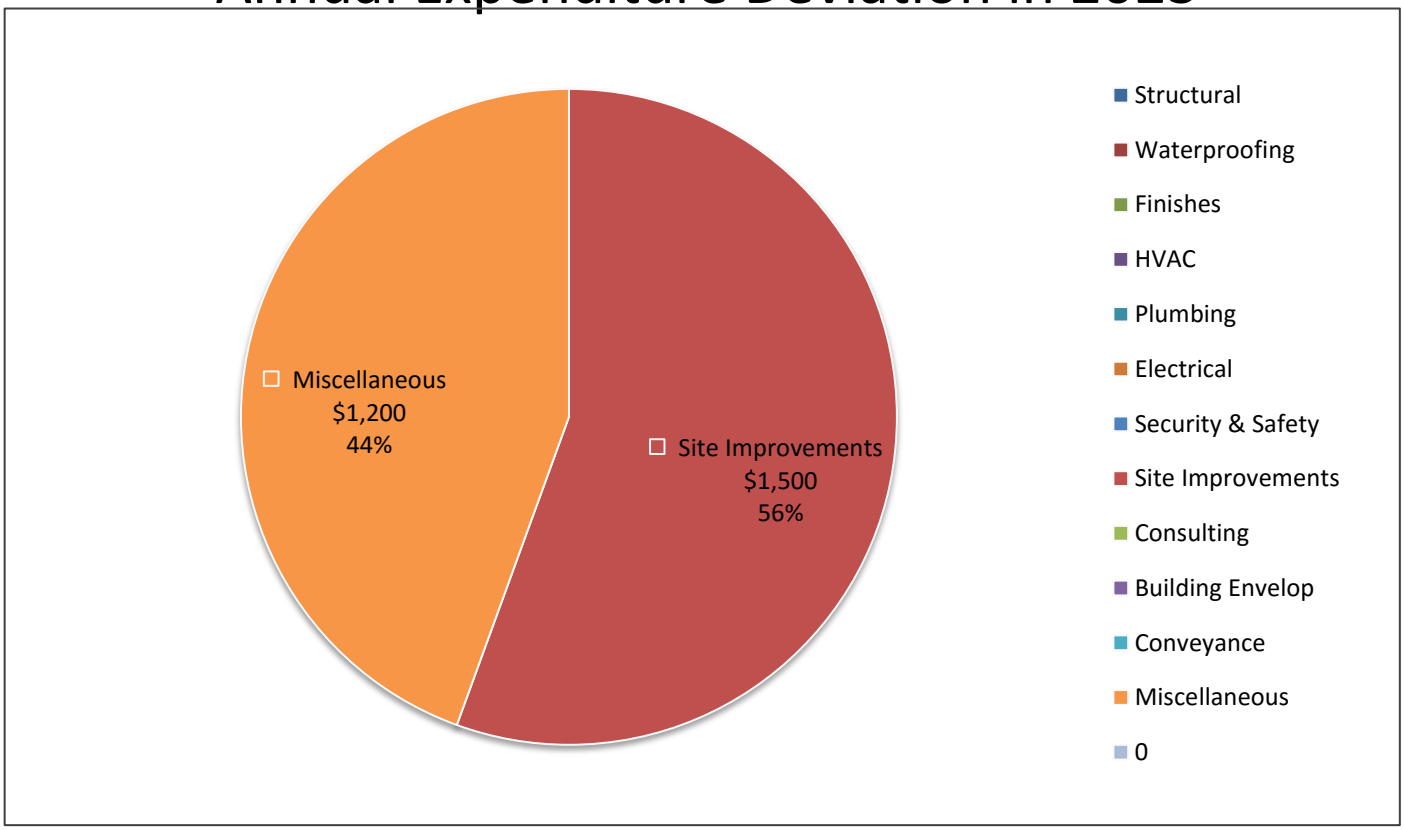
Annual Expenditure Deviation in 2021



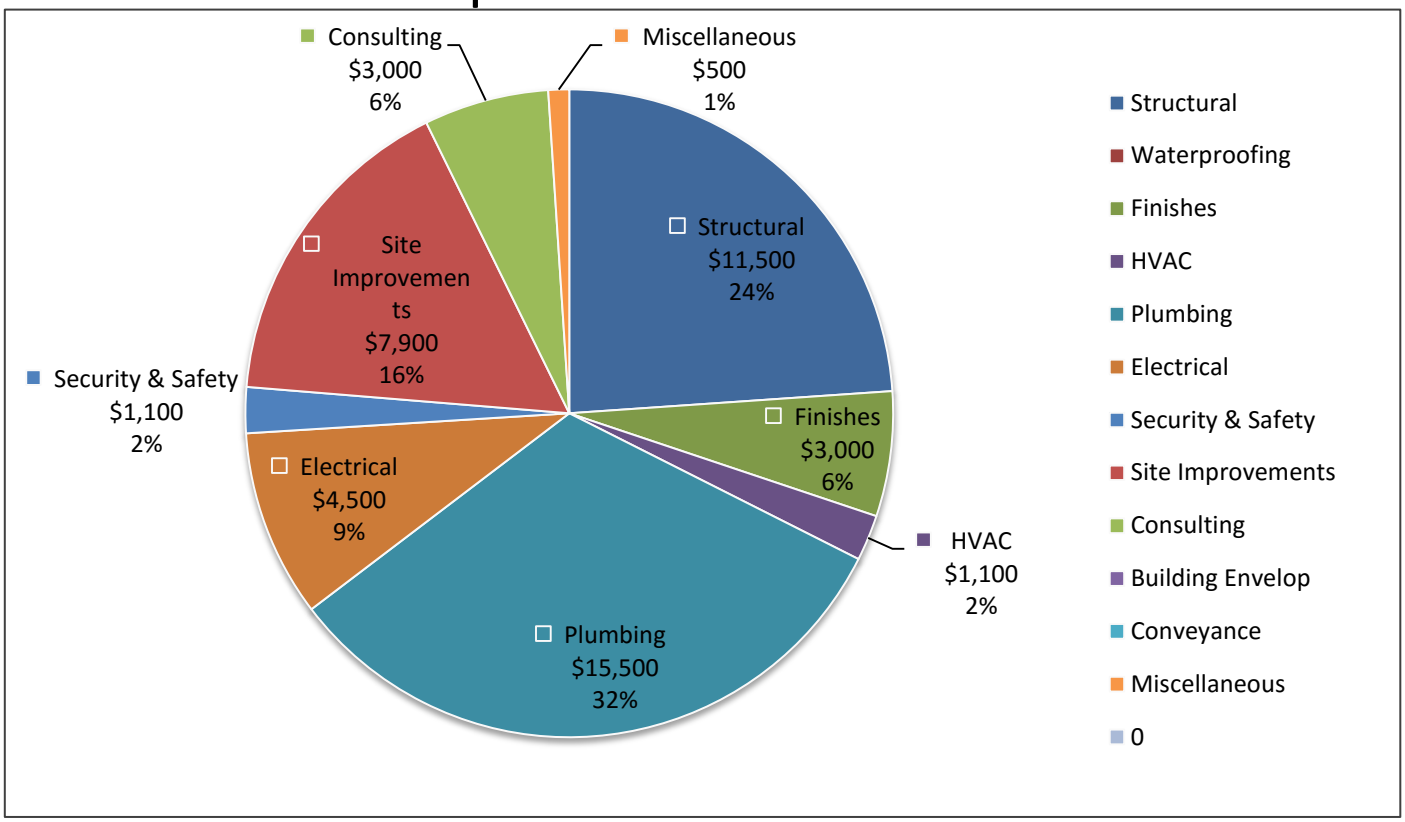
Annual Expenditure Deviation in 2022



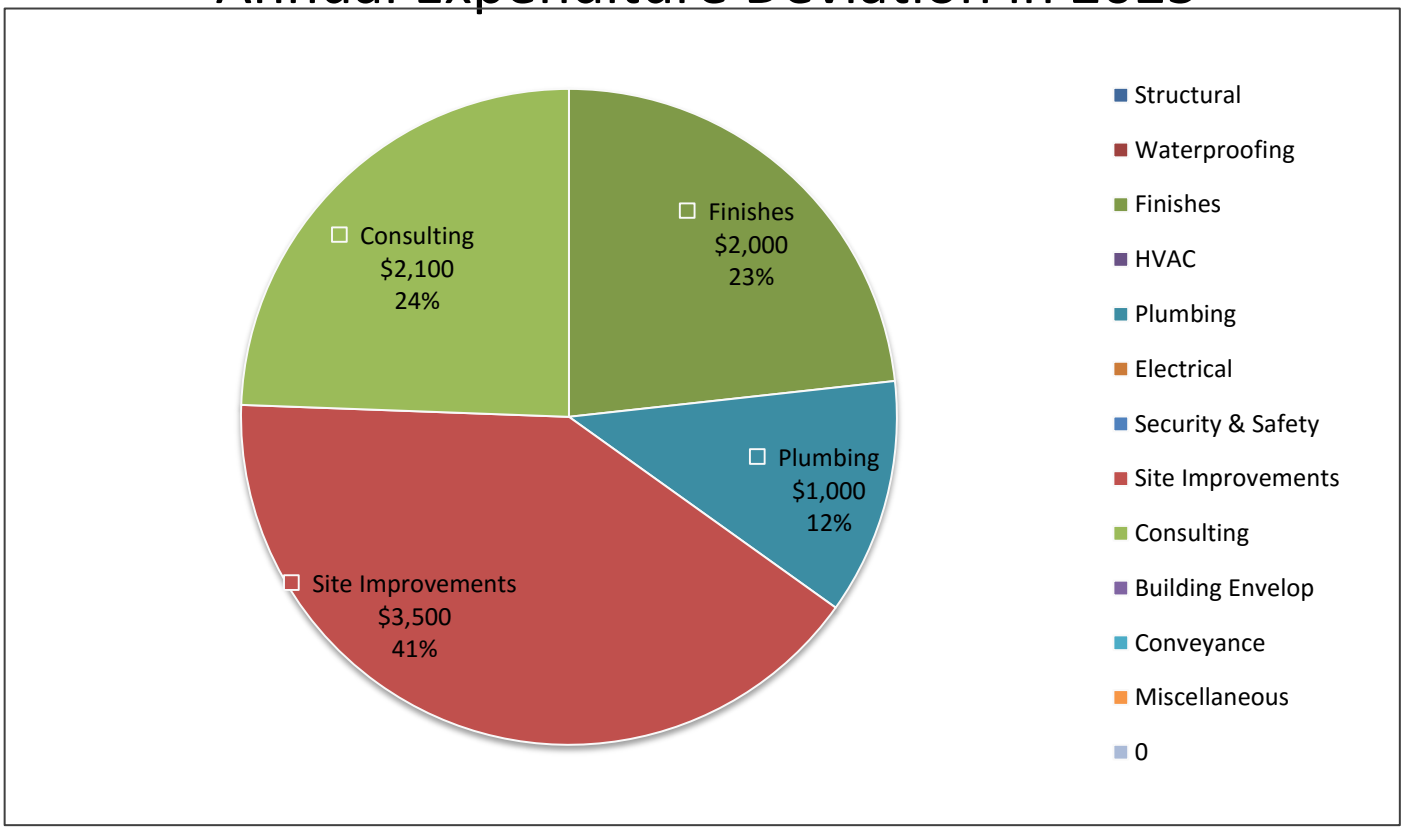
Annual Expenditure Deviation in 2023



Annual Expenditure Deviation in 2024



Annual Expenditure Deviation in 2025



APPENDIX B

PHOTOGRAPHS

Images No. 1 to 3

General overview of the site

Image No. 4

The site's house that operates as a clubhouse and residential apartment

Image No. 5 and 6

General overview of the marina deck. It is supported by a steel support system

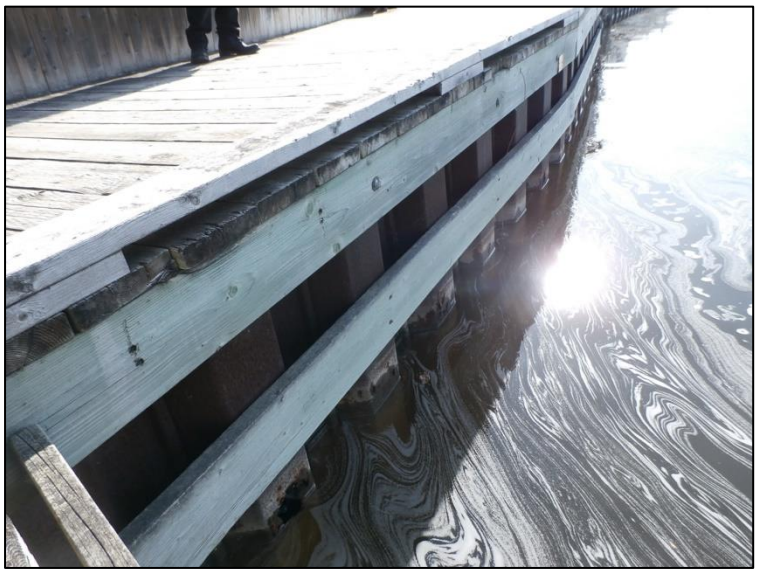


Image No. 7

Steel break wall that is also part of the marina's support system

Image No. 8

Backyard patio deck with balcony and pergola

Image No. 9

Stairs made of precast concrete pavers

Image No. 10

General overview of the entrance lobby with carpet and associated furniture.

Image No. 11

Overview of the club room

Image No. 12

Kitchen in the club room area

Image No. 13

General overview of the mechanical room

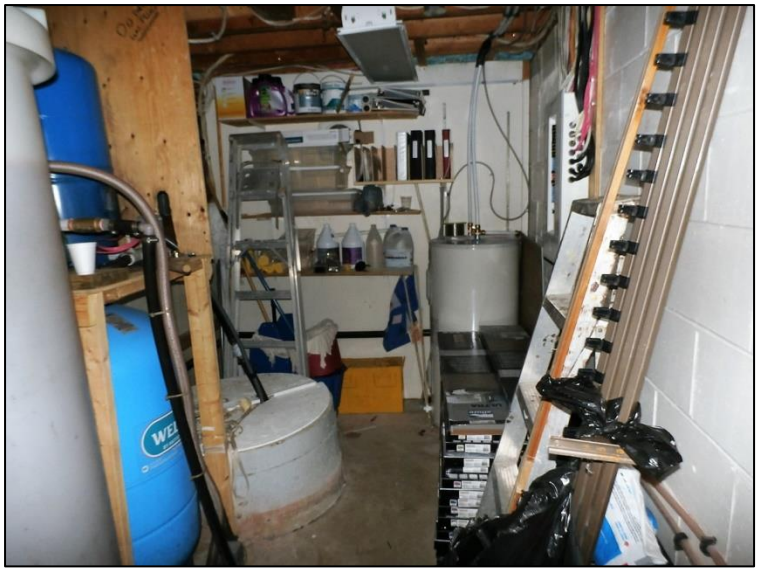


Image No. 14

Electric hot water tank

Image No. 15

Water filtration system that is connected to the water well. The cylindrical contains is part of the treatment system.

Image No. 16

Circuit breaker panel for the clubhouse. A separate one provides power to the apartment floor.

Image No. 17

Water supply piping that is connected to the municipal water system and the filtration system

Image No. 18

Washroom on the clubhouse main floor

Image No. 19

General overview of the upper floor of the clubhouse

Image No. 20

Office room on the upper floor of the clubhouse

Image No. 21

A gas-fired furnace installed in the house

Image No. 22

Stairs to residential apartment accessed from the side entrance of the house

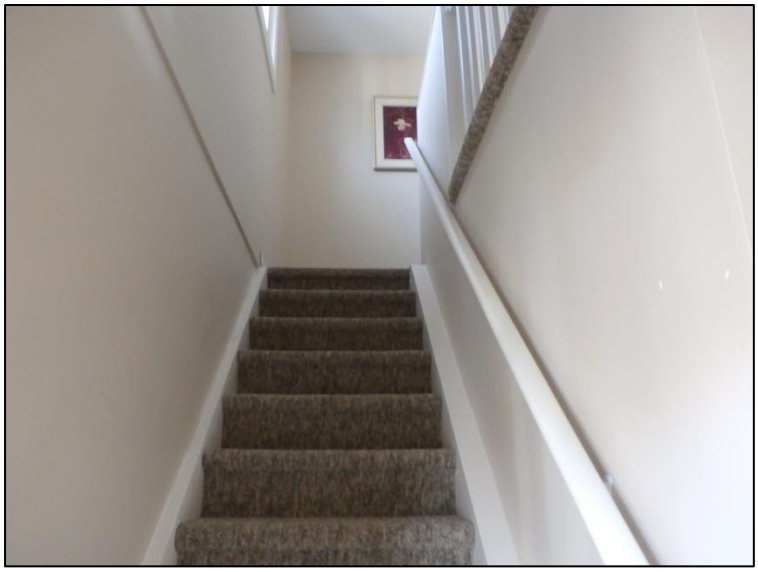


Image No. 23

Washroom of the residential apartment

Image No. 24

Laundry room of the residential apartment

Image No. 25

Living room area of the residential apartment

Image No. 26

Kitchen of the residential apartment

Image No. 27

Bedroom of the residential apartment

Image No. 28

Overview of the wooden balcony with guardrails and pergola

Image No. 29

General overview of the beach area of the site

Image No.30

Southern boundary of the site facing Lake Simcoe. The lighthouse and beacon are located here.

Image No. 31

General overview of the storage building

Images No. 32 and 33

Elements of the septic system on the north side of the storage structure

Image No. 34

Compressor tank inside the storage building

Image No. 35

The pedestrian steel bridge

Image No. 36

Green marine pump-out system used for extracting water from the lake. The water is then filtered and used for washing the boats.

Image No. 37

Irrigation system

Image No. 38

General overview of the washrooms building

Image No. 39

Gas-fired hot water boiler and filtration system at the rear of the washrooms structure.

Images No. 40 to 41

General overview of the interior of the washrooms structure.

Image No. 42

One of the storage sheds at the site

Image No. 43

The creek with stone break walls used for armouring the banks.

Image No. 44

One of the several electrical outlets throughout the marina deck for the boats.

Image No. 45

Northern entrance to the property. The gate consists of two chain link fences and wooden country fences.

Image No. 46

The site's tractor

Image No. 47

One of the marine pump-out systems used for water extracted from the lake.

APPENDIX C

FIGURES

RIVER
BRIDGE
STEEL BREAKWALL
ROCKS
STEEL BREAKWALL
STEEL BREAKWALL
FOOT BRIDGE
BOAT RAMP
STEEL BREAKWALL
SCALE: 1:500
0
12
24
48 M.
SCALE: 1:500
0
12
24
48 M.