



# Marian Coffin Gardens at Gibraltar

## Arresting Deterioration

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University of Delaware: BSLA Senior Capstone



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# Introduction

Marian Coffin Gardens at Gibraltar (MCG) are located on the prior grounds of a historically significant early 20th century estate garden located within the city of Wilmington, Delaware. The gardens are open to the public and often used for lesiure activities such as photography, picnicing, birdwatching, and strolling. MCG's prime location in Northern Delaware allows for outdoor enthhusiasts from the Mid-Atlantic region to find this hidden gem on their travels between other gardens such as Longwood and Nemours.



Figure 1. Delaware and surrounding states. Mapstoprint.com. Download Map MARYLAND DELAWARE Map to Print, [www.mapstoprint.com/MDEEDOWNLOAD.htm](http://www.mapstoprint.com/MDEEDOWNLOAD.htm).



Figure 2. Pennsylvania Avenue in Wilmington, DE. Google Maps.



Figure 3. Gibraltar estate and site of interest. Google Maps.

**Objectives** After resaerch and site visits, it became obvious that it was important to work out a process to arrest deterioration of the site as a whole and prioritize a list of items in need of completion to maximize maintenance efforts to the most popular spots of the garden. Below is a list of my objectives in priority order.



1. Determine a process to prioitize efforts to arrest deterioration of the site as a hole.



2. Deliver a prioritized list of things to do in order to maximize the impact the garden can have on the public.



3. Create a calendar of general maintenance activities and community events.



4. Catalog trees and determine their current health status as well as prioritize trees in order of future maintenance.



5. Describe a method to preserve statues and ironwork.



# Approach to MCG

## To Arrest Deterioration

This project will focus on the concept of arrested deterioration. In consultation with my capstone committee, it was agreed that it was preferable to slow down the deterioration of certain aspects in the garden through preservation and the installation of a proper maintenance plan specific to each area.

In 1999, the gardens were completely restored by Robinson Anderson Summers Inc. This project did not attempt to suggest another restoration due to the current lack of resources. Also, the prior restoration deteriorated quickly over the span of 20 years without proper preservation techniques. It is also not a rehabilitation because to rehabilitate something means to change the historic property which the committee agreed should not be done.

## Definitions

Preservation of a historic building or landscape focuses on the maintenance and repair of existing historic materials and retention of a property's form as it has evolved over time.(1)

Rehabilitation acknowledges the need to alter or add to a historic property to meet continuing or changing uses while retaining the property's historic character.(1)

Restoration re-creates vanished or non-surviving portions of a property for interpretive purposes.(1)

Management is the use of limited resources combined with forecasting, planning, leadership and execution skills to achieve predetermined goals; accommodate changing conditions.(2)

Maintenance is the process of keeping in a proper condition; repetitive maintenance routines.(2)

1\* Four Approaches to the Treatment of Historic Properties- Technical Preservation Services, National Park Service. National Parks Services, U.S. Department of the Interior, <https://www.nps.gov/tps/standards/four-treatments.htm>.

2\* University of Delaware Professor and Extension Specialist, Susan Barton, PhD, SITES AP



# Top Garden Locations Descriptions

## Iron Gates

The Iron Gates, located at the south end of the Flower Garden, are more often than not the first thing visitors see upon entering the garden. These gates are the most photographed area of the entire garden mostly focusing on this area's infrastructure. This area greatly needs to have the gates intricate ironwork details repaired, painted and preserved to have the maximum benefit for the garden.

## Pool Terrace

The Pool Terrace, located adjacently on the north west side to the Flower Garden, is the second most popular area in Gibraltar. Currently a bog, it catches people's attention, especially in the summertime when the water lilies are in bloom. This area is most photographed for the plants here. In order to maintain this area, the members of MCG need to address the safety hazards in this area first and then focus on maintaining the plants here as well.

## Tea House

The Tea House, located at the south most end of the Bald Cypress Allee of MCG, is a very popular area for photography due to its emansive space which allows for large groups of people to be in at the same time and the beauty of its infrastructure. This space gives people a glimpse of the history in which this garden holds. With this area being so heavily populated frequently and the way the sun is angled towards the south side of the tea house, the area in front of it sees very little sun and grass will not thrive. In order to help improve this area needs to be areated to reduce compaction and the bald cypress trees will need to get slightly cut back to allow for more sunlight to access the space and encourage grass to grow.

## Flower Garden

The Flower Garden is the first space visitors enter upon arrival at the north end of the Marian Coffin Gardens. This area is most frequently used to photograph the different constructed and decorative elements here. This area requires proper repair, cleaning and preservation practices in order to preserve the historic integrity of the statues and fountain. This area is the most open in terms of available planting area and sunlight, so there is equal opportunity for weeds to grow. Years of neglect mean a vast weed seed bank. This is an area where MCG volunteers can make a section of the garden their own. Volunteers could sign up for different sections of the garden to maintain. This will mainly include weeding their section, but also at the end of each summer, they could also meet with the members of the board to discuss concerns and provide suggestions for how to better their areas and replant for the next season. This will allow for the gardens to consistently be maintained and the volunteers can come and go as they please to work in their area.

## Bald Cypress Allee

The Bald Cypress Allee, located at the south end of MCG, is typically used for 'in the moment' or 'action' photographs; meaning that this area is one of the most heavily foot-trafficked areas in the entire garden. The combination of the topography, high foot traffic, and shading from the bald cypress trees makes the walkway very compacted and damp most of the year. There is very little grass able to grow here due to all of the stated factors. This area will need areation to reduce compaction and the bald cypress trees to get slightly cut back to allow for more sunlight to access the pathway before replanting turfgrass to grow in the area.

## Stairs

The Stairs, located at the south end of the Pool Terrace, is most frequently used for small group/couples photographs. The intimacy of this space allows for very personal moments to be captured and remembered. Many of the photographs taken here are for high school proms and baby birth announcements. The biggest safety hazard here is the leaves, flower petals, and other debris that acquire here throughout the year. MCG will need a strategy to help prevent people from getting hurt while trying to enjoy this space.



# Existing Conditions: History

## 1900-1999



Figure 1: Remodeled Tea House at south end of Bald Cypress Allee, 1997. Photograph by John Lewis.



Figure 3: Center "break" of Bald Cypress Allee with cast stone vase, 1997. Photograph by John Lewis.



Figure 4: North-south view of Bald Cypress Allee with large iron gate and Tea House, 1997. Photograph by John Lewis.



Figure 10: Winding marble staircase with metal chairs, Between 1917-1927. Courtesy of the Sharp family.



Figure 9: South-north view of Evergreen Terrace, Awning and Pool House at north end, 1917-1927. Courtesy of the Sharp family.



Figure 8: South-north view of Pool Terrace with swimming pool, Between 1917-1927. Courtesy of the Sharp family.



Figure 7: South-north view of Flower Garden, 1920s. Courtesy of the Sharp family.



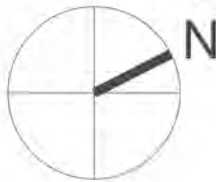
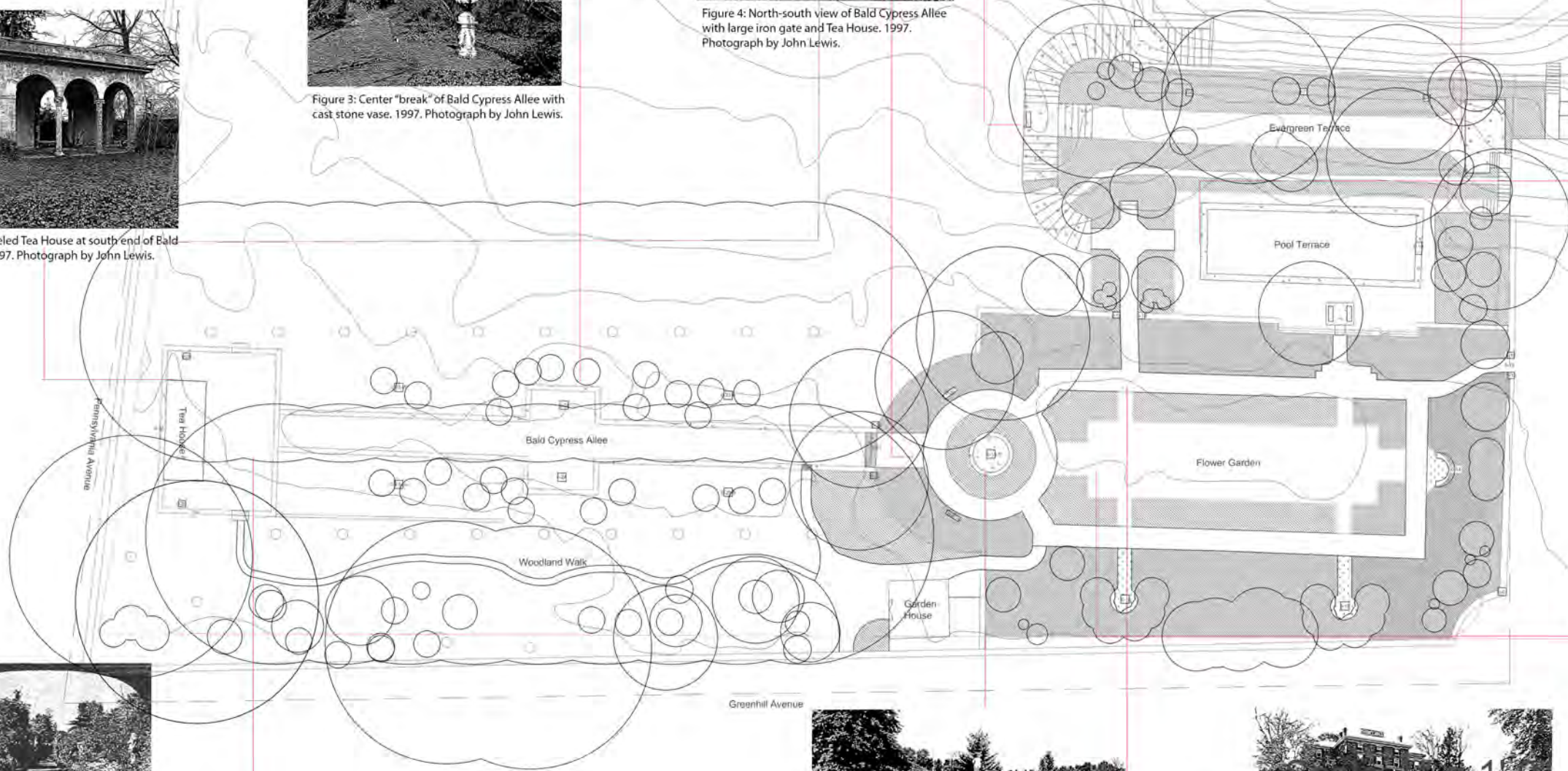
Figure 2: South-north view of Bald Cypress Allee, Late 1920s-1930s. Courtesy of the Sharp family.



Figure 5: Circular fountain with "Bathing Venus" centerpiece, and Flower Garden, Between 1917-1927. Courtesy of the Sharp family.



Figure 6: Flower Garden and east elevation of Mansion, 1920s. Courtesy of the Sharp family.





# Existing Conditions: Present Day 2019



Figure 1: Tea House at south end of Bald Cypress Allee. 2019. Photograph by Jaime Manlove.



Figure 3: Center "break" of Bald Cypress Allee with view of Tea House. 2019. Photograph by Jaime Manlove.



Figure 4: North-south view of iron gate and stone eagles. 2019. Photograph by Jaime Manlove.



Figure 10: Winding marble staircase with stone bench. 2019. Photograph by Jaime Manlove.



Figure 9: North-south view of Evergreen Terrace. Winding marble staircase at south end. 2019. Photograph by Jaime Manlove.



Figure 8: South-north view of Pool Terrace with swimming pool. 2019. Photograph by Jaime Manlove.



Figure 7: South-north view of Flower Garden. 2019. Photograph by Jaime Manlove.



Figure 2: South-north view of Bald Cypress Allee. 2019. Photograph by Jaime Manlove.



Figure 5: Circular fountain with "Bathing Venus" centerpiece. 2019. Photograph by Jaime Manlove.



Figure 6: Pool terrace entrance with view of two stone ornaments. 2019. Photograph by Jaime Manlove.



Pennsylvania Avenue

Tea House

Bald Cypress Allee

Secret Pathway

Evergreen Terrace

Pool Terrace

Flower Garden



# Historic Context

The Marian Coffin Gardens at Gibraltar are historically significant early 20th century estate gardens within the city of Wilmington, Delaware. The Gibraltar estate, built in 1844, was purchased in 1909 by Hugh Rodney Sharp and his wife, Isabella Mathieu du Pont Sharp. Hugh Rodney Sharp was one of Delaware's preeminent preservationists and philanthropist.

In 1916, Sharp hired Landscape Architect, Marian Cruger Coffin, who was among the first and most accomplished women landscape architects in the United States, to complete a garden design for the estate. The Gardens at Gibraltar are designed an historic landscape as they embody distinctive characteristics of the American Country Place Era which is the period of its greatest significance. In addition to its historic importance, the property forms an essential segment of a stretch of "green space" along Route 52, at the north entrance to the city of Wilmington.\* Coffin's design style emphasized form and structure, which she considered to be the "backbones of a beautiful garden." This is well represented throughout the gardens.

Unfortunately, both the gardens and the house have deteriorated since the deaths of Isabella who passed in 1946 and then Hugh in 1968. Their estate transfered to their children, who did not share their parent's passion for the gardens.

In 1997, the gardens were sold to Preservation Delaware, a non-profit organization dedicated to the preservation of Delaware's architectural heritage and historic settings through education, public policy initiatives, and technical assistance. During the time leading up to the transfer of the property to Preservation Delaware, the Friends of Gibraltar raised capital to secure a renovation. In 1998, the gardens and statues underwent a massive restoration carried out by Rodney Robinson Landscape Architect. Robinson was contracted to design and oversee an extensive restoration of hardscape, infrastructure, and plantings to transition the private estate into a public garden. The restoration project was intended to recreate Marian Coffin's original design with several updates as needed to meet current accessibility standards, which included a new handicap accessibility pathway at the south end of the Flower Garden Leading to the Woodland Walk next to the garden house.



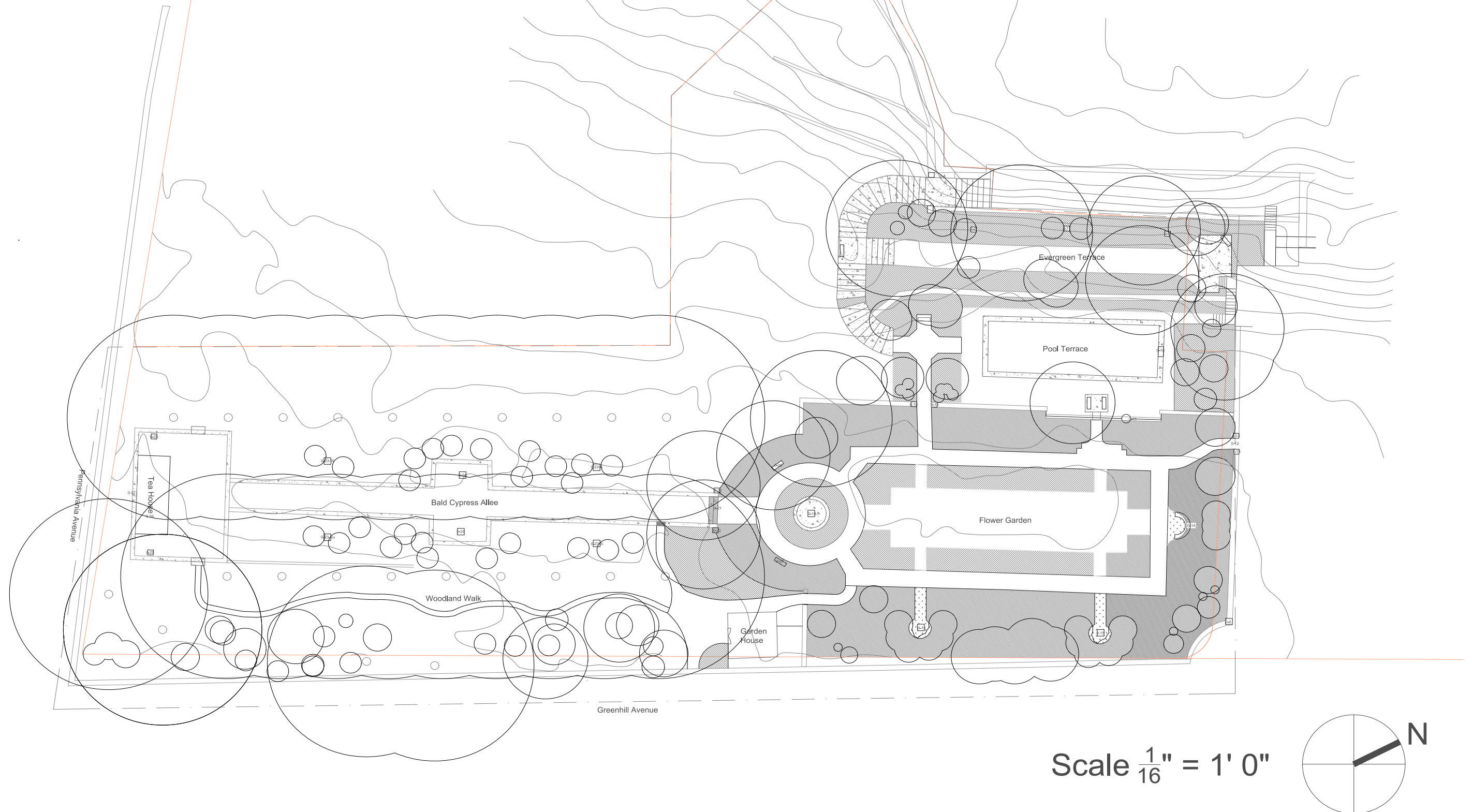
The Du Ponts: Houses and Gardens in the Brandywine. (n.d.). Retrieved from <http://www.delawaretoday.com/core/pagetools.php?url=/Delaware-Today/December-2009/The-Du-PontsHouses-and-Gardens-in-the-Brandywine/&mode=print>

\*Gestram, I. (summer 1997). The Historic Landscape at Gibraltar- A Proposal for its Preservation (Doctoral dissertation, University of Delaware) [Abstract]. Xii.



# Existing Conditions - Base Plan

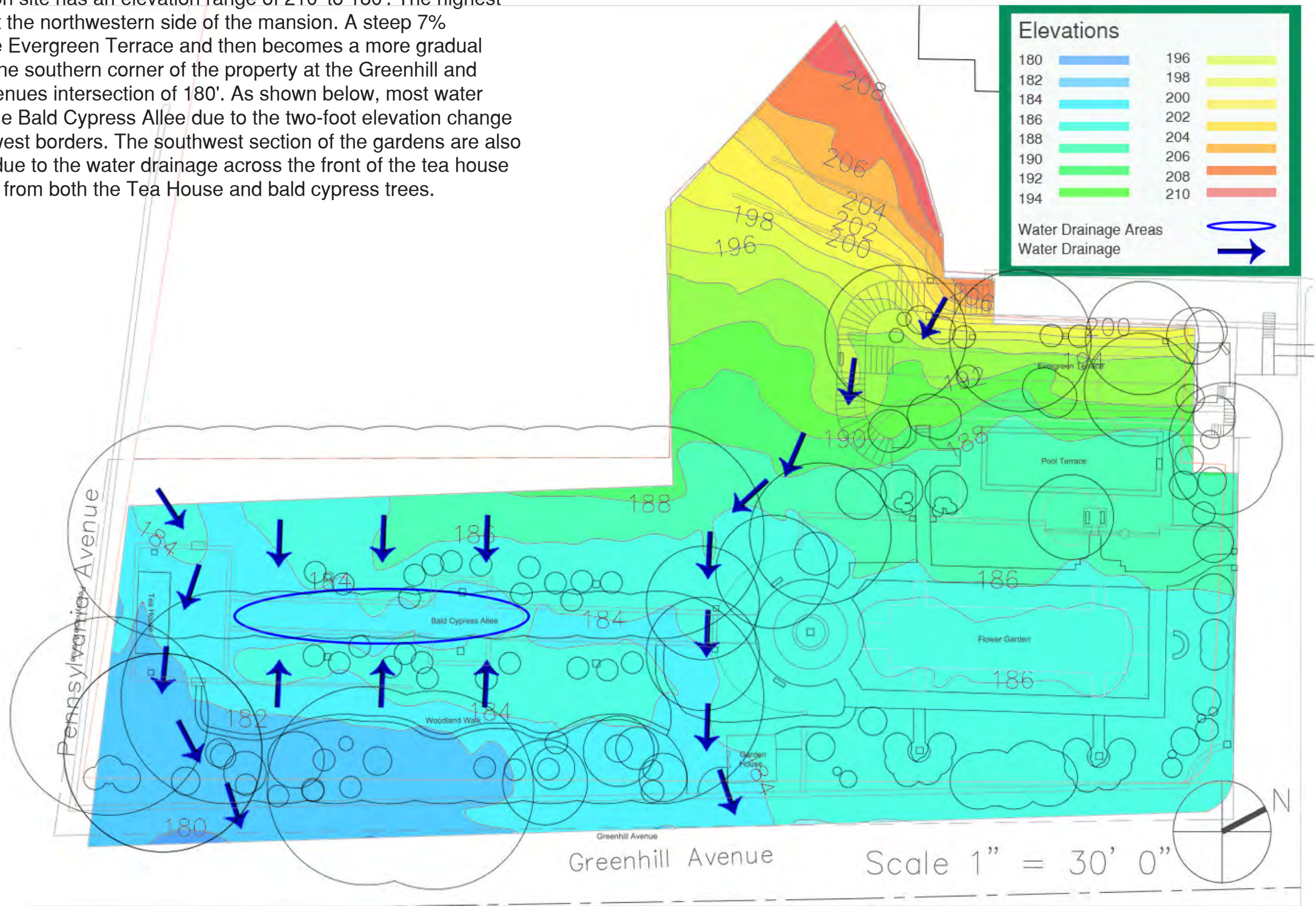
This graphic is the overall site of Marian Coffin Gardens. It shows the many different planting areas, immense number of trees, and the different marble pieces on site. Each area has its own functionality as separate outdoor living areas, much like a normal residence going from room to room.





# Site Analysis: Topography

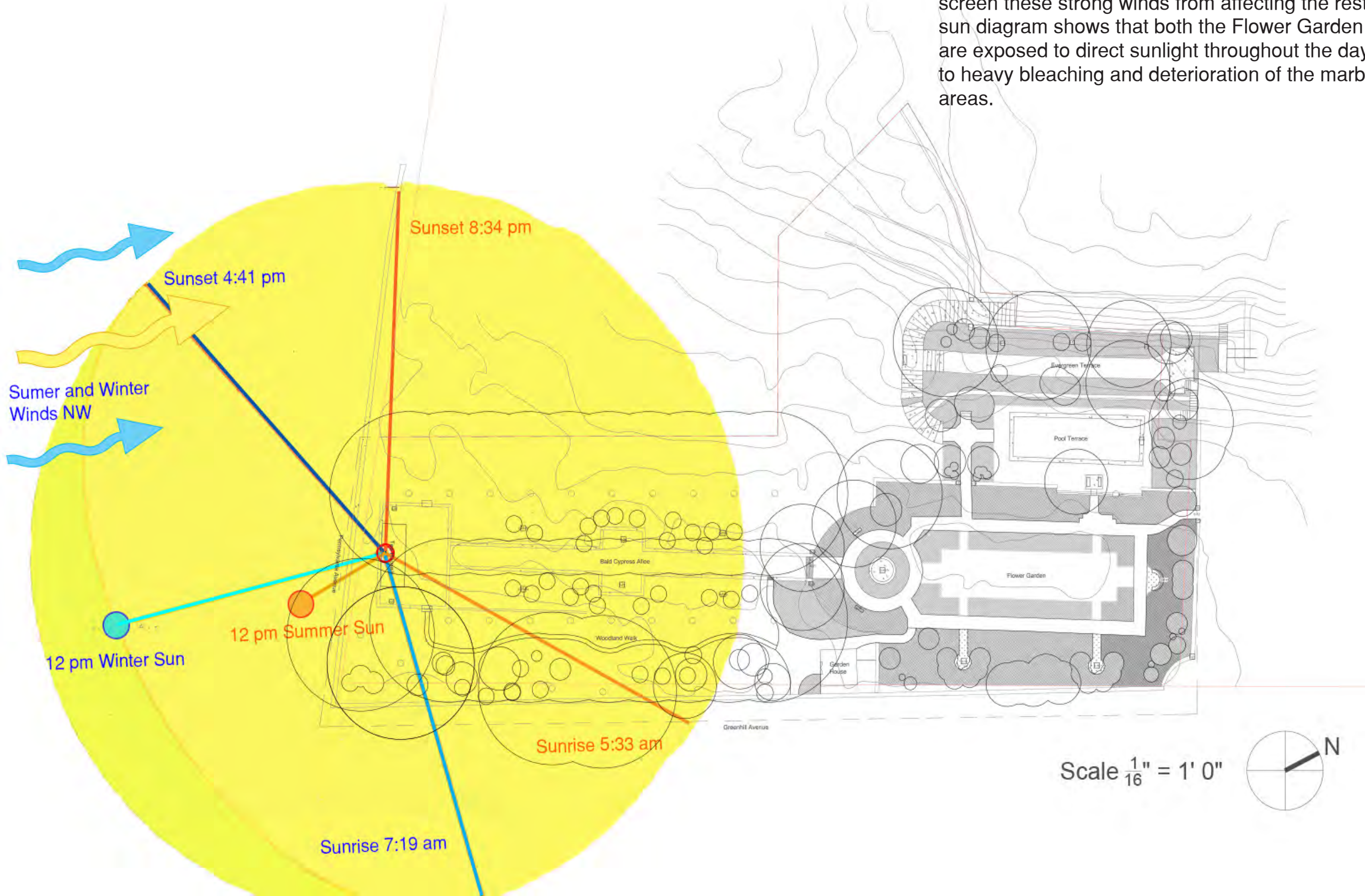
The topography on site has an elevation range of 210' to 180'. The highest point is located at the northwestern side of the mansion. A steep 7% slope leads to the Evergreen Terrace and then becomes a more gradual slope leading to the southern corner of the property at the Greenhill and Pennsylvania Avenues intersection of 180'. As shown below, most water accumulates in the Bald Cypress Allee due to the two-foot elevation change on the east and west borders. The southwest section of the gardens are also consistently wet due to the water drainage across the front of the tea house and heavy shade from both the Tea House and bald cypress trees.





# Site Analysis: Sun and Wind

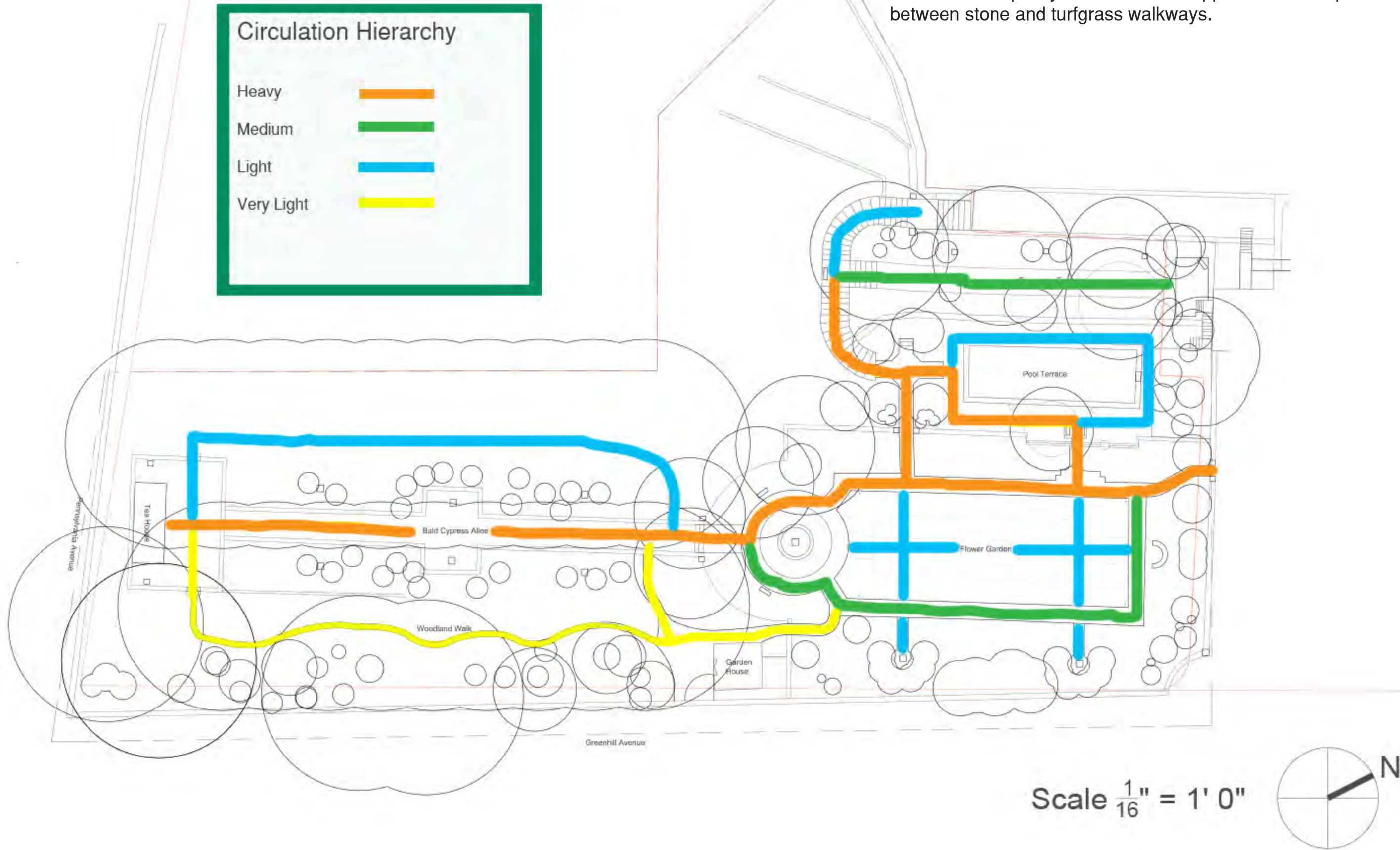
The diagram below illustrates that the prevailing winds are out of the south west throughout the year. This does not have a large impact on the garden due to the grand bald cypress trees that help screen these strong winds from affecting the rest of the site. The sun diagram shows that both the Flower Garden and Pool Terrace are exposed to direct sunlight throughout the day, which has led to heavy bleaching and deterioration of the marble pieces in these areas.





# Site Analysis: Circulation

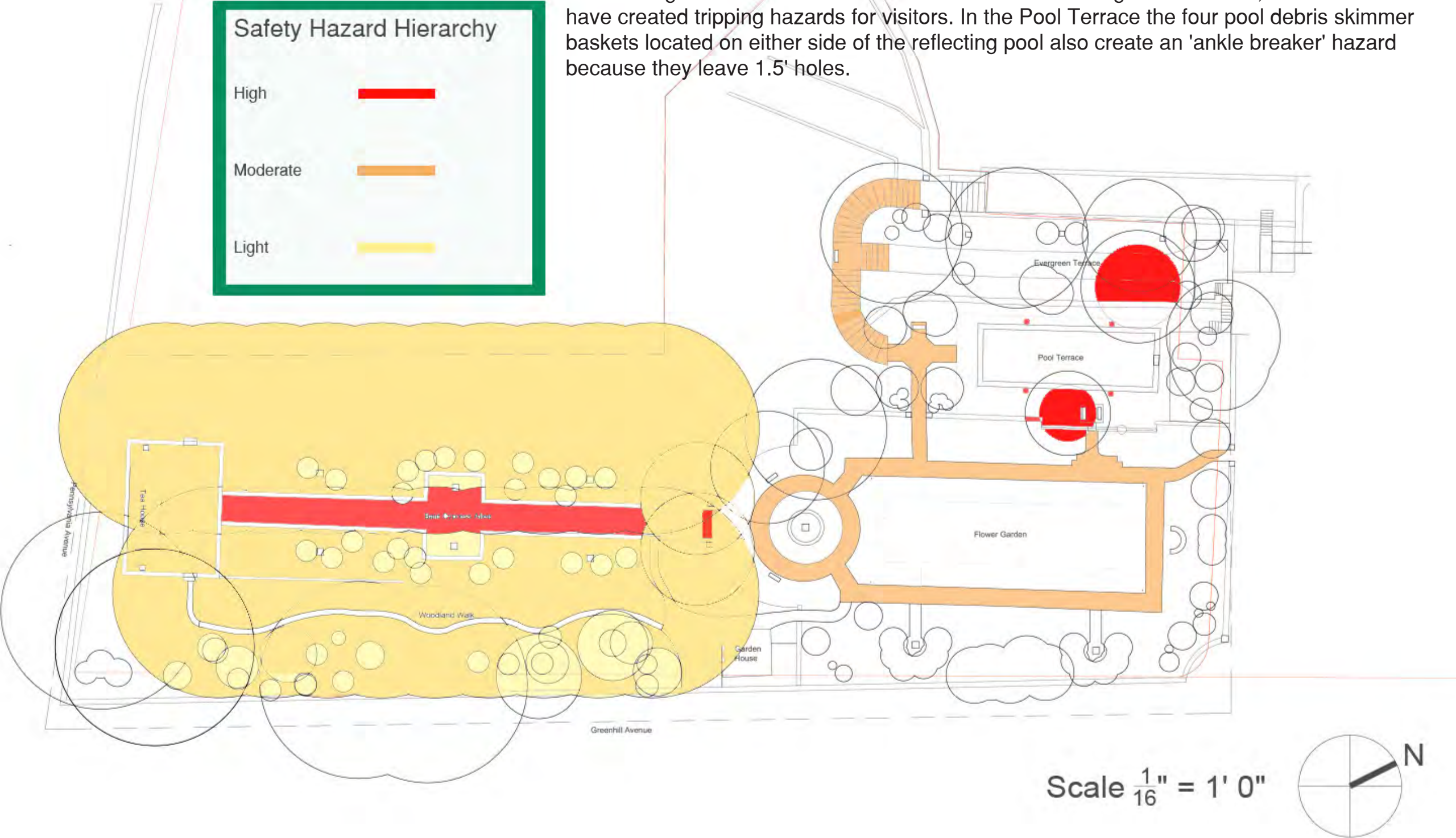
Shown below are the traffic patterns of the garden routes visitors utilize when touring the site. They are ranked from most traveled (red) to least traveled (yellow). Interestingly, the routes are utilized at the same capacity. Visitors do not appear to have a preference between stone and turfgrass walkways.





# Site Analysis: Safety Hazards

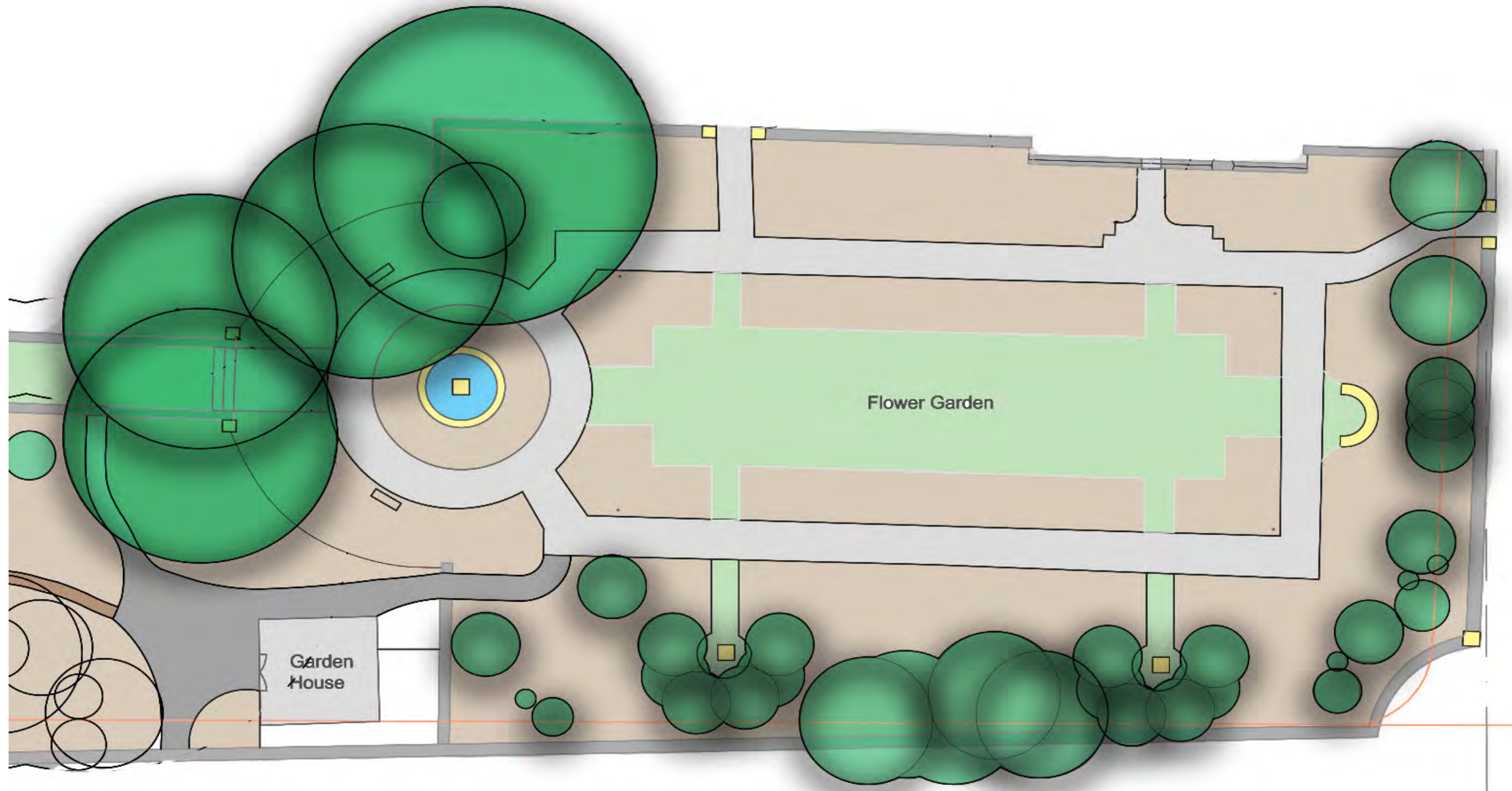
This rendering illustrates conclusions regarding the current safety hazards on site ranging from light to high hazards. The lightest safety hazards surround the Bald Cypress Allee. This dense area of plant material provides an area for people to hide providing a safety threat. The moderate hazards are throughout the Flower Garden (tripping hazard) and the Marble Staircase (slipping). The highest safety hazards are found in the main walkway of the Bald Cypress Allee, at the iron gates, and in the Pool and Evergreen Terraces. The iron gates have rusting present on them and the potential of falling tree limbs of the two saucer magnolias. In both the Allee and the Pool and Evergreen Terraces, the tree roots have created tripping hazards for visitors. In the Pool Terrace the four pool debris skimmer baskets located on either side of the reflecting pool also create an 'ankle breaker' hazard because they leave 1.5' holes.





# Site Analysis: Flower Garden

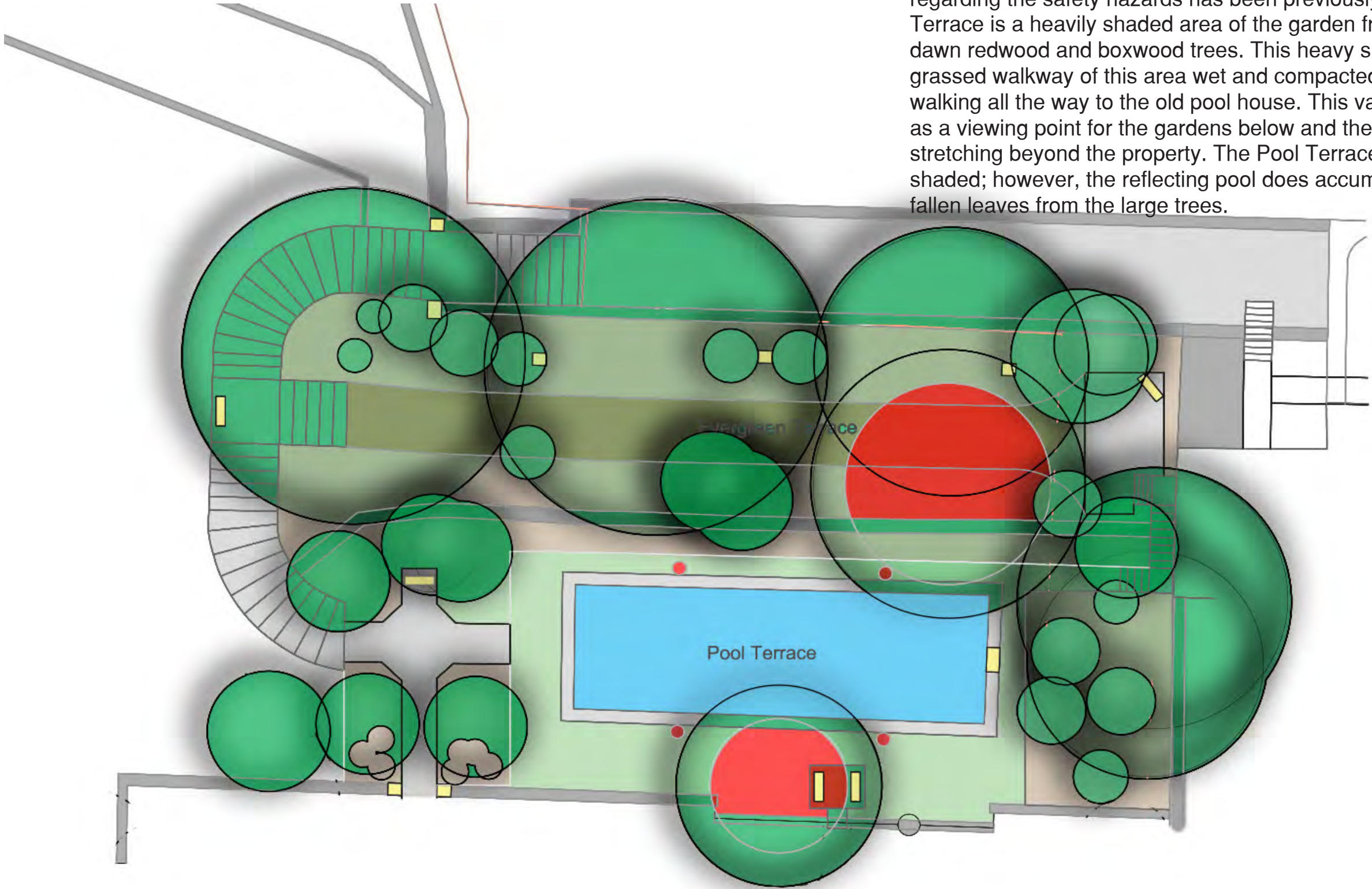
Shown here is the Flower Garden. It is a full sun garden with the trees and their shade on the northern and eastern borders. The grassed lawn area in the middle were originally designed for picnics and other social events. This space is currently underutilized and would be a wonderful venue for a Gibraltar Garden 'Wine and Weed' events, fundraisers, or other social events.





# Site Analysis: Evergreen and Pool Terraces

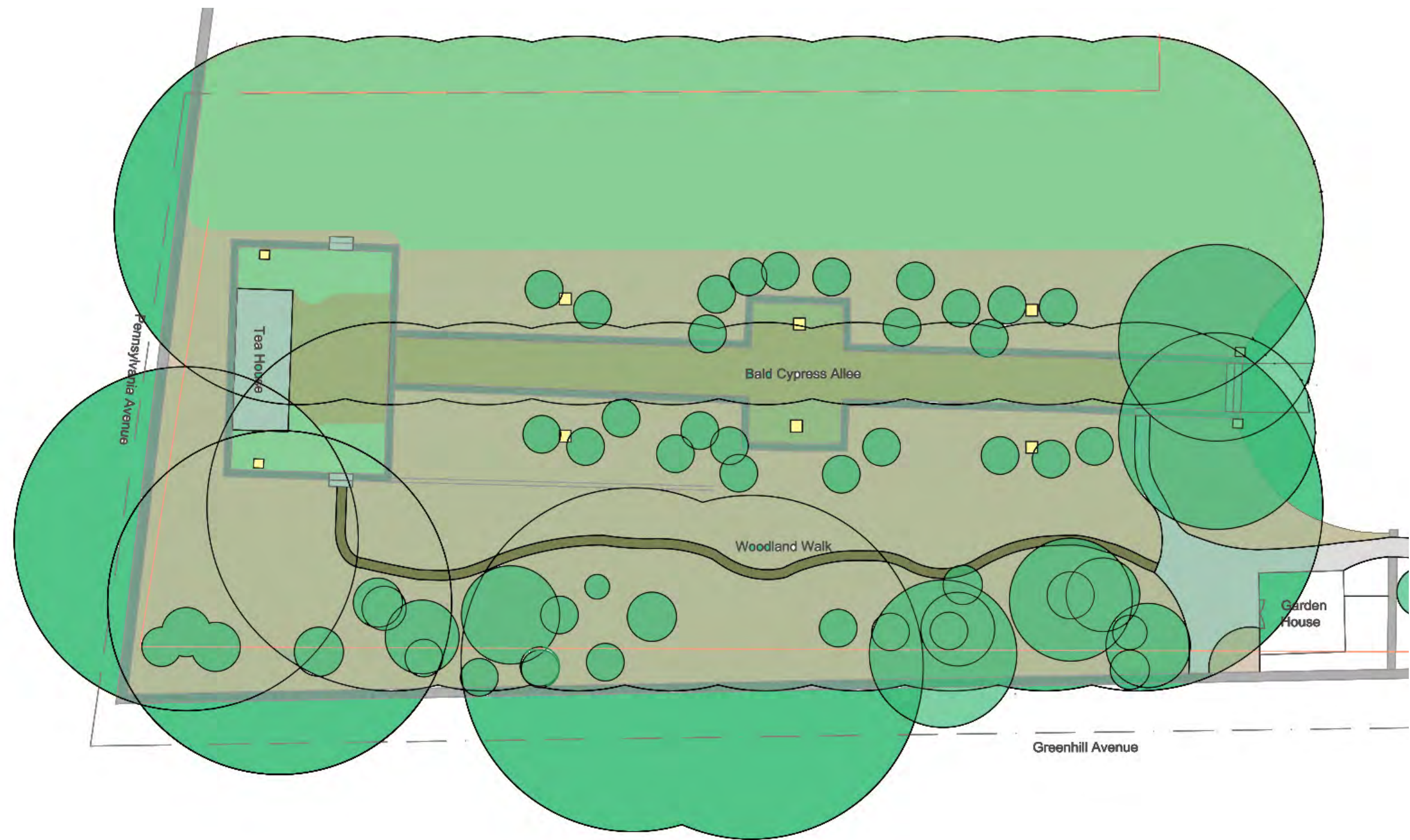
This map shows both the Evergreen and Pool Terraces with the marble pieces, safety hazards, and the shade analysis. Additional information about the marble pieces are in Appendix A. Similarly, the details regarding the safety hazards has been previously stated. The Evergreen Terrace is a heavily shaded area of the garden from the large magnolia, dawn redwood and boxwood trees. This heavy shade has made the grassed walkway of this area wet and compacted, deterring visitors from walking all the way to the old pool house. This vantage point served as a viewing point for the gardens below and the expansive landscape stretching beyond the property. The Pool Terrace is not as heavily shaded; however, the reflecting pool does accumulate many of the fallen leaves from the large trees.





# Site Analysis: Bald Cypress Allee

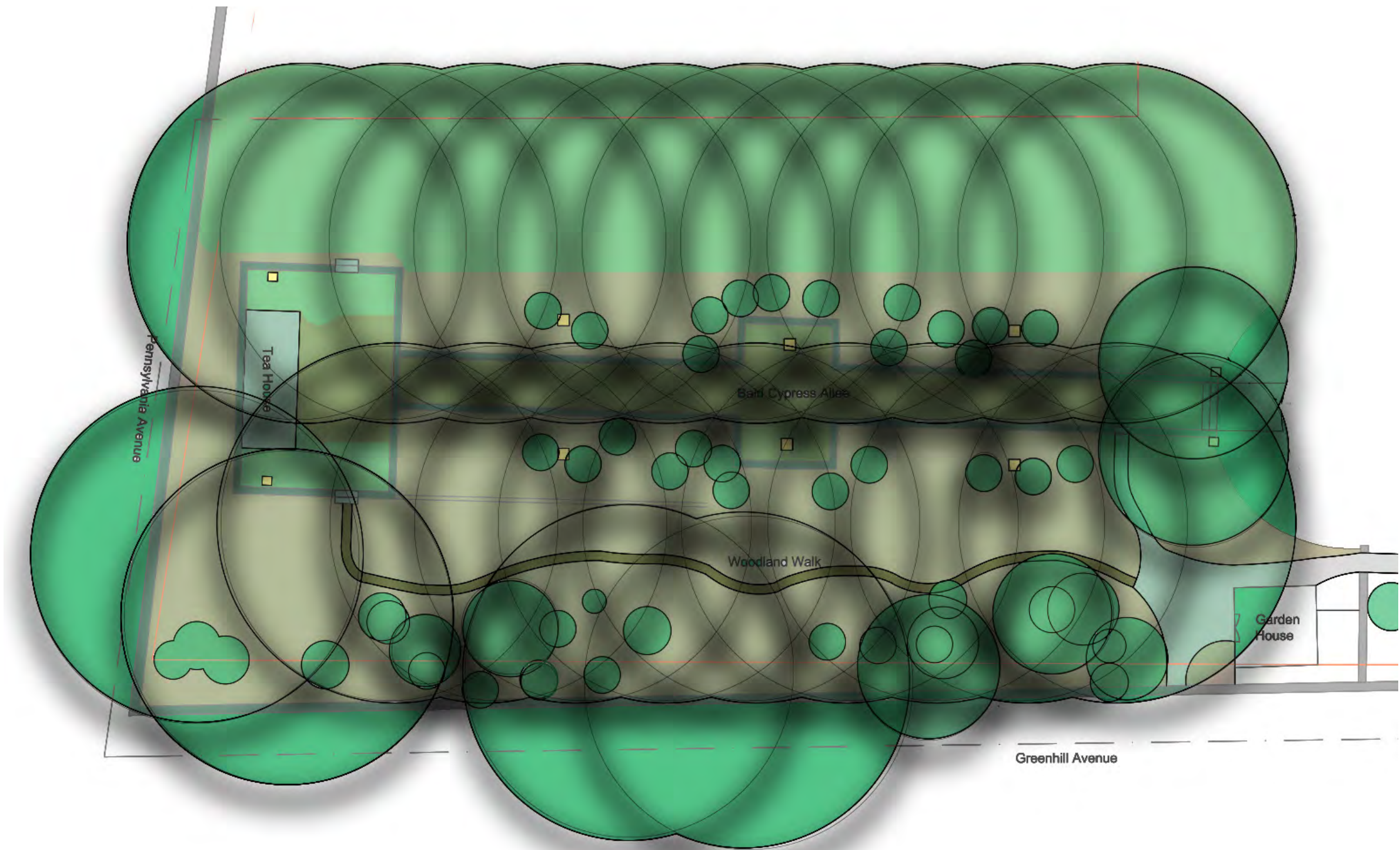
Shown below is the Bald Cypress Allee, Tea House and Woodland Walk located at the southwestern side of the property. These areas show the tree canopy (green), ground cover plantings (tan) which is primarily English ivy, and statues (yellow). As with the other garden areas, this was designed as a room or outdoor living space.





# Site Analysis: Bald Cypress Allee with Shade

This graphic is the same as the previous one, but shows the heavy amount of shade created by the bald cypress trees surrounding the Allee and Woodland Walk. The pathways in these areas are often sparse of grass due to the dense shade and water drainage.





# Site Analysis - Instagram

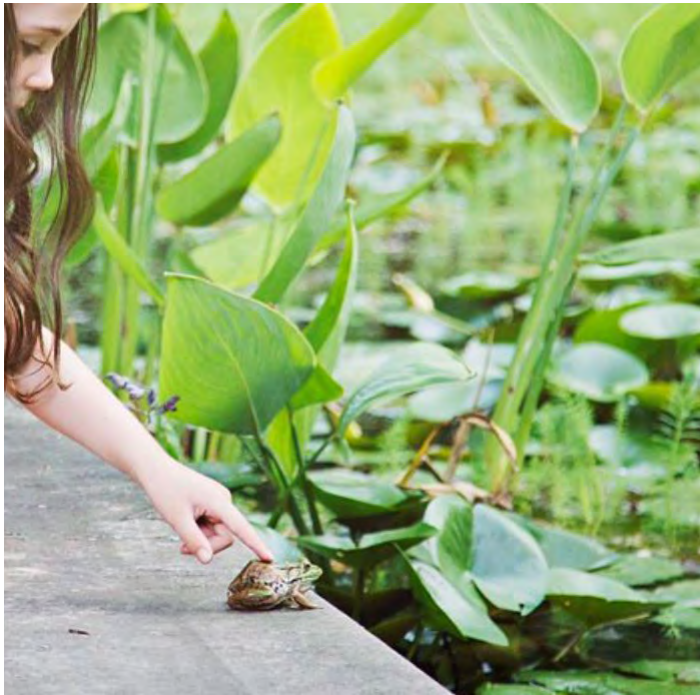
By accessing the Instagram location and hashtag #Marian Coffin Gardens and #Marian Coffin Gardens at Gibraltar, I was able to use social media to see how people currently utilize the space and what elements of the garden are most photographed. By systematically reviewing 668 photographs, I documented each instance of a subject that was captured as an image. By reviewing each of the locations with shown in each photograph, I recorded the number of times each garden space was used for the photograph. This helped me to further understand how the user was engaging with the site. It is from this public data and my own experience on site led to decisions that showcase the historic gardens design in a way that is beautiful and engaging.

## TOP POSTS

- 145 Infrastructure  
(iron work, marble, statues, buildings)
- 88 Wedding
- 64 Plants
- 57 Birth announcement
- 57 Prom
- 52 Engagement
- 42 Kids
- 42 Family
- 35 Self
- 31 Portrait
- 30 Activities (dancing, exercise, walking)
- 12 Nature
- 8 Dogs
- 3 Graduation
- 2 Birthday

## TOP LOCATIONS

- 95 Iron Gates
- 88 Pool Terrace
- 88 Tea House
- 86 Flower Garden
- 68 Bald Cypress Allee
- 57 Stairs
- 15 Curved Stone Bench
- 15 Evergreen Terrace
- 9 Door by Garden House
- 4 Poolhouse Door
- 3 Woodland Path
- 1 Putto in the Flower Garden





# Site Analysis - Instagram - Top Locations

Through this analysis, I was able to determine the top six priority locations of MCG and the top three uses at each location. The top priority locations include the iron gates, the pool terrace, the tea house, the flower garden, the allee, and the marble staircase.



IRON GATES  
95 Photographs  
37 Infrastructure  
14 Wedding  
13 Engagement



POOL TERRACE  
88 Photographs  
32 Plants  
13 Infrastructure  
12 Kids



TEA HOUSE  
88 Photographs  
21 Wedding  
11 Infrastructure  
11 Engagement



FLOWER GARDEN  
86 Photographs  
24 Infrastructure  
17 Portrait  
11 Wedding



ALLEE  
68 Photographs  
17 Infrastructure  
11 Birth Announcement  
10 Portrait



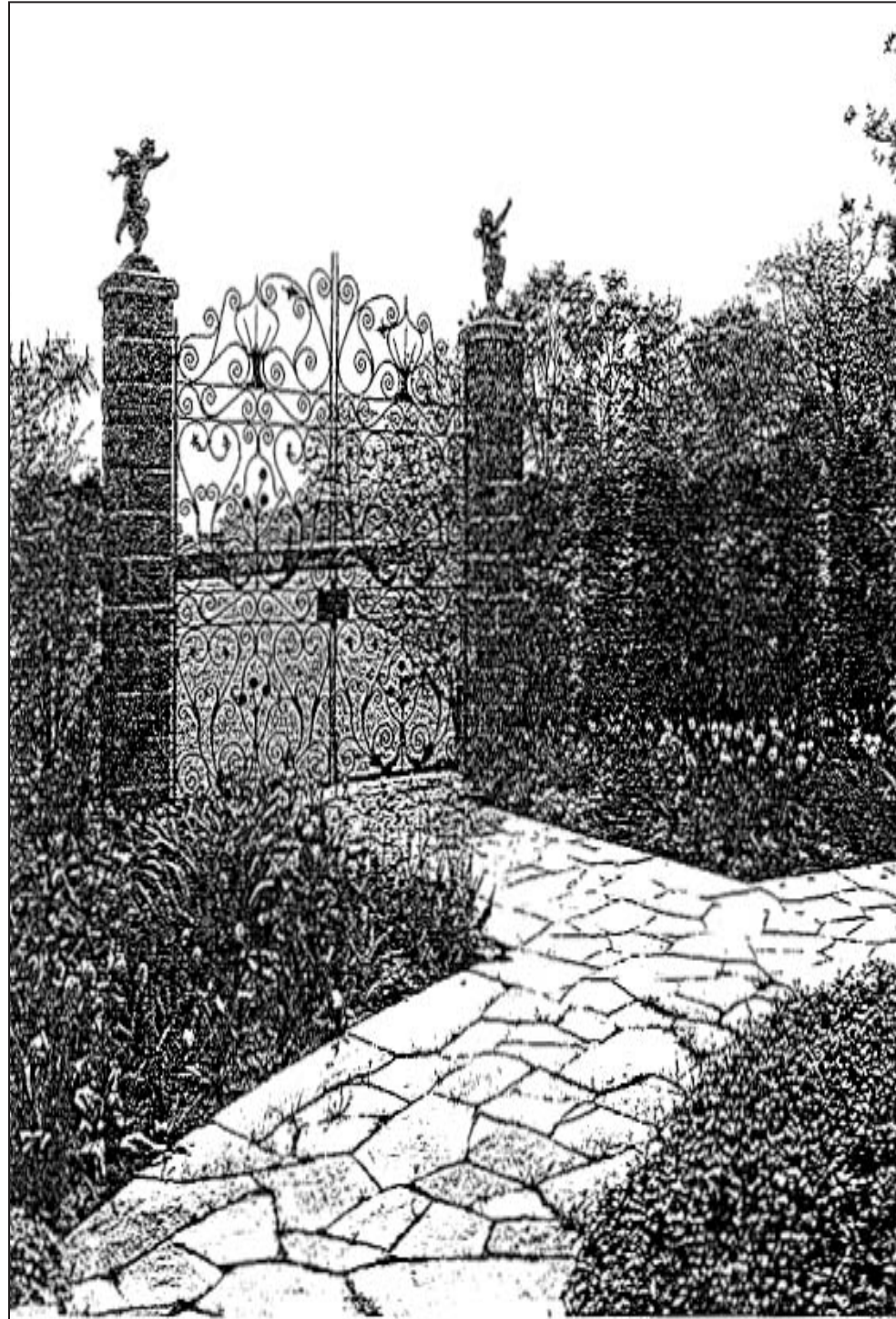
STAIRS  
57 Photographs  
12 Prom  
10 Birth Announcement  
10 Wedding



# Iron Gates Renderings

These renderings depict the iron gates throughout the past 100 years. The proposals are based on research about the history of the plantings in this area of the garden and point back to the overall objectives of safety and arresting deterioration of the garden.

Proposal: Limb and cable both magnolias, weed garden beds, clean both iron work and statues, plant more tulips (pink & white), anemone, buddlea, and gladiolus plants.



1900-1920's



Current



Proposed



# Pool Terrace Renderings

These renderings depict the pool terrace from when its main purpose was to be used as a pool, how it's used currently and how it can be used as a lily pond in the future. Similar to the iron gates, my proposal is based on the same criteria but also working to tie Marian Coffin's original vision with modern day society.

Proposal: Remove Magnolia by pool house, Remove tree next to iron fence, fill in drains, limb boxwoods, plant wisteria among the rose bushes.



1900-1920's



Current



Proposed



# Flower Garden Renderings

The first image shows the Flower Garden in all its glory in the 1900's. The garden does not currently conform to Coffin's original designed color sequence of pinks moving to reds at the opposite side of the spectrum. My proposal is to reintegrate the original design through the use of biennials, flowering bulbs, and some perennials to emphasize year-round appeal.

Proposal: Plant more annuals, biennials and flowering bulbs in the color sequence of pink/white moving to blue/yellow/lilac/maroon moving to orange/bronze/red starting at the south end of the flower garden.



1900-1920's



Current



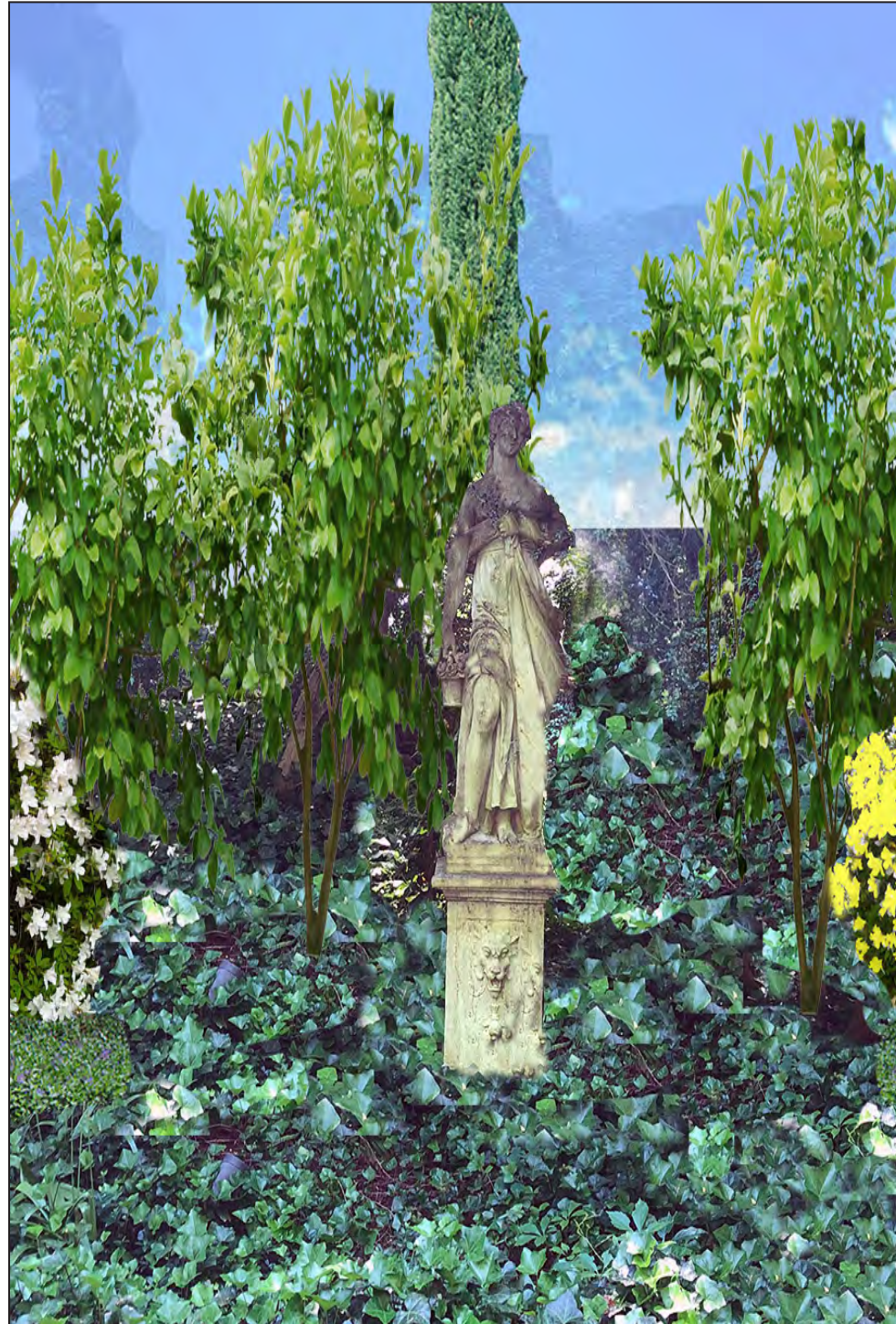
Proposed



# Allee Renderings

These renderings depict the Allee throughout the years. The biggest alteration to this area is to limb up the bald cypress trees, which due to their heavy overgrowth, creates a safety hazard. By cleaning up the trees to let in more light it will also promote grass growth. These proposals are based upon research about the history of the plantings in this area of the garden and relate back to the overall objectives of safety and arresting deterioration of the gardens.

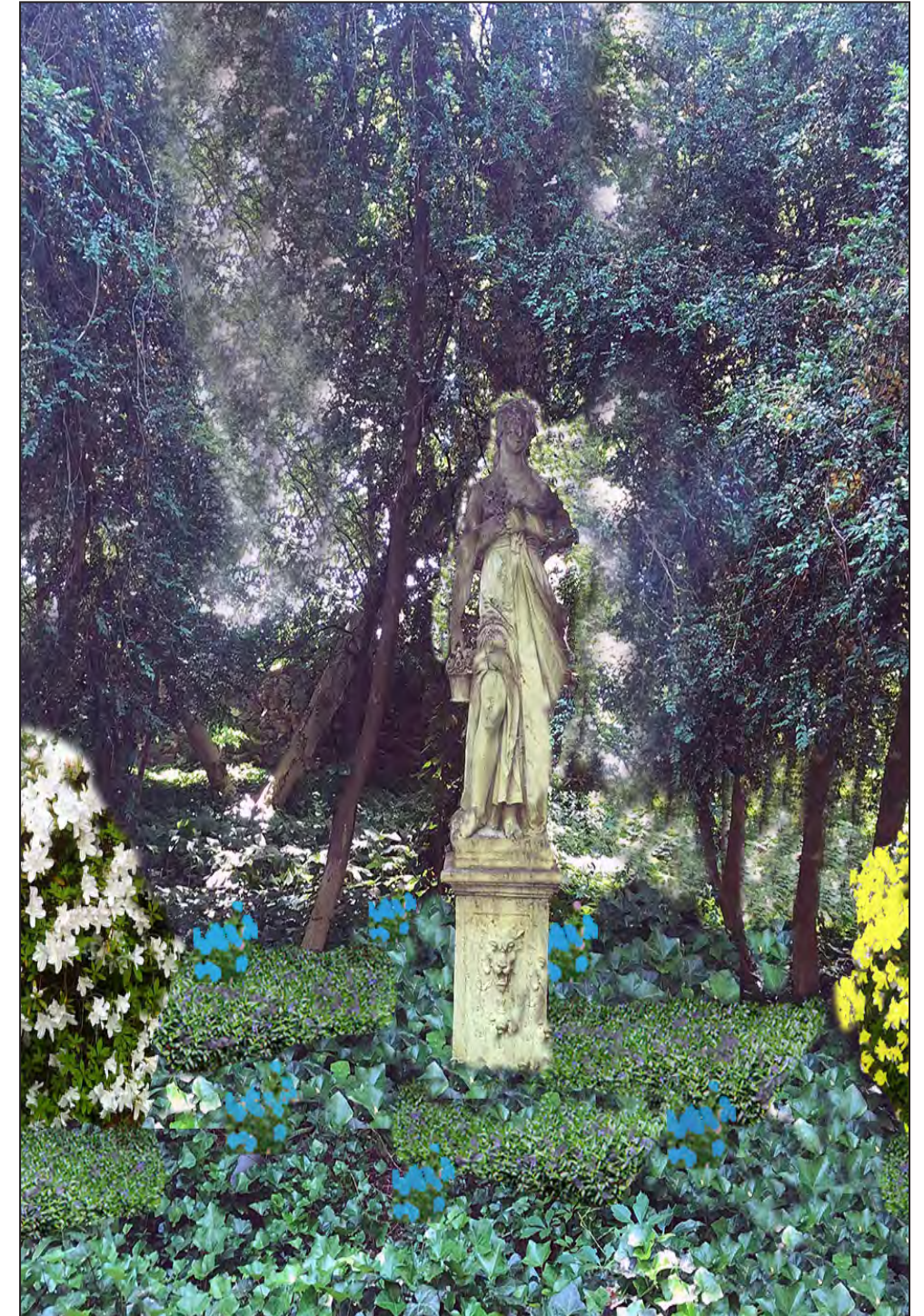
Proposal: Cut back bald cypress trees, limb up boxwood trees, cut back ivy, plant azaleas, scilla and periwinkle plants.



1900-1920's



Current



Proposed



# Stairs Renderings

These images include a historic photo of the stairs and then two renderings. The recommended proposals is very minimal due to the fact that the stairs and are mainly used for foot traffic between multiple terraces.

Proposal: Limb up over hanging trees, clean and repaint ironwork, clean marble staircase.



1900-1920's



Current



Proposed



# Appdendix A - Inventory of Garden Ornaments and Iron Work:

## Missing Items (December 1996 & April 2019)

### Evergreen Terrace

#### Lead Figure (0-8)

Description: Lead Figure of the Greek Titan, Atlas, bent over to carry a sundial, in form of a bronze armillary sphere, on his shoulders. On rectilinear stone base.

Location: Originally located on north side of terrace against stone retaining wall. Stone base now located at Pool Terrace; statue located inside Mansion.

Condition (1996): Poor. Figure disconnected from stone base. Feet still attached to stone base. Severe structural damage, especially at knees of figure. Bronze sphere intact and in good condition; now missing.

Condition (2019): MISSING

### Pool Terrace

#### Stone Staircase with Iron Railing (0-9)

Description: Two-piece stone staircase. Five raisers to first landing, nine raisers to second landing from Pool Terrace to Pool House entrance. Three raisers from pool House entrance down to Evergreen Terrace. Wrought iron railing with brass finials. Three pieces.

Location: Connecting Pool Terrace, Pool House entrance, Evergreen Terrace.

Condition: Good-fair. Some bent finials. Staircase and railing structurally sound.

Condition (2019): NO LONGER OWN

### Formal Flower Garden

#### Pair of Seated Lead Cupids (0-17)

Description: Cupids seated on stone ball and placed on rectilinear pedestals. Looking left and right. Cupids each 32” high. Body filled with concrete.

Location: Atop 8’ stone pillar to the left and right of large iron gate.

Condition: Left cupid missing. Remaining cupid: lead is collapsing, causing severe structural damage. Cracks in stone ball. No losses.

Condition (2019): MISSING

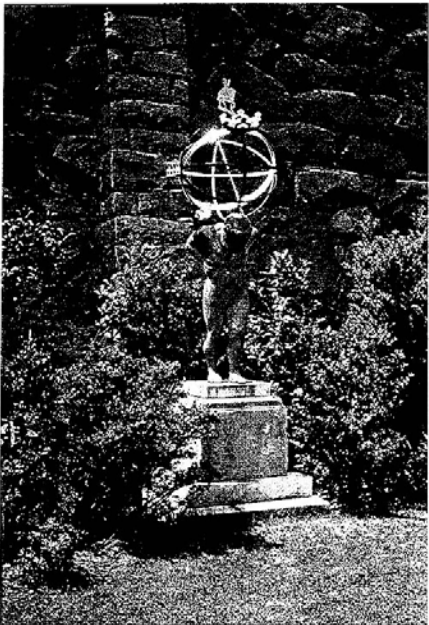


Figure A-11: Lead statue of Atlas (O-8). Undated. Courtesy of the Sharp family.



Figure A-16: Lead cupid (O-17) atop stone pillar west of large iron gate. 1996. Photograph by David Ames.



# Appdendix A - Inventory of Garden Ornaments and Iron Work:

## Critical Condition Items (December 1996 & April 2019)

### Pool Terrace

#### Stone Fountain (0-10)

Description: Cast stone fountain consisting of two putti, one riding on water-spouting dolphin. Piped.  
Location: At north rim of swimming pool.  
Condition: Fair. Corrosion and some losses. Object partially covered with ivy.  
Condition (2019): Poor. Bleaching and corrosion. Both right arms missing.



Figure A-12: Cast stone fountain (0-10) at north rim of swimming pool. 1997. Photograph by John Lewis.

### Formal Flower Garden

#### Stone Putto (0-15)

Description: Cast stone putto atop large stone ball. Ornamented with garlands of roses. Stone ball on pedestal.  
Sculpture framed by Ilex aquifolium and Juniperus virginiana.  
Location: On east side of Flower Garden, next to perimeter wall parallel to Greenhill Avenue. Closest to service courtyard.  
Condition: Poor. Severe structural damage and numerous losses. Several fragments rest on ground behind main fragment. Others may be missing.  
Condition (2019): Poor. Severe structural damage and numerous losses; head, arms, and ¼ of left leg missing.  
Surface eroded.



### Evergreen Terrace

#### Tall Lead Statue (0-7)

Description: Life-size, upright lead statue of Mercury, god of the Roman mythology. On rectilinear stone pedestal.  
Holding paper stylus and scroll.. Leaning on stylized tree stump.  
Location: North end of Evergreen Terrace, against retaining wall and next to Pool House.  
Condition: Fair. Structural damage in leg area, back and front side, due to corrosion of interior iron frame. Areas of former patching visible.  
Description (2019): Middle statue on terrace.  
Condition (2019): Fair-poor. Structural damage in leg area, back and front side, due to corrosion of interior iron frame. Areas of former patching visible.



Figure A-10: Lead statue of Mercury (0-7). Evergreen Terrace. 1997. Photograph by John Lewis.



# Appdendix A - Inventory of Garden Ornaments and Iron Work:

## Critical Condition Items (December 1996 & April 2019)

### Bald Cypress Allee

#### Fountain Basin (0-27)

Description: Round Rosso Verona marble fountain basin, 48” in diameter. Metal spout in center of basin.

Location: South of Tea House near perimeter wall.

Condition: Good. No losses. Surface of marble is pockmarked due to erosion.

Condition (2019): Good-fair. No losses. Cracking in bowl. Stagnant water.

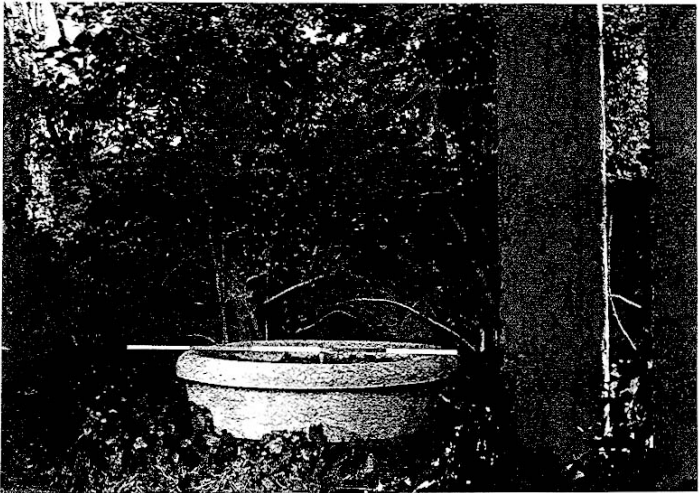


Figure A-26: *Verona Rosso* marble fountain basin (O-27) south of Tea House. 1997. Photograph by John Lewis.

### Bald Cypress Allee

#### Curved Stone Bench (0-14)

Description: Curved bench ornamented at ends with lion reliefs. Cast stone.

Location: At north end of Flower Garden.

Condition: Poor. Severe structural damage. Object is broken into large pieces.. Finials and several other parts missing.

Condition (2019): Fair. Bleaching and erosion. Areas of former patching visible. Bandid healed appearance.



Figure A-14: Cast stone bench (O-14) at north end of Flower Garden. 1997. Photograph by John Lewis.



# Appdendix A - Inventory of Garden Ornaments and Iron Work:

## Critical Condition Iron Work Items (December 1996 & April 2019)

### Formal Flower Garden

#### Small Iron Gate (0-12)

Description: Wrought iron gate. Ornate grillwork with floral pattern, One piece. Framed by stone pillars.

Location: Northwest corner of Flower Garden, opening into service courtyard.

Condition: Fair. Structural damage due to corrosion.

Condition (2019): Fair. Rust. Corrosion beginning. Bent or missing finials.



### Formal Flower Garden

#### Large Iron Gate (0-21)

Description: Wrought iron gate, Two fields. Each field 4'8" by 10'9". Ornate floral pattern. Framed by stone gate posts (9'7" high) and wrought iron fence which extends to form a semicircular shape.

Location: South entrance to Flower Garden.

Condition: Good-fair. Erosion. Some losses.

Condition (2019): Fair. Erosion. Bent or missing finials.

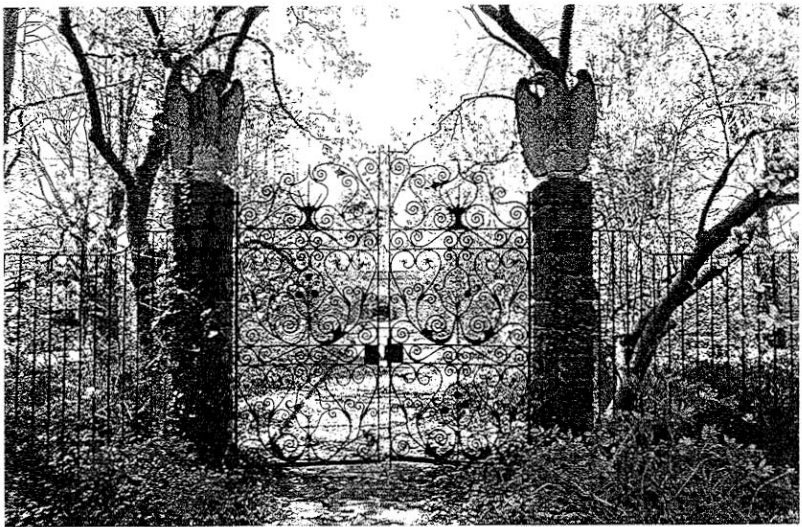


Figure A-20: Large iron gate (O-21) with cast stone eagles (O-22). Bald Cypress Allée and Tea House in back. 1997. Photograph by John Lewis.





# Appdendix A - Inventory of Garden Ornaments and Iron Work: Better Than Before Items (December 1996 & April 2019)

## Pool Terrace

### Iron Fence (0-1 1)

Description: Wrought, straight iron fence with ornamentation. Circa. 5' feet high.  
Location: East perimeter of Pool Terrace, separating part of Pool Terrace from Formal Flower Garden.  
Condition: Poor. Severe structural damage. Corrosion.

Condition (2019): Good. Light rusting.

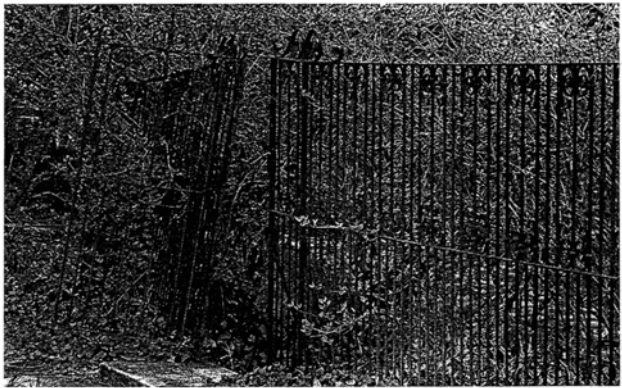


Figure A-13: Iron fence (O-11). 1997. Photograph by John Lewis.

## Formal Flower Garden

### Fountain (0-19)

Description: Cast stone fountain with water-spouting dolphin ornaments around central column supporting a round bowl (4'2" in diameter). Bowl adorned with water-spouting fox heads and fruit garlands. Original center ornament, a white marble 'Bathing Venus,' is missing., Overall height without center ornament: 7'4". Fountain located inside a round, 3' high cast stone basin, 1 1 '6" in diameter.  
Location: South end of Flower Garden.  
Condition: Fair. Losses in bowl. Structural damage.  
Condition (2019): Good. Light cracking in bowl; but no major erosion.



Figure A-18: Cast stone fountain (O-19). 1997. Photograph by John Lewis.



Figure A-19: Fountain (O-19) with centerpiece. Circa 1920. Courtesy of the Sharp family.





# Appdendix A - Inventory of Garden Ornaments and Iron Work:

## Better Than Before Items (December 1996 & April 2019)

### Bald Cypress Allee

#### Pair of Vases (0-24)

Description: Cast stone vases. 4'4" high, with inner metal support. Monumental vases display Bacchanal masks and various floral ornaments: bunches of grapes, leaves and flowers. Vases rest atop rectilinear stone base, 3'10" high, adorned with hit, ribbons and leaves.

Location: Placed between pairs of seasonal figures, in widened middle part of Allee.

Condition: Fair-poor. Vase on west side of AllCe has fallen onto its side and broken into pieces. Vase on east side of walk shows signs of erosion and structural damage throughout body. Losses in decoration. Fragment from rim of vase rests next to base.

Condition (2019): Fair. Erosion and bleaching visible. Areas of former patching visible.



Figure A-23: Cast stone vase (O-24) in center of Bald Cypress Allée. West side. 1997. Photograph by John Lewis.



### Bald Cypress Allee

#### Pair of Vases (0-25)

Description: Cast stone vases. "Egg and dart" motifs around lip. Each vase atop rectilinear stone base.

Location: On either longitudinal end of Tea House.

Condition: Fair-poor. No losses. Vase west of Tea House broken into pieces.

Condition (2019): Fair. No major losses; signs of erosion. Areas of former patching visible.



Figure A-24: Cast stone vase (O-25) near Tea House. 1995. Photograph by author.





# Appdendix A - Inventory of Garden Ornaments and Iron Work:

## No Drastic Changes Items (December 1996 & April 2019)

### Greenhill Avenue Entrance

Two Fruit Baskets (0-0)

Description: Two identical, round hit baskets. Cast stone. Rectilinear base.

Location: Atop stone pillars framing Greenhill Avenue entrance

Condition: Good-fair. Signs of erosion. No losses.

Condition (2019): Good-fair. Signs of erosion. No losses.

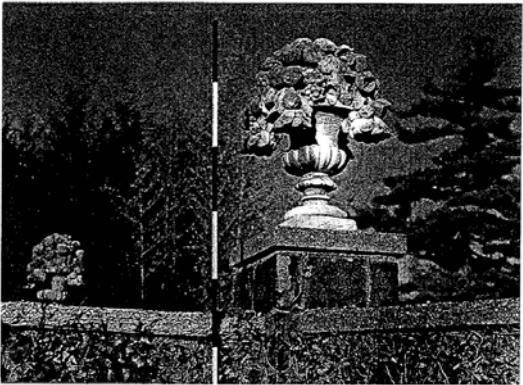


Figure A-2: Cast stone fruit basket (O-0). Greenhill Avenue entrance. 1997. Photograph by John Lewis.

### Large Marble Staircase

Recessed Stone Bench (0-4)

Description: Recessed stone bench cut into granite wall.

Location: At top end of large staircase, on the right.

Condition: Good.

Condition (2019): Good-fair. Covered in ivy, not sure of any structural damage.

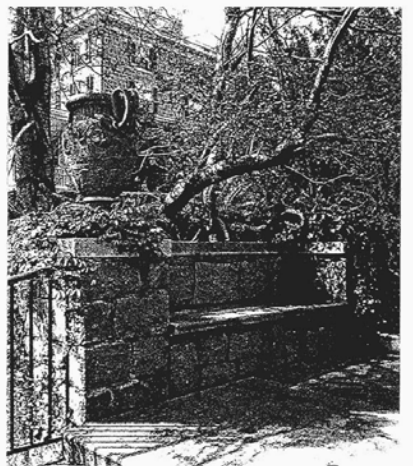


Figure A-7: Stone bench (O-4) and lead urn. Undated. Courtesy of the Sharp family.-



### Large Marble Staircase with Iron Railing (0-5)

Description: Grand curving marble staircase with three-piece ornate wrought iron railing with floral pattern and brass finials. Six raisers from Flagstone Terrace to first landing with recessed stone bench. Nineteen raisers from first landing to second landing where six raisers depart to the left, leading onto Evergreen Terrace. Sixteen raisers from Evergreen Terrace landing to bottom of steps and Pool Terrace.

Location: Staircase connecting Flagstone Terrace, Evergreen Terrace and Pool Terrace.

Condition: Good. No structural damage; several marble treads damaged; patches of rust on railing; bent or missing finials.

Condition (2019): Good-fair. No structural damage; several marble treads damaged; patches of rust on railing.



Figure A-9: Large staircase (O-5). Second landing leading right onto Evergreen Terrace. 1997. Photograph by John Lewis.





# Appdendix A - Inventory of Garden Ornaments and Iron Work:

## No Drastic Changes Items (December 1996 & April 2019)

### Evergreen Terrace

#### Two Vases (0-6)

Description: Cast stone vases on rectilinear stone pedestals. Ornamented with lion masks and garlands of foliage.  
Location: North side of Evergreen Terrace, along retaining wall.  
Condition: Fair. Objects partially covered with ivy.

Condition (2019): Fair. Signs of erosion beginning; Objects partially covered with ivy



### Formal Flower Garden

#### Two Fruit Baskets (0-13)

Description: Two identical, round fruit baskets. Cast stone. Rectilinear base.  
Location: Atop stone pillars framing small gate.  
Condition: Fair. Signs of erosion. No losses.  
Condition (2019): Fair. Signs of erosion. No losses.

### Formal Flower Garden

#### Stone Putto (0-16)

Description: Cast stone putto seated on large stone ball carrying on left shoulder a large round basket of fruit and flowers. Stone ball on pedestal. Sculpture fi-amed by Ilex aquifolium and Juniperus virginiana.  
Location: On east side of Flower Garden, next to perimeter wall parallel to Greenhill Avenue closest to large iron gate.  
Condition: Fair. No major losses. Surface eroded.  
Condition (2019): Fair. No major losses. Surface eroded.



Figure A-15: Cast stone putto (O-16). East side of Flower Garden. 1997. Photograph by John Lewis.



# Appdendix A - Inventory of Garden Ornaments and Iron Work:

## No Drastic Changes Items (December 1996 & April 2019)

### Formal Flower Garden

#### Two Stone Ornaments (0-18)

Description: Each ornament composed of two stone figures holding fruit or floral ornaments. Figures disguised by ivy.

Location: Each atop stone wall on either side of entrance to Vestibule at west boundary of Flower Garden.

Condition: Objects are covered with ivy which may cause severe structural damage as ivy becomes entrenched.

Condition (2019): Good. No losses. No structural damage.



Figure A-16: Lead cupid (O-17) atop stone pillar west of large iron gate. 1996. Photograph by David Ames.

### Formal Flower Garden

#### Pair of Stone Seats (0-20)

Description: Cast stone. Rectilinear. 1'7" by 4'7". T-shaped legs.

Location: Inside large iron gate, to the left and right.

Condition: Good. No losses. No structural damage.

Condition (2019): Good. No losses. Light erosion.



Figure A-21: Cast stone seat (O-20) left of large iron gate. 1997. Photograph by John Lewis.

### Formal Flower Garden

#### Pair of Stone Eagles (0-22)

Description: Cast stone eagles. One gazing to the right, one to the left. Bold detailed relief. Full bodied. Wings slightly spread. Seated on stone ball. 3'6" to base of ball.

Location: Atop gate posts left and right of large iron gate.

Condition: Good. No losses.

Condition (2019): Good. No losses.





# Appdendix A - Inventory of Garden Ornaments and Iron Work:

## No Drastic Changes Items (December 1996 & April 2019)

### Bald Cypress Allee

#### Four Seasonal Figures (0-23)

Description: Carved stone figures atop rectilinear pedestals (3'7" high) with pertinent identifying attributes. Body of figures 5'2" high.

Location: Pairs placed symmetrically at north and south end of Allee.

#### Winter (Pair 111) (0-23-W)

Description: Female figure gazing left. Draped and hooded, holding in left hand a handled container housing a flame.

Location: Placed closest to Tea House. Set back from Allee to the west and opposite to Summer.

Condition: Good-fair. Moss and ivy growing on figure. No major structural damage.

Description (2019): Female figure looking to her right.

Condition (2019): Good-fair. Densely shaded and bringing to be covered by surrounding boxwoods.



#### Summer (Pair 112) (0-23-Su)

Description: Female figure looking left. Draped. Cradling a sheaf of wheat in right arm.

Location: Placed closest to Tea House. Set back from Allee to the east and opposite to Winter.

Condition: Good-fair. Ivy growing on figure. Various cracks throughout.

Description (2019): Female figure looking to her right.

Condition (2019): Good-fair. Densely shaded and bringing to be covered by surrounding boxwoods. Ivy beginning to grow up the base of statue.



Figure A-22: *Autumn* (O-23-A). One of four seasonal figures. Bald Cypress Allée. 1997. Photograph by John Lewis.

#### Autumn (Pair 211) (0-23-A)

Description: Female figure gazing right. Figure is lightly draped, holding bunch of grapes in left hand.

Location: North end of Allee. Set back from Allee to the west and opposite to Spring.

Condition: Fair. Ivy rampant throughout figure. Severe cracks in drapery and leg region.

Description (2019): Female figure gazing to her left.

Condition (2019): Fair. Moss growth.



# Appdendix A - Inventory of Garden Ornaments and Iron Work:

## No Drastic Changes Items (December 1996 & April 2019)

### Bald Cypress Allee

#### Four Seasonal Figures (0-23)

Description: Carved stone figures atop rectilinear pedestals (3’7” high) with pertinent identifying attributes. Body of figures 5’2” high.

Location: Pairs placed symmetrically at north and south end of Allee.

#### Spring (Pair 212) (0-23-S)

Description: Female figure looking right. Draped, holding small bunch of roses in right hand and basket of roses in left hand.

Location: North end of Allee. Set back from Allee to the east and opposite to Autumn.

Condition: Fair. Ivy encroaching on figure. Various losses in stone due to ivy growth. Various cracks throughout object.

Description (2019): Female figure looking to her left.

Condition (2019): Fair. Moss growth. Densely shaded and beginning to be covered by surrounding boxwoods.



### Tea House (0-26)

Description: Italianate, arched structure of mortared brick with an outer layer of stucco. Rectilinear, 29’ by 15” circa 15’ high. Four Rosso Verona marble columns support arches in front and back. Capitals decorated with carved ornaments. Arched ceiling. Stone floor tiles laid out in ornamental pattern.

Location: South end of Allee in front of perimeter wall bordering Pennsylvania Avenue.

Condition: Fair. Considerable erosion around marble pillars and throughout brick structure. Ivy covers part of elevation facing Pennsylvania Avenue.

Condition (2019): Fair. Considerable erosion around marble pillars. Copper drainage pipes stolen. Leaves collecting on roof will soon begin deterioration of roof structure.



Figure A-25: Tea House (O-26). 1997. Photograph by John Lewis.



# Appendix C -Maintenance Priorities for Top Garden Locations

## Iron Gates

- A. Safety Hazards
  - 1. Rusting of iron gates
    - a. Solution: see Appendix D - Infrastructure: Iron Work Procedures for treatment details
  - 2. Falling tree limbs
    - a. Solution: refer to Tree Maintenance
- B. Infrastructure - Statues
  - 1. Preservation
  - 2. Cleaning
  - 3. Repairs
- C. Infrastructure - Iron Work
  - 1. See Appendix D: Iron Work Procedures for cleaning and painting details

## Pool Terrace

- A. Safety Hazards
  - 1. Pool debris skimmer baskets (4)
    - a. Solution: fill in with concrete
    - b. Solution: replace the covers to prevent people from accidentally falling into them
  - 2. Tree roots
    - a. Solution: possibly use a fill material to cover roots such as mulch
- B. Infrastructure - Iron Work
  - 1. Fence and gate
    - a. Make any necessary repairs to gate
    - b. Clean and paint
- C. Infrastructure - Marble Paving & Coping
  - 1. Cleaning - See Appendix D - Infrastructure: Marble Stone Procedures
- D. Infrastructure - Statues
  - 1. Preservation
  - 2. Cleaning
    - a. Benches (3)
  - 3. Repairs
    - a. Stone statue
- E. Plants - Ornamentals
  - 1. Lilies in bog must stay!
    - a. Cost?
    - b. Maintenance?
- F. Plants - Weeds
  - 1. Primary weeds: Cirsium arvense - Canada Thistle

## Tea House

- A. Safety hazards
- B. Infrastructure - Statues
  - 1. Preservation
  - 2. Cleaning
    - a. Fountain basin
      - 1. Currently no active drainage
        - a. Breeding ground for mosquitoes
- C. Infrastructure - Tea house
  - 1. Drainage
    - a. Remove leaves from roof
    - b. Replace water spouts on backside
  - 2. Cleaning - See Appendix C - Infrastructure Tea House Procedures
    - a. Walls facing Pennsylvania avenue
      - 1. Drainage from roof going down walls
- D. Plants - Ornamental
  - 1. Ivy outer edges
    - a. Cut back about 1 foot
- E. Plants - Grasses
  - 1. Grass area in front of tea house
    - a. Densely shaded → solutions?

## Stairs

- A. Safety hazards
  - 1. Rusting of iron
    - a. See Appendix D - Infrastructure: Iron Work Procedures for treatment details
  - 2. Leaves/flower petals on stairs
    - a. Solution: refer to the Monthly Calendar
- B. Plants - Ornamentals
  - 1. Cut back any ivy growing onto stairs
- C. Infrastructure - Marble Stairs
  - 1. Cleaning - see Appendix D - Infrastructure: Marble Stone Procedures
- D. Infrastructure - Iron Work
  - 1. Inspect attachments to walls and secure where required
  - 2. Reproduce missing finials
  - 3. Clean and paint
    - a. See Appendix D - Infrastructure: Iron Work Procedures for cleaning details



# Appendix C - Maintenance Priorities for Top Garden Locations

## Flower Garden

- A. Safety hazards
  - 1. Marble paving walkway - tripping hazard
- B. Infrastructure - Statues
  - 1. Preservation of details
    - a. Problem: bleaching
      - 1. Solution?
  - 2. Cleaning - See Appendix D - Infrastructure: Statues Procedures for cleaning details
    - a. Benches by allee
  - 3. Repairs
    - a. Putto
- C. Infrastructure - Marble Paving
  - 1. Cleaning - See Appendix D - Infrastructure: Marble Stone Procedures
- D. Infrastructure - Iron Work
  - 1. Gate to service court
    - a. Remove gate from the site and repair in the shop
    - b. Repair damaged members
    - c. Inspect hinges and attachments to piers and repair as required
    - d. Clean and paint
      - 1. See Appendix D - Infrastructure: Iron Work Procedures for cleaning and painting details
    - e. Install in original locations
  - 2. Fence between Allee and Flower garden
    - a. Inspect fence attachments to piers and walls at base and repair as required
    - b. Clean and paint fence
      - 1. See Appendix D - Infrastructure: Iron Work Procedures for detail
- E. Plants - Ornamental
  - 1. Pachysandra around statue
    - a. Do we want to plant flowers around the fountain on a seasonal basis to attract more people?
  - 2. Weeds
    - a. Primary weeds: *Cirsium arvense* - Canada Thistle
- F. Lighting
  - 1. Complete removal or make it decorative?
- G. Walkways
  - 1. Accessibility path next to garden house
    - a. Needs crushed stone/pea gravel to be refilled
      - 1. Find a way to help retain the stone better so it doesn't get washed out again
      - 2. Stepping stones pathway
        - a. Weeds growing in between them
        - b. Rodney suggestion: fill in between the stones but replant one section of the path not frequently walked on to show the historic purpose/value of the spacing

## Bald Cypress Allee

- A. Safety hazards
  - 1. Tripping hazards from tree roots beginning to grow up in the pathway
    - a. Solution: use fill material to cover pathway such as mulch
  - 2. Dense plant material that can allow for dangerous people to hide and attack
    - a. Solution: clean up trees and plants through a light cut back to allow more visibility
- B. Center walkway is dirt
  - 1. Potential solutions:
    - a. Pea gravel/crushed stone
    - b. Mulch
    - c. Try to replant grass if trees get cut back → will have more sun
- C. Infrastructure - Statues
  - 1. Preservation
  - 2. Cleaning - See Appendix D - Infrastructure: Statues Procedures
- D. Plants - Ornamentals
  - 1. Azaleas - need replacing
    - a. Follow Coffin's planting plans for proper replacement methods and plant types
  - 2. 1 smokebush missing
  - 3. Ivy
    - a. Cut back about 2 foot from base of plants and trees
    - b. Cut ivy back about 2 foot from bases of statues

## Appendix C - Guidelines for Garden Improvements: Plants - Weed Treatment & Removal Methods

- A. *Cirsium arvense* - Canada Thistle
  - 1. While Canada thistle will grow anywhere, it grows best in soil with low fertility and open areas. Improving your soil's fertility will weaken the Canada thistle and help desired plants grow better and, therefore, make them better able to compete with the Canada thistle. [\\*\\*https://www.gardeningknowhow.com/plant-problems/weeds/canada-thistle-control.htm](https://www.gardeningknowhow.com/plant-problems/weeds/canada-thistle-control.htm)
  - 2. Treatment Strategies
    - a. Requires multiple treatments
    - b. Most important time to treat: In the early fall when it is translocating back to its roots
      - 1. Use Milestone or Lontrel herbicide
    - c. Second most important time to treat: Late spring when it is in the bud to early bloom stage. Spring treatment will just eliminate top growth.
      - 1. Use glyphosate or a broadleaves herbicide.
  - 3. Removal Strategies
    - a. Controlling Canada thistle organically is done with a sharp eye and an even sharper pair of scissors. Find the base of the Canada thistle plant and simply snip it off at the base. Do not pull Canada thistle out, as this can split the root, which causes two Canada thistles to grow back. Check the location weekly and snip off any new growth that you may see. The idea is to force the weed to use up its energy reserves by regrowing but removing the new leaves before the Canada thistle has a chance to build its energy reserves back up. [\\*\\*https://www.gardeningknowhow.com/plant-problems/weeds/canada-thistle-control.htm](https://www.gardeningknowhow.com/plant-problems/weeds/canada-thistle-control.htm)



# Calendar

This calendar has been previously discussed and is loosely based on the Morton Arboretum's: Home Landscape Maintenance monthly calendar guide. I have removed and added a few suggestions based specific to MCG on my proposals throughout this project. The calendar could be printed or distributed via email to volunteers for reference while working in the gardens.

January	February	March	April	May	June
<p>Check young trees and shrubs for deer, rabbit, and rodent damage. <i>Use fencing or protective collars to prevent injury.</i></p> <p>On warm days, check perennials for heaving. <i>Abrupt temperature changes can cause shallow-rooted plants to push out of the ground, exposing roots. Cover plants with a three-to four-inch layer of mulch, such as woodchips or evergreen branches.</i></p> <p>Uncover plants weighted down with heavy snow. <i>Gently brush off branches to prevent breakage. If frozen, let snow melt naturally.</i></p> <p>Prune dead, diseased, crossing or rubbing branches anytime. <i>Remove water sprouts and suckers now, too.</i></p> <p>Prepare for spring planting. <i>Evaluate last year's garden and decide what changes need to be made. Draw garden plans on paper, including a wish list of plants you would like to add.</i></p> <p>Clean and sharpen garden tools. <i>Get ready for the upcoming growing season.</i></p>	<p>Don't be fooled by warm, sunny days. <i>It is still too early to remove mulches, screening, and other winter plant protections. Make sure they are still in place.</i></p> <p>Monitor tree health. <i>It is easier to notice dead branches, hollows, and cankers on trees. Cankers are signs that the tree has a disease.</i></p> <p>Prune trees and shrubs. <i>The ideal time to prune is in the dormant season, just prior to new growth. Wait to prune spring-flowering plants to avoid removing this year's flower buds.</i></p> <p>Wait to prune birch, elm, maple, and walnut trees until late fall. <i>Although harmless, these trees 'bleed' sap on sunny days when pruned during the winter.</i></p> <p>Clean and sharpen garden tools. <i>Get ready for the upcoming growing season.</i></p> <p>Check the summer bulbs that are stored in a cool, dry place. <i>Make sure they have not sprouted or dried out.</i></p> <p>Order seeds and garden plants. <i>Add new plants to your landscape.</i></p>	<p>Wait until new growth is established before removing winter protection. <i>Mulch protects plants from late spring freezes.</i></p> <p>Being general clean up. <i>Rake the lawn to remove leaves, twigs, and debris.</i></p> <p>Check for winter snow and salt damage. <i>Prune dead tips and broken branches.</i></p> <p>Cut ornamental grasses back to a few inches before new growth begins.</p> <p>Prevent soil compaction. <i>Avoid walking across saturated lawns and garden beds.</i></p> <p>Prepare new planting beds if soil is dry. <i>Work organic matter and compost into the soil before planting.</i></p> <p>Fertilize trees and shrubs before new growth appears. <i>A soil test will indicate a nutrient deficiency. Follow recommendations for fertilizer and pH adjustments.</i></p> <p>Prune summer-flowering shrubs before new growth begins in the spring. <i>Abelia, butterfly bush, panicle hydrangea, beautyberry and snowberry.</i></p>	<p>As temperature warms, remove winter protective covering from plants.</p> <p>Replenish mulch around existing plants to a depth of 3 to 4 inches. <i>Keep mulch away from trunks.</i></p> <p>Fertilize trees and shrubs before new growth appears. <i>A soil test will indicate a nutrient deficiency. Follow recommendations for fertilizer and pH adjustments.</i></p> <p>Weather permitting, dig and move trees and shrubs prior to bud break.</p> <p>Watch for insects and diseases that gave you problems last year. <i>The sooner you detect damage, the easier it is to control.</i></p> <p>Divide and move perennials every 3 years to prevent them from overcrowding.</p> <p>Deadhead spring bulbs when they are finished flowering to direct energy back into bulbs. <i>Discard tulips that only produced large leaves and no flowers.</i></p>	<p>Begin planting trees, shrubs, and perennials now.</p> <p>Divide and transplant perennials after they flower.</p> <p>Plant annuals after all danger of frost has passed. <i>Average date is May 15.</i></p> <p>Deadhead spring bulbs when they are finished flowering to direct energy back into bulbs. <i>Do not remove foliage, let it die back naturally.</i></p> <p>Prune spring flowering trees and shrubs immediately after blooming. <i>Crabapple, forsythia, lilac, viburnum.</i></p> <p>Apply 3 to 4 inches of mulch around plants. <i>This reduces weeds, conserves moisture, and controls temperature fluctuations in soil.</i></p> <p>Stake tall and floppy perennials (peonies, delphiniums) as they grow.</p> <p>Monitor all plants regularly for insect and disease problems.</p> <p>Check evergreens, especially spruces, for spider mites; treat as new growth begins. <i>Place a white sheet of paper under branch and tap lightly, looking for moving pin-head size spots.</i></p>	<p>Water trees and shrubs deeply if natural rainfall is less than 1 inch per week. <i>Water the soil and not the foliage to reduce leaf spot diseases.</i></p> <p>Replenish mulch under trees and shrubs to reduce weeds, conserve moisture, and control temperature fluctuations in soil.</p> <p>Prune late spring flowering shrubs and hedges now.</p> <p>Monitor all plants regularly for insect and disease problems.</p> <p>Pull weeds before they go to seed.</p> <p>Plant summer flowering bulbs and annuals.</p> <p>Avoid deep cultivation around shallow rooted plants by hand pulling weeds when they are small.</p> <p>Pinch garden mums and asters once a month for bushier growth. <i>Stop pinching after July 15 so plants can set flower buds.</i></p> <p>Remove faded blossoms from flowering annuals, perennials, and roses to encourage more blooms.</p>



# Calendar

This calendar has been previously discussed and is loosely based on the Morton Arboretum's: Home Landscape Maintenance monthly calendar guide. I have removed and added suggestions specific to MCG. The calendar could be printed or distributed via email to volunteers for reference while working in the gardens.

July	August	September	October	November	December
<p>Plants should receive 1 to 2 inches of water every 7 to 10 days. Supplement water if we have not had a natural rainfall. <i>Pay particular attention to drought sensitive plants.</i></p> <p>Monitor all plants regularly for insect and disease problems.</p> <p>Cool weather and excess moisture allow many fungal diseases to thrive. <i>To prevent re-infection, remove infected leaves that have fallen to the ground.</i></p> <p>Cut rose blooms back to the first set of 5 leaves after blooming to encourage stronger canes and more flowers.</p> <p>Divide and replant iris. Discard any plants showing signs of insects or disease. <i>Iris should be divided every 3 to 5 years.</i></p> <p>Remove spent flowers and pinch back leggy foliage from annuals and perennials to promote bushier growth and more flowers.</p>	<p>Monitor rainfall and keep plants well-watered during times of heat or drought, especially newly planted trees and shrubs.</p> <p>Continue to remove faded flowers on roses, annuals, and perennials. <i>Pinch back leggy growth.</i></p> <p>Don't fertilize trees and shrubs now. <i>New growth will not have time to harden off before winter.</i></p> <p>Mid-August through mid-September is an ideal time to establish a new lawn or to seed in bare spots.</p> <p>Late summer or early autumn is the best time to divide perennials that bloom in the spring and summer.</p> <p>Plant peonies from the end of the month through October.</p> <p>Continue regular weeding and monitoring for insect and disease problems.</p> <p>Order spring flowering bulbs to plant this fall.</p>	<p>Plant new trees and shrubs early in the month so they have time to develop a good root system.</p> <p>Divide perennials that bloom in the spring and summer.</p> <p>If weather is dry, water plants deeply. <i>Evergreens will especially need moisture in the soil for the winter months ahead.</i></p> <p>Deadhead perennials. <i>Remove and discard dead and diseased foliage to reduce infection next year.</i></p> <p>Spring flowering bulbs can be planted from September until mid-November.</p> <p>Leave the last rose blossoms of summer on plants to encourage dormancy.</p>	<p>Protect tender plants and annuals from light frosts by covering them with sheets, plastic, or newspaper on nights when frost is predicted.</p> <p>If weather is dry, water plants deeply, especially evergreens, before the ground freezes.</p> <p>Continue to mow lawn as needed.</p> <p>Begin to tidy up flowerbeds by removing faded flower heads and cutting back dead stems from perennials. <i>Remove annuals that have finished flowering.</i></p> <p>Remove leaves and other debris from staircase that pose a safety hazard.</p>	<p>Fall is a great time to prepare for a new flowerbed. <i>Turn soil and amend if necessary. Freezing and thawing over winter make soil more friable.</i></p> <p>Rake fallen leaves and compost or shred with lawn mower and place around landscape plants. <i>Discard diseased leaves, twigs and fruits.</i></p> <p>Plant hardy, spring-flowering bulbs outside until the ground freezes.</p> <p>Water landscape plants deeply, especially evergreens, before the ground freezes.</p> <p>Cut back foliage of perennials to the ground after a few hard freezes. <i>Leave unusual seed heads and ornamental grasses for winter interest.</i></p> <p>Apply winter mulch to perennials and roses after a hard frost and as ground begins to freeze.</p> <p>Drain and store garden hoses.</p> <p>Construct a cylinder of hardware cloth, chicken wire, or fencing around plants to protect against rabbit, mice and deer that damage the bark and twigs of plants.</p> <p>Continue to remove leaves and other debris from staircase that pose a safety hazard.</p>	<p>Begin light pruning on trees and shrubs by removing watersprouts and dead or crossing branches. <i>Pruning trees and shrubs can be done more easily in winter without leaves on branches but avoid pruning spring-flowering plants at this time.</i></p> <p>Apply winter mulch to base of roses once ground begins to freeze. <i>Applying too early can prevent ground from freezing naturally.</i></p> <p>Clean, sharpen, and repair all garden tools before storing.</p> <p>Protect multi-stemmed evergreens, such as upright arborvitae, junipers, and yews, from heavy snow or ice damage during a winter storm by tying trunks together with old nylons or cotton twine. <i>Be sure to remove in the spring.</i></p> <p>Avoid using heavy quantities of deicing material along walkways near landscape plants.</p> <p>Gently shake or brush off heavy snow that accumulates on shrubs and small trees before it freezes. <i>Do not attempt to remove ice.</i></p> <p>Begin monitoring for animal damage when food sources become scarce.</p> <p>Continue to remove leaves, snow and other debris from staircase that pose a safety hazard.</p>



# Tree Maintenance

Shown below is my proposal for the tree maintenance based off of the estimate recieved from Bartlett Tree Experts

## Iron Gates

- 1. Saucer Magnolia → Map ID: 13 & 14 → Location: left and right sides of iron gate entrance to Allee from flower garden
  - a. Bartlett Tree Experts Suggestion:
    - 1. Goals:
      - a. Reduce risk of branch failure
      - b. Reduce likelihood of storm damage
      - c. Repair storm damage
    - 2. Specifications:
      - a. Remove as needed dead, declining, broken branches, 1-2 inch diameter cuts, entire canopy
      - b. Remove off site all wood and debris
    - 3. Cost → \$628.00
- 2. Saucer Magnolia → Map ID: 13 & 14 → Location: left and right sides of iron gate entrance to Allee from flower garden
  - a. Bartlett Tree Experts Suggestion:
    - 1. Supplemental support → Cables
      - a. Install 3 supplemental support cables in Multiple leader Star Magnolia located at the Flower garden area near the entrance to limit branch movement to reduce the risk of branch failure.
      - b. Materials used for cabling consists of 7-strand galvanized steel cable anchored to branches or stems with forged eyebolts. Eyebolts are secured with nuts with washers.
    - 2. Cost → \$654.00

## Bald Cypress Allee

- 1. 18 Dawn Redwood → Map ID: 7 & 8 → Location: left and right sides of the Allee
  - a. Goals:
    - 1. Bartlett Tree Experts suggestion: \*\*Clear understory plants including Holly and Tree Boxwood\*\*
  - b. Specifications:
    - 1. Remove approximately 6 live branches, 2-4 inch diameter cuts, lower third
    - 2. Remove off site all wood and debris
  - c. Arborist Notes:
    - 1. In both groups of Dawn Redwood, remove approximately 6 (+or-) low branches encroaching understory plants
  - d. Cost \$838.00
- 2. Boxwood trees
  - a. Need limbing up
  - b. Cut back boxwoods from crowding statues
  - c. Health care - disease treatment
    - 1. 4 treatments → \$363.00 per treatment



# Tree Maintenance

Shown below is my proposal for the tree maintenance based off of the estimate recieved from Bartlett Tree Experts

## Stairs

- 1. Cut back any tree limbs that could potentially be a safety hazard or are obstructing views
- 2. Bartlett Tree Experts Suggestion: 1 Black Walnut → Map ID: 3 → Location: next to stairs on Evergreen Terrace
  - a. Goals:
    - 1. Remove dead and declining limbs in the lower ⅓ of the crown
    - 2. Remove weight on the branch ends of the low large leader extending towards steps
  - b. Specifications:
    - 1. Remove as needed dead, declining, broken branches, 1.5-3 inch diameter cuts, lower third
    - 2. Remove as needed over-extended branches, 1.5-3 inch diameter cuts, lower third
    - 3. Remove off site all wood and debris
  - c. Arborist Notes:
    - 1. Remove weight on the large overextended leader in the lower crown

## Pool Terrace

- 1. Double leadered Southern Magnolia → Map ID: 4 → Location: Wall area next to the pool
  - a. Has a seedling right next to it → Jaime’s suggestion: remove tree
  - b. Bartlett Tree Experts Suggestion:
    - 1. Goals:
      - a. Reduce risk of branch failure
      - b. Establish proper branch spacing
      - c. Improve light and air penetration through crown
    - 2. Specifications:
      - a. Install 2 supplemental support cables in a parallel arraignment spaced 6-7 feet apart to limit branch movement to reduce the risk of branch failure
        - i. Cables require periodic inspection for evidence of fatigue and to verify functionality.
      - b. Remove 20 percent of dead, live, declining branches, 1.5-2.5 inch diameter cuts, entire canopy
    - 3. Cost → \$1,785.00
- 2. Boxwood trees
  - a. Bartlett Tree Experts Diagnosis:
    - 1. There was no evidence of boxwood blight on the submitted sample.
    - 2. Symptom noted on the leaves of your sample is consistent with excess boron. This causes yellow leaf margins when the levels are on the lower end of the spectrum.
    - 3. The soil analysis indicated high (but not toxic) levels of boron in the soil. Boron in excess can cause severe damage to sensitive plants like boxwood.
    - 4. Boxwood mite feeding damage was noted on older leaves.
      - a. From a short distance, the infested boxwood appears unhealthy, with a dingy silvery color. If populations are high, boxwood mite feeding will cause the plant to be unsightly and can stress the plant so it will be more susceptible to other pests. Defoliation can occur.
  - b. Bartlett Tree Experts Suggestions:
    - 1. Check into the possibility of water treatment products containing boron.
      - a. It does not appear that boron is causing severe damage to the leaves.
    - 2. Applications of dormant oil and specific miticides are recommended for spider mites,
    - 3. Incorporate organic matter into the soil to improve soil drainage, as poor soil drainage can cause root decay.



# Appendix D - Guidelines for Garden Improvements

## Infrastructure - Stature Procedures

- A.     Cleaning [\\*\\*https://homeguides.sfgate.com/clean-marble-statue-27776.html](https://homeguides.sfgate.com/clean-marble-statue-27776.html)
  - 1.     Use Dawn dish soap and warm water to clean
  - 2.     Add 1 or 2 teaspoons of mild dish detergent (Dawn) and 1 gallon of warm water to a bucket
  - 3.     Dip a sponge or cloth into the soapy water and wipe over the marble statue. Rinse the sponge or cloth in the bucket often.
  - 4.     Rinse the marble statue thoroughly to remove any residue and dry it with a towel.
  - 5.     Things you will need:
    - a.     Mild dish detergent
    - b.     Bucket
    - c.     Cloth or sponge
    - d.     Towel
- B.     Stain Removal [\\*\\*https://homeguides.sfgate.com/clean-marble-statue-27776.html](https://homeguides.sfgate.com/clean-marble-statue-27776.html)
  - 1.     Mix hydrogen peroxide with enough baking soda or powdered clay to make a thick paste.
  - 2.     Test on an inconspicuous area of sculpture first!
  - 3.     Apply a thick layer of poultice to any stained areas with a plastic knife or spatula. Cover the area with plastic wrap and tape it into place. Allow the poultice to dry for at least 24 hours.
  - 4.     Remove the plastic wrap and check to see if the poultice is dry. If not, replace the plastic wrap and allow it to dry for another 24 hours. When the poultice is completely dry, scrape it away from the marble statue with the plastic knife or spatula.
  - 5.     Rinse any poultice residue from the marble statue and dry it with towel.
  - 6.     Things you will need:
    - a.     Baking soda or clay powder
    - b.     Hydrogen peroxide (12 percent strength)
    - c.     Plastic knife or spatula
    - d.     Plastic wrap
    - e.     Tape



# Appendix D - Guidelines for Garden Improvements:

## Infrastructure - Marble Stone Procedures

### Infrastructure - Marble Stone Procudures

- A. Marble stairs and paving to be cleaned in place shall be presoaked and gently scrubbed. Mist stone using nozzles that deliver a fine mist, not running water. Mist stone and test every hour with a scrubbing brush to ascertain the time interval required for the dirt in the crevices to release. Do not allow mist to run overnight. Brush with a soft bristle brush and hose rinse. The final rinse shall be applied with a 600 psi power washer. When cleaning stairs, always work from the upper level to the bottom level. Use extreme care when cleaning cracked or crumbling stones.
- B. Custom misting nozzles are recommended such as the following Spraying Systems Co. products available through Almaka Corporation, Chadds Ford, PA (610) 459-5913:
  - 1. ¼ SF CE-2, 105 degree fan, delivers 1.3 gallons per hour at hose pressure
  - 2. ¼ SF CE-1, 80 degree fan, delivers 1 gallon per hour at hose pressure

### Infrastructure - Iron Work Procedures

- A. Remove assembly or repair on site
- B. Reproduce missing ornaments
- C. Reattach loose and poorly attached members
- D. Inspect hinges, attachments to piers and swing, and repair as required
- E. Clean and paint - <https://www.wikihow.com/Paint-Black-Wrought-Iron>\*\*
  - 1. Scrub away any rust from the wrought iron. When left exposed to air (either indoors or outdoors), wrought iron will rust readily. If there is any rust present on your piece, you should remove it instead of painting over it. This is best done with a stiff wire brush, although it can be done more efficiently with a sandblaster if you have the required space to use one. Scrub the entire piece with the brush until all visible rust is gone. You may want to do this in a garage where you can easily sweep up the metal and paint flakes afterwards.
    - a. If the wrought iron is already painted, you will get the best results if you scrub away the old coat of paint with the wire brush.
  - 2. Sand the wrought iron. To prepare the iron for painting, go over the whole piece with medium-grit sandpaper. This provides the ideal surface for the primer and paint to adhere to.
  - 3. Apply a coat of rust inhibiting primer to the wrought iron. After sanding the piece smooth, you need to apply a coat of primer. This will help prevent the formation of rust and make your paint color appear as it should. Rust inhibiting primer is a product specifically designed for use on metals containing iron, and it can be purchased at any hardware store. It is best applied with a brush in a single thin coat.
  - 4. Sand the primer. After letting the primer dry completely, sand it lightly with medium-grit sandpaper. Clean the entire piece with a tack cloth before painting to ensure that metal flakes and dust do not mix into the paint.
  - 5. Apply paint to the wrought iron. For painting wrought iron, use exterior-grade enamel paint. For best results, use a “direct-to-metal” (DTM) paint that contains a rust inhibiting ingredient. Using ordinary exterior paint will lead to chipping. The paint should be applied with a brush in long, smooth strokes. A second coat can be applied if desired.



# In Conclusion

Throughout this project, I've learned a great deal about the history of the Gardens, the Sharp family and their relationship with Marian Coffin. Coffin's design style and use of form and structure throughout the garden rooms is still strongly evident today. The proposals I've presented have met my objectives of arresting deterioration in the garden while maximizing the impact the garden can have on the public. It is vital to the garden's future success and existence to plan, budget and schedule for the implementation of the proposed objectives. While each individual item may seem relatively insignificant on its own; collectively these improvements and modifications will have a tremendous impact on preserving a historical landmark.



# Thank You

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and professor,

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