

Landscape Preservation Maintenance Plan

Frederick Douglass National Historic Site



Preface

The Landscape Preservation Maintenance Plan (PMP) for the Frederick Douglass National Historic Site has been prepared to assist with the care of historic landscape features including vegetation, paths and other landscape elements. It consists of both preservation planning and preservation maintenance. Preservation planning is the research, documentation and decision-making process which leads to treatment of the landscape. Preservation maintenance is the act of caring for a specific feature, area or landscape by protecting stabilizing, and repairing it on a routine or cyclic basis so that the historic character is not compromised or lost. The PMP is designed to ensure that the historic landscape can continue to make a lasting impression on visitors through preservation of its historic character, so it can continue to serve as a tool that will educate future generations about their heritage.

In the case of the Frederick Douglass NHS, ideally the landscape would reflect the time period wherein Douglass spent the last 18 years of his life (1877-1895). Maintenance restrictions and cost, as well as the time it takes for plants to mature, assure that restoring the landscape to this state is not a quick process. The PMP recognizes that landscapes change over time and that resource planners and managers need to be flexible. The PMP is not meant to be an overly restrictive document. Instead, it is a guiding reference for those who are managing the landscape. It contains information on planting, care and culture of landscape features that contribute to the overall character and significance of the landscape.

The approved guiding landscape document for the historic landscape at the Frederick Douglass NHS is the 1976 Landscape Restoration Plan (Drawing #872/80,001, sheets 1-11 [included in supplementary information section of this document]). The plan includes a list of plants known to have been included in the historic landscape, as well as a map of the historic landscape, including trees, structures and paths. The findings were extracted from research of historic documents, photographs and correspondence related to the site. Since the development of the 1976 plan, no significant additional findings about the historic landscape have been discovered by the Cultural Landscape Program of the National Capital Region of the NPS.

This document is not comprehensive. It focuses on maintenance activities and treatment priorities. A more complete history of the landscape during the time of Frederick Douglass can be found in the Cultural Landscape Inventory of the Frederick Douglass National Historical Site, which was completed in 2007.

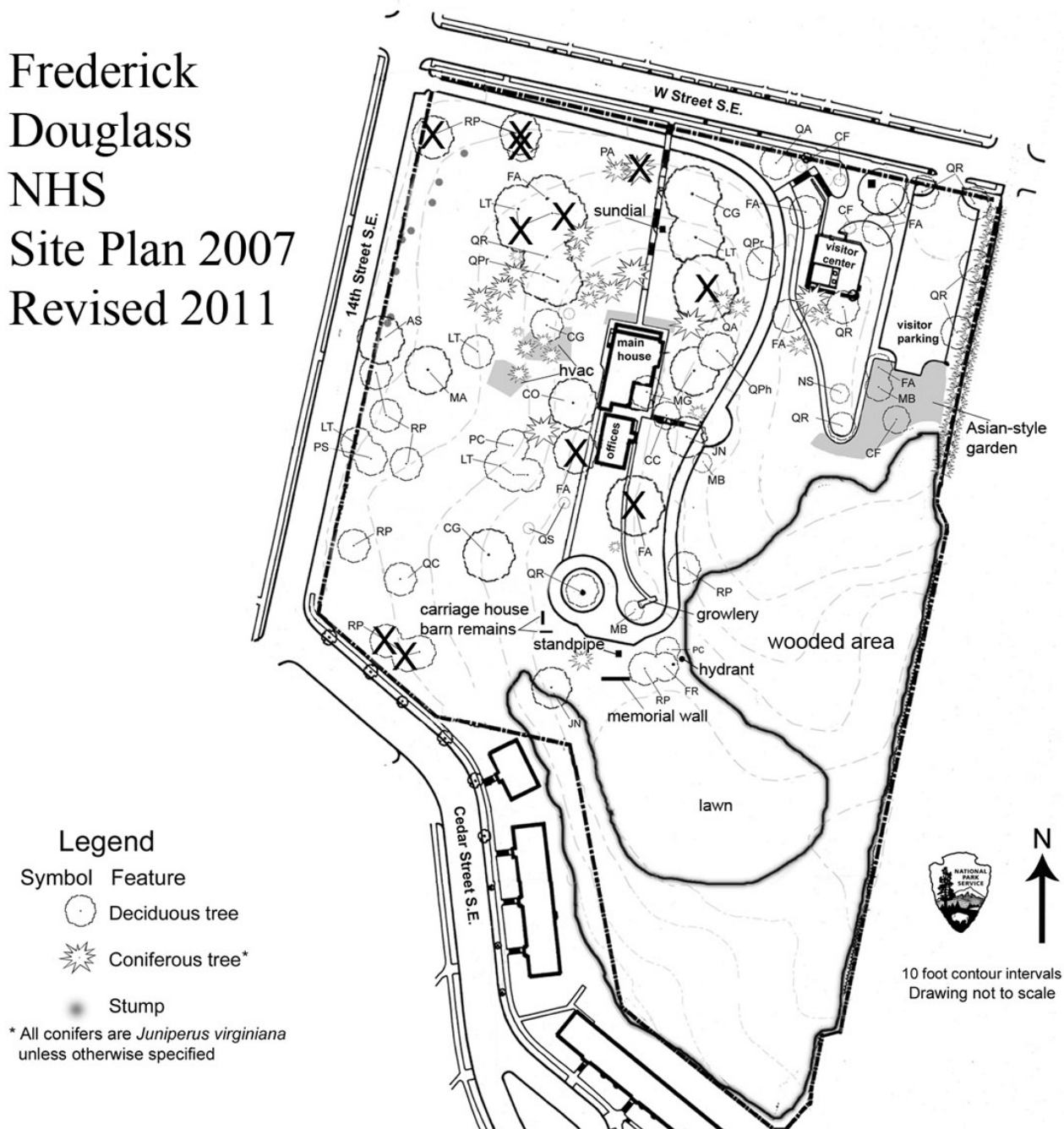
The PMP for the Frederick Douglass National Historic Site was initiated in the spring of 1999. On-site inventory and condition assessment was conducted in the spring, summer and fall of 1999 by Historical Landscape Architect Judith Earley and NCPE Intern Nick Parrish, and was updated and continued by Historical Landscape Architect Saylor Moss in 2007. Guidance from the Olmsted Center for Historic Preservation and local assistance from Regional Historical Landscape Architect Maureen Joseph, NCR Intern Stephanie Bailey, Park Ranger James Hemsley, Maintenance Supervisor Ernest Biggs, NACE Chief of Grounds Douglas Carr, NACE Supervisory Resource Management Specialist Stephen Syphax, FRDO Acting Site Manager Eola Dance and other NACE managers and rangers was essential in putting this PMP together.

Table of Contents

Preface	2
Site Map	4
Character Areas	5
Summary History of the Landscape	6
Area 1 North Lawn	7
Area 2 East Glen	12
Area 3 Woodland	17
Area 4 West Glen	19
Area 5 Hilltop	23
General Recommendations: Trees	33
General Recommendations: Shrubs, Perennials and Groundcovers	34
General Recommendations: Lawns and Slopes	35
General Recommendations: Circulation	37
General Recommendations: Structural Features	39
General Recommendations: Planting Beds and Borders	40
General Recommendations: Shrubbery around HVAC/Electric Boxes	42
Plant Feature Data	43
Bibliography	79
Calendar for Inspection and Work	80
Work Needed	84

Site Map

Frederick Douglass NHS Site Plan 2007 Revised 2011

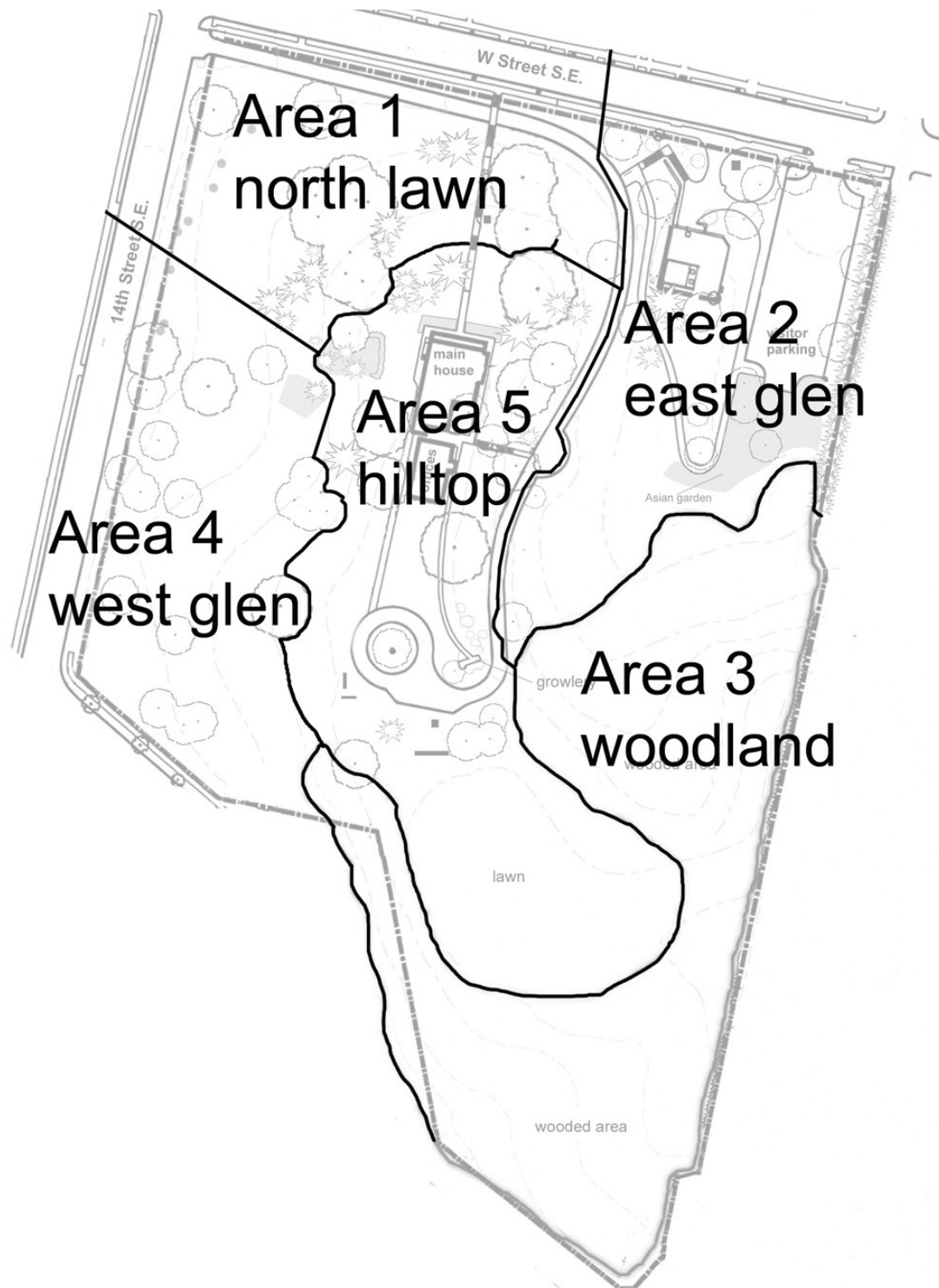


Note: X indicates tree that has fallen between Fall '08 and Spring 2011

KEY	BOTANICAL NAME	COMMON NAME	KEY	BOTANICAL NAME	COMMON NAME
AS	<i>Acer saccharinum</i>	Silver maple	NS	<i>Nyssa sylvatica</i>	Black tupelo
CF	<i>Cornus florida</i>	Flowering dogwood	PA	<i>Picea abies</i>	Norway spruce
CG	<i>Carya glabra</i>	Pignut hickory	PC	<i>Pyrus communis</i>	Common pear
CO	<i>Celtis occidentalis</i>	Hackberry	PS	<i>Prunus serotina</i>	Black cherry
FA	<i>Fraxinus americana</i>	White ash	RP	<i>Robinia pseudoacacia</i>	Black locust
JN	<i>Juglans nigra</i>	Black walnut	QA	<i>Quercus alba</i>	White oak
LT	<i>Liriodendron tulipifera</i>	Tulip poplar	QC	<i>Quercus coccinea</i>	Scarlet oak
MA	<i>Morus alba</i>	White mulberry	QPh	<i>Quercus phellos</i>	Willow oak
MB	<i>Malus baccata</i>	Siberian crabapple	QPr	<i>Quercus prinus</i>	Chestnut oak
MG	<i>Magnolia grandiflora</i>	Southern magnolia	QR	<i>Quercus rubra</i>	Red oak
			QS	<i>Quercus Sp.</i>	Oak, unknown

Character Areas

In order to organize information within the PMP, the landscape has been divided into 5 “character areas.”



Summary History of the Landscape at Frederick Douglass NHS

The 8.07-acre Frederick Douglass National Historic Site is located at 1411 W. St., S.E. on a terraced knoll in the Anacostia Historic District in the southeastern quadrant of Washington, D. C. It was acquired by the NPS in 1962. The property is significant for its association with Frederick Douglass, the African American abolitionist, publisher, orator, author, statesman, reformer and champion of human rights who is generally recognized as the father of the civil rights movement. It was at this property where Douglass spent the last 18 years of his life (1877-1895).

Douglass called the property “Cedar Hill” for its abundance of cedar trees. The landscape of Cedar Hill during the historic period includes its usage as a “gentleman’s” farm (as opposed to a working farm), a family home, and a retreat. Use of the landscape during the historic period included the growing and tending of gardens and fruit and nut trees that supplemented the diet of both the family and livestock. Livestock, including horses, cows, chickens and possibly goats, were sources of food and labor. Care of these animals necessitated Douglass’ construction of a barn, and a chicken coop with a cistern. In addition, the landscape supported Douglass’ affection for fragrant and flowering plants, which he used to enhance the home’s surroundings. Memoirs of the landscape from Douglass’ time recall his use of showy annuals, perennials, vines, and shrubs. Douglass and his guests prized wooded sections of the landscape for their wilderness qualities. The unique setting, size, vegetated quality of the property, and the juxtaposition of the wooded setting in relation to the urban landscape rendered it a desirable destination for friends, family and associates of the Douglasses. The vegetated property also rendered the hot and humid summers of Washington, D.C. tolerable by providing shade for inhabitants and guests of Cedar Hill as they lounged about the great lawns, took in the views of Washington City, or participated in croquet, a favorite pastime of the family.

Cedar Hill demonstrates the characteristics of a romantic cottage in natural surroundings. While the landscape has been altered over time, it does retain historic integrity for the period of significance. The property’s role in housing Frederick Douglass and his family during the time when Douglass was one of the most well-known African Americans in Washington, D.C. and the nation lends it a high degree of historic significance at the national level.



(Left) Frederick Douglass' granddaughter plays croquet, a favorite pastime of the family, on the shaded lawn to the south of the house. (Howard University, Moorland-Spangarn Research Center).

(Right) A figure ascends the staircase on the east side of the house in 1893. Stairs, handrails, an arbor, a trellis and a magnolia tree characterize the landscape during this period. (Photo source unknown NCR files).



Area 1 North Lawn

Historic Character of the North Lawn

During the historic period, the north lawn area, or ‘front’ of the property, was visible upon approach to the house from W St. S.E., Its chief historic characteristics were the series of terraced slopes that rise to the hilltop, and the flight of steps used to navigate them. The vegetation in this area would likely have been a mixture of large deciduous trees with grass, clover and possibly native herbaceous plants growing in a meadow-like setting underneath. Red cedars, and a handful of Norway spruce that were planted by Douglass, also grew in this area. The length of the grass on the north lawn, as in other areas, was most likely determined by grazing animals. Trees were likely to have grown in a random arrangement on this section of the property. By 1893, the portion of the driveway that runs parallel to W Street was in place. It is not known if there was a fence along the front of the property during the historic period.

The North Lawn Today

During the 1920s, the National Association of Colored Women’s Clubs (NACWC), who owned the property at the time, paid to “make slight changes on the contours of the terraces” (Toogood, 51). In 1962 the Douglass home and property was acquired by the NPS. Additions to the north lawn area by the NPS after acquisition include: the surrounding fence at street level, the brick entrance piers, signs, entrance gate plantings, the material of the driveway (asphalt and brick edging), the ivy on the bottom slope, the concrete retaining walls, and the crapemyrtle plantings on either side of the entrance.

The majority of existing deciduous trees in the north lawn are probably descendants of 19th century trees, self-seeded from surrounding trees. The red cedars found today were planted in 1977, or are replacements of the 1977 plantings. The age of the existing Norway spruce near the front is undetermined. Judging by its size, it is certain that it was not planted during the historic period.

Despite modern utility wires and poles, the addition of the fence, gate and brick entrance piers and the planting of turf grass, the appearance of the north lawn and house is, in many ways, similar to its historic appearance.

Areas of Preservation Concern

Erosion of slopes is an ongoing concern along the terraces. Especially along the edges of north stair flights and in the areas where the downspout chute-drains expel water on the side of the hilltop. Erosion damage is also seen along the eastern edge of the driveway where water escapes from the road and drains into the turf at high rates of speed. Slow, gravity-driven slumping of the steep slopes, especially along the northern edge of the property, is also a concern.

Area 1 North Lawn cont.

Trees

The following is a discussion of some trees that characterize the north lawn.
(See also Feature Data for general tree information.)

Norway spruce (*Picea abies*): The Norway spruce (1-17), located on the second terrace, just west of the front flight of steps to the house, may have been planted by school children in the 1930s. The tree appears too young to date to Frederick Douglass' day, but it does contribute to the historic significance of the property because it is known that Frederick Douglass ordered six of this species of tree to plant on his property. This tree conveys information about Douglass' intent for his grounds, and should be maintained and preserved.

Maintenance Procedures: Specimen should be protected and replaced in-kind upon its death. A second specimen to replace the one that fell during the 2000s should also be planted in this area.

Tulip poplar (*Liriodendron tulipifera*): Tulip poplars in the north lawn area are probably the off-spring of older trees. One very old tulip poplar in this area was removed in 1999. One tulip poplar (see 1-7) was planted in 1976 as part of the restoration plan.

Maintenance Procedures: Overall, the tulip trees are in good shape. They were pruned and limbed up in 1999 to enhance historic views to Washington and surrounds.

Pignut hickory (*Carya glabra*): Hickories grew on the property in Douglass' time. They are not easily replaced because they are not generally grown by nurseries. There are 2 healthy specimens on the property (see 1-6, 4-15).

Maintenance Procedures: The regional horticulturist should be consulted to determine that this is the correct designation of species. Pignut hickories are experiencing some difficulty in regeneration in the wild, and perhaps these trees should be propagated by cuttings to ensure that replacements will be available when needed.

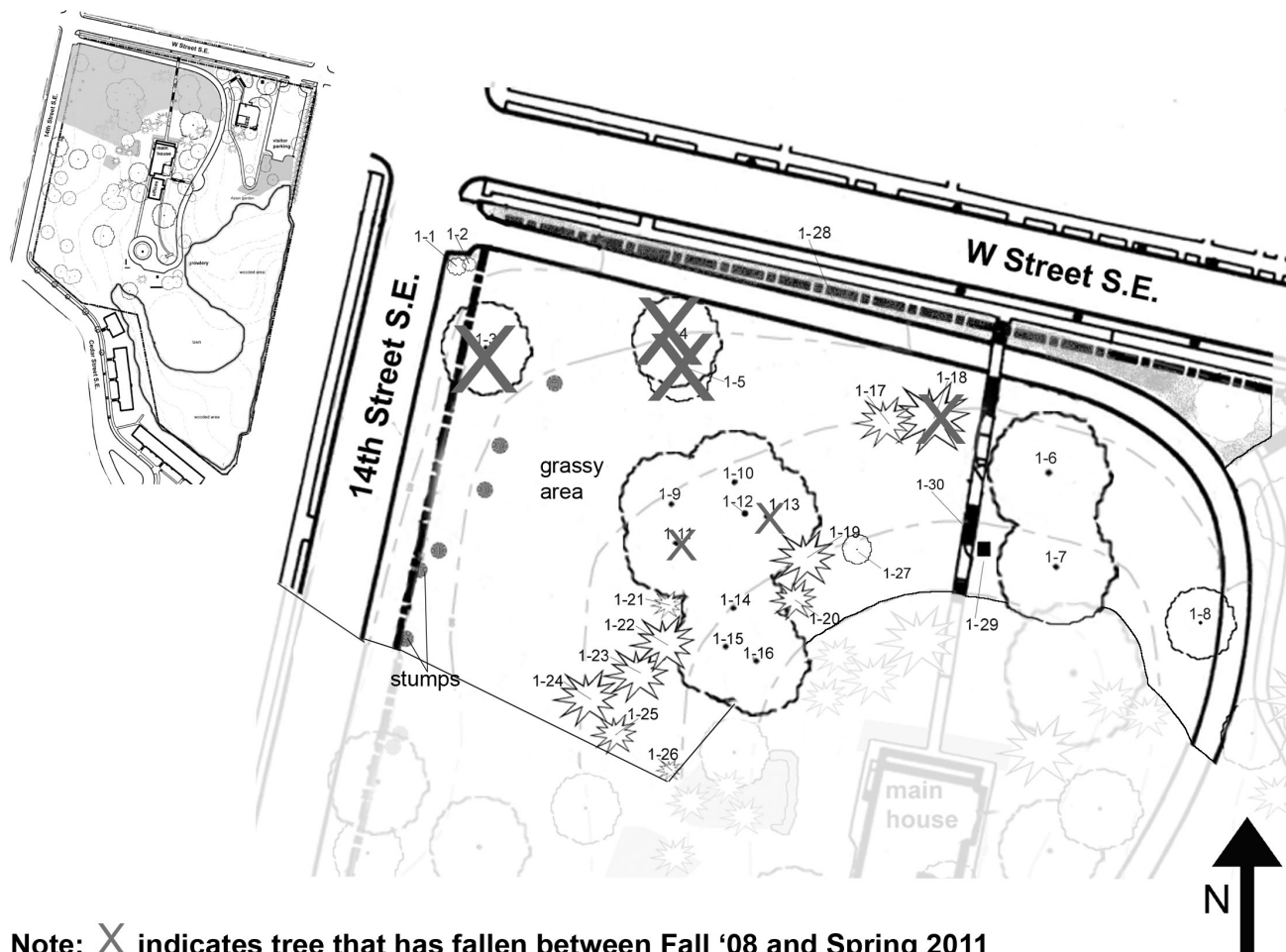
Crapemyrtle (*Lagerstroemia indica*): Prune back to establish structure in late winter. Remove smaller shoots and establish a series of 3-5 "trunks" for a shrub-like effect. It is preferable to gradually thin out the plant; it should not be topped. In the summer, remove seedpods after bloom to encourage more flowers.

Stumps

Before any stump removal, the area should be assessed by the regional archeologist to prevent damage to any archeological resources.

Stumps in this area should be removed to 6 (minimum) to 12 inches below grade.
After removal, regrade and reestablish lawn.

Area 1 North Lawn



Note: X indicates tree that has fallen between Fall '08 and Spring 2011

ID#	Feature Name	ID#	Feature Name
1-1	Crapemyrtle (<i>Lagerstroemia indica</i>)	1-16	Chestnut oak (<i>Quercus prinus</i>)
1-2	Crapemyrtle (<i>Lagerstroemia indica</i>)	1-17	Norway spruce (<i>Picea abies</i>)
~~1-3~~	~~Black locust (<i>Robinia pseudoacacia</i>)~~	~~1-18~~	~~Eastern redcedar (<i>Juniperus virginiana</i>)~~
~~1-4~~	~~Black locust (<i>Robinia pseudoacacia</i>)~~	1-19	Eastern redcedar (<i>Juniperus virginiana</i>)
~~1-5~~	~~Black locust (<i>Robinia pseudoacacia</i>)~~	1-20	Eastern redcedar (<i>Juniperus virginiana</i>)
1-6	Pignut hickory (<i>Carya glabra</i>)	1-21	Eastern redcedar (<i>Juniperus virginiana</i>)
1-7	Tulip poplar (<i>Liriodendron tulipifera</i>)	1-22	Eastern redcedar (<i>Juniperus virginiana</i>)
1-8	Chestnut oak (<i>Quercus prinus</i>)	1-23	Eastern redcedar (<i>Juniperus virginiana</i>)
1-9	Tulip poplar (<i>Liriodendron tulipifera</i>)	1-24	Eastern redcedar (<i>Juniperus virginiana</i>)
1-10	White ash (<i>Fraxinus americana</i>)	1-25	Eastern redcedar (<i>Juniperus virginiana</i>)
~~1-11~~	~~Tulip poplar (<i>Liriodendron tulipifera</i>)~~	1-26	Eastern redcedar (<i>Juniperus virginiana</i>)
1-12	Tulip poplar (<i>Liriodendron tulipifera</i>)	1-27	Tulip poplar (<i>Liriodendron tulipifera</i>)
~~1-13~~	~~Tulip poplar (<i>Liriodendron tulipifera</i>)~~	1-28	Ivy (<i>Hedera helix</i>) bed
1-14	Red oak (<i>Quercus rubra</i>)	1-29	Sundial
1-15	Chestnut oak (<i>Quercus prinus</i>)	1-30	North staircase

Frederick Douglass National Historic Site
Preservation Maintenance Plan

Area 1 North Lawn Inventory

Feature Name	I.D. #	Maintenance Recommendations	Origin/Note
Crapemyrtle (<i>Lagerstroemia indica</i>)	1-1	Plant is rangy and should be gradually pruned to establish a better form.	
Crapemyrtle (<i>Lagerstroemia indica</i>)	1-2	See above.	
Locust (<i>Robinia pseudoacacia</i>)	1-3	Self-seeded, poor condition due to improper pruning. recommended for removal.	Fell between fall 08 and spring 2011
Locust (<i>Robinia pseudoacacia</i>)	1-4	Self-seeded, poor condition due to improper pruning. recommended for removal.	see 1-3
Locust (<i>Robinia pseudoacacia</i>)	1-5	Self-seeded, poor condition due to improper pruning. recommended for removal.	see 1-3
Pignut hickory (<i>Carya glabra</i>)	1-6	Needs sucker and ivy removal from trunk	
Tulip poplar (<i>Liriodendron tulipifera</i>)	1-7		Planted 1976
Chestnut oak (<i>Quercus prinus</i>)	1-8		
Tulip poplar (<i>Liriodendron tulipifera</i>)	1-9		
White ash (<i>Fraxinus americana</i>)	1-10		
Tulip poplar (<i>Liriodendron tulipifera</i>)	1-11		see 1-3
Tulip poplar (<i>Liriodendron tulipifera</i>)	1-12		
Tulip poplar (<i>Liriodendron tulipifera</i>)	1-13		see 1-3
Red oak (<i>Quercus rubra</i>)	1-14		

Frederick Douglass National Historic Site
Preservation Maintenance Plan

Area 1 North Lawn Inventory

Feature Name	I.D. #	Maintenance Recommendations	Origin/Note
Chestnut oak (<i>Quercus prinus</i>)	1-15		
Chestnut oak (<i>Quercus prinus</i>)	1-16	Remove ivy from trunk	
Norway spruce (<i>Picea abies</i>)	1-17		
Norway spruce (<i>Picea abies</i>)	1-18	Re-plant another Norway spruce in north lawn area	Fell between fall 08 and spring 2011
Eastern redcedar (<i>Juniperus virginiana</i>)	1-19	Remove ivy from trunk	
Eastern redcedar (<i>Juniperus virginiana</i>)	1-20	Remove ivy from trunk	
Eastern redcedar (<i>Juniperus virginiana</i>)	1-21		
Eastern redcedar (<i>Juniperus virginiana</i>)	1-22		
Eastern redcedar (<i>Juniperus virginiana</i>)	1-23		
Eastern redcedar (<i>Juniperus virginiana</i>)	1-24		
Eastern redcedar (<i>Juniperus virginiana</i>)	1-25		
Eastern redcedar (<i>Juniperus virginiana</i>)	1-26	Correct "volcano mulching" by raking excessive mulch away from the base of the tree.	
Tulip poplar (<i>Liriodendron tulipifera</i>)	1-27	Monitor for erosion near tree.	2007
Ivy Bed	1-28		
Sundial/pedestal	1-29		
North staircase	1-30		

Area 2 East Glen

Historic Character of the East Glen

The east glen was the historic location of a large garden plot and a well that served as the primary water source for the home. The east glen also included the carriage turnaround and a post and rail fence along the eastern edge of the drive.

Historic photo (right) shows a flight of wooden stairs that led from the carriage turnaround to the low terrace of the east glen. The east glen is one of the lowest areas on the property, and according to historic photographs and maps, it appears to have been a moist swale (Photo #4540 FRDO files).



The East Glen Today

Today, the east glen is primarily characterized by the visitor center and plaza, and the parking lot. It also includes a accessible ramp, a large grassy area and the Asian-style garden. The old well has been sealed and its location is unmarked for safety reasons.

Vegetation in this area is mainly comprised of the area of shrubs, annuals, perennials and three trees in the Asian-style garden; trees and shrubs used to screen the edges and walls of the visitor center, and groundcovers and trees which surround and soften the edges of the visitor center plaza and parking lot.

Areas of Preservation Concern

The east glen is prone to erosion primarily caused by stormwater flowing down the paved driveway. At certain points along the road, water concentrates and flows from the road down the slope. In some areas where the concentration of water is high, channels have worn down the slope. Some of these channels have eroded to a point where they may become hazardous to staff and visitors.

Drains within the visitor center/plaza area can easily become clogged with leaves, especially in the fall. Monitor drains and clear leaves on a regular basis to avoid flooding and other problems.

The Asian-style garden is a non-contributing feature (it does not derive from or reflect the historic landscape). It was installed by Frederick Douglass Gardens, Inc., a local organization,

Area 2 East Glen

although maintenance of the area is the responsibility of the NPS, the majority of maintenance in the garden is done by Frederick Douglass Gardens, Inc.

Ivy

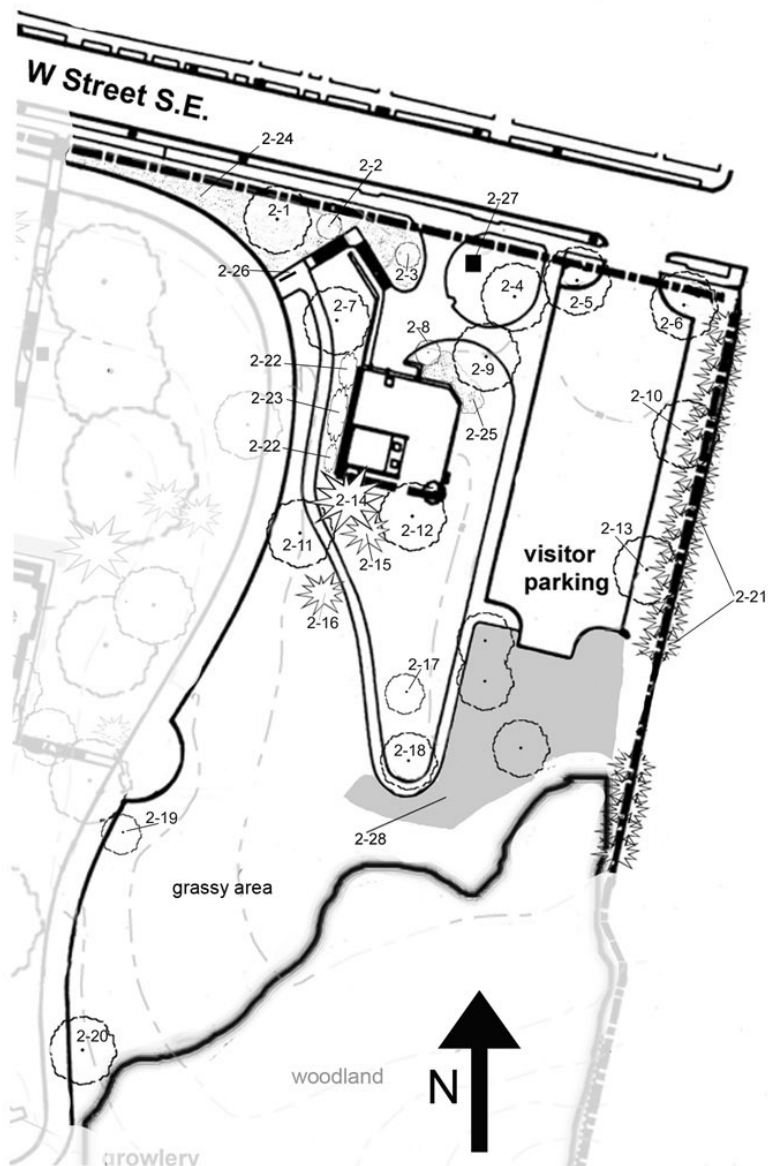
Ivy was not grown at Cedar Hill during Frederick Douglass' time; honeysuckle, strawberry and other plants vegetated the slopes during the historic period. Sweet potato vines were grown en masse in the orchard, presumably to stabilize the soil there. However, at this time, the ivy on the slopes of the east glen should continue to be maintained in a good condition.

Maintenance Procedures: Maintenance managers need to be vigilant to keep the ivy from climbing into trees. When strands of ivy are observed on tree trunks and shrubs they should be removed. If a tree is located in an ivy bed, it should be constantly checked for ivy on its trunk and the ivy near its base should be clipped short and kept as controlled as possible.

- Invasive woody plants growing in the ivy need to be removed. If they can't be pulled out, they need to be treated with an approved herbicide or removal method. Specific removal methods should be clearly explained to contractors who are maintaining the landscape.
- Herbaceous plants growing in the ivy can either be pulled out when the earth is damp, or cut back so they are not so visually obtrusive. The objective here is not to free the area of all weeds—that would be impossible. The more important focus is removal of the invasive woody plants.
- Fertilizer is not needed on the ivy.
- Ivy does not need to be “shaved.” In no case should mowers or “weed whacker” devices be used to trim the tops of ivy beds. Only the edges of the beds should be trimmed by hand to keep ivy within bounds.

Row of eastern redcedar on west side of parking lot: Between 2008 and 2011, several of these died. Re-planting is recommended to continue the line of trees and to screen new development to the east of the site.

Area 2 East Glen



I.D.#	Feature Name
2-1	White oak (<i>Quercus alba</i>)
2-2	Flowering dogwood (<i>Cornus florida</i>)
2-3	Flowering dogwood (<i>Cornus florida</i>)
2-4	White ash (<i>Fraxinus americana</i>)
2-5	Red oak (<i>Quercus rubra</i>)
2-6	Red oak (<i>Quercus rubra</i>)
2-7	White ash (<i>Fraxinus americana</i>)
2-8	Flowering dogwood (<i>Cornus florida</i>)
2-9	White ash (<i>Fraxinus americana</i>)
2-10	Red oak (<i>Quercus rubra</i>)
2-11	White ash (<i>Fraxinus americana</i>)
2-12	Red oak (<i>Quercus rubra</i>)
2-13	Red oak (<i>Quercus rubra</i>)
2-14	Eastern redcedar (<i>Juniperus virginiana</i>)
2-15	Eastern redcedar (<i>Juniperus virginiana</i>)
2-16	Eastern redcedar (<i>Juniperus virginiana</i>)
2-17	Black tupelo (<i>Nyssa sylvatica</i>)
2-18	Red oak (<i>Quercus rubra</i>)
2-19	Siberian crabapple (<i>Malus baccata</i>)
2-20	Black locust (<i>Robinia pseudoacacia</i>)

ID#	Feature Name
2-21	Row of 18 Eastern redcedar (<i>Juniperus virginiana</i>)
2-22	Winter honeysuckle (<i>Lonicera frangrantissima</i>)
2-23	Flowering quince (<i>Chaenomeles speciosa</i>)
2-24	Ivy beds on slope
2-25	Ivy bed
2-26	Bench
2-27	Flagpole
2-28	Asian-style garden

Frederick Douglass National Historic Site
Preservation Maintenance Plan

Area 2 East Glen Inventory

Feature Name	I.D. #	Maintenance Recommendations	Origin/Note
White oak (<i>Quercus alba</i>)	2-1		1979
Flowering dogwood (<i>Cornus florida</i>)	2-2		1979
Flowering dogwood (<i>Cornus florida</i>)	2-3	Prune out dead wood, prune crossing branch in center of tree.	1979
White ash (<i>Fraxinus americana</i>)	2-4		1979
Red oak (<i>Quercus rubra</i>)	2-5	Correct "volcano mulching" by rak- ing excessive mulch away from the base of the tree if necessary.	1979
Red oak (<i>Quercus rubra</i>)	2-6		1979
White ash (<i>Fraxinus americana</i>)	2-7		1979
Flowering dogwood (<i>Cornus florida</i>)	2-8		1979
White ash (<i>Fraxinus americana</i>)	2-9		1979
Red oak (<i>Quercus rubra</i>)	2-10		1979
White ash (<i>Fraxinus americana</i>)	2-11		1979
Red oak (<i>Quercus rubra</i>)	2-12		
Red oak (<i>Quercus rubra</i>)	2-13	Correct "volcano mulching" by rak- ing excessive mulch away from the base of the tree if necessary.	1979
Eastern Redcedar (<i>Juniperus virginiana</i>)	2-14		1979

Frederick Douglass National Historic Site
Preservation Maintenance Plan

Area 2 East Glen Inventory

Feature Name	I.D. #	Maintenance Recommendations	Origin/Note
Eastern redcedar (<i>Juniperus virginiana</i>)	2-15	Clean out dead branches, remove ivy, poison ivy.	1979
Eastern redcedar (<i>Juniperus virginiana</i>)	2-16		1979
Black tupelo (<i>Nyssa sylvatica</i>)	2-17		
Red oak (<i>Quercus rubra</i>)	2-18	Prune out dead branches. Monitor irrigation.	1979
Siberian crabapple (<i>Malus baccata</i>)	2-19		
Locust (<i>Robinia pseudoacacia</i>)	2-20		
Row of Eastern redcedar (<i>Juniperus virginiana</i>)	2-21	Correct “volcano mulching” by raking excessive mulch away from the base of the trees. Re-plant trees in gap.	
Winter Honeysuckle (<i>Lonicera fragrantissima</i>)	2-22		
Common flowering quince (<i>Chaenomeles speciosa</i>)	2-23		1979
Ivy beds on slope	2-24		1979
Ivy bed	2-25		1979
Bench	2-26		
Flagpole	2-27		1982
Asian-style garden	2-28		2003

Area 3 Woodland

Historic Character of the Woodland

Historic correspondence includes romantic descriptions of strolling through the woodland at Cedar Hill. The exact location and extent of the woodland during Douglass' time on Cedar Hill however, is not known. During that time, the extent of the property included almost six additional acres located to the south/southwest of the present property boundary.

It is certain that over time the woodland has migrated north. Photographs confirm that Douglass planted a fruit orchard to the south of the growlery that extended to the upper slopes of the east glen, where lawn and woodland grow today.

A drive from Douglass' property east to property owned by the Pitts family may have passed through what today is the woodland. Such a feature no longer exists and whether it did in Douglass' time is uncertain.

The Woodland Today

The existence of the woodland in the modern landscape of the property is significant, despite the fact that its location and extent do not accurately reflect what existed during Douglass' time. The woodland that remains is a unique landscape feature within an urbanized residential neighborhood that now supports a high density of buildings and roads. It not only serves as a visual buffer between the built-up community and the Douglass property, but it is also a significant historic characteristic of the landscape.

The woodland today is a disturbed area, invaded by vines, especially English ivy. Poison ivy is also rampant in the woods.

Areas of Preservation Concern

As invasive plants establish themselves and continue to spread through the woodland, trees may be in jeopardy of being strangled and killed. The woodland also tends to be an area where trash collects. Regular efforts should be made to remove ivy from woodland trees and collect trash from this area.

Area 3 Woodland



At this time, no surveys of woodland vegetation have been undertaken.

More information on the woodland will be added to this document as it is made available.

Area 4 West Glen

Historic Character of the West Glen

The west glen was the historic location of a vegetable and flower garden, fruit trees and a rectangular plot of corn that was likely grown for animal feed. It was also the area upon which Douglass built a new driveway after changes were made to W. Street in 1892. The drive meandered up the southwest section of the property and terminated at the top of the slope. It was used until 1894, when Douglass built a drive that entered the property from the northwest, the same path that the current drive follows.

The slopes of the west glen were described by one visitor as being planted with strawberries, sweet potato vines and honeysuckle. Exactly where they grew is not known.

The West Glen Today

The west glen today is composed of lawn and trees. There is no evidence of historic garden plots. A single non-historic pear tree (identified as 4-9 on area map) can be found to the west of the turnaround. It is the only feature of the west glen that is at all evocative of the historic landscape since it is in or near the location of four historic specimens that are shown on the 1976 Landscape Restoration Plan along the northern edge of the historic garden plot.

Toward the front of the house, the HVAC vault and electrical boxes are located on the upper west slope, along the boundary of the west glen and the hilltop (Area 5).

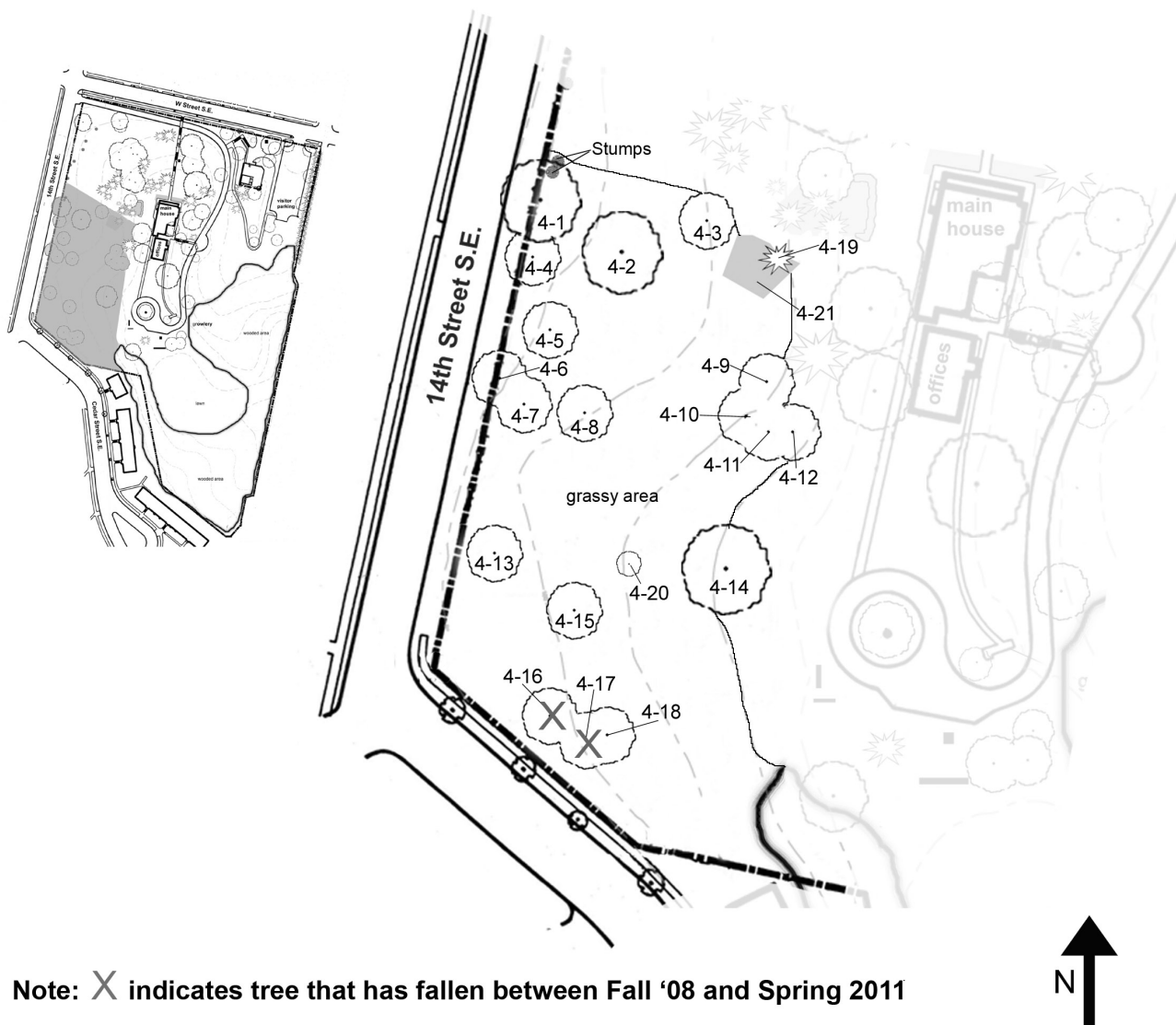
Areas of Preservation Concern

Areas of concern in the West Glen include the area around the HVAC vault and electrical boxes. Here, ivy and other invasive species threaten to overtake the shrubs that were planted to screen the utility boxes.

Also, erosion on the slopes of the West Glen threaten their integrity and should be monitored.

Many trees (notably the black locust in the southwestern portion of the West Glen) have been inundated with ivy and are candidates for removal. As stated in the General Recommendations for Trees section of this document, locust trees are not historic to Cedar Hill and should be replaced with more suitable historically appropriate specimens. such as oak, ash, tulip poplar, hickory, chestnut or black walnut.

Area 4 West Glen



Note: X indicates tree that has fallen between Fall '08 and Spring 2011

ID#	Feature Name	ID#	Feature Name
4-1	Silver maple (<i>Acer saccharinum</i>)	4-11	Tulip poplar (<i>Liriodendron tulipifera</i>)
4-2	White mulberry (<i>Morus alba</i>)	4-12	Tulip poplar (<i>Liriodendron tulipifera</i>)
4-3	Tulip poplar (<i>Liriodendron tulipifera</i>)	4-13	Black locust (<i>Robinia pseudoacacia</i>)
4-4	Black locust (<i>Robinia pseudoacacia</i>)	4-14	Scarlet oak (<i>Quercus coccinea</i>)
4-5	Black locust (<i>Robinia pseudoacacia</i>)	4-15	Pignut hickory (<i>Carya glabra</i>)
4-6	Tulip poplar (<i>Liriodendron tulipifera</i>)	4-16	~~Black locust (<i>Robinia pseudoacacia</i>)~~
4-7	Black cherry (<i>Prunus serotina</i>)	4-17	~~Black locust (<i>Robinia pseudoacacia</i>)~~
4-8	Black locust (<i>Robinia pseudoacacia</i>)	4-18	Black locust (<i>Robinia pseudoacacia</i>)
4-9	Common pear (<i>Pyrus communis</i>)	4-19	Eastern redcedar (<i>Juniperus virginiana</i>)
4-10	Tulip poplar (<i>Liriodendron tulipifera</i>)	4-20	Willow oak (<i>Quercus phellos</i>)
		4-21	Utility box bed

Frederick Douglass National Historic Site
Preservation Maintenance Plan

Area 4 West Glen Inventory

Feature Name	I.D. #	Maintenance Recommendations	Origin/Note
Silver maple (<i>Acer saccharinum</i>)	4-1	Monitor and remove ivy from trunk.	
White mulberry (<i>Morus alba</i>)	4-2		
Tulip poplar (<i>Liriodendron tulipifera</i>)	4-3		
Black locust (<i>Robinia pseudoacacia</i>)	4-4		
Black locust (<i>Robinia pseudoacacia</i>)	4-5	Remove suckers.	
Tulip poplar (<i>Liriodendron tulipifera</i>)	4-6		
Black cherry (<i>Prunus serotina</i>)	4-7	Remove ivy and suckers.	
Black locust (<i>Robinia pseudoacacia</i>)	4-8	Recommended for removal. Heavy ivy damage.	
Common pear (<i>Pyrus communis</i>)	4-9		
Tulip poplar (<i>Liriodendron tulipifera</i>)	4-10	Monitor and remove ivy from trunk.	
Tulip poplar (<i>Liriodendron tulipifera</i>)	4-11		
Tulip poplar (<i>Liriodendron tulipifera</i>)	4-12		
Black locust (<i>Robinia pseudoacacia</i>)	4-13		
Scarlet oak (<i>Quercus coccinea</i>)	4-14		

Area 4 West Glen Inventory

Feature Name	I.D. #	Maintenance Recommendations	Origin/Note
Pignut hickory (<i>Carya glabra</i>)	4-15		
Black locust (<i>Robinia pseudoacacia</i>)	4-16	Recommended for removal.	Fell between fall 08 and spring 2011
Black locust (<i>Robinia pseudoacacia</i>)	4-17	Recommended for removal.	See 4-16
Black locust (<i>Robinia pseudoacacia</i>)	4-18	Recommended for removal.	
Eastern redcedar (<i>Juniperus virginiana</i>)	4-19		
Willow oak (<i>Quercus phellos</i>)	4-20		2007
Utility box bed	4-21	Monitor and remove weeds and ivy.	

Area 5 Hilltop

Historic Character of the Hilltop

The Hilltop, or top terrace, surrounds the house. It was where Frederick Douglass and his family and friends gathered together outdoors. In the summer, there was outdoor seating in the form of chairs, benches and hammocks. Games and other activities took place on the shaded back lawn. Nearly all the outbuildings were located on the hilltop or along its edge. These included the barn, chicken coop and carriage house, the Growlery, the brick carriage house/stables, a corn crib, the privy, and another unidentified structure. There was also an underground cistern near the barn that collected rain water for the animal's use.

The driveway, though historically composed of different materials, followed nearly the same path that it does today. During the historic period it continued past the location where it now ends and ran along the west side of the house to a terminal turnaround at the west end of the front porch. A staircase on the east side of the house led guests from the house and down the terrace to the carriage turnaround located along the east side of the driveway.

Views from the hilltop extended across the Anacostia river and over Washington, D.C., to the hills on the western horizon. Behind and along the side of the house were views of the vegetable gardens, fruit trees and of the surrounding woods.

The Hilltop Today

The Hilltop is now composed of lawn, a scattering of trees, and flower beds. Brick and flagstone walkways lead visitors around the buildings. Most of the outbuildings of Frederick Douglass' day have been lost, but the Growlery, his outdoor study, was reconstructed in 1981. A caretaker's cottage, now NPS offices, covers what was part of the Douglasses back lawn. The cedars that crowned the hilltop, and for which Douglass named the property, had nearly all disappeared by 1960, and 18 new ones were planted in 1977. A few replacements have been planted since then. The grape arbor and some of the large shade trees that dotted the back lawn in Douglass' day are gone. A curbed driveway turnaround that accommodates a couple of parked vehicles is located near the Growlery. Beyond that, to the south of the paved drive is a memorial wall and fire stand-pipe and hydrant. Structures housing the utilities on the west slope are surrounded by massed plantings that are intended to conceal them from view. Ivy covers the steep slopes that lead down to the terraces below the hilltop.

Views from the front of the house towards the Anacostia river and the city are mostly intact. However, from the back of the house, the character of the space and the view from it is quite changed due to construction of the caretaker's cottage, buildup of the surrounding residential neighborhood and the reduced size of the woodland.

Area 5 Hilltop

Areas of Preservation Concern

Trees

The following trees located on the Hilltop are notable either for their age and importance or were planted in connection with the 1976 grounds restoration plan.

Cedars (*Juniperus virginiana*): The cedars were an important character-defining feature in Douglass' time, but none remained by the 1960s. The existing cedars planted in 1977, and in the more recent past are generally in good condition. Cedars can live a long time—a hundred years or more. They will take on a different form and character as they age and will eventually mature into the form that they took during the historic period.

Maintenance Procedures: Ivy must be prevented from growing into any of the cedar trees. Inspect trees periodically for mites and twig blights.

Oaks planted in 1977: The red oak (*Quercus rubra*, 5-38) within the driveway terminus, and a willow oak (*Quercus phellos*, 5-9) on the east side of the house were planted as part of the 1976 grounds restoration plan.

Maintenance Procedures: Because these are among the youngest trees on site they have the potential to live longer than many of the others and should be regularly inspected and maintained as necessary.

Southern magnolia (*Magnolia grandiflora* 5-11): The Southern magnolia adjacent to the house is considered historic.

Maintenance Procedures: The present tree has been treated for a number of conditions, and was severely pruned in 1998. It should not be pruned again, but a fertilizing program should be followed to see if it can regain some vigor. During times of drought, moisture levels should be monitored and adjusted if needed. Lightning rods should be installed in the tree to protect it from lightning strikes.

White oak (*Quercus alba* 5-5): *The white oak on the northeast side of the house (now just a stump) was the oldest tree on the property and may be the only one that actually dated to Frederick Douglass' time.*

Maintenance Procedures: *Acorns that were collected are propagating in a greenhouse. When these mature, a replacement should be planted where the old one grew.*

Area 5 Hilltop

Shrubs and Herbaceous Plantings in the Vicinity of the Growlery

An enjoyment of flowers and fragrance was part of Frederick Douglass' attachment to the natural world. His Growlery was a retreat where he could isolate himself and his thoughts from his family and the public in a natural setting. Historically, there were fragrant shrubs and vines growing around the Growlery. The shrubs today may not be the same kinds as those in his lifetime, but until there is better information, these should be treated as if they were historic and cared for in ways that enhance the characteristics valued in the late 19th century. In Frederick Douglass' time, shrubbery that was fountain-like or that had a weeping form was much admired.

Carolina allspice, also called common sweetshrub (*Calycanthus floridus*): *Calycanthus* may be a shrub that historically grew in this location. Although it is not referred to specifically, there is mention of "strawberry bush" in the historic records, a name often used for *calycanthus*.

Maintenance Procedures: Though there are several individual shrubs here, they should be treated as a mass and allowed to grow together. Its branches should be allowed to find their own shape gracefully. It should be pruned only to remove dead wood. It should never be sheared.

Flowering quince (*Chaenomeles speciosa*): It is not known whether this was grown here historically, but it was popularly used during the historic period. Flowering quince has a variety of growth habits depending on the type. The variety planted produces salmon pink flowers.

Maintenance Procedures: Never shear this shrub. Prune only to remove dead wood and to direct growth, preferably either while in bud for flowering branches for the house or just after bloom.

Weigela (*Weigela florida*): Also referred to as *Weigela rosea*. This is a long-favored garden shrub. It is not known whether there was a weigela on the property during the Douglass years, but it was popularly used during the historic period.

Maintenance Procedures: Weigelas become rangy unless pruned carefully. After flowering, cut back branches that have bloomed to unflowered side branches. Leave only 1 or 2 of these for each stem. Cut some of oldest stems to ground. Thin new suckers to a few of the most vigorous. Needs moderate summer watering. Keep invasive vines off the shrub.

Peonies and Rose Bushes: Peonies and roses were popular plants of the 19th century. There is documentation that Frederick Douglass had both, probably in some quantity. Right now there is only one of each, although more were planted as part of the 1976 grounds restoration plan.

Maintenance Procedures: The rose bush needs all dead wood removed and yearly pruning at the end of the dormant season when new buds appear. Healthy wood and approximately 5 to 6 sturdy canes should be retained. The rose bush needs to be watered when there isn't sufficient rain (keeping water off the leaves); and it should be fertilized regularly during the spring season beginning with the first signs of growth.

The peony should be fertilized in the fall and again in the spring. In the fall, top-dress the peony with a fertile loam to provide spring nutrients. A light fertilizing in the spring will also keep the plants healthy. It should be watered regularly during late spring and summer. After bloom, dead bloom stems should be cut off to the first leaf. Continue to water and cut off foliage stems in the fall after

Area 5 Hilltop

the leaves turn brown. A light mulch of leaf mold or compost can be used during the winter.

Winter jasmine (*Jasminum nudiflorum*): This is one of the least fragrant jasmines and it might have been a shrub that was planted on the property in Frederick Douglass' day. There are several of them behind the Growlery and they are in good shape.

Maintenance Procedures: Prune dead wood in spring after flowering.

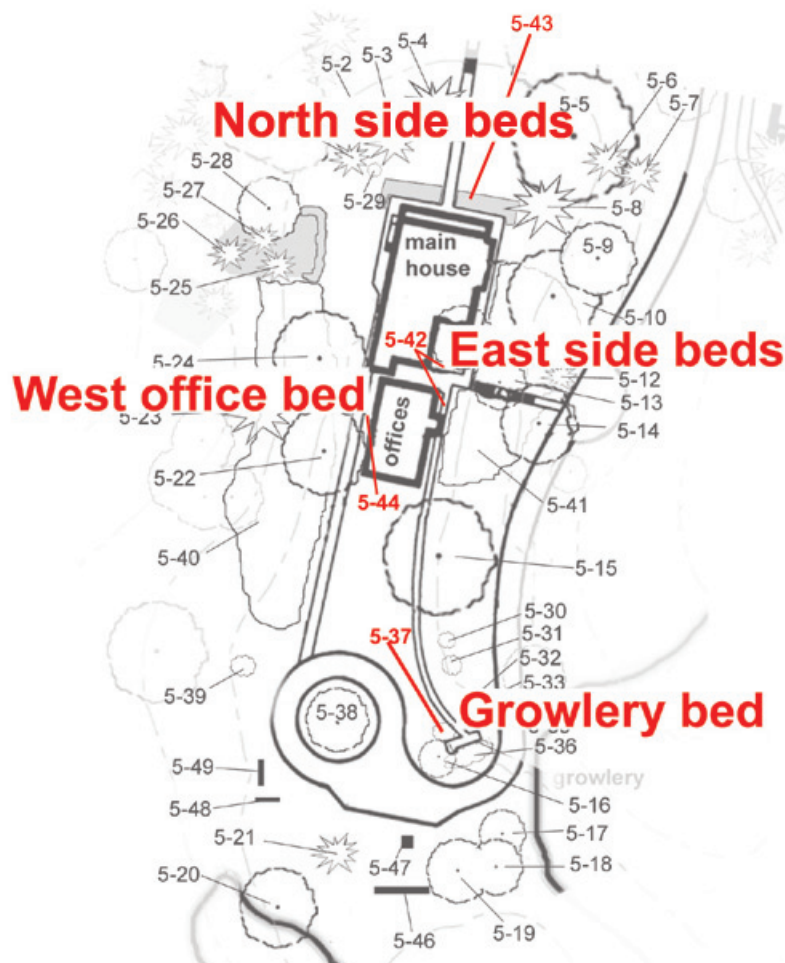
Winter honeysuckle (*Lonicera fragrantissima*): A fragrant shrub in keeping with the theme of the area. Whether this plant was used historically on the site or even during the period is not known.

Maintenance Procedures: Does not need much attention; just prune out dead wood.

Daylilies (*Hemerocallis*): These plants can be found in front of the Growlery. They are not known to have grown in this location during the historic period. No mention of the plant is made in any of the historic correspondence.

Maintenance Procedures: Daylilies generally do not require any maintenance other than the cutting back of the dead bloom stalks and the removal of dead leaves during the growing season. The daylily foliage will stay green throughout the growing season and should be cut down when it becomes unsightly and brown.

Planting Beds



Area 5 Hilltop

Growlery bed (feature 5-37): Currently, daylillies and burdock occupy this space. Neither are historic. Over time, this bed has expanded and has become larger than its historic configuration. To correct this, lawn should be allowed to grow in to the edge of the growlery on its northwest side and a large flowering shrub with a similar character to the specimen shown in the a historic photograph should be planted on the northeast side of the growlery. In keeping with the character of the historic planting, several plants, including lilac, mock orange and weigelia could be considered. Regional historical landscape architects should come up with a suitable planting.



In the 1890s a large shrub was growing on the northeast side of the growlery. (NCR CLP files).

West office bed (feature 5-44): The small bedding strip on the west side of the office (the old caretaker's house) is currently planted with *liriope spicata*. This planting is thriving and should be preserved and maintained in good condition.

East side beds (features 5-42): One of the east side beds is located at the northeast corner of the office. Currently the bed is filled with white rock. It is recommended that the white rock be removed and *liriope spicata* planted instead. The planting bed should be prepared to a depth of at least 12".

The other east side bed is located on the southeast corner of the house. It is edged on its east and north sides by a bed of white rock bounded by landscape edging and another edged bed with a few hostas. Beyond that, there is a lawn which takes up the majority of the bed. The white rock, while it may prevent dirt from splashing up on to the house, is not historic and does not complement the color of the house. The hostas are in fair condition, and due to the limbing up of the magnolia, do not receive enough shade to justify their being planted in that location. They suffer from sunburn and overall poor health.

It is recommended that the metal strips and white rocks be removed from this area, *liriope spicata* planted in the bed next to the house, and a lawn planted in the rest of this area. In order to protect the magnolia from potential disturbance caused by planting and fertilizing grass, the tree would benefit from a light layer of mulch around its base. The grass should be planted no closer than 2-3 feet from the tree trunk.

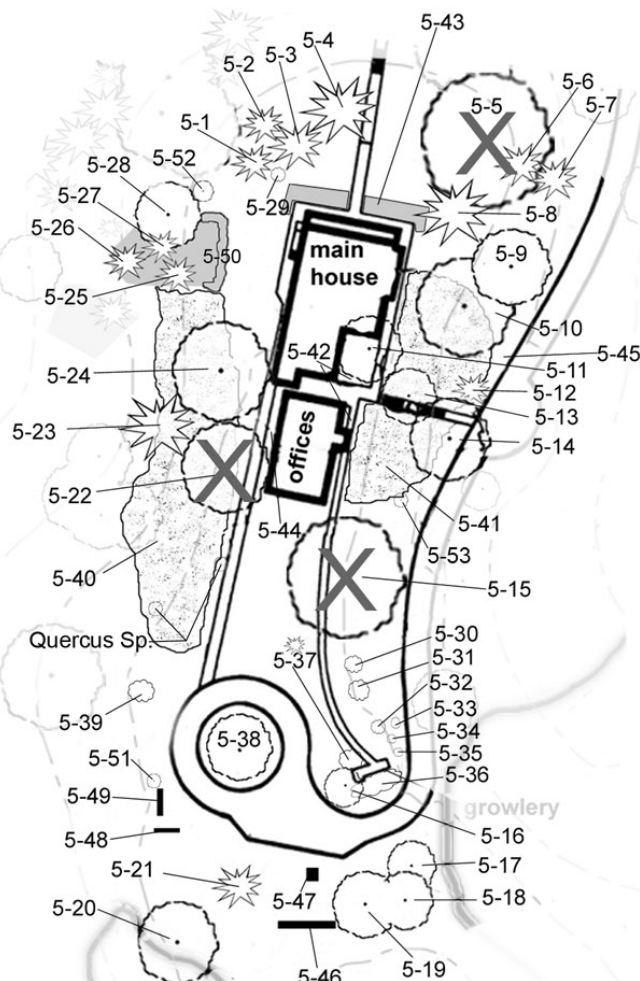
North side bed (feature 5-43) The bed on the north side wraps around the front of the house and is edged with metal, which is not a historic feature and should be removed. The bed should be reduced to the size recommended in the 1976 Landscape Restoration Plan.

Area 5 Hilltop



ID# Feature Name

- 5-1 Eastern redcedar (*Juniperus virginiana*)
- 5-2 Eastern redcedar (*Juniperus virginiana*)
- 5-3 Eastern redcedar (*Juniperus virginiana*)
- 5-4 Eastern redcedar (*Juniperus virginiana*)
- 5-5 White oak (*Quercus alba*)
- 5-6 Eastern redcedar (*Juniperus virginiana*)
- 5-7 Eastern redcedar (*Juniperus virginiana*)
- 5-8 Eastern redcedar (*Juniperus virginiana*)
- 5-9 Willow oak (*Quercus phellos*)
- 5-10 Southern magnolia (*Magnolia grandiflora*)
- 5-11 Southern magnolia (*Magnolia grandiflora*)
- 5-12 Eastern redcedar (*Juniperus virginiana*)
- 5-13 Hackberry (*Celtis occidentalis*)
- 5-14 Black walnut (*Juglans nigra*)
- 5-15 White ash (*Fraxinus americana*)
- 5-16 Siberian crabapple (*Malus baccata*)
- 5-17 Pear (*Pyrus* sp.)
- 5-18 White ash (*Fraxinus americana*)
- 5-19 Black locust (*Robinia pseudoacacia*)
- 5-20 Black walnut (*Juglans nigra*)
- 5-21 Eastern redcedar (*Juniperus virginiana*)
- 5-22 White ash (*Fraxinus americana*)
- 5-23 Eastern redcedar (*Juniperus virginiana*)
- 5-24 Hackberry (*Celtis occidentalis*)
- 5-25 Eastern redcedar (*Juniperus virginiana*)
- 5-26 Eastern redcedar (*Juniperus virginiana*)
- 5-27 Eastern redcedar (*Juniperus virginiana*)
- 5-28 Pignut hickory (*Carya glabra*)
- 5-29 Privet (*Ligustrum* sp.)
- 5-30 Sweet Shrub (*Calycanthus floridus*) (3ea.)
- 5-31 Winter honeysuckle (*Lonicera fragrantissima*)
- 5-32 Rose (*Rosa* sp.)
- 5-33 Peony (*Paeonia*)
- 5-34 Common flowering quince (*Chaenomeles speciosa*)
- 5-35 Common flowering quince (*Chaenomeles speciosa*)



Note: X indicates tree that has fallen
between Fall '08 and Spring 2011

New plants are noted on map.

ID# Feature Name

- 5-36 Winter jasmine (*Jasminum nudiflorum*)/
Mockorange (*Philadelphus coronarius*)
- 5-37 Daylily (*Hemerocallis*)/ Burdock (*Arctium*)
- 5-38 Red oak (*Quercus rubra*)
- 5-39 Weigela (*Weigela florida*)
- 5-40 West side ivy bed
- 5-41 East side ivy bed
- 5-42 East side beds
- 5-43 North side planting beds
- 5-44 West office planting bed
- 5-45 Bench
- 5-46 Memorial Wall
- 5-47 Standpipe
- 5-48 Carriage house ruins
- 5-49 Chicken coop ruins
- 5-50 Utility structure plantings
- 5-51 Tulip poplar (*Liriodendron tulipifera*)
- 5-52 Willow oak (*Quercus phellos*)
- 5-53 Tulip poplar (*Liriodendron tulipifera*)

Area 5 Hilltop Inventory

Feature Name	I.D. #	Maintenance Recommendations	Origin/Note
Eastern redcedar (<i>Juniperus virginiana</i>)	5-1	Correct "volcano mulching" by raking excessive mulch away from the base of the trees.	1977
Eastern redcedar (<i>Juniperus virginiana</i>)	5-2		1977
Eastern redcedar (<i>Juniperus virginiana</i>)	5-3	Correct "volcano mulching" by raking excessive mulch away from the base of the trees.	1977
Eastern redcedar (<i>Juniperus virginiana</i>)	5-4		1977
White oak (<i>Quercus alba</i>)	5-5		re-plant from acorns
Eastern redcedar (<i>Juniperus virginiana</i>)	5-6		1977
Eastern redcedar (<i>Juniperus virginiana</i>)	5-7		1977
Eastern redcedar (<i>Juniperus virginiana</i>)	5-8		1977
Willow oak (<i>Quercus phellos</i>)	5-9		1977
Southern magnolia (<i>Magnolia grandiflora</i>)	5-10		
Southern magnolia (<i>Magnolia grandiflora</i>)	5-11	Install lightning rods. Do not prune. Check and water in drought period.	
Eastern redcedar (<i>Juniperus virginiana</i>)	5-12		
Hackberry (<i>Celtis occidentalis</i>)	5-13		
Black walnut (<i>Juglans nigra</i>)	5-14		

Area 5 Hilltop Inventory

Feature Name	I.D. #	Maintenance Recommendations	Origin/Note
White ash (<i>Fraxinus americana</i>)	5-15		No longer standing (2011)
Siberian crabapple (<i>Malus baccata</i>)	5-16	Prune and remove cross-branching to improve air circulation.	
Pear (<i>Pyrus</i> sp)	5-17		
White ash (<i>Fraxinus americana</i>)	5-18		
Black locust (<i>Robinia pseudoacacia</i>)	5-19		
Black walnut (<i>Juglans nigra</i>)	5-20		
Eastern redcedar (<i>Juniperus virginiana</i>)	5-21		
White ash (<i>Fraxinus americana</i>)	5-22		No longer standing (2011)
Eastern redcedar (<i>Juniperus virginiana</i>)	5-23		
Hackberry (<i>Celtis occidentalis</i>)	5-24		
Eastern redcedar (<i>Juniperus virginiana</i>)	5-25		
Eastern redcedar (<i>Juniperus virginiana</i>)	5-26		
Eastern redcedar (<i>Juniperus virginiana</i>)	5-27		

Frederick Douglass National Historic Site
Preservation Maintenance Plan

Area 5 Hilltop inventory

Feature Name	I.D. #	Maintenance Recommendations	Origin
Pignut hickory (<i>Carya glabra</i>)	5-28		
Privet (<i>Ligustrum</i> sp.)	5-29	Remove specimen.	
Sweet Shrub (3ea.) (<i>Calycanthus floridus</i>)	5-30	Remove dead wood. Do not shear.	1978*
Winter honeysuckle (<i>Lonicera fragrantissima</i>)	5-31	Prune after flowering. Blooms on old wood.	
Rose (<i>Rosa</i> sp.)	5-32	Remove suckers, prune back in winter.	1978*
Peony (<i>Paeonia</i>)	5-33		
Common flowering quince (<i>Chaenomeles speciosa</i>)	5-34		1978*
Common flowering quince (<i>Chaenomeles speciosa</i>)	5-35		1978*
Winter jasmine (<i>Jasminum nudiflorum</i>) Mock Orange (<i>Philadelphus coronarius</i>)	5-36		1978*
Daylily (<i>Hemerocallis</i>)/ Burdock (<i>Arctium</i>)	5-37	Burdock is a weed and should be removed.	1978*
Red oak (<i>Quercus rubra</i>)	5-38		1977
Weigela (<i>Weigela florida</i>)	5-39		1978*
	5-40	Monitor and remove weeds. Do not shear.	
West side ivy bed	5-41	Monitor and remove weeds. Do not shear.	
East side ivy bed			

*Plants were included in 1978 plan, current specimens may be replacements.

Area 5 Hilltop Inventory

Feature Name	I.D. #	Maintenance Recommendations	Origin
East side beds	5-42	Remove white rocks and metal strips.	
North side planting beds	5-43	Remove metal strips and decrease size to match 1976 plan recommendations.	
West office bed	5-44	Maintain lirioppe in good condition.	
Bench	5-45		
Memorial Wall	5-46		1930
Standpipe	5-47		
Carriage house ruins	5-48		
Chicken coop ruins	5-49		
Utility structure plantings	5-50	Remove weeds and ivy.	
Tulip poplar (<i>Liriodendron tulipifera</i>)	5-51		2007
Willow oak (<i>Quercus phellos</i>)	5-52		2007
Tulip poplar (<i>Liriodendron tulipifera</i>)	5-53		2007

General Recommendations: Trees

Consideration of tree varieties found on the property during Douglass' lifetime is critical when tree replacement opportunities arise. Often, NPS cultural resource standards specify "replacement in kind" as a rule of thumb, but that is not appropriate here. For example, there are many locusts and other trees that have seeded themselves over the years and should not be replaced. Although some existed during the historic period, most did not. Instead, the Landscape Restoration Plan of 1976, the CLI and this document offer guidance for current vegetation replacement plans.

Historically, the site contained cedars and large deciduous trees such as oaks, ash, tulip poplar, crabapple, hickory, locust, chestnut and black walnut. Locust, chestnut and black walnut trees are not listed in the plan of 1976, but are known to have existed on the property since they were described by visitors to the home during the historic period. The property also contained a variety of fruit trees.

Inventories of existing conditions will indicate which historic species are missing or in short supply. Native soils and sun exposure should be considered in determining type and location of new trees. NCR planting specification should be followed to help ensure survival of new plantings.

Generally, existing trees require little pruning other than removal of dead or hazardous branches.

Ivy

Ivy growth into trees has become an issue due to the planting of English ivy as a slope stabilizer. Over time, ivy will strangle a tree, so it is important to keep ivy from creeping up into trees. Ivy should be cut and pulled out of the ground and stripped off of the trees. Power tools are never appropriate tools for ivy removal in trees. For safety don't pull ivy out of tree above you. It may bring down dead branches or a hornet or wasp nest. Wear proper clothing, long sleeves, long pants, gloves and sturdy shoes even in the summer.

Mulching Trees

Avoid and correct "volcano" style mulching when planting or amending trees. Mulch is used to reduce water loss, suppress weeds and improve soils. It also provides a well-tended appearance in the landscape. Trees should be treated with a 2-4" ring of mulch. Trees should be planted with soil to the same height as which it grew at the nursery, and mulch should be feathered to zero at the tree trunk. Improper application of mulch can lead to excessive moisture in the root zone and on the tree trunk. Also, compaction of mulch could prevent the penetration of air and water could lead to moisture, pest and disease problems.

General Recommendations: Shrubs, Perennials and Groundcovers

Since there are a limited number of shrubs and large perennials on the property, it is important to keep them clear of weedy or invasive plant material. In most cases, this can be done by hand.

Generally, Spring-flowering shrubs should be pruned after they bloom, and summer-blooming shrubs should be pruned in winter before their spring growth begins (see individual plant feature data for more specific information).

Shrubs at the Frederick Douglass site that should be pruned after bloom are: mock orange, flowering quince, weigela, calycanthus, winter jasmine, winter honeysuckle and crepe myrtle (crape myrtle also benefits from late winter pruning, but is not a plant which generally requires a lot of pruning). Roses should be pruned in late winter.

While most shrubs will respond best to pruning immediately after their bloom cycle, dead wood and conflicting branches can be taken off shrubs or trees at almost any time of year. However it is never a good decision to disturb plants during times of extreme heat or cold, as pruning could place stress on plant specimens.

Perennials should be pruned to remove dead or dying foliage and spent blooms before they go to seed. Dead foliage should be removed in the late winter or early spring as new growth starts to appear.

General Recommendations: Lawns and Slopes

Mowing

Increasing the mowing height and increasing the length of time between mowing in areas that are not accessed regularly by visitors would help slow stormwater flow down the slopes of the site and prevent erosion and bare patches that occur where the blades scrape the ground.

Mowing lawns with equipment used during Douglass' era would also reduce problems arising from modern gas-powered mowers.

Meadows

Historically, native grasses and forbs grew in areas now maintained as lawns. In Douglass' time, vegetation was partially maintained by grazing livestock. From a historic, ecological and economic perspective, it may be practical to maintain meadows in a few carefully chosen areas on the site. These meadows would be small areas of native grasses and forbs, and would have mown edges for a neat appearance. Meadow patches would increase the infiltration of stormwater, decrease costs by reducing the need for regular maintenance of lawns, provide habitat for native species, reduce the amount of chemical fertilizer used on site, and provide an opportunity for interpretation of the historic landscape and local ecology.

Areas that experience a significant amount of visitor interaction such as the front and back of the house, and the grass adjacent to the parking lot would be maintained with regular lawns mown on a regular schedule to ensure that views to the house from W St. S.E. are unobstructed, and to avoid a public perception of neglect of the site.

Areas such as the large lawn in the east glen and along the slopes on the west glen as well as the area between the woodland and the memorial wall on the south end of the hilltop area are good candidates for gradual meadow implementation (see diagram on following page). They are infrequently used by visitors and they are in areas of the property that are not highly visible from outside of the site.

Meadows on the site could be implemented in a two-phase program.

Phase 1: Reduce mowing of meadow areas to twice per year, once in mid-winter and once in late summer. Examine the remaining vegetation, and if it is an appropriate type, continue twice-yearly mowing program.

Phase 2: If resources are available, establish native meadows using seeds or plugs.

Another consideration of meadow management would be leaf removal in the fall. In areas which are highly visible to the public, such as in the east and west glens, leaves should be removed. On the hilltop, between the memorial wall and the woodland, leaves could be removed but could be left to decompose and enrich the soil.

General Recommendations: Lawns and Slopes (cont.)

Once a program to gradually implement meadows on to the site is approved, a step-by-step program will be drafted to guide maintenance managers through the process. This would include a timetable of implementation as well as an appropriate plant palette for the slopes and differing light and moisture conditions on site.

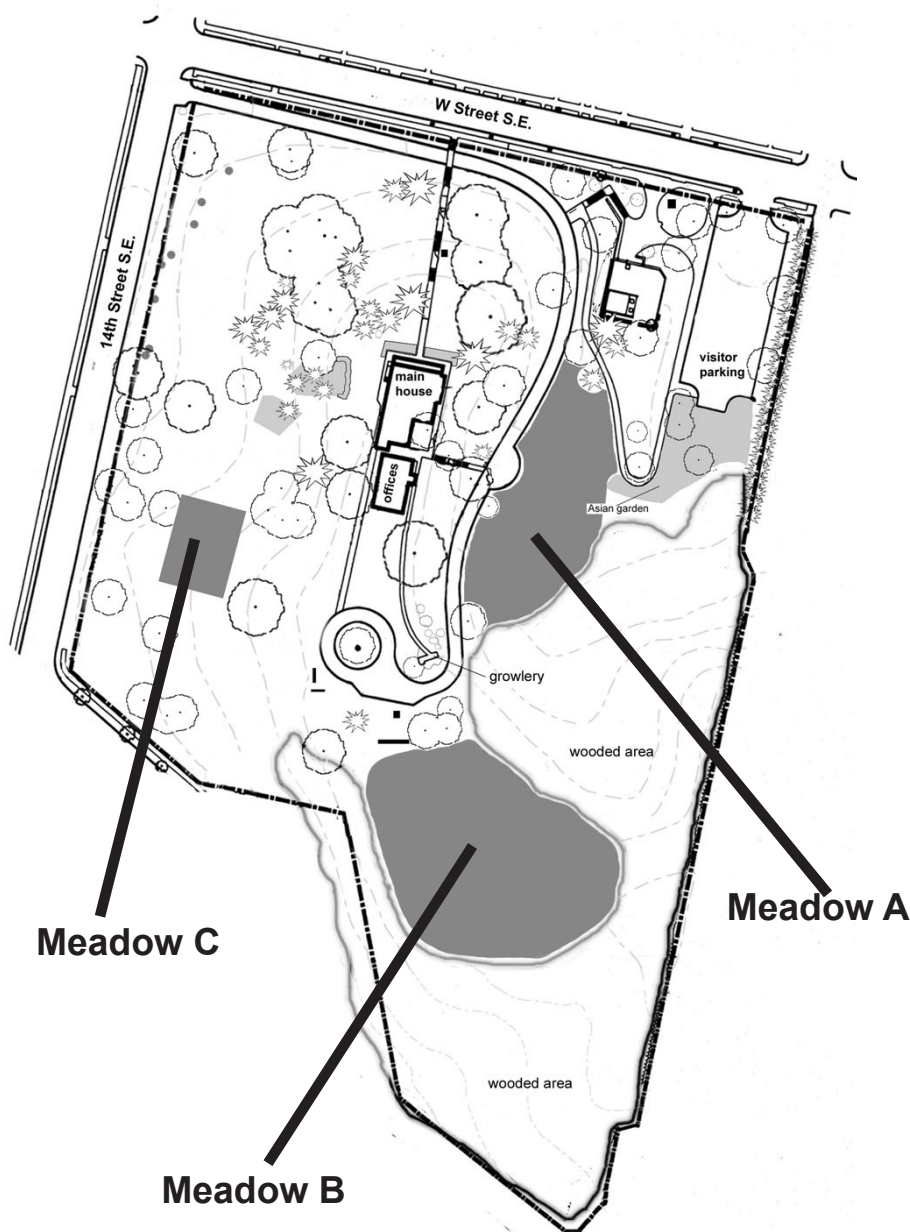
Discussions between site managers, resource managers, historical landscape architects and maintenance staff have led to the creation of this diagram illustrating the areas of the site best suited for meadow implementation.

Meadow A is envisioned as a grassy area with a mown edge.

Meadow B would be placed in the high point of the property. It would absorb stormwater and reduce the amount of runoff to the site's lower elevations.

Meadow C would not only serve the regular ecological and interpretive benefits of a meadow, it would also represent the outline the location of a garden that existed during Douglass's time at Cedar Hill.

It is recommended that all meadows would have mown edges along woods, walks or drives, for a neat appearance, and that meadows A and B would assume organic shapes rather than having straight, even edges.



General Recommendations: Circulation

Driveway

Essentially, the driveway follows the same route as it did when Douglass re-routed it in response to grade changes on Jefferson St. in 1894 (modern W St.). The parking area behind the house and the rotary terminus are not part of the historic layout. They were installed in the early 1980s under the guidelines of the Landscape Restoration Plan of 1976. The materials of the driveway, asphalt with brick edging, are not historic. In Frederick Douglass' day, the driveway was composed of a number of materials: small pebbles, ash, coal and oyster shell. It may also have been edged in stone, and it was probably more narrow than the present drive.

The carriage turnaround on the east side of the house at the base of the side steps is a historic feature. During the historic period, the driveway along the east glen was bounded by a post and three-rail fence. Its replacement was recommended in the 1976 Landscape Restoration Plan. That report also recommended gravel rather than asphalt for the driveway. Gravel-topped asphalt had been included in a 1980s contract, but an acceptable sample could not be found, so plain asphalt was applied.

Maintenance Procedures: In 2005, milling and paving of the entire length of drive was completed along with the replacement of broken brick curbing. Some of the bricks were cut to allow water to drain off of the road. These new drainage patterns have led to erosion problems. Future replacement should consider use of a stable material that simulates a gravel surface. Parking vehicles in the carriage turnaround detracts from the historic scene.

The Front Walk and Stairs

The brick walk and steps were reconstructed in the 1970s and seem to be in good condition. They are made of brick and lined by wooden railings on either side of the staircase. There is little documentation about the composition of the walkway, stairs and handrail in Frederick Douglass' day. According to the 1968 Historic Grounds Report, it is likely that the stairs were constructed of brick and lined with a light wooden handrail.

Maintenance Procedures: The main problem here seems to be the effects of runoff. There are cracks in the bricks and some of the soil along the edges of the stairs has eroded. The eroded ground adjacent to the steps is continually sodded as a temporary measure to correct the problem. This condition should be monitored annually until a permanent solution is found. The stairs and handrail should be maintained and preserved in good condition.

The Steps on East Side of House

The steps on the east side of the house remain in their historic location. They lead from the house to the carriage turnaround along the driveway. The composition of the historic steps is unknown. According to the 1968 Historic Grounds Report, they were likely composed of brick, paved over with concrete and lined with a wooden hand rail. This theory concurs with a historic photograph in which the east-side stairs appear to be composed of a light-colored material. In the photo, the stairs are edged with handrails on either side. Currently the stairs are constructed out of bricks with black steel rails on either side.

General Recommendations: Circulation (cont.)

Maintenance Procedures: Preserve and maintain staircase and railing in good condition.

Brick Walks on the Hilltop

The brick walks along either side of the house derive from the historic landscape. The bricks are replacements of the originals. There are two brick walks behind the house. One leads from the old caretaker's cottage to the driveway turnaround. It is a non-historic extension of the historic brick walk on the west side of the home installed by Douglass. The other brick path leads from the east side of the house to connect with the flagstone path to the Growlery; it was added to accommodate current use of the property.

Maintenance Procedures: Preserve and maintain walks in good condition.

According to the 1976 plan, existing walkways were "...basically in alignment with those which existed in 1895, with the exception of the walk to the west of the caretaker's house (Reeves: 4)."

Flagstone Path to the Growlery

Findings from archeology, and reports from the 1968 Historic Grounds Report reveal that a brick walkway underlies the flagstone and may date to around 1880. A flagstone path was first installed in the 1930s and reconstructed around 1980. Mortar was placed between the stones in 1999. Flagstones that existed during the historic period were probably not held together with mortar. When the time comes to replace the path, further research into this matter would be advisable.

Maintenance Procedures: Preserve and maintain flagstone path in good condition.

General Recommendations: Structural Features

Outbuilding Ruins

Foundation walls for the carriage house/stables and the chicken house are located on the west side of the driveway to the southwest of the house. In the past, mowing and grade changes have dislodged bricks and mortar from these ruins. These foundations should be preserved and protected to enable their interpretation as some of the few remaining elements of the historic landscape from Douglass' time.

***Note: Carriage house ruins were visible in 2008. In 2011 they are no longer visible.**

Maintenance Procedures: Mowing equipment should be kept away from these ruins. The grass around them should be hand clipped and cut less frequently than the lawn. Another possibility for maintaining lawn near the outbuilding ruins is a push mower. Stabilize ruins to prevent stones from being dislodged. Before treating the structural features, consult the regional Historical Architect.

Memorial Wall

The brick memorial wall south of the rotary terminus of the driveway was installed in the 1930s. It is not an element of the historic landscape, but it is a feature which should be protected. It is in memory of Frederick Douglass, dedicated by D.C. African-American school children. It is missing its dedication plaque.

Maintenance Procedures: As with the outbuilding ruins, the memorial wall needs to be preserved and protected. Mowing equipment should be kept away from the wall. The grass around it should be hand clipped and cut less frequently than the lawn. Before any cleaning of structural features, consult the regional Architectural Conservator and/or Historical Architect for proper treatment methods.

Sundial and Pedestal

The sundial and pedestal are located on the east side of the staircase on the north side of the house. It was donated by the Married Women's Culture Club of Pittsburgh in 1922. Although this feature is not an element of the historic landscape, it should be protected.

Maintenance Procedures: As with the outbuilding ruins and memorial wall, the sundial and pedestal need to be preserved and protected. Mowing equipment should be kept away from the sundial. The grass around them should be hand clipped and cut less frequently than the lawn.

Brick Entrance Piers and Fencing

The fence was added in the 1980s. The piers existed before the 1976 plan.

Maintenance Procedures: Protect and maintain fence and entrance piers in good condition.

General Recommendations: Planting Beds and Borders

Planting beds and borders are the “non-turf” areas found along the foundations of the structures on-site.

Locations:

Planting bed in front of the Growlery (Hilltop 5-37)
Planting bed on the west side of the office (Hilltop 5-44)
Planting bed on north side of main house (Hilltop 5-43)
Planting bed on east side of the main house (Hilltop 5-42)
Planting bed on east side of office (Hilltop 5-42)
Ivy beds (1-27, 2-24, 2-25, 5-40, 5-41)

General Maintenance Guidelines:

- Monitor and remove weeds on at least a monthly basis with the intent of zero tolerance for annual, biennial and perennial weeds.
- Monitor planting beds for pests and diseases on a monthly basis.
- Monitor soil moisture on a weekly basis during the growing season.
- Water deeply and less frequently to encourage deep rooting.
- Prune shrubs and deadhead spent flowers.
 - Remove spent flowers from flowering shrubs immediately after bloom to redirect plant growth into healthy foliage and next year’s flower buds.
 - Prune shrubs according to plant feature data sheets.
- Remove fallen tree and shrub leaves from beds and borders.
- Apply fertilizer to beds in spring and fall.

Specific Maintenance Guidelines:

Planting bed in front of the Growlery (Hilltop 5-37)

Existing Conditions: The front of the Growlery is currently planted with daylilies, and contains burdock, a weed. The planting bed has expanded over time to a size that is incompatible with its historic conditions.

- Eliminate perennial bed on northwest side of growlery. Allow grass to grow to edge of structure.
- Plant large fragrant flowering shrub on northeast side of growlery.

Planting bed on the west side of the office (Hilltop 5-44)

Existing Conditions: Currently planted with *Liriope spicata*.

- Preserve and maintain planting of *Liriope spicata*.
- Shear *Liriope* in the late winter or early spring before new growth appears to eliminate previous years’ unsightly foliage.

General Recommendations: Planting Beds and Borders (cont.)

Planting bed on north (front) side of main house (Hilltop 5-43)

Existing Conditions: The beds on the north side of the house are surrounded by non-historic steel edging. Together, the beds add up to approximately 225 square feet of planting space. There is no historic record of these beds. Rather it was reported that during the historic period peonies lined the edge of the walkway leading from north staircase to the front porch of the home. Presently, seasonal annuals and bulbs are added to this bed and changed with the seasons.

- Remove steel edging defining existing beds.
- Reduce size of planting beds, and replant in accordance with specifications in 1976 plan (DWG # 872/80,001, can be found in supplemental information section of Preservation Maintenance Plan).

Planting beds (2) on east side of the main house (Hilltop 5-42)

Northeast corner of park office

Existing Conditions: One of the east side beds is at the northeast corner of the office. Currently it is filled with white rock.

- Plant bed on northeast corner of park office with lirioppe (*Liriope spicata*) if ground is not too compacted. If ground is too hard to plant, remove rocks and prepare soil to a depth of at least 12" before planting.
- Shear lirioppe in the spring before new growth appears to eliminate previous years unsightly foliage.

Southeast corner of house

Existing Conditions: The other east side bed is located on the southeast corner of the house. It is bordered on the west side by the house and edged on its east and north sides by a bed of white rock bounded by landscape edging and another planting bed currently planted with a few hostas, and retained by another strip of steel edging. Beyond that, there is a lawn that takes up the majority of the bed.

- Remove all steel edging
- Plant lirioppe (*Liriope spicata*) next to the house.
- Shear lirioppe (*Liriope spicata*) in the spring before new growth appears to eliminate previous years unsightly foliage.
- Plant remainder of area with grass.
- Mulch area around base of magnolia tree to limit disturbance during lawn planting.
- Avoid disturbing roots of magnolia grandiflora during seeding processes or when fertilizing grass.

Ivy Beds (1-27, 2-24, 2-25, 5-40, 5-41)

- Maintain ivy beds with ivy until suitable substitute is found.
- Keep ivy beds weed-free by hand-weeding or approved herbicide applications.
- Fill in bare spots in ivy beds with new plants or with cuttings from existing ivy plants.
- Prevent ivy from growing up the trunks of trees in beds.

General Recommendations: Shrubbery Around HVAC and Electrical Boxes

These are not historic, but planted to conceal mechanical structures. The species were selected as sympathetic to the historic period. Problems in this area, as in other shrub plantings, include the invasion by woody self-seeding plants that are very difficult to remove.

Maintenance Procedures: Weedy invasives should be removed by hand as soon as they are apparant. Those which have become established need to be treated by a regimen of herbicide applications until they are sufficiently weakened to enable removal.

Feature Data: Silver maple (*Acer saccharinum*)

Common name: Silver maple

Botanical name: *Acer saccharinum*

Plant location (area, feature #): 4-1

Historic Significance: Silver maple are not known to have existed in the historic landscape.

Preservation Objectives/Maintenance Procedures: The trees should be periodically inspected for leaf and trunk damaging insect and disease infestations. Hazard pruning, if necessary should be done immediately, structural pruning should be done in late winter or early spring before buds enlarge. Branches can be brittle. Not recommended for planting near structures.

Characteristics: Deciduous tree with pendulous branches found in the eastern and northeastern US, can reach up to 125' in height. Delicate foliage makes this tree an attractive ornamental. Can be brittle. Tolerates shade in wet areas

Leaf: Opposite, simple and palmately veined, 3 to 6 inches long, 5 delicately rounded lobes, entire margin; green above, paler below.

Flower: Light yellow-green, small, clustered, hanging from a long, slender (1 to 3 inch) stem, appearing with or slightly before the leaves in early spring.

Fruit: Two-winged horseshoe-shaped samaras about 1 inch long, appearing in clusters, brown when mature in the fall.

Twig: Brown, slender and shiny with lighter lenticels; terminal buds brown, very sharp pointed, with tight scales.

Bark: Variable, but generally brown, on older trees it becomes darker, develops furrows, with long, thick irregular curling outward, firm ridges.

Pests: There are no serious insect pests of silver maple, but the species is attacked by borers, leaf feeders, and scale insects.

Disease: Chief among the foliage diseases on silver maple are gray-mold spot; bull's eye spot, which can cause severe defoliation of nursery stock; anthracnose; tar spots; leaf blister; and the powdery mildew fungi. Probably the most important stem disease in silver maple is Verticillium wilt, which can cause sudden death.

Recommended Replacement Method: Replace tree with historic variety i.e. ash, oak, hickory etc.

Feature Data: Sweet Shrub (*Calycanthus floridus*)

Common name: Sweet Shrub, Carolina allspice

Botanical name: *Calycanthus floridus*

Plant location (area, feature #): 5-30 (3ea.)

Historic Significance: It is not known whether *Calycanthus floridus* existed but it was a shrub used in American gardening during the historic time period. *Calycanthus floridus* is sometimes referred to as a 'strawberry bush,' which was mentioned in historic documents.

Preservation Objectives/Maintenance Procedures:

Shrubs should be left to grow naturally. Shrubs should be periodically inspected for leaf and trunk damaging insects, disease and weed infestations.

Pruning: Prune only to remove dead or dying branches and errant shoots. Pruning should not be a shearing process.

Characteristics: Deciduous fast-growing upright shrubs with fragrant flowers. Grows 6-9' tall with equal or greater spread. Golden yellow fall color.

Leaf: Opposite, lustrous, dark green (pale beneath), ovate to elliptic leaves to 6" long turn golden yellow in fall. Leaves are aromatic when bruised

Flower: Very fragrant, brown to reddish-brown flowers (2" across) which bloom at the ends of short branchlets in spring.

Fruit: Balloon or urn-shaped tan fruits 2" to 3" long wrinkled surface mature in fall and persist throughout the winter after ripening in October.

Pests: Fairly pest free.

Disease: Powdery mildew, bacterial galls. Overall fairly pest free.

Recommended Replacement Method: Replace in kind with nursery stock.

Feature Data: Pignut hickory (*Carya glabra*)

Common name: Pignut hickory

Botanical name: *Carya glabra*

Plant location (area, feature #): 1-6, 4-15, 5-28

Historic Significance: Hickories are known to have existed on the property during Douglass' time.

Preservation Objectives/Maintenance Procedures: Trees should be left to grow naturally. They should be periodically inspected for leaf and trunk damaging insect and disease infestations. Hazard pruning, if necessary should be done immediately, structural pruning should be done in late winter or early spring before buds enlarge. Pignut hickories on the property should be preserved as they are a historic tree variety.

Characteristics: Sun-loving, slow-growing deciduous tree found in open, well-drained to dry areas of eastern US. Significant timber resource prized for strength of wood and fuel value. Deep tap-root, thin bark, yellow to gold fall color.

Leaf: Alternate, pinnately compound, 8 to 12 inches long, with 5 (sometimes 7) leaflets.

Flower: Monoecious; males are yellow-green, drooping catkins, with three hanging from one stalk, 2 to 3 inches long; females are very short and found in clusters at the end of the branches, both appear in spring.

Fruit: Obovoid to pear-shaped, 1 to 2 inches long, with a thin husk that only partially splits upon maturation; nut is not ribbed, fairly round but flattened, seed is somewhat bitter; ripening in early fall.

Twig: Moderately stout to slender (when compared to the other hickories) and glabrous; leaf scars are 3-lobed to cordate - best described as a "monkey face"; terminal bud is small (1/4 inch), ovate and light brown in color.

Bark: Initially smooth, and light gray, soon developing scaly ridges; the bark on older trees has obvious close interlacing shaggy-topped ridges.

Pests: Leaf-eating insects and hickory bark beetle may attack an unhealthy tree. The foliage of heavily infested trees turns red within a few weeks after attack, and the trees soon die. Gall-producing insects which may attack hickories include *Phylloxera caryaecaulis*, *Caryomyia holotricha*, *C. sanguinolenta*, and *C. tubicola*.

Disease: Trunk rot caused by *Poria spiculosa*. Cankers vary in size and appearance depending on their age. A common form develops around a branch wound and resembles a swollen, nearly healed wound.

Recommended Replacement Method:

Replace in kind with nursery stock.

Feature Data: Hackberry (*Celtis occidentalis*)

Common name: Hackberry

Botanical name: *Celtis occidentalis*

Plant location (area, feature #): 5-13, 5-24

Historic Significance: Hackberry trees may have been present during the historic period, as they appear as historic specimens on maps made in 1976. No specific references to them exist from the historic period.

Preservation Objectives/Maintenance Procedures: The trees should be periodically inspected for leaf and trunk damaging insect and disease infestations. Hazard pruning, if necessary should be done immediately, structural pruning should be done in late winter or early spring before buds enlarge.

Characteristics: Sun to light shade-loving deciduous tree, grows 60-100' tall with rounded crown and drooping branches. Widely distributed throughout eastern US. Prefers moist soils. Late summer fruit attractive to wildlife, harvested for plywood. Insignificant fall color.

Leaf: Alternate, simple, ovate, 2 to 5 inches long, serrated margin, pinnately veined, with acuminate tip and an inequilateral base, three distinct veins originate from base, maybe hairy or scruffy, green above and paler and somewhat pubescent below.

Flower: Monoecious; very small (1/8 inch), light green, produced on stalks from new leaf axils. Each flower with a 4 or 5 lobed calyx, appearing in spring.

Fruit: Round drupe, 1/4 to 3/8 inch in diameter, turning orange-red to dark purple when ripe, flesh is thin and quite dry but edible and sweet, enclosing a large pit, maturing in early fall.

Twig: Slender, zigzag, light red-brown with numerous lighter lenticels; terminal bud is lacking, but a pseudoterminal bud is present. Lateral buds are small, tan, triangular, and appressed, pith is often chambered at the nodes.

Bark: Smooth and gray-brown when young, soon developing corky, individual "warts" which later develop into rough corky, irregular ridges.

Pests: Hackberry is the host of four gall-producing insects-Pachypsylla celtidisgemma, P. celtidismamma, P. celtidisuesicula, and P. venusta. The adults pass the winter in cracks of the bark or among the debris on the ground and in spring lay eggs on the leaves. The damage is not serious. Disease: Several leaf-spot fungi are common on hackberry trees-Cercospora spegazzinii, Cylindrosporium defoliatum, Cero-sporella celtidis, Mycosphaerella maculiformis, Phleospora celtidis, Phyllosticta celtidis, and Septogloeum celtidis. The most important disease is "witches-broom," which causes a rosette-like proliferation of the branch tips and is caused by two agents, one the gall mite Eriophyes spp. and the other a powdery mildew.

Recommended Replacement Method:

Replace in kind with nursery stock.

Feature Data: Common Flowering Quince (*Chaenomeles speciosa*)

Common name: Common flowering quince

Botanical name: *Chaenomeles speciosa*, *Chaenomeles lagenaria*

Plant location (area, feature #): 2-23, 5-34, 5-35, 5-50

Historic Significance: Flowering quince are not known to have existed during Douglass' time. but they were commonly used (known during the time as *Chaenomeles lagenaria*) in the American landscape during the historic period. Flowering quince were part of screen plantings installed to soften and hide the edges of the visitor's center and the HVAC utilities.

Preservation Objectives/Maintenance Procedures: Shrubs should be left to grow naturally. They should be periodically inspected for damaging insects, disease and weed infestations.

Pruning: Prune only to remove dead wood and errant branches. The shrub should never be sheared.

Characteristics: Woody, deciduous shrub 5-10' tall and as wide. Drought tolerant; grows in most soil types in sun to partial shade. Pinkish-rose flowers appear on thorny gray-brown branches in late winter/early spring before the appearance of leaves. Insignificant fall color.

Leaf: Alternate, simple, ovate to oblong 1 ½-3" long. Sharply serrate, lustrous dark green above.

Flower: Perfect, 5-petaled, single to double and solitary or 2-4 per cluster. Flowers 1 ½ to 1 ¾ " diameter and very showy.

Fruit: Apple shaped, 2 to 2 ½ " long and wide. Yellow-green with blush of red. Ripens in October and sour. Sometimes used for preserves and jellies.

Twig: Slender and brown to gray-brown, often hairy.

Pests: Aphids on new growth, scale, mites.

Disease: Apple scab, cedar-quince rust, wood rot and decay.

Recommended Replacement Method:

Replace in kind with nursery stock.

Feature Data: Flowering Dogwood (*Cornus florida*)

Common name: Flowering dogwood

Botanical name: *Cornus florida*

Plant location (area, feature #): 2-2, 2-3, 2-8

Historic Significance: Flowering dogwoods are not known to have existed on the property during Douglass' time. Existing specimens were installed in conjunction with the construction of the visitor's center in the early 1980's.

Preservation Objectives/Maintenance Procedures: Trees should be left to grow naturally. They should be periodically inspected for leaf and trunk damaging insect and disease infestations. Hazard pruning, if necessary should be done immediately, structural pruning should be done during the dormant season to avoid damage from boring insects which may attack if pruning is done in late spring.

Characteristics: Small slow-growing deciduous tree with short trunk and opposite branches. Native to eastern US. Prefers rich, well-drained soils and partial shade and rarely grows over 40' tall with a short trunk and horizontal spreading branches. Scarlet-red fall color.

Leaf: Opposite, simple, 3 to 5 inches long, oval in shape with an entire or slightly wavy margin, green above and slightly paler below.

Flower: Monoecious; very small and inconspicuous tight cluster, but surrounded by 4 very showy, large, white (occasionally pink) bracts, 2 inches in diameter, appearing in mid-spring.

Fruit: A shiny, oval red drupe, 1/4 to 1/2 inch long, in clusters of 3 to 5, maturing in fall.

Twig: Slender, green or purple (purple on sunlit side), later turning gray, often with a glaucous bloom. The terminal flower buds are clove-shaped, vegetative buds resemble a dull cat claw.

Bark: Gray and smooth when young, turning very scaly to finely blocky.

Pests: The dogwood borer, flatheaded borers, dogwood twig borer, the twig girdler, scurfy scale, and dogwood scale. Dogwood club gall, a club like swelling on small twigs, is caused by infestations of midge larvae the redhumped caterpillar, a tussock moth, io moth, and scarab beetles. Introduced pests of flowering dogwood include the Japanese weevil and Asiatic oak weevil.

Disease: Basal stem canker, caused by the fungus *Phytophthora cactorum*, may girdle the tree and is the most lethal disease. Target cankers sometimes occur on the trunk and limbs, and *Armillaria mellea* has been found on dogwoods. Leafspot attacks seedlings, and *Meliodogyne incognita* causes severe root galling, associated with dieback and premature leaf fall in seedlings. Twig blight, caused by the fungus *Myxosporium nitidum*, may cause dieback of small twigs. Leaf spots and dieback of flowers are caused by *Botrytis cinerea*, *Elsinoe corni*, and *Septoria cornicola*, while *Ascochyta cornicola* may result in shrivelling and blackening of the leaves. Verticillium wilt attacks dogwood, and the cherry leafroll, tobacco ringspot, and tomato ringspot viruses have been isolated from dogwood leaves. Noninfectious diseases include sunscald, mechanical and drought injury, and freezing. Dogwood reproduction is often browsed heavily by deer and rabbits.

Recommended Replacement Method:

Replace in kind with nursery stock.

Feature Data: White Ash (*Fraxinus americana*)

Common name: White ash

Botanical name: *Fraxinus americana*

Plant location (area, feature #): 1-10, 2-4, 2-7, 2-9, 2-11, 5-18,

Historic Significance: Ash trees are known to have existed on the property during Douglass' time.

Preservation Objectives/Maintenance Procedures: Trees should be left to grow naturally. They should be periodically inspected for leaf and trunk damaging insect and disease infestations. Hazard pruning, if necessary should be done immediately, structural pruning should be done fall. Ash trees on the property should be preserved as they are a historic tree variety.

Characteristics: Large deciduous tree 70-100' tall. Tolerates partial shade in youth and prefers sun as it matures. Likes rich, moist, well-drained soils Widespread in eastern US. Susceptible to air pollution damage, particularly ozone and industry. Fall color is yellow and then purple.

Leaf: Opposite, pinnately compound with 7 serrate to entire leaflets that are ovate to somewhat lanceolate, 8 to 12 inches long, essentially hairless, green above and slightly paler below.

Flower: Dioecious; light green to purplish, both sexes lacking petals, females occurring in loose panicles, males in tighter clusters, appear after the leaves unfold.

Fruit: A one-winged, dry, flattened samara with a full, rounded, seed cavity, maturing in fall and dispersing over winter.

Twig: Stout, gray-olive-green, hairless, leaf scars round at the bottom, notched at the top, with lateral buds in the notch; terminal bud is large, brown, with leathery scales and flanked by two lateral buds.

Bark: Ashy gray to brown in color, with interlacing corky ridges forming obvious diamonds; older trees may be scaly.

Pests: Of the insect pests, the oystershell scale (*Lepidosaphes ulmi*) is the most serious. Severe infestations cause yellowing of the leaves, and if prolonged, may kill some trees. The cottony maple scale (*Pulvinaria innumerabilis*) also attacks white ash. The brownheaded ash sawfly (*Tomostethus multicinctus*) and the blackheaded ash sawfly (*Tethida cordigera*) are defoliators that are of concern mainly on ornamental trees. The forest tent caterpillar (*Malacosoma disstria*) and the green fruitworm (*Lithophane antennata*) feed on forest trees and occasionally cause complete defoliation within small geographic areas. The larvae of sphingid moths-Sphinx chersis (the great ash sphinx), *S. kalmiae*, and *Ceratornia undulosa*-feed on the leaves of white ash, as does the notched-wing geometer (*Ennomos magnaria*). The larvae of two leaf roller moths, *Sparganothis dilutocostana* and *S. folgidipenna*, also feed on ash. The ash bark beetle (*Leperisinus aculeatus*) may cause slight injury when the adults bore into the bark to hibernate. The ash borer (*Podoseia syringae*) may seriously damage young shade and shelterbelt trees. The ash and privet borer (*Tylonotus bimaculatus*) attacks and kills branches, especially on older trees. Both the red-headed ash borer (*Neoclytus acuminatus*) and the banded ash borer (*N. caprea*) colonize cut logs and dead or dying trees.

Feature Data: White Ash (*Fraxinus americana* cont.)

Disease: Ash decline (also called ash dieback) is the most serious problem affecting white ash. Drought-weakened trees may be invaded by canker causing, branch-girdling fungi such as *Fusicoccum* spp. and *Cytophorna pruinosa*. A rust (*Puccinia peridermiospora*) distorts petioles and small twigs.

Cankers caused by *Nectria galligena* may cause branches to break but are rarely found on main stems. Heartwood rots may be caused by *Perenniporia fraxinophilus*, *Phellinus igniarius*, *Pleurotus ostreatus*, *Tyromyces spraguei*, and *Laetiporus sulphureus*. These organisms usually enter through wounds or broken branches, mainly on older trees.

Recommended Replacement Method:

Replace in kind with nursery stock.

Feature Data: English Ivy (*Hedera helix*)

Common name: English ivy

Botanical name: *Hedera helix*

Plant location : Throughout property in mass plantings on slopes.

Historic Significance: English ivy is not known to have existed on the property during Douglass' time.

Preservation Objectives/Maintenance Procedures: Ivy was planted for erosion control on slopes. It is not a historic plant. The 1968 Historic Grounds Report cites potato vine, strawberries, flowers [sic] and honeysuckle as having been planted on slopes during Douglass's time at Cedar Hill. English ivy is considered an invasive plant and has been the cause of loss of trees on-site due to strangling. It is arguable whether English ivy is a very effective erosion control measure, but for now it is a durable, dependable and well-established evergreen cover for slopes. Until a suitable replacement is found, ivy beds should be kept neat and not be permitted to spread beyond their current designated beds. Ivy needs to be monitored and pruned regularly to ensure it is not creeping up tree trunks or strangling perennials and shrubs.

Characteristics: Evergreen ground cover spreads by constant rooting of spreading shoots. Vines attach to the bark of trees and other surfaces by way of numerous, small, root-like structures, which exude a glue-like substance; older vines can reach a foot in diameter.

Leaves: dark green, waxy, somewhat leathery, arranged alternately along the stem; leaf forms are extremely variable with the most recognized leaf form being three-lobed.

Flowers, fruits and seeds: when sufficient light is available, on older plants, umbrella-like clusters of small, greenish-white flowers are produced in the fall on flowering branches that extend out at right angles from clinging vines; fruits are black with a fleshy outer layer and mature during the following spring; seeds are stone-like.

Spreads: Vigorously reproduces vegetatively and by seed, which is dispersed to new areas primarily by birds. English ivy contains glycosides that cause some birds to vomit and disseminate seeds. New plants grow easily from cuttings or stem fragments that make contact with the soil.

Look-a likes: Boston ivy (*Parthenocissus japonicus*) is sometimes confused with English ivy.

Distribution and Ecological Threat:

English ivy occurs throughout the eastern United States, across the southern states and up to Washington State. It is one of the most abundant and insidious invasive plants, as it threatens all vegetation levels of forested and open areas, growing along the ground as well as into the tree canopy. English ivy infests woodlands, forest edges, fields, hedgerows, coastal areas, salt marsh edges and other upland areas, especially where some soil moisture is present. As a ground cover, the dense growth and abundant leaves form a thick canopy just above the ground that prevents sunlight from reaching herbs and seedlings. Vines that climb up trees slowly kill the tree from the base upwards by enveloping branches and twigs, blocking sunlight, causing branch and eventual tree death. The added weight of vines also makes trees susceptible to blowing over during storms. English ivy has been confirmed as a reservoir for bacterial leaf scorch (*Xylella fastidiosa*), a harmful plant pathogen that affects a wide variety of native and ornamental trees such as elms, oaks

Feature Data: English Ivy (*Hedera helix* cont.)

and maples.

Recommended Replacement Method:

Replace in kind with nursery stock until suitable replacement is recommended by historical landscape architect.

Feature Data: Winter Jasmine (*Jasminum nudiflorum*)

Common name: Winter jasmine

Botanical name: *Jasminum nudiflorum*

Plant location (area, feature #): 5-36

Historic Significance: Winter jasmine is not known to have existed on the property during Douglass' time, but was generally used during the historic period. Winter jasmine planted on the west side of the house were put in place to screen the HVAC utilities.

Preservation Objectives/Maintenance Procedures: Shrubs should be left to grow naturally and periodically inspected for damaging insects, disease and weed infestations.

Pruning: Prune back after flowering if necessary. Usually, prune only to remove dead branches.

Characteristics: Deciduous fast-growing shrub with a broad, arching form spreading 6-10' with a 4-7' spread. Can be pruned to desirable size for landscape needs. Tolerates a broad range of sun, soil and moisture conditions. Light fragrance. Fertilize during growth period with a low nitrogen fertilizer about once a month.

Leaf: Opposite, oblong to ovate, to 1", bright, glossy, green pinnate leaves divided into 3 oblong leaflets.

Flower: Waxy maroon-red buds; 1.5 to 2" solitary light yellow flowers in winter to early spring on previous season's growth

Pests: Scale, thrips, mites.

Disease: Fairly disease free.

Recommended Replacement Method:

Replace in kind with nursery stock.

Feature Data: Black Walnut (*Juglans nigra*)

Common name: Black walnut

Botanical name: *Juglans nigra*

Plant location (area, feature #): 5-14, 5-20

Historic Significance: Black walnuts are known to have existed on the property during Douglass' time.

Preservation Objectives/Maintenance Procedures: Tree should be left to grow naturally and should be periodically inspected for leaf and trunk damaging insect and disease infestations. Hazard pruning, if necessary should be done immediately, structural pruning should be done in early spring or late summer as they will bleed badly if pruned in the spring. Black walnuts on the property should be preserved and maintained as they are a historic tree variety.

Characteristics: Common to the eastern US, but found throughout the country, this large tree can grow 50-75' tall with a similar spread. High branching habit, sun-loving and slow growing. Prefers deep, moist soils. This tree is prized for its edible fruit and high quality lumber and veneer. Clear yellow fall color. Due to an antagonism between black walnut and many other plants growing within its root zone, it should not be planted near an apple tree (among others).

Leaf: Alternate, pinnately compound, 12 to 24 inches long with 10 to 24 leaflets (poorly formed or missing terminal leaflet), leaflets are ovate-lanceolate, finely serrate, and 3 to 3 1/2 inches long, rachis is stout and somewhat pubescent; yellow-green to green above, slightly paler below.

Flower: Monoecious; males are single-stemmed catkins, 2 1/2 to 5 1/2 inches long; females on short spikes near twig end, yellow-green in color, appearing in late spring.

Fruit: Round, 2 to 2 1/2 inches across, with a thick, green indehiscent husk. The husk contains an irregularly furrowed, hard nut that contains sweet, oily meat (edible), mature in late summer to fall.

Twig: Stout, light brown, with a buff-colored chambered pith; buds are tan, and large with a few pubescent scales; leaf scars are 3-lobed, resembling a "monkey face".

Bark: Brown on surface, darker brown when cut, ridged and furrowed with a rough diamond pattern.

Form: A medium to large tree up to 100 feet in height that develops a straight, clear bole with a narrow crown under competition, twigs and branches quite stout.

Pests: Defoliating insects including the walnut caterpillar and the fall webworm are commonly found eating the leaves beginning in midsummer and continuing until September. Boring insects are the ambrosia beetle, which may introduce a *Fusarium* fungus into the tree, causing dieback and resprouting from the base of the tree; the flatheaded apple tree borer feeds in the phloem and outer sapwood area as larvae and on the foliage as adults; the walnut curculio damages developing nuts when the larvae bore into them and cause great losses during the so-called "June drop" of walnuts; and the walnut shoot moth, which damages the terminal buds in early spring when the larvae bore into the still unexpanded bud, causing multiple forks and crooks in the main stem. Sucking insects are aphids or plant lice, which suck the juices from leaves and often deposit a sticky substance called "honey-dew" on the leaf surface that may turn black and prevent photosynthesis; and the walnut lace bug, which causes damage when the adults and nymphs suck the sap

Feature Data: Black Walnut (*Juglans nigra* cont.)

from the lower surfaces of walnut leaflets.

Disease: Two serious root rot diseases found in seedling nurseries are caused by the fungi *Phytophthora citricola* and *Cylindrocladium* spp. An important mold of stored seed and seedlings is associated with *Penicillia* and other normally saprophytic fungi. Walnut anthracnose, caused by the fungus *Gnomonia leptostyla*, is a leaf spot disease that begins during wet spring weather, although symptoms may not become visible until June or July. Another important foliage disease is target leafspot which is caused by the fungus *Cristulariella prymidalis* and is responsible for premature defoliation. A newly discovered, serious leaf spot disease is caused by the fungus *Mycosphaerella juglandis*. Important stem diseases caused by fungi are the *Fusarium* cankers caused by several species of *Fusarium* and the perennial target canker (*Nectria galligena*) commonly known as *Nectria* canker. Cankers usually occur on the main stem where a branch broke off and left an open wound.

Recommended Replacement Method:

Replace in kind with nursery stock.

Feature Data: Eastern Redcedar (*Juniperus virginiana*)

Common name: Eastern redcedar

Botanical name: *Juniperus virginiana*

Plant location (area, feature #): 1-19, 1-20, 1-21, 1-22, 1-23, 1-24, 1-25, 1-26, 2-14, 2-15, 2-16, 4-19, 5-1, 5-2, 5-3, 5-4, 5-6, 5-7, 5-8, 5-12, 5-21, 5-23, 5-25, 5-26, 5-27, row of (18) cedars along eastern edge of property.

Historic Significance: Cedar trees were so abundant upon the Douglass property that they inspired Douglass to name his home "Cedar Hill." Numerous descriptions and photographs of cedar trees on the property during Douglass's time prove that they were among the most significant vegetation of the historic landscape.

Preservation Objectives/Maintenance Procedures: Trees should be left to grow naturally and should be periodically inspected for leaf and trunk damaging insect and disease infestations. Hazard pruning, if necessary should be done immediately, pruning of undesirable branches should be done during the growing season

Characteristics: Coniferous tree that is readily found in a variety of growing conditions in the eastern US. Usually grows to 30-40' but can reach a height of 60-90' depending on the conditions. Blue fruit grows on female plants. Cold and drought tolerant once established.

Leaf: Evergreen, very small, with two types of leaves (often on the same tree), scale-like leaves 1/16 inch long, dark green, with 4 sides held tightly to twig and longer (1/4 inch), dark blue-green needle-like leaves that are more common on young trees and fast growing shoots.

Flower: Dioecious; but occasionally Monoecious; males are small, yellow-brown, occurring in large groups; females are light blue-green.

Fruit: Berry-like cones, light green in spring, turning dark blue and glaucous at maturity, about 1/4 inch in diameter, appearing in spring and maturing in the fall.

Twig: Green for several years, covered in scales, later turning brown.

Bark: Red-brown in color, exfoliating in long, fibrous strips, often ashy gray where exposed.

Pests: Bagworm caterpillars (controlled by use sprays of *Bacillus thuringiensis*), red spider mites. To combat spider mites, spray with insecticidal soap or a nicotine solution (which can be made by soaking tobacco in water overnight).

Disease: Twig blights cause death and browning of twigs tips. Kabatina blight appears in early spring, from Phomopsis in summer. Three rust diseases seen most often are cedar-apple rust, hawthorn rust, and quince rust. The most common is cedar-apple rust. On Juniper the first two diseases form galls and orange jelly-like horns in spring. The horns are most likely to form following periods of rainy, warm weather. Spores formed in the horns infect the alternate host. The diseases are more serious on the alternate host than Juniper. Prune out the spore horns when seen in the spring. Do not plant near hawthorns, apples, or crabapples. Junipers are not tolerant of ice coatings.

Recommended Replacement Method: Replace in kind with nursery stock. Replacements are recommended to be large balled and burlapped specimens with full, even growth.

Feature Data: Crape Myrtle (*Lagerstroemia speciosa*)

Common name: Crape myrtle

Botanical name: *Lagerstroemia speciosa*

Plant location (area, feature #): 1-1, 1-2

Historic Significance: Crape myrtle are not among the species known to have existed on the property during Douglass' time.

Preservation Objectives/Maintenance Procedures: Shrubs should be left to grow naturally. Specimens are located at the entrance to the property and should be trimmed if they impede traffic or sight lines. The trees should be periodically inspected for leaf and trunk damaging insect and disease infestations.

Pruning: Structural pruning should be done in late winter or early spring before buds enlarge. Prune to encourage a 3-5 stem tree-like form, removing only suckering inner shoots, crossing branches, and side shoots 4 to 8 feet from the ground.

Characteristics: One of only a few deciduous trees which grow in tropical and subtropical areas of the country. A profusion of large, three-inch wide, bright pink to lavender blooms appear in dense, foot-long, terminal panicles from June to July, making it a spectacular specimen or street tree. It can reach 40 to 60 feet in height and a spread of 30 to 40 feet. This large, upright rounded, deciduous tree is clothed with 12-inch-long, dark green, oblong, leathery leaves which turn attractively red before falling in winter. Best in full sun, drought resistant once established.

Leaf: elliptic (oval), obovate, oblong, semi-evergreen, 2 to 4 inches.

Flower: Pink, lavender.

Fruit: Small oval to round and brown in color with hard, dry covering.

Trunk and branches: Branches droop; showy; typically multi-trunked; thorns. New twigs are thin to medium sized and brown, green.

bark: bark is smooth, mottled and peeling.

Pests: Aphids and scale, followed by sooty mold.

Disease: No diseases are of major concern.

Recommended Replacement Method:

Replace in kind with specimen b&b nursery stock.

Feature Data: Tulip Poplar (*Liriodendron tulipifera*)

Common name: Tulip poplar, Tuliptree

Botanical name: *Liriodendron tulipifera*

Plant location (area, feature #): 1-7, 1-9, 1-12, 4-3, 4-6, 4-10, 4-11, 4-12

Historic Significance: Tulip poplars are known to have existed on the property during Douglass' time.

Preservation Objectives/Maintenance Procedures: Trees should be left to grow naturally and should be periodically inspected for leaf and trunk damaging insect and disease infestations. Hazard pruning, if necessary should be done immediately, structural pruning should be done in late winter or early spring before buds enlarge. Tulip poplars on the property should be preserved as they are a historic tree variety.

Characteristics: Deciduous, sun-loving and fast growing, 15-20' in 6-8 years. Mature specimens 100-120' tall. Found in the eastern US where conditions are neither too wet nor too dry in well-drained slightly acidic soils. Golden yellow to yellow fall color. Yellow-poplar seedlings and saplings have thin bark and are extremely susceptible to fire damage.

Leaf: Alternate, simple, 4-lobed with an entire margin, 4 to 8 inches long, notched to flat top. Somewhat shaped like a tulip, light green to green on top, paler below.

Flower: Monoecious; perfect, showy, resembling a large tulip, but usually solitary and occurring high in the tree, 2 1/2 inches long, with yellow-green petals and an orange corolla, appearing May to early June.

Fruit: An oblong (cone-like) aggregate of samaras (2 inches long), deciduous at maturity, maturing August to October and disseminating through late fall and winter.

Twig: Red-brown in color, often with a shiny appearance or a waxy bloom. Stipules are large and encircle the twig; buds are elongated and valvate, resembling a "duck bill". Twigs have a sweet, spicy odor when broken.

Bark: Light gray-green and smooth when young, later developing flat-topped ridges and conspicuous white colored furrows in diamond shaped patterns. On older trees sapsucker holes are common.

Pests: The tuliptree scale (*Toumeyella liriodendri*) causes loss of vigor by removing large quantities of phloem sap. Scale attacks often kill leaders of seedlings and saplings causing them to be overtopped by competitors. The yellow-poplar weevil (*Odontopus calceatus*) feeds on buds and foliage and may occur in outbreaks over large areas. The rootcollar borer (*Euzophera ostricollis*) attacks the phloem tissue at the base of the tree and provides entry points for rots and other pathogens. **Disease:** Soft, spongy, white or gray rot caused by the fungus *Armillaria mellea*. A white heartwood rot caused by *Collybia velutipes* often is associated with top breakage and dying limbs. Species of the genus *Nectria* have been associated with stem cankers. A canker caused by *Fusarium solani* causes damage only when the host is weakened by unfavorable environmental factors. A fungus of the genus *Myxosporium* was associated with dead bark of infected trees and was shown to cause canker formation after experimental inoculations.

Recommended Replacement Method:

Replace in kind with nursery stock.

Feature Data: Winter Honeysuckle (*Lonicera frAGRantissima*)

Common name: Winter Honeysuckle

Botanical name: *Lonicera frAGRantissima*

Plant location (area, feature #): 5-31, 2-22

Historic Significance: Mention of honeysuckle in the historic landscape is given with reference to it having grown on the hillside and down to the pear trees. However, it is unlikely that *frAGRantissima* was the honeysuckle variety from the historic landscape. Existing winter honeysuckle was installed in conjunction with the visitor's center and the placement of outdoor HVAC units. These plants were chosen for screening and to perpetuate the tradition of flowering and fragrant plants on the property. They were likely to have been chosen for their showy flowers and low-maintenance qualities.

Preservation Objectives/Maintenance Procedures: Shrubs should be left to grow naturally and maintained for safety of visitors. This includes the pruning of the shrubs as they encroach into walkways and auto lanes. The shrubs should be periodically inspected for damaging insects, disease and weed infestations.

Pruning: Prune only to remove dead branches and errant roots. Pruning should be done immediately following bloom. Flowers bloom on older wood.

Characteristics: Deciduous, drought tolerant shrub that holds its leaves long into the autumn. Stiff-branched. Full sun to part shade. In late winter, small, dangling fragrant white flowers with a pink blush appear just before foliage which emerges yellow-green & slowly darken to blue-green.

Habit: Can grow 8-10' tall with an 8' spread.

Leaf: Opposite, 1-3" long simple, elliptic to broad-ovate.

Flower: Creamy white with pink to red tinge. 2-lipped and extremely fragrant. ½" long, blooms for 3-4 week period.

Fruit: Berry, ¼" to 1/3" diameter. Inconspicuous, borne under foliage.

Pests: Aphids, wooly honeysuckle sawfly, whitefly, flea beetle, looper caterpillar, long-tailed mealybug, fall webworm, scale

Disease: Leaf blight, leaf spots, powdery mildews.

Recommended Replacement Method:

Replace in kind with nursery stock.

Feature Data: Southern Magnolia (*Magnolia grandiflora*)

Common name: Southern magnolia

Botanical name: *Magnolia grandiflora*

Plant location (area, feature #): 5-10, 5-11

Historic Significance: At least one southern magnolia is thought to have existed on the property during Douglass' time but it has not been determined which existing specimen is the original or a replacement. In any case, it should be maintained as an historic tree.

Preservation Objectives/Maintenance Procedures: Trees should be left to grow naturally and should be periodically inspected for leaf and trunk damaging insect and disease infestations. Hazard pruning, if necessary should be done immediately, structural pruning should be done after it has bloomed, in the early summer. Be careful of wounds created by pruning do not heal easily. It is a good idea to remove all dead and diseased wood, as well as suckers and water sprouts. Southern magnolias on the property should be preserved as they are a historic tree variety.

Characteristics: The southern magnolia's range encompasses portions of the southern US. It is a very popular ornamental with large fragrant white flowers and evergreen leaves. It is a medium sized tree which can reach 60-80' with a spread of 30-50'. Prefers partial shade and moist soils. Lumber used to make furniture, pallets, and veneer. The leathery leaves are used by florists in bouquets.

Leaf: Alternate, simple, evergreen, oval to elliptical, 5 to 8 inches long, pinnately veined, entire margin, very thick almost plastic-like, waxy/shiny dark green above, paler with rusty fuzz below.

Flower: Monoecious; very showy and fragrant, 6 to 8 inches wide with large white petals, occur singly in late spring and occasionally a few in the fall.

Fruit: An aggregate of follicles, green changing to red and later to brown, cylindrical, 3 to 5 inches long with a bright red seed (1/2 inch long) in each follicle, maturing in fall.

Twig: Stout, with white to rusty tomentum and a long (1 to 1 1/2 inches) silky white to rusty red terminal bud.

Bark: Brown to gray, thin, smooth/lenticellate when young, later with close plates or scales.

Pests and Disease: Young southern magnolia are susceptible to fire-caused injury and mortality. Winter droughts can cause extensive dieback and mortality. A number of fungi, including species of *Cladosporium*, *Colletotrichum*, *Glomerella*, *Phyllosticta*, and *Septoria* cause leaf spots but these seldom result in any significant damage. A leaf spot caused by *Mycosphaerella milleri* can be a problem on nursery seedlings. A number of *Fomes* and *Polyporus* fungi can cause heartrot in southern magnolia. Heavy infestations of magnolia scale (*Neolecanium cornuparyum*) can kill branches or entire trees. Oleander pit scale (*Asterolecanium pustulans*) and tuliptree scale (*Toumeyella liriodendri*) attack and injure southern magnolia, but rarely cause mortality. A variety of other pests including tuliptree aphid (*Illinoia liriodendri*) striped mealybug (*Ferrisia virgata*), leaf weevil (*Odontopus calceatus*), magnolia leafminer (*Phyllocnistis magnoliella*), and spider mite (*Tetranychus magnoliae*) feed on this species. *Euzophera magnolialis*, a wood borer, can injure or kill nursery seedlings.

Recommended Replacement Method: Replace in kind with specimen b&b nursery stock.

Feature Data: Siberian Crabapple (*Malus baccata*)

Common name: Siberian crabapple

Botanical name: *Malus baccata*

Plant location (area, feature #): 2-19, 5-16

Historic Significance: Siberian crabapple are not known to have existed on the property during Douglass' time.

Preservation Objectives/Maintenance Procedures: Trees should be left to grow naturally and should be periodically inspected for leaf and trunk damaging insect and disease infestations. Hazard pruning, if necessary should be done immediately, structural pruning should be done before early June. Siberian crabapple trees on the site may not have been planted by the Douglass family but they are historic varieties found throughout the country at that time in history. As showy, flowering specimens, they evoke the ostentatious and fragrant vegetation that Douglass was known to be fond of.

Characteristics: A deciduous small tree, 15-25', found in the northeastern US, Siberian crabapple is the hardiest species of the *Malus* genus and produces fragrant white flowers. Prefers slightly acidic heavy loam soil. Used for windbreaks and smokehouse kindling and firewood. Yellow fall color.

Leaf: Alternate, reddish-brown with imbricate scales. Margins finely serrate to irregularly toothed or lobed. Length 1-3 1/4 inches. Width 1-2 1/2 inches. Dark or olive green above, paler green beneath; yellow fall color.

Flower: Umbel or corymb-like racemes. White in color.

Fruit: A 1/4 to 1/3 inch (pea-sized) pome with deciduous calyx Yellow, often with reddish blush.

Twig: Medium to thin, brown in color.

Bark: Gray-brown to reddish-brown.

Pests: Aphids, fall webworm makes nests on the branches and feeds inside the nest. Small nests can be pruned out or sprayed with BT. Scales of various types are usually controlled with horticultural oil. Mites are too small to see easily so can cause much foliage discoloration before being detected. Mites are usually controlled with horticultural oil. Tent caterpillar builds tents or nests in trees in early summer or late spring. Feeding occurs outside the nest. Small nests are pruned out or simply pull the nest out of the tree and crush the caterpillars.

Disease: Siberian Crabapple is susceptible to scab. Infection takes place early in the season and dark olive green spots appear on the leaves. In late summer the infected leaves fall off when they turn yellow with black spots. Infected fruits have black, slightly raised spots. Fire blight susceptible trees have blighted branch tips. Leaves on infected branch tips turn brown or black, droop, and hang on the branches. The leaves look scorched as by a fire. The trunk and main branches become infected when the bacteria are washed down the branches. Cankers form and are separated from adjacent healthy bark by a crack. The infected bark may be shredded. Do not over-fertilize. Powdery mildew is a fungus which coats leaves with mycelia resembling white powder. Rust causes brown to rusty-orange spots on the leaves. Badly spotted leaves fall prematurely. Redcedars are the alternate host. Crabapples are subject to several canker diseases. Prune out infected branches, avoid unnecessary wounding, and keep trees healthy. Should not be planted within close proximity to cedar trees.

Recommended Replacement Method: Replace in kind with nursery stock.

Feature Data: White Mulberry (*Morus alba*)

Common name: White mulberry

Botanical name: *Morus alba*

Plant location (area, feature #): 4-2

Historic Significance: White mulberry is not known to have existed on the property during Douglass' time.

Preservation Objectives/Maintenance Procedures:

White mulberry is one of the most invasive plants in the mid-Atlantic region. Ecological threats posed by white mulberry include its hybridization with and replacement of our native red mulberry (*Morus rubra*), the transmittal of a harmful root disease to red mulberry, and its ability to invade natural areas including fields, forest edges and roadsides.

Prevention and Control:

Seedlings can be pulled. Otherwise, cut the tree and grind the stump or cut and paint the stump with glyphosate (the active ingredient in Roundup and other herbicides); if very large, girdle the tree.

Characteristics:

Deciduous, medium to large fast-growing dense, rounded tree. Can grow 30-50' tall with equal spread. Dull yellow fall color.

Leaf: Alternate, simple, roughly orbicular in shape, 3 to 6 inches long with a serrate margin, often irregularly lobed, smooth above.

Flower: Normally Dioecious; small, green catkins, male flowers narrow, 1 to 2 inches long; female flowers plump, 1 inch long.

Fruit: Resembling blackberries, cylindrical, 1 to 1 1/4 inch long, fleshy multiple of drupes, pale pink to dark red, not as juicy as red mulberry, maturing in late summer.

Twig: Slender, zigzag, gray to orange-brown, smooth, buds reddish brown with numerous scales, scales often lack dark edges, leaf scar sunken oval, broken twigs display silvery white filaments.

Bark: Orange-brown with lenticels when young, becoming gray with long narrow irregular ridges. Form: A small tree up to 40 feet tall, branches low and develops a wide spreading crown

Pests: Scale and mites.

Disease: Leaf spot, bacterial blight, powdery mildew, leaf spot and cankers may infect this tree.

Recommended Replacement Method:

DO NOT REPLACE Existing specimen is probably self-sown as the tree is an invasive exotic in this area.

Feature Data: Black Tupelo (*Nyssa sylvatica*)

Common name: Black tupelo, blackgum, sourgum, tupelo, tupelogum

Botanical name: *Nyssa sylvatica*

Plant location (area, feature #): 2-17

Historic Significance: Black tupelo or gum is not known to have grown on the property during the historic period. The current specimen was installed in conjunction with construction of the visitor center and accessible walkway projects of the early-mid 1980s.

Preservation Objectives/Maintenance Procedures: Tree should be left to grow naturally and should be periodically inspected for leaf and trunk damaging insect and disease infestations. Hazard pruning, if necessary should be done immediately, structural pruning should be done in late winter or early spring before the buds enlarge.

Characteristics: Deciduous tree found in the eastern and southeastern US in a variety of climates and temperatures. Slow grower to 12-15' over 10-15 years pyramidal in youth, can grow to 75' tall. On younger trees the branches often stand at right angles to the trunk with numerous short, curled spur shoots present. High wildlife value and often planted as an ornamental tree. Showy fall colors from fluorescent oranges and yellows to scarlet and purple.

Leaf: Alternate, simple, pinnately veined, oblong to obovate in shape with an entire margin, 3 to 5 inches long, occasionally shallow lobes (or coarse teeth) near tip, dark green above and slightly paler below.

Flower: Primarily Dioecious; not showy, light green in color, in clusters hanging from slender stalks, appearing with the leaves.

Fruit: A dark, purplish blue drupe, 1/2 inch long, with a fleshy coating surrounding a ribbed pit, ripen in late summer and fall.

Twig: Moderately stout, red-brown to gray, diaphragmed pith; 1 to 2 inch curved spur shoots are often present; buds ovate, pointed, green and light brown, but darkening to brown in the winter.

Bark: Gray-brown and shallowly, irregularly furrowed, on old stems it can become quite blocky, resembling alligator hide.

Pests: The tupelo leafminer (*Antispila nysaefoliella*) and the forest tent caterpillar (*Malacosoma disstria*) can attack the trees.

Disease: Several fungi cause cankers. As the cankers enlarge the infected stems die back. Trunk cankers cause tree dieback. Prune out infected branches and keep trees healthy. Leaf spots cause purplish blotches on the upper leaf surface. Rake up and destroy infected leaves in the fall to reduce the disease potential for the following year, if you wish. Recently a large number of trees have been discovered dying in the mountains of North Carolina, Tennessee, Virginia, and Georgia. The causal agent is unknown but symptoms include leaf spots, branch cankers, leaves dying and hanging on the tree, and leaf blotches.

Recommended Replacement Method:

Replace in kind with nursery stock.

Feature Data: Peony (*Paeonia*)

Common name: Peony

Botanical name: *Paeonia*

Plant location (area, feature #): 5-33

Historic Significance: Peonies are said to have existed on the property during Douglass' stay on Cedar Hill. According to the 1968 Historic Grounds Report, the primary source for historical vegetation data, reports a border of peonies were located along the sidewalk from the front porch of the house to the first set of terrace stairs.

Preservation Objectives/Maintenance Procedures: Peonies should be periodically inspected for leaf and stem damaging insect and disease infestations. Peonies may require support. Installation of "tomato cages" or more specifically, peony supports, will help the plants stay upright. Supports can be implemented at any time, but in order to do the least amount of damage to the plant, they should be put out before foliage emerges in the early spring, or shortly afterwards. When peonies become crowded, plants should be divided and transplanted in the fall. Top-dress with a fertile loam in fall to provide spring nutrients.

Peonies on the property should be preserved as they are an historic tree variety.

Characteristics: Long-lived herbaceous (dies to the ground in winter) perennial. Can grow to 2-3' tall and as wide. Prefer full sun and well-drained soils. Fragrant.

Pests: Rose chafers, scale, thrips, aphids, and strawberry root weevil.

Ants are often found on the buds of peonies. Common belief is that the peonies will not bloom without the presence of ants. However, modern science does not support this theory. Ants are not harmful to peonies and are usually found feeding on aphids or the sap produced by the peony bud scales.

Disease: Botrytis blight fungus over-winters in dead peony leaves and stems. It is most damaging in cool, rainy weather. Infected flowers and shoots turn gray-brown in early spring. Mature stems rot at ground level. Gray-brown felt-like spores appear on leaves and stem. Young buds dry up whereas shoots and mature buds flower soften and rot. Reduce infection sources by destroying affected plants. Cut plants to the ground after the foliage turns brown in the fall. Spray a copper fungicide on newly emerging shoots in the spring. Repeat two to three times at ten-day intervals. Mosaic leaf curl and crown elongation are common virus diseases. Distorted plants will not recover from these diseases. Destroy infected plants before the disease spreads to surrounding plants. Leaf blotch or measles occurs after plants bloom. The fungus overwinters in dead plants. Infected plants have small red or reddish-brown spots on stems, leaves, and flowers. The spots on the leaves later enlarge into purplish-brown blotches on the upper surfaces. Dull brown blotches appear on lower surfaces. Wilt fungi infect the water-conducting stem tissue. Infected plants wither and die quickly. Remove plants immediately. Do not plant peonies in the same spot for at least three years after wilted plants have died. Phytophthora blight and other crown and stem rots. Phytophthora blight damages individual plants. Infection spreads to the stems from the buds. Stems dry up and turn brown and leathery. Plants rot at ground level. Cut plants to the ground in the fall.

Recommended Replacement Method:

Replace in kind with nursery stock.

Mock Orange (*Philadelphus coronarius*)

Common name: Mock Orange

Botanical name: *Philadelphus coronarius*

Plant location (area, feature #): 5-36

Historic Significance: It is not known whether mock orange was grown on the property during Douglass' time. But it is known to have been used in American gardens during the period of significance, and its fragrant flowers and shrubby habit are typical of the types of plants Douglass favored.

Preservation Objectives/Maintenance Procedures: The shrubs should be periodically inspected for damaging insects, disease and weed infestations.

Pruning: Prune only to remove dead branches after flowering. New flowers appear on wood of the previous year.

Characteristics: Deciduous, erect, medium sized shrub for sun to light shade with some curving and drooping in the branch structure. Moderate growth rate to 8'. Low tolerance to drought.

Leaf: Opposite, simple, oblong to ovate, coarsely to not serrated, 2 to 4 inches long, green above, lighter below.

Flower: White, four petals, yellow anthers, 1 inch across, fragrant, appearing in early summer.

Fruit: Dry, four-parted capsule, 1/2 inch long, persistent.

Twig: Slender, light brown to reddish brown, raised leaf scar, 3 bundle scars, hidden bud.

Bark: Light brown, coarsely shreddy.

Form: Shrub, with an overall rounded shape and arching branches.

Pests: Aphids, leaf miner.

Disease: Gray mold and rotting of wood.

Recommended Replacement Method:

Replace in kind with nursery stock.

Feature Data: Norway Spruce (*Picea abies*)

Common name: Norway spruce

Botanical name: *Picea abies*

Plant location (area, feature #): 1-17

Historic Significance: Norway spruce are known to have existed on the property during Douglass' time, since receipts were found for six Norway spruces that were purchased by Douglass in 1881.

Preservation Objectives/Maintenance Procedures: Trees should be left to grow naturally and should be periodically inspected for needle and trunk damaging insect and disease infestations. Pruning should be kept to a minimum and reserved for dead or hazardous branches. Norway spruce on the property should be preserved as they are a historic tree variety.

Characteristics: Fastest growing of the spruces. Develops strong graceful branches that are covered with dark green needles. Matures at 60'; 25' spread. Adapts to a variety of harsh soil and sparse moisture conditions and native to many areas of Canada and the US.

Leaf: Evergreen needles, stiff, 1/2 to 1 inch long, 4-angled but somewhat flattened, with a sharp pointed tip, shiny deep green. Each needle borne on a raised, woody peg (sterigma).

Flower: Monoecious; males yellow-brown in large groups; females upright, purple.

Fruit: Cones are very large, cylindrical, 4 to 6 inches long, with stiff, thin scales that are irregularly toothed, chestnut brown, maturing in fall.

Twig: Slender to medium in size, lacking hair, shiny orangish brown; needles are borne on woody pegs; buds with very loose, orange-brown scales (resembles a rose).

Bark: Red-brown and scaly, later turning gray with flaking scales or plates.

Form: A medium to large tree with conical form capable of reaching over 120 feet tall, with horizontal to upward sweeping branches that often droop branchlets.

Pests: Spider mites may cause damage when feeding on needles. Cooley spruce gall aphids on the new growth cause damage by chewing, causing misshapen cones.

Disease: Largely disease resistant but can be susceptible to cytospora canker caused by a fungus.

Recommended Replacement Method:

Replace in kind with nursery stock.

Feature Data: Common Pear (*Pyrus communis*)

Common name: Pear

Botanical name: *Pyrus communis*

Plant location (area, feature #): 4-9, 5-17

Historic Significance: Pear trees are known to have existed on the property during Douglass' time.

Preservation Objectives/Maintenance Procedures: Trees should be periodically inspected for leaf and trunk damaging insect and disease infestations. Structural pruning should be done during the winter dormant season. Regular maintenance including fruit thinning, feeding and watering, and checking for bug and disease problems, is similar to that required for apples. See apple and pear pruning pages in appendix. Fruiting pear trees on the property should be preserved as they are a historic tree variety.

Characteristics: Pear trees can grow to 25 feet or more in fertile, well-drained soil in full sun. They have strong vertical branches.

Leaf: Alternate, simple, ovate with a finely serrated margin, 1 to 4 inches in length, shiny green above, paler and dull below.

Flower: Clusters of showy white flowers (each 1/2 to 3/4 inch across) appearing before or with the leaves.

Fruit: A large edible pome (3 to 4 inches), pear-shaped.

Twig: Glossy brown to reddish brown, medium in texture, spur shoots present; terminal buds are medium in size (less than 1/4 inch), conical to dome shaped, and may be lightly hairy.

Bark: Gray-brown to reddish brown, becoming grayish brown with shallow furrows and flat-topped scaly ridges.

Form: Typically quite upright and conical with very narrow branch angles.

Pests: Caterpillars, leaf roller, blister mites, aphids, scale insects.

Disease: Powdery mildew, crown gall, fire blight, pseudomonas blossom blast and canker, anthracnose canker and bull's-eye rot.

Recommended Replacement Method:

When replacing or planting new pears in accord with a historical landscape architect's recommendations. Use varieties that would have been used during the historic period such as Bartlett, Bosc, Tyson, Bergen, Seckel, Flemish beauty, Winter Nelis.

Nursery stock including trees from heirloom fruit vendors.

Feature Data: White Oak (*Quercus alba*)

Common name: White oak

Botanical name: *Quercus alba*

Plant location (area, feature #): 2-1

Historic Significance: White oaks are known to have existed on the property during Douglass' time.

Preservation Objectives/Maintenance Procedures: The trees should be periodically inspected for leaf and trunk damaging insect and disease infestations. Hazard pruning, if necessary should be done immediately, structural pruning should be done in late winter or early spring before buds enlarge. White oaks on the property should be preserved as they are a historic tree variety. The white oak northeast of the house should be propagated to enable future replacement with some genetic stock.

Pruning: Pruning should be done under the guidance of the regional horticulturalist.

Characteristics: Deciduous tree widespread at elevations below 500' in the eastern US. Best in partial shade and good on all but the driest, shallowest soils. Commonly grows slowly to 60-80' tall with broad round heads in open-grown settings. Reddish-purple fall color. White oaks do not generally suffer from debilitating insect or disease problems. Fire is one of the leading causes of loss of an oak tree. Lightning rods are recommended for installation in the historic specimen on the north lawn (5-5).

Leaf: Alternate, simple, oblong to ovate in shape, 4 to 7 inches long; 7 to 10 rounded, finger-like lobes, sinus depth varies from deep to shallow, apex is rounded and the base is wedge-shaped, green to blue-green above and whitish below.

Flower: Monoecious; male flowers are yellow-green, borne in naked, slender catkins, 2 to 4 inches long; female flowers are reddish green and appear as very small single spikes; appearing with the leaves in mid-spring.

Fruit: Ovoid to oblong acorn, cap is warty and bowl-shaped, covers 1/4 of the fruit; cap always detaches at maturity; matures in one growing season in the early fall.

Twig: Red-brown to somewhat gray, even a bit purple at times, hairless and often shiny; multiple terminal buds are red-brown, small, rounded (globose) and hairless.

Bark: Whitish or ashy gray, varying from scaly on smaller stems to irregularly platy or blocky on large stems. On older trees smooth patches are not uncommon.

Form: A very large tree; when open grown, white oaks have rugged, irregular crowns that are wide spreading, with a stocky bole. In the forest crowns are upright and oval with trees reaching up to 100 feet tall and several feet in diameter.

Feature Data: White Oak (*Quercus alba* cont.)

Pests: white oaks can be attacked by wood borers and leaf eaters including the gypsy moth (*Lymantria dispar*), orange-striped oakworm (*Anisota senatoria*), variable oakleaf caterpillar (*Heterocampa manteo*), several oak leaf tiers (*Psilocorsis* spp.), and walkingstick (*Diapheromera femorata*). Frequently trees are killed from an interaction of damaging agents such as a defoliator followed by invasion of a shoestring fungus and the twolined chestnut borer (*Agrilus bilineatus*). The oak timberworm (*Arrhenodes minutus*) frequently damages white oak, making it unfit for tight cooperage. Attacks by this insect usually occur at wounds made by logging, lightning, and wind. Golden oak scale (*Asterolecanium variolosum*) can seriously damage and even kill the tree. It is especially damaging when accompanied by drought.

Disease: Can be effected by oak wilt, a vascular disease caused by the fungus *Ceratocystis fagacearum*, is potentially the most destructive disease of both the red and white oak. A root rot caused by the fungus *Armillaria mellea* attacks weakened trees. Root rot caused by *Armillaria tabescens* is similar and attacks oaks in the South. White root rot caused by *Inonotus dryadeus* is common on weak and suppressed trees. The fungus *Gnomonia veneta* causes irregular brown areas on leaves and shoots. It may cause loss of some leaves and rarely, complete defoliation. Oak leaf blister, caused by *Taphrina caerulescens*, is prevalent on eastern oaks, producing blister-like swellings on the foliage.

Recommended Replacement Method:
Replace in kind.

Feature Data: Scarlet Oak (*Quercus coccinea*)

Common name: Scarlet oak

Botanical name: *Quercus coccinea*

Plant location (area, feature #): 4-14

Historic Significance: Several varieties of oaks are known to have existed on the property during Douglass' time. The existence of scarlet oak, specifically, is unknown.

Preservation Objectives/Maintenance Procedures: Trees should be left to grow naturally and should be periodically inspected for leaf and trunk damaging insect and disease infestations. Hazard pruning, if necessary should be done immediately, structural pruning should be done in late winter or early spring before buds enlarge. Oaks on the property should be preserved as they are a historic tree variety.

Characteristics: Large deciduous tree found in the humid region of the central, eastern US. Grows rapidly to 60-80' tall. Tolerates a variety of soil conditions. Popular shade tree with brilliant autumn color.

Leaf: Alternate, simple, 3 to 7 inches long, oval in shape with very deep sinuses and bristle-tipped lobes, shiny green above, paler and generally hairless below but may have tufts in vein axils.

Flower: Monoecious; males are borne on slender yellow-green catkins; females are borne on very short axillary spikes, both appear with the leaves in spring.

Fruit: Acorns are 1/2 to 1 inch long, with the cap covering 1/2 of the nut, cap scales are shiny, somewhat resembling a varnished black oak cap, scales on edges of cap generally not loose; the tip of the acorn may have concentric rings or fine cracks; maturing in two years and ripening in the fall.

Twig: Moderately stout, red-brown with multiple terminal buds; buds reddish brown, plump, pointed, slightly angled, and covered with a light colored pubescence on the top half.

Bark: On young trees, gray-brown, with smooth streaks; later becoming darker and developing irregular broad ridges and narrow furrows especially near the base.

Form: A medium size tree reaching up to 80 feet tall with generally poor form, irregular crown, and many dead branches. A butt-swell is often noticeable, and often is useful in identification.

Pests: Oak leafeater, fall cankerworm, forest tent caterpillar, gypsy moth and orangestriped oak-worm. The walkingstick may severely defoliate scarlet oak, particularly in the northern portion of the scarlet oak range. Larvae of carpenterworms can damage scarlet oak by tunneling into heartwood and sapwood. They prefer open grown trees or trees growing on poor sites. Ambrosia beetles and the oak timberworm can invade and damage freshly cut or wounded trees. The red oak borer breeds in trunks of living trees greater than 5 cm... (2 in) d.b.h.. Larvae bore into phloem and cause serious defect and degrade; ants and fungi may then enter wounds and cause further injury. The gouty oak gall wasp can produce galls on twigs and smaller limbs of scarlet oak, and heavy infestations may kill the entire tree. Also, the large oak-apple gall wasp may cause gall on the leaves or leaf petioles of scarlet oak.

Feature Data: Scarlet Oak (*Quercus coccinea* cont.)

Disease: The fungus *Stereum gausapatum*, which is transmitted from stump to sprout, was the most common cause of decay. Scarlet oak is also susceptible to oak wilt. Trees attacked by this fungus may die within a month after the first symptoms appear. This oak is also subject to cankers of *Nectria* spp. and *Strummella coryneoidea*. These diseases are especially severe from Virginia northward

Recommended Replacement Method:
Replace in kind with nursery stock.

Feature Data: Willow Oak (*Quercus phellos*)

Common name: Willow oak

Botanical name: *Quercus phellos*

Plant location (area, feature #): 5-9

Historic Significance: While oak trees are known to have existed on the property during Douglass' time, there is no mention of willow oak as part of the historic landscape.

Preservation Objectives/Maintenance Procedures: Tree should be left to grow naturally and should be periodically inspected for leaf and trunk damaging insect and disease infestations. Hazard pruning, if necessary should be done immediately, structural pruning should be done in late winter or early spring before buds enlarge.

Characteristics: Deciduous tree for sun or partial shade. Round-topped symmetrical crown can reach up to 120' in southern range, likely to grow to 40-50' in Mid-Atlantic region. Long-lived and fast growing shade tree in many urban areas. Prefers loamy, clay soils. Native to humid regions of southeastern US.

Leaf: Alternate, simple, 2 to 5 inches long, linear or lanceolate in shape (willow-like) with an entire margin and a bristle tip.

Flower: Monoecious; males borne on slender yellow-green catkins; females borne on very short axillary spikes, both appear very early with the leaves.

Fruit: Acorns are very small, 1/4 to 1/2 inch across, nearly round and yellow-green, turning tan when older, caps are thin, saucer-like and cover only 1/4 of acorn with thin, tomentose, appressed scales.

Twig: Slender, hairless, olive-brown in color when young; multiple terminal buds are very small, reddish brown and sharp-pointed.

Bark: On young stems, smooth, gray and tight; later becoming darker and forming irregular rough ridges and furrows.

Form: A medium sized tree up to 80 feet tall that forms a dense oblong crown when open grown; lower branches do not readily self-prune.

Pests: Perhaps the most serious insect pests are the trunk borers. They cause serious degrade in saw log quality. Three of the more common are the red oak borer (*Enaphalodes rufulus*), carpenterworm (*Prionoxystus robiniae*), and living-beech borer (*Goes pulverulentus*).

Disease: A common canker on bottom-land willow oaks is caused by *Polyporus hispidus*. This fungus grows rapidly, cankers lengthening 4 to 6 in per year, and may cause as much as 25 percent cull in some areas. Cankered trees should be removed as soon as possible, both to salvage the log and to remove the tree as a source of infection.

Recommended Replacement Method:

Willow oak is not known to have grown in the historic landscape of Cedar Hill. Red, white and pin oaks were known to have grown on the property during Douglass's time and may be more appropriate to use instead. Replace with nursery stock recommended by a regional historical landscape architect.

Feature Data: Chestnut Oak (*Quercus prinus*)

Common name: Chestnut oak

Botanical name: *Quercus prinus*

Plant location (area, feature #): 1-8, 1-15, 1-16

Historic Significance: A variety of oaks and chestnuts were known to have grown on the property during Douglass' time, but there is no evidence that the chestnut oak was part of the historic landscape.

Preservation Objectives/Maintenance Procedures: Trees should be left to grow naturally and should be periodically inspected for leaf and trunk damaging insect and disease infestations. Hazard pruning, if necessary should be done immediately, structural pruning should be done in late winter or early spring before buds enlarge.

Characteristics: Medium-sized, long-lived slow growing tree found in humid regions of the central eastern US. Grows 65-80' tall. Prefers sun but more shade tolerant than northern red, black, or scarlet oaks. Wide-spreading shallow root system establishes as trees mature. Copper, red and yellow fall color.

Leaf: Alternate, simple, 4 to 6 inches long, obovate to elliptical in shape with a crenate margin, shiny green above, paler below.

Flower: Monoecious; male flowers are yellow-green, borne in naked catkins, 2 to 4 inches long; female flowers are reddish and appear as single spikes, appearing with the leaves in mid-spring.

Fruit: Acorns are 1 to 1 1/2 inches long, ovoid in shape and separate from the cap when mature; cap is thin, warty and shaped like a teacup, edges of cap are very thin; matures in one growing season, ripening in the fall.

Twig: Medium textured, lacking hair, orange-brown or grayish in color with chestnut brown multiple terminal buds that are pointed, narrowly conical and quite long.

Bark: Gray-brown to brown, very smooth when young; developing hard and wide flat-topped ridges which later become thicker and more sharply pointed ridges; somewhat resembling the back of an alligator or ridge tops.

Form: A medium sized tree to 80 feet tall that on better sites will develop a straight trunk and narrow crown; on drier ridge tops it is much smaller with a crooked stem.

Habit: A medium to large sized tree. Height can reach 30' in 20 years. Capable of reaching over 100 feet tall. Rounded crown and a straight trunk.

Pests: Chestnut oak and white oak are preferred by the gypsy moth (*Lymantria dispar*). Other defoliators are the spring and fall cankerworms, the forest tent caterpillar and the half-wing geometer. Gallforming wasps, pit scale, and golden oak scale. The acorns of chestnut oak are frequently infested with larvae of the nut weevils *Curculio* spp. and *Conotrachelus* spp., the moth *Valentinia glandulella*, and the cynipid gall wasps.

Feature Data: Chestnut Oak (*Quercus prinus* cont.)

Disease: susceptible to most of the diseases of oaks including oak wilt (*Ceratocystis fagacearum*), twig-blight fungus *Diplodia longispora*, a die-back and branch canker caused by *Botryodiplodia* spp., and, from Virginia northward, stem cankers caused by *Nectria galligena* and *Strumella coryneoidea*. The heartrot fungi *Spongipellis pachyodon* commonly occurs around dead branch stubs on chestnut oak in the southeast. Sprout rot, caused primarily by the heart rot fungi *Stereum gausapatum*, *Fistulina hepatica*, and *Armillaria mellea*.

Recommended Replacement Method:

Consider more historic oak varieties when replacing. Consult with regional historical landscape architect or horticulturalist.

Feature Data: Red Oak (*Quercus rubra*)

Common name: Red oak

Botanical name: *Quercus rubra*

Plant location (area, feature #): 1-14, 2-5, 2-6, 2-10, 2-12, 2-13, 2-18, 5-38

Historic Significance: Red oaks are known to have existed on the property during Douglass' time.

Preservation Objectives/Maintenance Procedures: Trees should be left to grow naturally and should be periodically inspected for leaf and trunk damaging insect and disease infestations. Hazard pruning, if necessary should be done immediately, structural pruning should be done in late winter or early spring before buds enlarge. Red oaks on the property should be preserved as they are a historic tree variety.

Characteristics: Moderate to fast-growing sun to partial shade-loving deciduous shade tree widely found in the eastern US. Likes warm, well-drained, slightly acidic moist soils. Rounded shape in youth with broad symmetrical crown upon maturity. Prized for its fast growth habit and use in general construction. Fall color crimson golden-orange or russet.

Leaf: Alternate, simple, 5 to 8 inches long, oblong in shape with 7 to 11 bristle-tipped lobes, sinuses extend 1/3 to 1/2 of the way to midvein, generally very uniform in shape, dull green to blue-green above and paler below.

Flower: Monoecious; males in yellow-green slender, hanging catkins, 2 to 4 inches long; females are borne on short axillary spikes, appearing with the leaves in spring.

Fruit: Acorns are 3/4 to 1 inch long and nearly round; cap is flat and thick, covering about 1/4 or less of the acorn, resembling a beret; matures in 2 growing seasons, in late summer and fall. Largest acorn of black-oak varieties.

Twig: Quite stout, red-brown and glabrous; terminal buds multiple, quite large, conical, and covered with red-brown, mostly hairless scales but terminal scales may bear some frosty pubescence.

Bark: On young stems, smooth; older bark develops wide, flat-topped ridges and shallow furrows. The shallow furrows form a pattern resembling ski tracks.

Form: A medium sized to large tree that reaches up to 90 feet tall, develops a short trunk and round crown when open grown, straight with a clear, long bole when grown with competition.

Pests: Defoliation may be caused by the gypsy moth and the variable oakleaf caterpillar, the orangestriped oakworm, the browntail moth and the Asiatic oak weevil. Insects that tunnel into the wood, seriously degrading products cut from infested trees include the carpenterworm, Colombian timber beetle, oak timberworm, red oak borer, and the twolined chestnut borer. Damage to acorns can be caused by nut weevils, gall-forming cynipids, the filbertworm, and the acorn moth.

Disease: Oak wilt, foliage diseases that attack northern red oak but seldom do serious damage are anthracnose, leaf blister, powdery mildews, and eastern gall rust.

Recommended Replacement Method:

Replace in kind with nursery stock.

Feature Data: Black Locust (*Robinia pseudoacacia*)

Common name: Black locust, yellow locust

Botanical name: *Robinia pseudoacacia*

Plant location (area, feature #): 2-20, 4-4, 4-5, 4-8, 4-13, 4-18, 5-19

Historic Significance: Research at present does not find mention of black locust trees on the site during the time of Frederick Douglass' residency. Most trees are thought to have been self-sown.

Preservation Objectives/Maintenance Procedures: Trees should be left to grow naturally and should be periodically inspected for leaf and trunk damaging insect and disease infestations. Hazard pruning, if necessary should be done immediately, structural pruning should be done in late winter or early spring before buds enlarge.

Characteristics: Fast growing nitrogen-fixing, sun-loving, deciduous tree to 40-80 ' tall. Mature trees usually have straight trunks and crooked branches. Has become widely naturalized throughout US and Canada. Tolerates poor soils, and most soil types excluding wet soils. Freely seeds itself and develops shoots from its roots. Known to become ragged with age.

Leaf: Alternate, pinnately compound, with 7 to 19 leaflets, 8 to 14 inches long. Leaflets are oval, one inch long, with entire margins. Leaves resemble sprigs of grapes; green above and paler below.

Flower: Monoecious; perfect, showy and fragrant, white, 1 inch long and pea-like in long (5 inches) hanging clusters, appear in mid to late spring.

Fruit: Flattened and pod-like, light brown, 2 to 4 inches long; containing 4 to 8 kidney-shaped, smooth, red-brown seeds, ripen in the fall.

Twig: Zigzag, somewhat stout and angular, red-brown in color, numerous lighter lenticels. Paired spines at each leaf scar (often absent on older or slow growing twigs); buds are submerged beneath the leaf scar.

Bark: Gray or light brown, thick and fibrous, resembles a woven rope.

Pests: Black locust are susceptible to pest and disease. Some are the locust borer (*Megcallene robiniae*), locust leafminer (*Odontota dorsalis*) and locust twig borer (*Ecdytolopha insiticihana*).

Disease: Some common diseases are heart rot and witches' broom disease, caused by a virus, *Chlorogenus robiniae*.

Recommended Replacement Method:

Black locust trees on the property are thought to have self-seeded, rather than to have been purposefully planted. As specimens die, consideration of replacement with historic vegetation such as ash, oak, walnut, chestnut or Eastern redcedar may be preferable. However, since black locust thrive in the site's dryer areas, they may be used when soils are deemed unsuitable for other tree varieties. Otherwise, replace with nursery stock recommended by historical landscape architect.

Feature Data: Rose (*Rosa*)

Common name: Rose

Botanical name: *Rosa* sp.

Plant location (area, feature #): 5-32

Historic Significance: Roses were planted in the historic landscape of Cedar Hill during the time of Frederick Douglass.

Preservation Objectives/Maintenance Procedures: The shrub should be periodically inspected for damaging insects, disease and weed infestations. Structural pruning should be done in late winter (see below).

Characteristics: Deciduous, sun-loving shrub. Summer flowers.

Pruning: Pruning should be done in late winter about two weeks before the last of the killing frosts. Cut out dead, old, weak or otherwise undesirable wood. Minor pruning during season will encourage more blooms. For best results, clip spent blooms at an angle at the next 5-leaf branch-let on the stalk.

Fertilizing: Make the first application about two weeks after the late-winter pruning, or about the date of the last killing spring frost. Fertilize the second time during or after the second bloom, around the middle of July.

Pests: Aphids, spider mites, thrips and powdery mildew.

Disease: Powdery mildew, blackspot, anthracnose, rust and verticillium wilt.

Recommended Replacement Method:

Replace in kind with nursery stock.

Feature Data: Weigela (*Weigela florida*)

Common name: Weigela

Botanical name: *Weigela florida*

Plant location (area, feature #): 5-39

Historic Significance: Little is known of the specific plants existing on the property during Douglass' time. Weigela is not known to have been one of them. However, they were plants used in the American landscape during the same time period as Douglass' residency at Cedar Hill.

Preservation Objectives/Maintenance Procedures: The shrub should be periodically inspected for damaging insects, disease and weed infestations.

Pruning: Structural pruning should be done immediately following the bloom. Prune to enhance upright, arching habit.

Characteristics: Medium-sized deciduous shrub. Sun loving and grows in a variety of soil conditions.

Leaf: Opposite, simple 5-15 cm... long, ovate-oblong with an acuminate tip, and with a serrated margin.

Flower: Showy to 1 ½ " long in compound clusters.

Fruit: Dry capsule.

Pests: Japanese Beetle may sometimes feed on Weigela foliage. Inspect the stems of unhealthy-looking plants to see if scales are present. Overwintering stages can be controlled with sprays of dormant oil. The preferred method of control involves regular inspection for early detection then spraying with dormant oil.

Disease: Bacterial crown gall causes formation of roundish, warty-looking growths on the lower stems. There is no chemical control. Remove and destroy infected plants.

Leaf spots sometimes attack weigela and can be controlled with fungicides. Rake up and destroy infected leaves.

Recommended Replacement Method:

Replace in kind with nursery stock.

Calendar for Inspection and Work-Winter

- Trees:**
- Prune out dead, damaged and diseased wood from trees where it is unsightly or poses a safety concern (all areas).
 - Remove snow from young plants promptly to avoid broken branches (all areas).
 - Monitor trees for pest damage and fungal diseases (all areas).
 - Rake fallen leaves as needed (all areas).
- Beds and Borders:**
- Remove fallen tree and shrub leaves from beds and borders (Area 5).
- Circulation:**
- Monitor and remove debris from drains especially near and in visitor center plaza area (Area 2).
- Shrubs, Perennials Groundcovers:**
- Prune roses and crapemyrtle for shape and structure sometime between February and late March.
- Structural Features:**
- Reset ruin stones that may have been dislodged.

Calendar for Inspection and Work-Spring

- Trees:**
- Transplant: fall is best, but if necessary, spring is a good time to plant replacement trees.
 - Remove suckers and water sprouts (the branches that grow straight up). They can be plucked off when they are still soft. They are less likely to re sprout if they are plucked off, because cutting them leaves a stub with buds.
- Beds and Borders:**
- Apply fertilizer to beds (Area 5).
- Circulation:**
- Remove debris from drains and surfaces (all areas).
 - Inspect surface conditions and repair as needed.
- Shrubs, Perennials Groundcovers:**
- Shear liriope in early spring before new growth appears (Area 5).
 - Prune spring flowering shrubs after they bloom.
- Lawns and Slopes:**
- Raise mower height and mow as needed during spring season.
 - Take preventative action to protect the base of trees from string trimmer and mower damage. Train all equipment operators.
- Structural Features:**
- Reset ruin stones that may have been dislodged.

Calendar for Inspection and Work-Summer

Trees:	-Continue to monitor trees for pest, disease and structural damage. -Water new transplants so that they receive one inch of water every 10 days, and monitor all trees for moisture during drought conditions.
Beds and Borders:	-Monitor and remove weeds on a monthly basis with the intent of zero tolerance for annual, biennial and perennial weeds. -Monitor planting beds for pest and disease on a monthly basis. -Monitor soil moisture on a weekly basis during the growing season.
Circulation:	-Inspect surface conditions and repair as needed.
Shrubs, Perennials Groundcovers:	-Prune spring-blooming shrubs and remove spent flowers to redirect plant growth into healthy foliage and next year's flower buds (including mock orange, flowering quince, weigela, calycanthus, winter jasmine winter honeysuckle).
Lawns and Slopes:	-Raise mower height and mow as needed during summer season. -Take preventative action to protect the base of trees from string trimmer and mower damage. Train all equipment operators.
Structural Features:	-Monitor, maintain and preserve sundial, memorial wall, carriage house and barn ruins, and other structures for damage by mechanical devices. -Reset ruin stones that may have been dislodged.

Calendar for Inspection and Work-Fall

Trees:	-Continue to monitor trees for pest, disease and structural damage. -Prune to prevent limb breakage during winter weather only where necessary. -Monitor all trees for moisture during drought conditions so that they receive one inch of water every 10 days, especially new plantings. -Remove mummified fruit from fruit trees and ground to increase sanitation and limit the spread of pests and disease.
Beds and Borders:	-Apply organic matter (leaf mold or compost) to beds to improve soil condition. -Remove fallen tree and shrub leaves from beds and borders.
Circulation:	-Inspect surface conditions and repair as needed. -Work to keep drains free of leaf debris.
Shrubs, Perennials Groundcovers:	-Remove spent flowers from late-blooming shrubs. -Prune back unsightly foliage on spent perennials.
Lawns and Slopes:	-Remove leaf debris by raking or use leaf blowers where appropriate. -Take preventative action to protect the base of trees from string trimmer and mower damage. Train all equipment operators.
Structural Features:	-Monitor, maintain and preserve sundial, memorial wall, carriage house and barn ruins, and other structures for damage by mechanical devices. -Reset ruin stones that may have been dislodged.

Bibliography

Bailey, Liberty Hyde and Ethel Zoe Bailey. *Hortus Third: A Concise Dictionary of Plants Cultivated in the United States and Canada*. New York: Macmillan, 1976.

Brown, George E. *The Pruning of Trees, Shrubs and Conifers*. Portland, Cambridge: Timber Press, 1972.

Coxe, Anna Toogood. *Frederick Douglass Home: Cedar Hill Historic Grounds Report Historical Data Section*. Washington, D.C. USDI/NPS, 1968.

Dirr, Michael A. *Manual of Woody Landscape Plants: Their Identification, Ornamental Characteristics, Culture, Propagation and Uses*. Champaign, Ill: Stipes, 1975.

Herron, John G. *Archeological Excavation of The Growlery: Frederick Douglass Home Memorial*, Washington, D.C. USDI/NPS, 1981.

Reeves, Craven. *Landscape Restoration Frederick Douglass Home 14th and W Sts., S. E. Washington, D.C.* USDI/NPS, 1976.

Cover photographs images from New Deal Network, owner U.S. National Archives and Records Administration Still Picture Branch, 1930s.

Area 1 Work Needed

Date	Feature Type and Location Number	Work Needed	Completed (x)
	Black Locust 1-3	Remove	(x)
	Black Locust 1-4	Remove	(x)
	Black Locust 1-5	Remove	(x)
	Stumps	Remove to 6" (minimum) to 12" below grade, regrade and reestablish lawn.	()
	Crapemyrtle 1-1, 1-2	Prune to establish structure in late winter. Remove smaller shoots and establish a series of 3-5 "trunks" for a shrub-like effect. It is preferable to gradually thin out the plant; do not top. In the summer, remove seedpods after bloom to encourage more flowers.	()
	Lawn area on west side of slope.	Monitor and patch eroded areas at drain outlets on west side of slope. Monitor slope slumping.	()



The terraced slopes at Frederick Douglass NHS are subject to erosion. On-going maintenance is needed to correct and prevent future erosion and protect the cultural landscape(NCR CLP 2006).

Inspection completed by Douglas Carr Chief of Grounds National Capital Parks East, Ernest Biggs Maintenance Supervisor, National Capital Parks East, Saylor Moss Historical Landscape Architect National Capital Region. December 2007.

Area 2 Work Needed

Date	Feature Type and Location Number	Work Needed	Completed (x)
	Lawn area upslope from feature 2-16, Eastern redcedar (Juniperus virginiana)	Stabilize lawn area affected by erosion. Recommended patching material is "Slopetame2" erosion control blanket. http://www.invisiblestructures.com/GP2/grasspave.htm Possible local contact person: Melanie Fuhrman Ferguson - Waterworks 1801 Geotextile Product Specialist 540-761-9123	()

Inspection completed by Douglas Carr Chief of Grounds National Capital Parks East, Ernest Biggs Maintenance Supervisor, National Capital Parks East, Saylor Moss Historical Landscape Architect National Capital Region. December 2007.

Area 3 Woodland Work Needed

Date	Feature Type and Location Number	Work Needed	Completed (x)
	Entire woodland	Garbage removal.	()
	Invasive plant species	Inventory, monitor and remove	()

Inspection completed by Douglas Carr Chief of Grounds National Capital Parks East, Ernest Biggs Maintenance Supervisor, National Capital Parks East, Saylor Moss Historical Landscape Architect National Capital Region. December 2007.

Area 4 Work Needed

Date	Feature Type and Location Number	Work Needed	Completed (x)
	Stumps	After consulting with regional archeologist, remove to 6" (minimum) to 12" below grade, regrade and reestablish lawn.	()
	Black locust (Robinia pseudoacacia) 4-8, 4-18	Remove trees and stumps.	()

Area 5 Work Needed

Date	Feature Type and Location Number	Work Needed	Completed (x)
	Ligustrum sp. 5-29	Remove specimen.	()
	All Planting beds	Remove all weeds from planting beds (including 5-30 through 5-36).	()
	North Side Planting Beds 5-43	Remove steel edging and reduce beds to size intended in 1976 Landscape Restoration Plan.	()
	East side planting bed (on south side of house)	Remove all steel edging and white rock, plant lirioppe spicata at base of house, plant lawn in planting bed. Keep grass 2-3 feet from magnolia tree trunk.	()
	East side planting bed (on north side of cottage)	Remove gravel and plant with lirioppe spicata.	()

Inspection completed by Douglas Carr Chief of Grounds National Capital Parks East, Ernest Biggs Maintenance Supervisor, National Capital Parks East, Saylor Moss Historical Landscape Architect National Capital Region. December 2007.

Work Needed

Date	Feature Type and Location Number	Work Needed	Completed (x)

