



MONTGOMERY COUNTY DEPARTMENT OF PARKS
THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION

MCPB
Item: 5
Date: 2/25/10

February 18, 2010

MEMORANDUM

TO: Montgomery County Planning Board

VIA: Mary R. Bradford, Director of Parks *MB*
Michael F. Riley, Deputy Director, Department of Parks *JM*
Mitra Pedoeem, Chief, Park Development Division *Mit*

FROM: Patricia McManus, Design Section Supervisor, Park Development Division *pm*
Kimberly Paniati, Project Manager, Park Development Division (301-495-2465) *KP*
Ching-Fang Chen, Landscape Architect, Park Development Division *CFC*

SUBJECT: Facility Plan for Brookside Gardens Parking and Access Improvements

STAFF RECOMMENDATION

- 1) Approve the facility plan Alternative 4 for parking and access improvements at the Brookside Gardens Visitors Center, including cost estimate.

Note: Approval of the facility plan is conditioned upon approval of the revised Preliminary Forest Conservation Plan, as well as a variance for impacts to trees 30 inches or larger in diameter. The Preliminary Forest Conservation Plan and variance is currently under review and will be presented to the Planning Board by Environmental Planning staff at a later date. The facility plan is presented at this time, in order to meet the schedule for the Montgomery County Council's Planning Housing and Economic Development (PHED) Committee review of the FY11-16 Department of Parks Capital Improvements Program.

PROJECT DESCRIPTION

Introduction

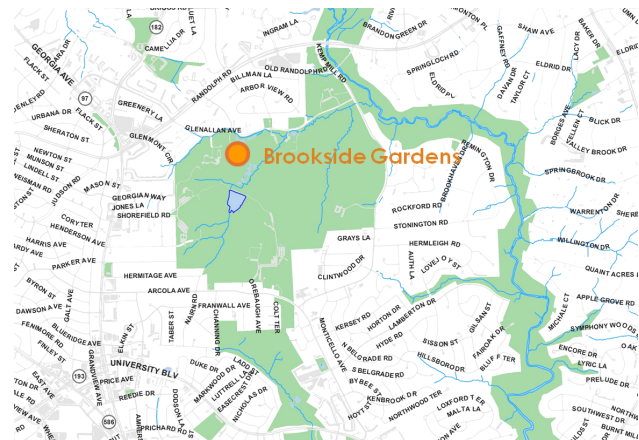
The purpose of this project is to prepare a facility plan to expand the existing parking area at the Brookside Gardens Visitors Center in order to help alleviate parking shortages and to create a more welcoming entrance to the building. This project is the second phase of work identified in the Brookside Gardens Master Plan and will be implemented in conjunction with the first phase of the master plan, which is the renovation of the entrance to Brookside Gardens at 1800 Glenallan Avenue. The entrance renovation and parking lot expansion projects are intended to reinforce the entrance to the Visitors Center as the primary entrance to Brookside Gardens and to set the tone for the visitation experience throughout the Gardens.

Brookside Gardens is located within the 500-acre Wheaton Regional Park in the Kensington-Wheaton planning area. The facility provides a popular cultural destination known for plant collections, scenic landscapes, and horticulture education services. The Gardens encompass 50 acres of which 35 are open to the public and 15 are service and natural areas. Brookside Gardens is bounded by Wheaton Regional Park on three sides, with Brookside Nature Center to the east and mature woodlands from the park to the south and west sides. The north side of the property is bounded by a narrow residential street, Glenallan Avenue, which provides access to both public and service areas of the Gardens. Regional transportation routes nearby include Georgia Avenue, Randolph Road and Kemp Mill Road.

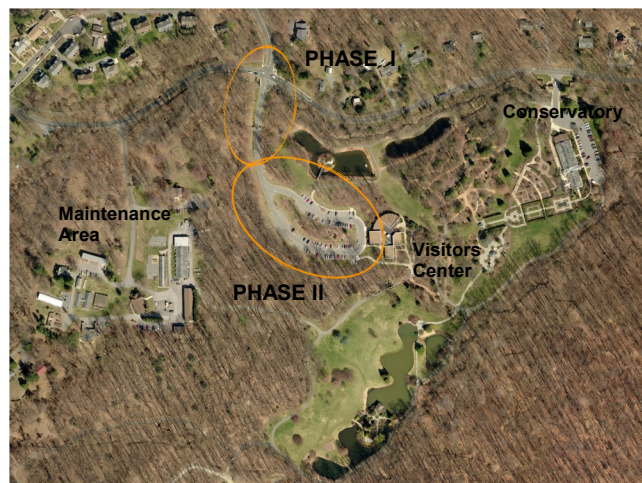
Brookside Gardens welcomes over 400,000 visitors of all ages each year. It includes a connected sequence of individual garden areas, open spaces, a conservatory, and a visitors center. The Visitors Center is a hub of activity, used extensively for classes, larger gatherings, and community functions. In addition to providing a regional garden attraction, over 95,000 visitors annually attend special events held at Brookside Gardens such as the Wings of Fancy butterfly exhibit and the Garden of Light Show.

A facility plan for the Phase I entrance renovations was completed and approved by the Montgomery County Planning Board on July 17, 2008. The purpose of the project was to visually reinforce the Visitors Center entrance on Glenallan Avenue as the primary entrance to Brookside Gardens, improve vehicular and pedestrian access, and to enhance the garden experience upon arrival to the facility. This project included reconfiguring the vehicular and pedestrian entrances on Glenallan Avenue, removing impervious surfaces, providing decorative pervious paving, and providing entrance features including artwork, signage, a gatehouse with a green roof, display plantings along the entrance drive, deer control measures, and rain gardens.

Staff is recommending that Phases I and II should be developed together as one project through detailed design and construction, so that the arrival experience is designed and constructed sequentially and to ensure that physical improvements from the Phase I entrance renovation would not be damaged by construction activities occurring later for the Phase II parking area. This approach will also result in cost savings.



Vicinity Plan



Project Location

Project Funding and Timing

The facility planning study was funded with \$130,000 in the Capital Improvements Program in the Brookside Gardens Master Plan Implementation PDF. The project was designed by in-house staff in collaboration with Charles P. Johnson & Associates, Inc., who provided engineering and environmental services. The project was initiated in late July 2009 and was combined with the approved Phase I entrance renovation project for detailed design and construction in the FY11-16 Capital Improvements Program, which was submitted to the County Executive in Fall 2009 and recommended for approval. The facility plan provides 30% complete construction documents, a determination of the regulatory feasibility of the project, and a detailed cost estimate.



Phase I Entrance Renovation
Approved July 17, 2008



Facility Planning Process

The facility planning process included the following steps:

1. Review and analyze existing site conditions and project background information.
2. Prepare site survey, including location of utilities and delineation of existing wetlands.
3. Prepare a geotechnical analysis and report to determine feasibility of parking and stormwater management options.
4. Prepare and obtain approval of Natural Resources Inventory/Forest Stand Delineation Summary Map.
5. Prepare preliminary program of requirements.
6. Prepare preliminary parking lot alternatives.
7. Discuss alternatives and technical issues with internal stakeholder groups and expand study limits to include area between building and parking lot.
8. Present program of requirements, design alternatives and recommended plan to the community.
9. Prepare stormwater management concept submission and obtain approval from the Department of Permitting Services.
10. Prepare and submit Preliminary Forest Conservation Plan and variance request for impacts to trees 30 inches in diameter or greater for approval.
11. Prepare final facility plan, report, cost estimate, and operating budget estimates.
12. Present facility plan recommendations and costs to the Montgomery County Planning Board for approval.

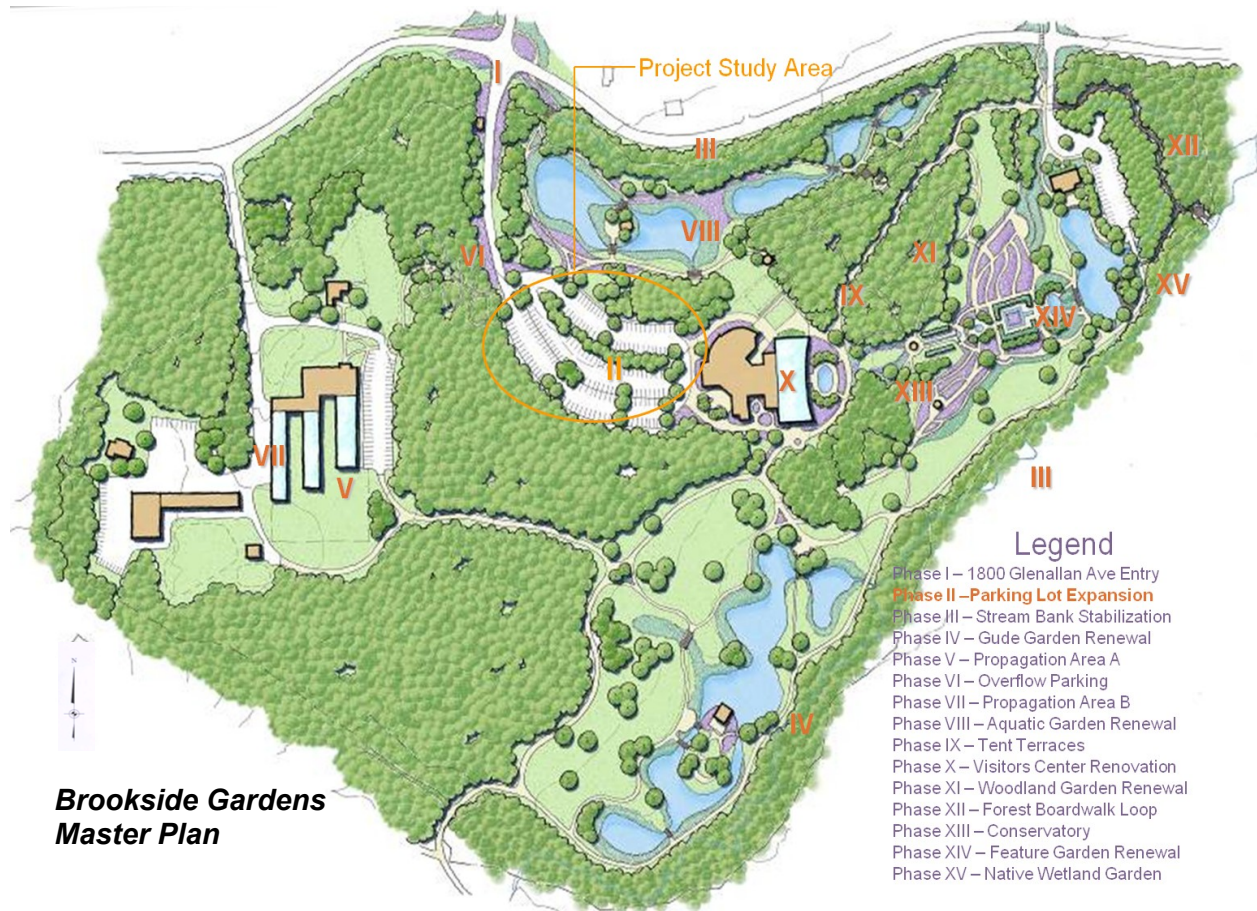
PLANNING DOCUMENT RECOMMENDATIONS

Brookside Gardens Master Plan

The Brookside Gardens Master Plan was completed and approved by the Montgomery County Planning Board in March of 2005, providing a long-term vision for the renewal of Brookside Gardens. The master plan identified fifteen phases of development for implementation. The renovation of the main entrance was identified as the first phase for implementation, and this project to expand the parking lot and improve access to the building was identified as the second phase.

The master plan identified the scope of this project as including expansion of the existing parking lot by approximately 50 spaces within the limits of the existing developed parking area, introduction of gardens in the parking area, providing a service drive along the south side of the Visitors Center, and providing stormwater management as required. In addition the master plan envisions reconfiguring the Visitors Center complex in the future so that the southwest door to the existing building will eventually become the main visitor entrance. The parking lot configuration, drop-off functions and pedestrian circulation should be designed to accommodate this future building reconfiguration.

The Maryland-National Capital Park & Planning Commission has a policy of maintaining a ratio of 1/3 developed to 2/3 undeveloped land within regional parks. Since Wheaton Regional Park is nearing its threshold for development, the master plan for Brookside Gardens focuses primarily on enhancing the gardens and improving the visitor experience rather than increasing development and visitation. The proposed parking lot expansion is modest in size to maintain this park development ratio and to provide an aesthetically pleasing entrance experience with substantive planted areas within the parking lot and at the building entrance.



PROGRAM OF REQUIREMENTS

The following program of requirements was developed based on guidance from the master plan as well as input received from the staff team:

- Provide a minimum of 50 new parking spaces to better accommodate visitors
- Provide a minimum of 2 parking spaces for busses
- Provide accessible parking spaces and pedestrian circulation in compliance with the Americans with Disabilities Act Guidelines
- Improve the visitor drop-off area for vehicles and busses
- Improve parking area circulation and safety for pedestrians and vehicles

- Create an arrival and transition space between the parking area, the Visitors Center and the gardens
- Enhance the visitor experience and appearance of the parking area and entrance by introducing gardens into the parking area and by use of special hardscape materials
- Design vehicular and pedestrian circulation to accommodate a future main entrance to the building at the southwest side of the existing building
- Implement low impact development techniques and stormwater best management practices in accordance with new environmental site design criteria
- Provide a service drive along the south side of the Visitors Center separated from pedestrian circulation to the facility
- Provide energy efficient lighting for safe access to the building at night
- Provide irrigation as required for landscape plantings
- Design facilities in compliance with Crime Prevention Through Environmental Design (CPTED) principles

FACILITY PLAN STUDY

Existing Conditions

The Visitors Center was constructed in 1998 and is a significant resource for the gardens. While the building and parking areas are evident from the approach drive, the design of building entrances and layout of parking and walkways contribute to visitor confusion. The existing parking area is terraced, with spaces for 122 automobiles and 2 busses. The vehicular circulation system is intended to be a one-way system, however the drive aisles are wide enough for two way traffic and signage is unclear, making wayfinding difficult for a first-time visitor. There is a drive aisle at the front of the building which is part of the main parking lot circulation flow and is also used for pedestrian drop-off, service deliveries and maintenance access. The main pedestrian access to the gardens at the south side of the building is also the access point for maintenance vehicles, detracting from the visitor experience and efficiency of maintenance activities and emergency access. There is also a need for more direct pedestrian connectivity from the



building entrance to Glenallan Avenue and the aquatic gardens, as well as from the parking lot to the gardens on the north side of the building.

Brookside staff estimates that there is no available visitor parking for at least 45 days per year, and visitors park their vehicles on the neighboring residential street, Heurich Road. In addition, there are 14 days per year when Brookside staff makes arrangements to use the parking area at the adjacent Nature Center and nearby Glenallan Elementary School to provide overflow parking for events and popular visitation days such as Mother's Day. On these busy days visitors frequently park in the drop-off aisle, exacerbating vehicular congestion. Since there are few areas for pedestrians to gather near building entrances, pedestrians occasionally gather in the drop-off aisle, further restricting vehicular flow and creating safety concerns.

The existing setting for the parking lot includes a prominent wooded slope on the south side of the parking lot with a high quality stand of mature trees, comprised primarily of tulip poplar and red maple. A large island within the parking lot takes up six to eight feet of grade change between the two existing bays of parking. The island includes recently planted trees as well as several large tulip poplars, which are remnants of the previously forested area and have been declining over recent years. On the north side of the parking lot, there is a small stand of hardwood forest in the mid succession stage, comprised of tulip poplar, red maple and sycamore.

Water is collected from the existing parking lot through stormwater management infiltration trenches, which are not functioning properly. Erosion is occurring at some of the existing storm drains, and the pedestrian paving at the main entrance drains poorly causing winter icing conditions. The Visitors Center, parking lot and entrance road drain to an existing stormwater management pond adjacent to Glenallan Avenue, which is considered to be part of the aquatic gardens. Fringe wetlands are located adjacent to this pond. Water is collected, routed through an existing riser structure and is then conveyed through a storm drain to an adjoining lower pond in the aquatic gardens where it eventually discharges to the existing stream adjacent to Glenallan Avenue. The 100 year floodplain is generally limited to the upper banks of this tributary.



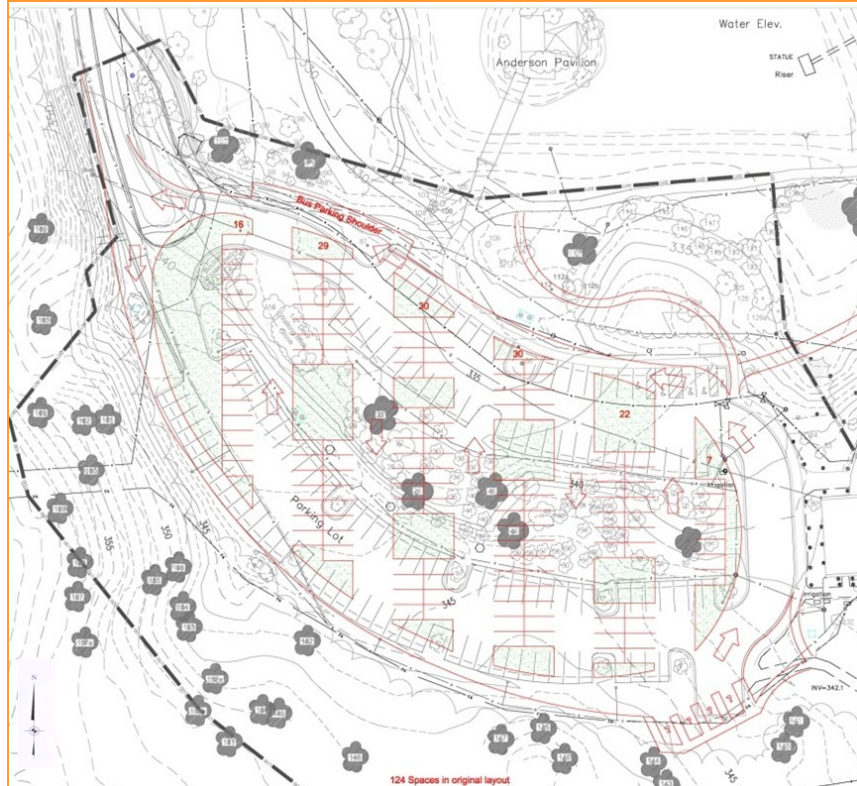
Alternatives Considered

The following chart summarizes the alternatives considered for the parking lot.

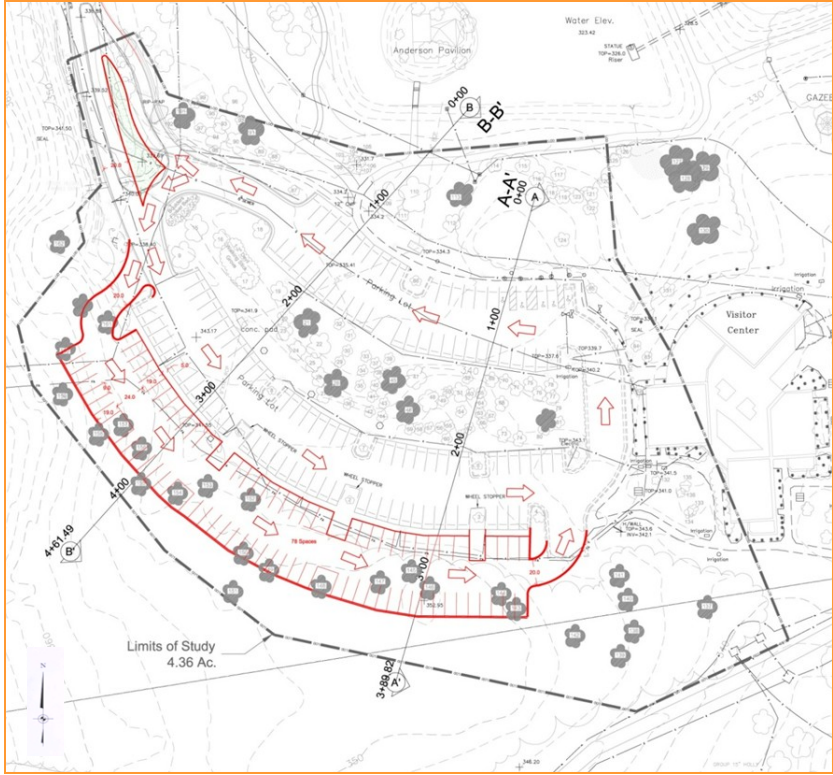
Alternative	Description	Comments
Master Plan Alternative	Provides new bay of parking between existing parking aisles	<ul style="list-style-type: none"> • Adds 52 spaces • Does not improve existing arrival or drop-off space • Expansive asphalt with limited green space, which does not represent or enhance the character of the gardens • 8 foot high retaining walls required to take up grade change between bays • Locates bus parking remote from building
Alternative 1	Re-oriens parking aisles 90 degrees	<ul style="list-style-type: none"> • Eliminates 12 spaces from current count, no gain in parking • Inefficient layout, poor pedestrian flow, no arrival space and steep grades in parking lot • Provides ample opportunity for internal planting islands
Alternative 2	Preserve existing parking lot island and locate new bay of parking to south of existing parking lot	<ul style="list-style-type: none"> • Adds 78 spaces • Does not improve existing arrival or drop-off space • Preserves trees in existing parking lot and scrub woodlands to north of existing parking lot • Removes 14 specimen trees and high quality forest cover to south of existing parking lot • Requires large retaining walls to south of parking lot
Alternative 3	Maintains existing limits of parking lot on south side, and adds third bay immediately north of existing bay	<ul style="list-style-type: none"> • Adds 57 spaces • Requires large retaining walls between parking bays • Provides some improvement to drop-off and arrival area • Limited internal green space in parking lot
Alternative 4	Maintains existing limits of parking lot on south side, but changes orientation of two bays to north to provide internal green space	<ul style="list-style-type: none"> • Adds 63 spaces • Provides separate drop off zone and bus parking in close proximity to building • Provides flexible circulation pattern, including potential for valet parking for special events • Provides large amounts of internal greenspace in parking lot • Eliminates need for large retaining walls • Preserves high quality forest and specimen trees to south • Eliminates most of scrub woodlands to north • Areas requiring retaining walls are limited



Master Plan Alternative



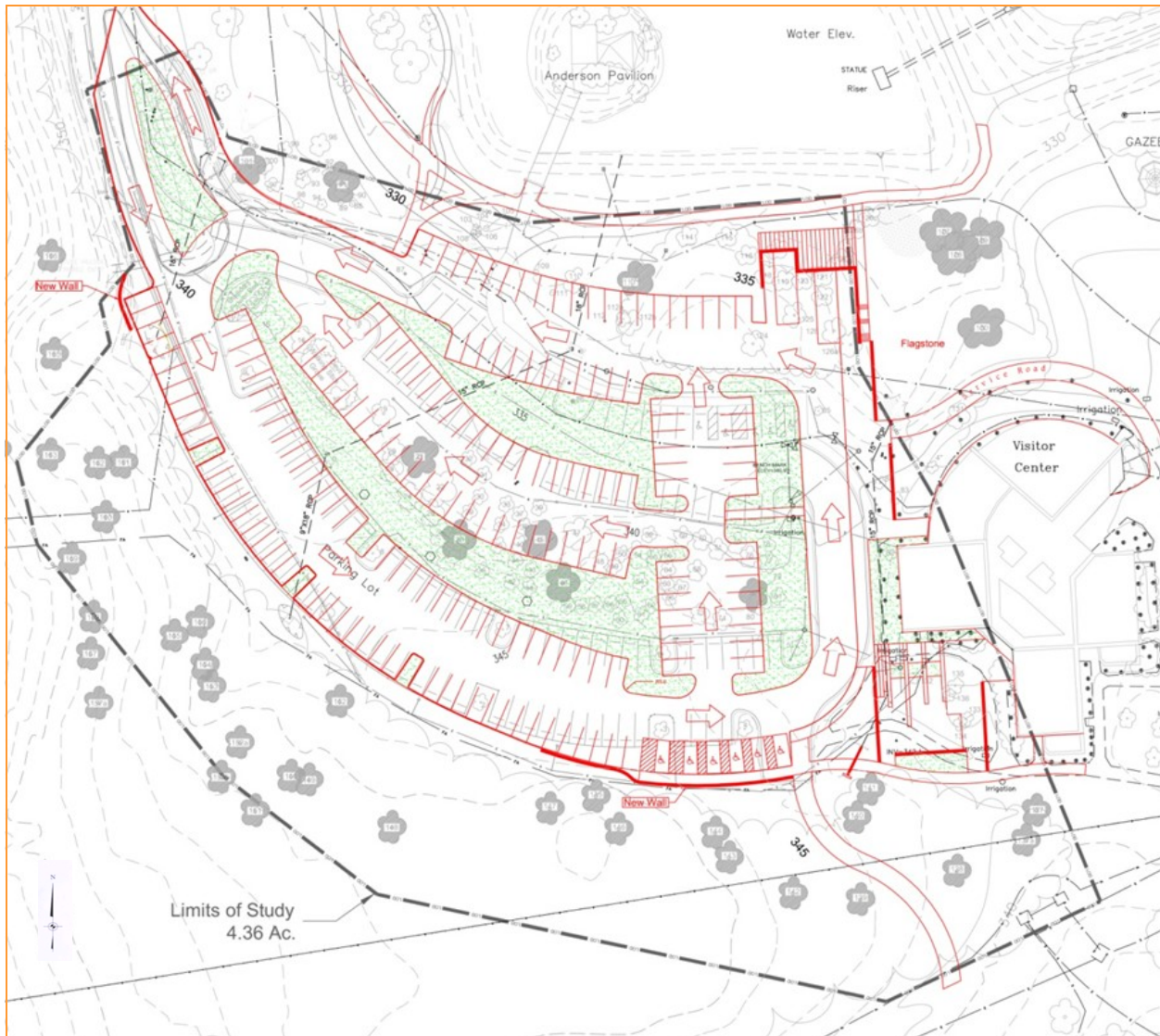
Alternative 1



Alternative 2



Alternative 3



Preferred Plan - Alternative 4

Community Outreach

The existing conditions, program of requirements, design alternatives and recommended plan were presented to the community in a public meeting on January 7, 2010. Most of the attendees were neighbors, however there were several questions sent in by e-mail. In general, the recommended plan was well received and supported. Specific questions and concerns included improving the directional signage to reinforce the one-way system and direct traffic flow, adding a crosswalk at Heurich Road and Glenallan Avenue, requesting a Ride-on bus service stop at Brookside Gardens, and using diagonally oriented parking spaces rather than ninety degree spaces to make it easier and safer for visitors to park. There were also questions about how the programmatic need for fifty spaces was determined, whether planting could occur in the road right-of-way at the Heurich Road intersection and whether the terrace at the drop-off area would encourage people to stay longer, fill up the parking lot, and picnic in the gardens on weekends.

Staff intends to improve the directional signage and will consider using angled parking. Our initial studies of angled parking with the curved parking lot alignment resulted in inefficiencies and a loss in the number of parking spaces, however we will re-evaluate this alternative during detailed design. Brookside staff requested Ride-on bus service and a crosswalk in the past, but was denied service because Glenallan Avenue is classified as a rural road and a traffic study did not warrant a crosswalk. Plantings in the right-of-way at the Heurich Road intersection were envisioned as part of the Phase I renovations. Staff intends to pursue the planting, crosswalk and bus service issues further with County agencies during the detailed design stage of the project. With respect to picnicking, Brookside staff indicated that picnicking is not permitted in Brookside Gardens, and staff is present on weekends to enforce the rules.

Agency Coordination and Regulatory Approvals

The following is a summary of agency coordination and regulatory approvals obtained for this project.

- Montgomery County Department of Permitting Services (DPS) - The stormwater management concept plan (Plan #237186) was approved by DPS on January 29, 2010.
- M-NCPPC Environmental Planning (NRI/FSD) - A Natural Resources Inventory/Forest Stand Delineation Summary Map (NRI/FSD) for the entrance renovation was approved on May 4, 2007. A revision to the approved NRI/FSD (#4-94149) was submitted for the parking lot expansion and is currently under review.
- M-NCPPC/Montgomery County Department of Environmental Protection (DEP) – In accordance with the new Maryland State Bill 666 and proposed changes to the Montgomery County Forest Conservation Law (Chapter 22A), an application for a variance was submitted to remove three trees in fair condition having a diameter of 30 inches or greater. Two of the three trees were shown for removal on the previously approved Preliminary Forest Conservation Plan for the entrance renovations (#P-95001) from November 13, 2007. The third tree is located in an existing parking lot island which is being removed. The application is currently under review and is the first application that DEP has received since the law went into effect.
- M-NCPPC Environmental Planning (FCP) – A Preliminary Forest Conservation Plan for the entrance renovation was approved on November 13, 2007. A revision to the approved Preliminary Forest Conservation Plan (#P-95001) was submitted for the parking lot expansion and is currently under review.

Recommended Facility Plan Alternative 4

The recommended facility plan Alternative 4 significantly improves the visitor parking and entrance experience at Brookside Gardens Visitors Center. The recommended plan improves circulation and safety for pedestrian and vehicular traffic, creates an arrival and transition space between the parking area and the Visitors Center and gardens, enhances the aesthetics of the entry and parking area, provides flexibility for operational use, and implements innovative,

environmentally sensitive stormwater management practices. Refer to Attachment B for the Facility Plan Technical Appendices.

The recommended plan includes the following elements:

- One-way vehicular circulation system with flexibility to bypass the drop-off area;
- Impervious asphalt drive aisles with pervious parking spaces (increase of 63 spaces) ;
- Pedestrian access routes articulated within parking lot by use of decorative pavers;
- Generous internal planting islands with demonstration rain gardens and canopy trees to provide shade and reduce the heat island effect of the parking lot;
- Transitional garden space between parking lot and drop-off aisle to visually separate parking area from building entrance zone;
- Entrance drive with separate pull off area for drop-off;
- Pedestrian crosswalks delineated by unit pavers and ample pedestrian walkways connecting to building entrances;
- Bus parking area for two busses with separate overlook deck and terrace area to allow for group assembly and safety in loading each bus;
- Terrace area with seating for gathering at south building entrance;
- Service and emergency vehicle access drive along the south side of the building separated from pedestrian circulation;
- Directional signage;
- Energy efficient parking lot lights and bollard path lighting;
- Bicycle racks;
- Innovative, low impact stormwater management facilities including permeable paving with underground reservoirs to infiltrate water into the soil, and micro-bioretenion areas;
- Sustainable display plantings with irrigation only as required; and
- Design and construction practices in compliance with principles of Crime Prevention Through Environmental Design (CPTED) and the Sustainable Sites Initiative.

The following is a comparison summary of the existing parking area to the proposed plan.

Item	Existing	Proposed	Increase/Decrease
Total Pavement	1.27 acres	1.80 acres	+0.53 acres
Total Parking Spaces	122 (includes 4 disabled)	185 (includes 6 disabled)	+63 spaces
Bus Parking	2 spaces	2 spaces	0 spaces
Impervious Pavement	1.27 acres	0.69 acre	-0.58acre
Pervious Pavement	0.00 acre	1.11 acre	+1.11 acre
Internal Greenspace	0.59 acre	0.54 acre	-0.05 acre

PREFERRED PLAN - Alternative 4

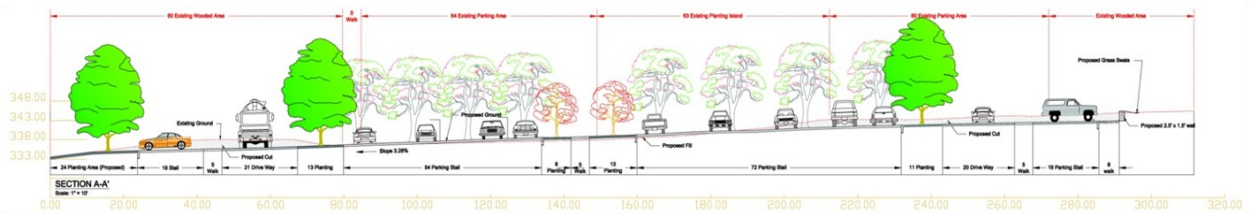
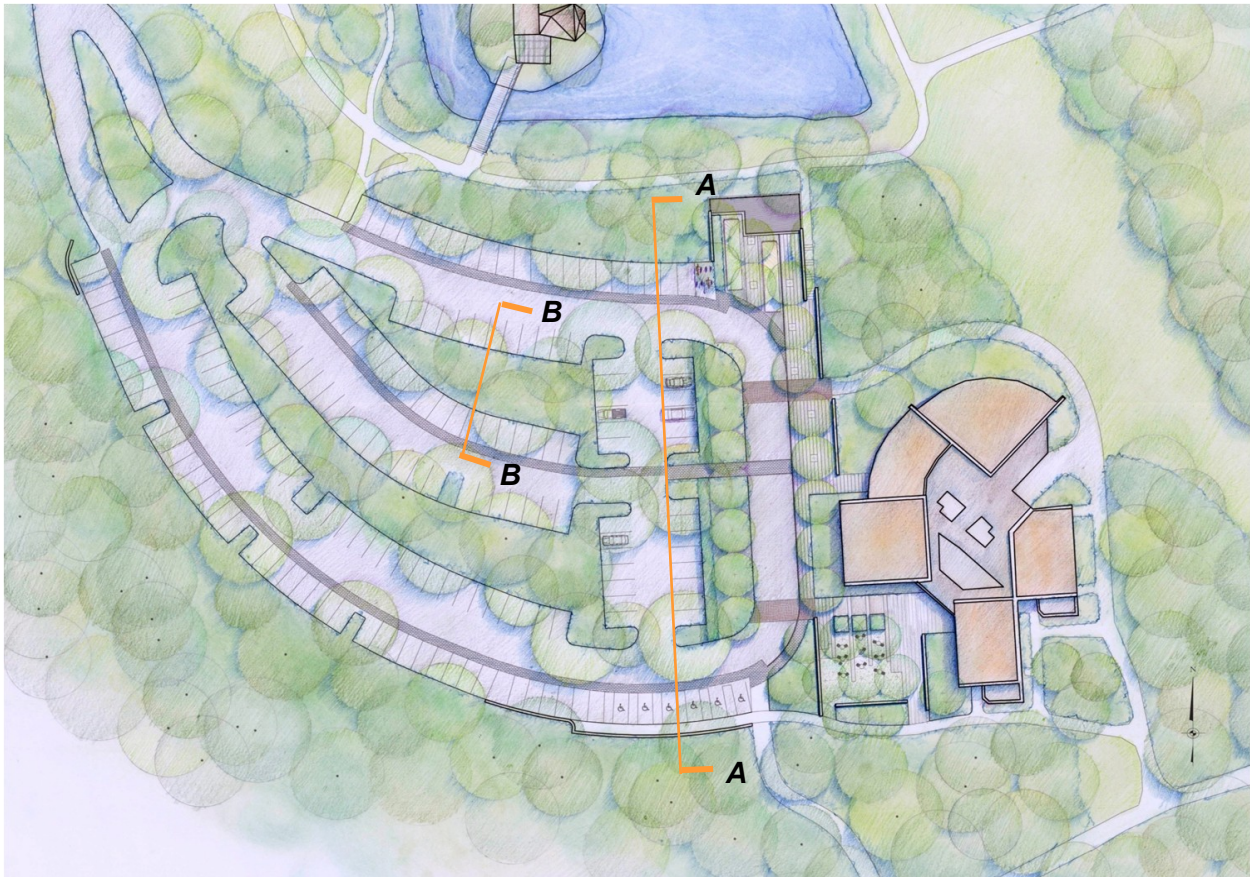


Existing Conditions

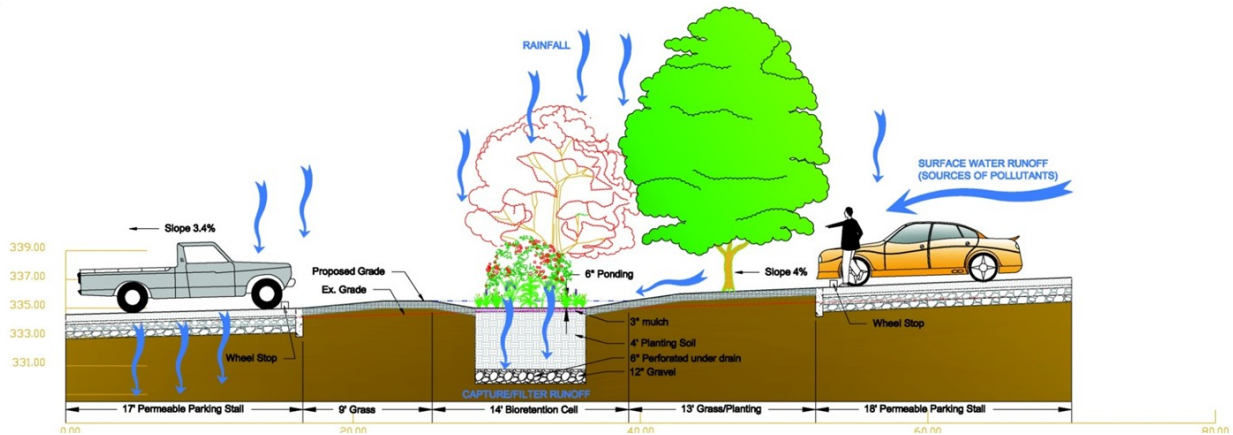


Proposed Hardscape at Entrance
(Model Image, plantings not shown for clarity)

SECTIONS



Section A-A

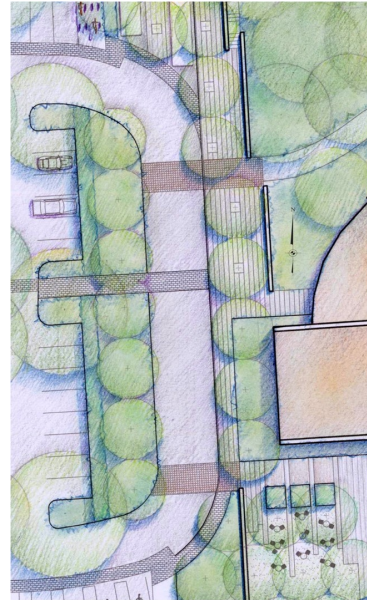


Section B-B

ENTRY COURT- Visitor Drop-off and Arrival Area



Existing Conditions



Plan

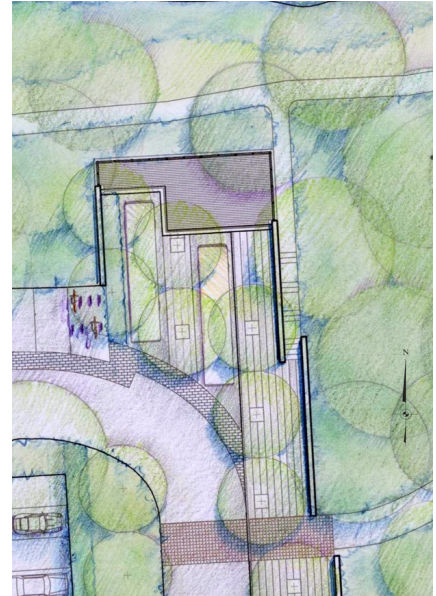


Proposed (Model Image)

NORTH TERRACE- Bus Drop-off Area



Existing Conditions



Plan



Proposed (Model Image)

SOUTH TERRACE– Garden Terrace Area



Existing Conditions



Plan



Proposed (Model Image)

COST ESTIMATE

Construction Costs and Phasing

The proposed cost for the recommended facility plan Alternative 4, including design, permitting, construction and construction management costs is \$3,085,000. The cost of the approved facility plan for the Phase I entrance renovations was \$2,061,000. The County Executive's recommended level of funding in the Capital Improvements Program for both projects is \$4,687,000, which is a shortfall of \$459,000. This shortfall is caused by a recommended cut to the project funding by the County Executive, and our initial budget request did not include the full scope of pedestrian improvements near the building entrance that are proposed in the final plan. A summary of project costs is outlined below. Refer to Attachment A for the Capital Improvements Program Project Description Form and Attachment B for a detailed cost estimate.

ITEM NO	ITEM	TOTAL COST
1	Site Preparation & Demolition	\$238,920
3	Earthwork	\$206,024
4	Drainage & Stormwater Management	\$327,816
5	Structures	\$306,575
6	Pedestrian and Vehicular Paving	\$765,715
7	Utilities	\$195,900
9	Landscaping	\$291,842
*	PARK CONSTRUCTION SUBTOTAL	\$2,332,792
10	Construction Contingency (15% x Construction Subtotal)	\$349,919
**	PARK CONSTRUCTION TOTAL	\$2,682,711
11	Design Contract w/contingency (10% x Construction Total)	\$268,271
12	Staff Charge Backs (20% x Design w/Contingency)	\$53,654
13	Construction Management & Inspection (3% x Construction Total)	\$80,481
***	TOTAL PROJECT COST	\$3,085,118

Staff believes that current market conditions may enable us to build the full scope of work for the currently approved level of funding. Additional strategies that we may pursue are to increase the level of donations that are raised for the project, include some project elements in future phases of the implementation of the master plan, or to re-evaluate selection of materials to reduce project costs. We may also phase the landscape plantings over time and install plants from the Pope Farm Nursery incrementally.

Operating Costs

Annual operating budget costs to maintain the renovated parking and entrance area are expected to increase slightly. Maintenance activities for the planted areas will be absorbed by existing Brookside staff, with no increase to the operating budget. The new parking lot lighting system is more energy efficient and will reduce energy costs, however the size of the lighted area has expanded, which will minimize the cost savings. The increase in operating costs are primarily a result of maintenance requirements for the pervious paving system. Pervious paving typically requires periodic vacuuming or washing of surfaces to maintain porosity. The maintenance requirements will be quantified during the detailed design stage of the project, once a paving system has been specified. Staff does not anticipate the impact to the operating budget to be significant.

CONCLUSION

Staff recommends approval of the facility plan Alternative 4 and the associated cost estimate. The recommended plan is designed in keeping with the desired goals for the entrance to become a welcoming arrival point that will foster anticipation of the gardens inside. The parking and entry area integrates function, sustainability and visitor experience in a way that is coherent and flexible, and the project lives up to the reputation of Brookside Gardens as a forward thinking facility that is designed for the enjoyment of current and future generations.

ATTACHMENTS

Attachment A: CIP Project Description Form
Attachment B: Facility Plan Technical Appendices