# APPENDIX A

# Renewing the Washington Park Arboretum

A Proposal by the Arboretum and Botanical Garden Committee
December 2000

This copy of Renewing the Washington Park Arboretum is provided in the EIS without the accompanying plans. The plans referenced herein are available from Seattle Parks Department, Laurel Mercury 206-684-7055

# *Renewing the Washington Park Arboretum*

A Proposal by the Arboretum and Botanical Garden Committee
The Preferred Alternative to be evaluated in the Final Environmental Impact Statement

December 2000

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# 1. Purpose and Need

> *The Washington Park Arboretum is a living plant museum emphasizing trees and shrubs hardy in the maritime Pacific Northwest. Plant collections are selected and arranged to display beauty and function in urban landscapes, to demonstrate their natural ecology and diversity, and to conserve important species and cultivated varieties for the future. The Arboretum serves the public, students at all levels, naturalists, gardeners, and nursery and landscape professionals with its collections, educational programs, interpretation, and recreational opportunities.*
>
> Mission Statement, 1996

The Washington Park Arboretum has had a glorious sixty-year history as one of the most loved educational and cultural resources in the Pacific Northwest. The Arboretum, then known as the University of Washington Arboretum, began officially in 1934 when an agreement was signed by the University of Washington and the City of Seattle, allowing the University to develop and manage an arboretum and botanical garden in Washington Park. This agreement continues to serve the park's and arboretum's mission of service to the people of the Northwest, through education, conservation, and recreation.

The purpose of the proposed plan for the renewal of the Washington Park Arboretum is to reach consensus on a vision for the future of the Arboretum and to establish a framework according to which that vision may be realized. The Arboretum must maximize its value to the communities of western Washington as a place of

- education, both formal and informal, concerning the natural history and landscape value of woody plants;
- conservation of plant species, and of their genetic diversity, that are threatened with extinction worldwide; and
- recreation and tranquil experience for all visitors to Washington Park.

This document first establishes, in Chapter One, the need for a comprehensive plan to renew the Arboretum and a set of goals for its future. These needs and goals are the foundation for the plan's objectives and the proposed plan itself, which are presented in Chapter Two.

With over 4,400 species and cultivated varieties on its grounds, the 230-acre Washington Park Arboretum contains one of the three most diverse collections of woody plants in the United States. As such, Washington Park *is unique* among Seattle's many urban green spaces: it embodies the ecological values of any well-forested urban park -- such as absorption of pollutants, moderation of urban heat island effects, and habitat for wildlife

-while most effectively displaying the beauty, diversity, and landscape utility of the world's temperate flora.

Our cool maritime Pacific Northwest climate allows us to grow a wider variety of plants than almost anywhere in temperate North America. As human pressures affect the ecological health of the Earth, living museums such as the Arboretum have a duty to educate people about the values of plants, of their natural environments, and of their importance in urban landscapes.

As a park, the Washington Park Arboretum welcomes visitors from throughout the region to walk, bicycle, picnic, take photographs, observe wildlife, and enjoy its quiet, naturalistic, Olmstedian ambience.

## 1.1 Project proponent

The proposed plan for the Washington Park Arboretum is the result of cooperative effort by the City of Seattle, the University of Washington, and The Arboretum Foundation, working together on the Arboretum and Botanical Garden Committee (ABGC). The ABGC is the legally mandated advisory committee to the University and the City established by the Arboretum's enabling ordinance in 1934. The ABGC comprises nine members appointed by the University, City, Governor, and the Arboretum Foundation. The Department of Parks and Recreation has management responsibility for the Arboretum on behalf of the City of Seattle, and the Center for Urban Horticulture in the College of Forest Resources has management responsibility on behalf of the University. The Arboretum and Botanical Garden Committee believes that it is in the best interest of the Arboretum and its constituents to address these issues in a comprehensive planning process, rather than piecemeal.

## 1.2 Need for a Plan for the Washington Park Arboretum

The plan by which the Arboretum now operates, the *Master Plan Update for the University of Washington Arboretum in Seattle's Washington Park* (Jones and Jones, 1978), addressed issues principally of facilities, traffic, and pedestrian circulation. If the Arboretum is to successfully fulfill its mission in the next several decades, however, it must have a clear vision driven by its responsibilities and goals in education, conservation, and recreation. Therefore this new master plan presents a complete set of goals, objectives, and programmatic recommendations to guide the Arboretum's immediate and long-range future in a way that is inspiring and sustainable.

The following sections review the issues that comprise the most compelling justification for a new plan for the Washington Park Arboretum.

### 1.2.1 Education

*Formal educational programs*

The Washington Park Arboretum offers educational programs of outstanding quality, yet they serve far fewer people than should the most significant public garden in Seattle's major, growing metropolitan area. Traditionally, public garden education has been oriented almost solely to sophisticated plant enthusiasts, the academic elite, and the affluent. Major metropolitan public gardens now are successfully reaching much wider audiences, suggesting the Arboretum's greater potential for educational service to the community.

School administrators and teachers are increasingly aware that when students participate in field trip experiences related to classroom study, they better absorb and retain their classroom lessons. When they visit the Arboretum, children easily learn how important plants and parks are to our own health and urban environment, and in turn how important it is to care for parks and plants. A visit to the Arboretum can stimulate a child's lifetime enjoyment of gardening and nature. A child's lessons in geography come to life in the presence of trees and forests from all over the world.

K-12 school programs served approximately 2,640 students in 1999-2000. The demand and potential are much greater, however. Approximately 60% of current participants are school children who reside in the Seattle City limits. The Arboretum is one of two parks in which the 3rd grade Plant Growth and Development curriculum is taught. With continued assistance from community partners such as Alliance for Education, the Arboretum is able to offer many children their first-ever field trip experience. Arboretum staff expects increases from Seattle schools as well as eight other school districts through the Saplings programs. The 2006 goal is to host 6,000 students in the Saplings program. Given the uniqueness of the Arboretum as an educational resource in western Washington, and the performance of similar public gardens in other major metropolitan areas, when the Arboretum reaches its potential it should serve at least 20,000 K-12 students and youth each year from throughout the Puget Sound region.

Other audiences for formal educational programs presently are even less well served by the Arboretum. These include families, educators, landscape professionals, natural history/ecology enthusiasts, gardeners, special-needs populations, and adults in general. It is estimated that 4-5,000 additional people could benefit from formal Arboretum programs.

*Educational value to the community at large*

The Washington Park Arboretum can and should better serve the community at large, whose interest in natural history, gardening, and open space recreation is unsurpassed anywhere in the United States. Hundreds of thousands of visitors each year attest to the Arboretum's value to the community. One reflection of this value is the membership in The Arboretum Foundation, the nonprofit organization that promotes education, volunteerism, and financial support for the Arboretum. The Foundation today boasts a membership of about

3,200 from throughout the Puget Sound region and beyond. Membership, volunteerism, and financial support will increase substantially when the community is inspired by a plan to make the Arboretum's bounty of plant life, beauty, and educational benefit more interesting and accessible to our diverse population.

The Arboretum, like any living museum, fulfills much of its educational mission by informal means, by having plant exhibits whose messages are clear, absorbing, and well interpreted through signage, docents, and written materials. Visitors seeking recreation and emotional renewal from their time in the Arboretum should leave the park having learned something, however implicitly "by osmosis," about the natural world as well. The current organization and interpretation of plant collections, however, do not promote such informal education.

*Educational relevance of plant displays.*

Many of the Arboretum's plant collections and displays are incomprehensible to all but a few botanically sophisticated visitors. Most current displays are organized around taxonomic themes, according to plants' evolutionary relationships: legumes are grown, together, as are viburnums, cherries, spruces, mountain-ashes, crabapples, hollies, maples, and magnolias. Some of the Arboretum's taxonomic displays are well appreciated, but most are not even recognizable to the untrained visitor. Over the past half-century, living museums like the Arboretum have found that students and audiences learn best from, and enjoy, displays that are organized ecologically, according to plants' natural communities, or *horticulturally,* according to plants' uses in urban garden landscapes. Much of the recent popularity of Seattle's Woodland Park Zoo, for example, can be traced to its change from taxonomic (the Primate House) to ecological (African Savanna) display themes.

### 1.2.2. Conservation

*Conservation of threatened species and genetic diversity*

The world's biological diversity today is increasingly at risk of extinction and loss of self-sustainability. Currently the Washington Park Arboretum grows specimens of at least 117 species of trees and shrubs that are considered endangered or threatened with extinction somewhere in the world according to the CITES list. However, most of the Arboretum's conservation species are represented by just one or two individual specimens. As one of the major public gardens in the United States, the 230-acre Arboretum should play a much larger role in the *ex situ* ("off site") conservation of endangered species. In addition, the genetic diversity of many cultivated species is in decline as old cultivated varieties are abandoned for new. Public gardens such as the Arboretum can preserve this diversity by growing individuals of varieties that are not currently in fashion but that may provide material for hybridization in the future. The goal of the Arboretum can be achieved by cultivating numerous individuals in order to preserve possible samples of the species genetic variability.

*Conservation education*

Most urban dwellers have little direct notion of the fragility of our natural heritage. One of the best ways to communicate that message is through plant displays that represent natural plant communities of the world, including our own native forests, and that demonstrate the inter-relatedness of those communities and their intrinsic value. Naturalistic, ecological displays can emphasize those plants that are in danger of extinction within their natural habitats. No current display at the Arboretum effectively communicates such a message. The natural marshy shoreline, wetlands, and uplands could demonstrate how ecosystems may vary in their vegetation and wildlife. For example, a renovated riparian area around Arboretum Creek even may attract salmon, to the ecological benefit of Union Bay and the educational benefit of visitors.

*Location of plant collections*

The relationship between the location of plant collections and the site conditions in which they can thrive is often poor in the present Arboretum. The original James Dawson (Olmsted Brothers) plan for the Arboretum imposed a sequence of plant displays on Washington Park with insufficient concern for environmental conditions most conducive to the health of the plants. Siting plants in the correct environment is the first step to showing their beauty and significance while decreasing the intensity of maintenance they require.

*Horticultural maintenance*

Many of the Arboretum's finest trees and shrubs are dying from old age, storm damage, disease, inadequate pruning and other care, overcrowding, shading out by fast growing self-sown native trees, and being overcome by invasive species such as English ivy and Himalayan blackberry. Invaders not only are affecting the health of exotic collection plants, but also are interfering with the natural regeneration of the Arboretum's habitat matrix of native trees and shrubs. A well-managed Arboretum can be a model for other Puget Sound urban green spaces.

The Arboretum's horticultural crew, with only one staff member for every twelve acres, ranks well below other comparable public gardens such as Strybing Arboretum in San Francisco, which has one horticultural staff for every five acres. As a result, many specimens and displays have declined for many years, so that some are dead, some are unrecognizable, and others, such as the viburnums, are vestiges of dying, misshapen specimens.

*Plant security*

Increasingly, the Arboretum's plant collections are victims of theft and vandalism, such as recent severe damage and losses to the crabapples, conifers, birches, and valuable Japanese maples.

*Wildlife*

The Arboretum is currently a haven for many species of birds, insects, and other wildlife that utilize both the diverse native forest habitats and the botanically rich collections of exotic trees and shrubs. In the past, curation and management of the plant collections have not sought to maximize wildlife health and diversity, but such concerns must be addressed in the future if the Arboretum is to fulfill its role as an urban wildlife sanctuary.

### 1.2.3. Recreation and Visitor Services

*Balancing recreational use and plant/environment health*

The Washington Park Arboretum is a unique urban resource that must balance its roles as a park and as a resource for education, conservation, and display. Bicycling, jogging, dog walking, and other recreational activities often damage plants and their environments either directly or indirectly, e.g. by compacting soil over root systems. For instance, canoe and kayak launching, waterfowl feeding, wave action, runoff, and compaction by pedestrians, contribute to degradation of the Duck Bay shoreline, which in one place has receded by more than fifteen feet in recent years. Both “arboretum” and “park” uses can be better supported through improved planning and infrastructure.

*Bicycle use of Washington Park*

Presently the bicycle linkage between E. Madison Street and the north end of Washington Park is difficult and dangerous. Recreational bicycle use of Washington Park is not well provided for, resulting in inappropriate bicycling on pathways, which interferes with the health and appreciation of the Arboretum plant collections, and visitor safety.

*Visitor safety and security*

During the scoping phase of the current planning process (see section 2.2 below), personal safety was the concern expressed most frequently by the public. Crime statistics are typical for those in a Seattle park, which deters some constituents - particularly families with small children and elderly plant devotees - from exploring the entire Arboretum. Also, inappropriate bus and truck traffic on Arboretum Drive puts pedestrians at risk. Parked automobiles are frequently broken into, especially in the small, isolated parking lots throughout the Arboretum. The Seattle Police Department's "Crime Prevention Through Environmental Design" team has recognized the Arboretum's significant safety problems and has suggested numerous creative solutions.

*Automobile traffic*

Lake Washington Boulevard accommodates about 18,000 cars on a typical weekday, four times as many as was intended in the original plan for the boulevard. This traffic restricts easy pedestrian access across Lake Washington Boulevard, which is spanned only by the Wilcox Footbridge near the north end of the park. The western portion of the Arboretum is therefore effectively inaccessible to most visitors, and many Montlake residents living west of Washington Park cannot easily access the eastern core of the Arboretum on foot.

Traffic issues are especially acute during rush hours, when many drivers make U-turns at the north entrance of the Arboretum in order to enter eastbound Route 520.

*Pedestrian circulation*

Pedestrian passage across Lake Washington Boulevard is particularly problematic near the south end of Washington Park, hindering access between the Japanese Garden and the rest of the Arboretum. The majority of trails in the Arboretum are not surfaced or graded to permit reasonable access by disabled or elderly visitors. Pedestrian entrance into, and orientation within, the Arboretum are often confusing and difficult, especially for visitors who are not yet intimately familiar with the park. Pedestrian access from local bus-stops should be improved so that more people will visit the Arboretum without their automobiles.

*Japanese Garden experience*

One of the most outstanding features of the Washington Park Arboretum is the Japanese Garden. However, the full Japanese Garden ambience and experience have not been achieved for several reasons: Facilities envisioned in the 1959 plan for the Garden, such as a pavilion and expanded north entry, have not yet been implemented. Landscaping outside the fence, intended to contribute appropriate Asian forest "borrowed scenery" to the Garden's context, has not yet been provided. In addition, high traffic volumes on Lake Washington Boulevard impact the tranquility desired in the garden.

*Visitor amenities*

The Arboretum portion of Washington Park has only one set of restrooms, at the Graham Visitors Center in the north end, for its entire area. (Restrooms at the south end ballfields are relatively inaccessible from the Arboretum due to heavy Boulevard traffic.) Water fountains are similarly sparse, and even basic food service is lacking. Other than the Visitors Center, only the Lookout in the south end offers visitors any shelter from the often unpredictable weather.

*Naturalistic experience*

Since its inception, the Washington Park Arboretum has adhered to the Olmstedian ideal of plants displayed in a naturalistic manner, accessible to people for education and for esthetic respite from urban stresses. The Arboretum should continue to embrace that ideal in the future.

### 1.2.4 General Issues

*Arboretum Foundation activity and membership*

As noted above, The Arboretum Foundation is an outstanding nonprofit organization that supports the Washington Park Arboretum through volunteerism and fundraising, and its

membership level should be expected to grow, commensurate with the most significant public garden in the Pacific Northwest.

*Fiscal sustainability*

The Washington Park Arboretum's fiscal health has been inadequate from its very inception, as evidenced by 50-years'-worth of deferred maintenance on the grounds, relatively few people served by its educational programs, and the waning relevance of many of the plant exhibits.

## 1.3 GOALS FOR THE FUTURE OF THE WASHINGTON PARK ARBORETUM

The goals for the future of the Washington Park Arboretum directly address the needs and issues raised in the previous section. The focus of improvements to the Arboretum will remain on Curation, Education, and Visitor Services. Goals are numbered for ease of later reference, not to suggest any priority order, and are summarized as follows:

### 1.3.1 Education

1. An educational program fulfilling the Washington Park Arboretum's potential to serve K-12 students, higher education, families, landscape professionals, natural history/ecology enthusiasts, gardeners, special needs populations, and general visitors (consistent with Washington Park's recreational mission)

2. Plant exhibits organized, designed, and interpreted to be as interesting and self-explanatory as possible to the Arboretum's diverse audiences

### 1.3.2 Conservation

3. Plant exhibits that demonstrate to all visitors the ecological attributes and values of natural plant communities throughout the temperate world, emphasizing forests of the Pacific Northwest, of regions with similar cool winter-rain climates, and of selected Pacific Rim regions

4. Active conservation of species of trees and shrubs, and of their genetic diversity, that are threatened with extinction in temperate regions of the world

5. Healthy, thriving plant collections and exhibits throughout the Washington Park Arboretum

6. The Arboretum as a sanctuary for diverse urban wildlife

7. Rehabilitation of historic planting sites, physical amenities, and Olmstedian influences.

### 1.3.3 Recreation and Visitor Services

8. Non-structured recreational use of Washington Park consistent with the Arboretum's mission of education, display, and conservation, as further defined below.

9. Improved safety of all visitors to Washington Park, including vulnerable populations, and security for their belongings

10. Decreased disruption of park and arboretum use by arterial traffic on Lake Washington Boulevard and entering/exiting State Route 520

11. Improved pedestrian and bicycle access to Washington Park

12. Enhancement of the ambience and visitor experience at the Japanese Garden

13. Educational, conservation, and visitor facilities consistent with growing recreational enjoyment of Washington Park Arboretum by citizens of the city, region, and beyond

12. Provision for the visitor amenities expected of a 230-acre public garden and recreational park

14. Continuation of the naturalistic influence upon which the Arboretum was founded.

### 1.3.4 General Goals

15. Efficient and effective administration that excels at fundraising, resource allocation, advocacy, and personnel management

16. A thriving Arboretum Foundation, with membership, active volunteerism, and fiscal support at levels appropriate for the flagship public garden in the Pacific Northwest

17. Long-term fiscal sustainability for ongoing operations and capital improvement

18. Rehabilitation in accordance with appropriate historic preservation goals

# 2. A Proposal by the Arboretum and Botanical Garden Committee

## 2.1 OBJECTIVES FOR THE PLAN

The proponents intend through a new master plan to address those issues and challenges that confront the present and future of the Washington Park Arboretum. At the end of each listed objective, there is in parentheses reference back to the particular goals, and their category (Education, Conservation, Recreation/Visitor Services, General), that are listed in Chapter One. The objectives are numbered below for ease of reference, and do not suggest any priority order.

### 2.1.1 Education, Volunteerism, and Community Outreach

1. Implement classes, tours, self-guided learning opportunities, and other means to educate Arboretum visitors on the natural history, conservation, and landscape value of the world's woody plants. Those audiences should include at least 20,000 K-12 students each year plus substantial numbers of higher-education students, families, landscape professionals, natural history/ecology enthusiasts, gardeners, special needs populations, and general visitors (See Appendix D of the final EIS for details.)

2. Build on the Arboretum Foundation's successful volunteer program, with ever more Foundation members contributing their efforts and resources in all program areas.

3. Achieve a level of staff, volunteers, and facilities that will allow implementation of all desired educational programs in a fiscally sustainable manner.

### 2.1.2 Collections and Exhibits

4. Improve existing educationally valuable plant exhibits by redesign, plant replacement, provision of appropriate, unobtrusive interpretive signage, and informative written and electronic publications.

5. Create new plant exhibits that address the full range of the Arboretum's educational mission -natural history, environmental studies, and conservation as well as landscape horticulture - and interpret them appropriately.

6. Create plant exhibits that truly simulate forest communities of the Pacific Northwest, other cool winter-rain regions of the world, and selected Pacific Rim regions.

7. Implement conservation programs for selected temperate zone woody species threatened with extinction, in collaboration with other gardens, government agencies, and non-governmental organizations.

8. Grow and maintain plants representing the full genetic diversity of Pacific Northwest native trees and shrubs, in cooperation with conservation agencies and non-governmental organizations.

9. Maintain unusual old cultivars of selected landscape plants in danger of disappearing, so they are available in the future for landscape use and hybridization, in cooperation with regional centers of germplasm conservation.

10. Improve the Japanese Garden's facilities and the plantings outside its boundaries to enhance the Japanese Garden visitor experience.

11. Improve the ecological health and natural regeneration of the Arboretum's areas of native habitat, both wetland and upland, for their intrinsic value and consistent with relevant environmental regulations.

12. Enhance wildlife diversity through the design, implementation, and phasing of plant collection exhibits and native forest habitats.

13. Achieve a level of staff, volunteers, and facilities adequate for outstanding curation and record-keeping of the plant collections.

### 2.1.3 Horticultural Maintenance

14. Situate present and future plant displays in areas of the Washington Park Arboretum most appropriate for their health with the least maintenance and use of resources and chemicals.

15. Care for each plant so that it effectively demonstrates its ecological attributes and/or urban landscape uses.

16. Aggressively control invasive plants and weeds in the Arboretum, and actively discourage the introduction and use of presently or potentially invasive landscape plants.

17. Maintain a healthy, matrix of native forest habitat for its wooded ambience and wildlife value.

18. Control self-sown native vegetation that has been allowed over the years to kill and weaken many of the Arboretum's plant exhibits.

19. Improve the security of plant collections against theft and vandalism.

20. Achieve a level of staff, volunteers, and facilities adequate for the sustainable first class maintenance of the Arboretum's plant collections.

### 2.1.4 General Services and Administration

21. Achieve a level of staff, volunteers, and facilities adequate for effective general services, administration, fundraising, and advocacy for the Arboretum's mission.

22. Achieve predictable, long-term fiscal sustainability for the Washington Park Arboretum.

23. Attract new funding by effectively promoting an inspiring vision for the future of the Arboretum.

### 2.1.5 Visitor Experience and Built Facilities

24. Configure and juxtapose plant displays, native forest habitats, pathways, buildings, parking, and outdoor education shelters so as to retain the naturalistic environment that visitors now enjoy.

25. Phase the implementation of planned alterations of hardscape and plant displays over many years so that disruption of the Arboretum's naturalistic ambience is minimized at any given time.

26. Work with appropriate agencies to reorient arterial traffic conduits at the north end of the Washington Park Arboretum and reduce speed of traffic on Lake Washington Boulevard so traffic moves logically between Lake Washington Boulevard and SR-520, with minimum disruption to the Arboretum.

27. Maintain appropriate traffic on Arboretum Drive in order to improve its safety as a pedestrian route and use it for tours, bicycles, and other special access.

28. Improve surfacing and grading of selected trails throughout Washington Park to permit better barrier-free access for all park visitors

29. Improve appropriate recreational bicycle access through Washington Park, as well as linkage between E. Madison Street and the north end of Washington Park.

30. Improve pedestrian entrances and trail orientation to promote effective self-guided use of the Arboretum.

31. Improve linkage between parts of Washington Park west and east of Lake Washington Boulevard, especially in the region of the Japanese Garden.

32. Reconfigure parking lots to promote safety of visitors, security for their personal belongings, and maximum parking capacity per lot area.

33. Plan and implement on-site built facilities for appropriate programs in broad-based public education, collections curation, horticultural maintenance, visitor service, and associated administration, while maintaining the Arboretum's naturalistic ambience.

34. Increase numbers of strategically placed visitor services, such as restrooms, water fountains, outdoor open shelters, and modest food service.

35. Increase the habitat diversity in Washington Park by restoring the natural function of Arboretum Creek and the northern shoreline, and utilize for urban environmental education.

36. Promote an increase in unstructured recreational opportunities in a manner consistent with the Arboretum's mission of education, display, and conservation.

37. Reduce actual crime in Washington Park and the magnitude of potentially unsafe localities.

## 2.2 PLANNING FOR THE WASHINGTON PARK ARBORETUM

The following plan for the future of the Washington Park Arboretum is the culmination of a process that began in July 1994 when a formal scoping study to identify critical issues regarding the Arboretum was begun under the aegis of the Arboretum and Botanical Garden Committee. This scoping study, conducted by Carol Hudson and Mark Hinshaw, utilized written questionnaires, visitor surveys, traffic surveys, and meetings with constituent groups and the neighboring communities to gather information. In 1995 Hudson and Hinshaw published their report, *The Scoping Document for a New Master Plan for the Washington Park Arboretum.*

The issues identified in their report were used in a formal review by the City of Seattle Department of Parks and Recreation to select a firm that would conduct a planning process and devise a new master plan. A committee composed of representatives from the City of Seattle, University of Washington, The Arboretum Foundation, and Seattle Design Commission evaluated written submissions from various firms that responded to a public call, for qualifications. Interviews then were conducted with four finalists. The committee recommended in late 1996, with the concurrence of the Arboretum and Botanical Garden Committee, that The Portico Group, a Seattle-based landscape architecture, architecture, and planning firm with considerable experience and reputation for design and planning of living museums, be hired to conduct the Master Plan process. The planning process was conducted under the supervision of the Department of Parks and Recreation, with the Arboretum and Botanical Garden Committee as the primary advisee.

During much of 1997, The Portico Group, along with its sub-consultants, conducted a series of community meetings, surveys, and 17 public interest panels in order to gather additional relevant information about the conditions of the Arboretum and the visions for the future held by its varied constituents. Formal planning sessions concerning specific topics were conducted with directors and leaders of other public gardens, and with other interested parties, throughout the planning process. Several public open houses also were held to gather comments from neighbors, friends, and park/arboretum users.

The Portico Group issued three primary reports in late 1997: 1) The Programming, Existing Conditions Assessment, and Conceptual Plan; 2) The Executive Summary; and 3) The

Arboretum Plan: A Greenprint for the Future. Subsequently, throughout 1998-99 hundreds of discussions have been held about the Arboretum Plan in order to gauge reaction to the proposed draft plan and to elicit creative input in the interest of further improvement to the plan.

During 1998-99, over a hundred community presentations about the plan were made to horticultural organizations, community clubs and councils, and public service clubs from Portland, Oregon, through Vancouver, British Columbia, with special emphasis on Seattle and its surrounding communities. At 47 of these meetings, 597 participants completed written surveys about the draft master plan, rating each of the 23 major elements of the plan as "great idea", "good idea", "neutral", or "bad idea." The 23 elements receivied "great" plus "good" ratings ranging from 68% to 97% of the respondents. Conversely, several local community organizations passed resolutions expressing strong reservations about certain aspects of the draft plan, particularly those involving hardscape (e.g., buildings and parking). The Plan was available and continues to be on the internet for study and comment.

During the fall of 1998, the Seattle Board of Parks Commissioners sponsored one public meeting and three public workshops, at which further citizen input was solicited. The results were synthesized by the Parks Board, and given to the Arboretum and Botanical Garden Committee to provide guidance for their revision of the draft plan. Workshops also were held with the leadership of the Arboretum staff from both the University and City, and with the Arboretum Foundation board of directors, to further inform the plan's revision.

Between mid-1998 and early 1999, the ABGC assembled and analyzed all of the information received from multiple sources in order to prepare a revised alternative plan. This revised plan was then presented as the preferred plan for the Draft EIS. Testimony and public hearings were conducted, and this information was used by the ABGC to formulate the current and again revised plan. The ABGC continued to consider and plan details as the EIS was being written. The plan has been modified in response to all of the comments, public hearings, and workshops that have occurred during the last 6 years. The proposal described here is a product of more than a year of work on the EIS and is the master plan that the ABGC expects to propose to the Seattle City Council and UW Board of Regents. Readers who have followed the planning process over the years will note significant differences between the current proposal and the 1997 *Greenprint* draft plan, especially in the areas of Visitor Experience and Built Facilities; those differences are summarized in Attachment A.

The ABGC greatly appreciates the efforts and creative thinking by thousands of persons since discussions began in 1994, and believes the result to be an inspiring plan that reflects diverse, positive visions for the future of the Washington Park Arboretum.

## 2.3 THE PROPOSAL: RENEWING THE WASHINGTON PARK ARBORETUM

The proposed master plan includes programmatic as well as physical changes to the Arboretum. The map entitled Proposed Master Plan illustrates many features of the physical plan and, with its marginal notes, relates them to the themes elucidated above. This plan shows the general, conceptual location of these features, and may be adjusted in the design phase of implementation. The proposed master plan includes new trails and exhibits, revised roadways and parking, new and replacement buildings, and expanded maintenance and education programs. New exhibits include Taxonomic, Horticultural, Eco-Geographic and Native Forest Exhibits, stream and marshland restoration and rehabilitation, and a new southern terminus for Azalea Way. New structures include a south gateway education and visitor center, education and curation buildings near the Graham Visitors Center, a pavilion and an entry building for the Japanese garden, expanded maintenance facilities, greenhouse and lathhouse replacement, and utilization of part of the present Museum of History and Industry (MOHAI). The following sections of this document, organized according to the same scheme as the outline of the plan's objectives, describe both the physical and programmatic plan in further detail.

### 2.3.1 Education, Volunteerism, and Community Outreach

The Washington Park Arboretum proposes to improve current programs in education, volunteerism, and community outreach, and to develop and offer additional programs that meet the Arboretum's mission of helping educate Seattle's urban populations about our responsibility to care for the living natural world that surrounds us. This would be accomplished by expanding onsite education opportunities while also carrying the Arboretum's message, resources, and lessons afield through community outreach and enhanced options for volunteerism.

Existing programs at the Washington Park Arboretum would continue to evolve to complement those at related institutions and facilities, such as the U.W. Center for Urban Horticulture and the City of Seattle's Discovery and Carkeek Parks. Educational and outreach programs would be developed to best take advantage of the Arboretum's unique niche as the flagship public garden in western Washington and the most diverse collection of woody plants west of the Mississippi River. In addition, the physical site of Washington Park affords unique opportunity to teach about landforms, habitat diversity, plant ecology, wildlife, conservation, and the entire recent geological history of Puget Sound country, all within easy reach of urban students and audiences. In fact, the Arboretum offers a rare opportunity to teach geologic history, evolution of plant and animal history, and human intervention history.

1. Education for pre-kindergarten through high school students, developed in cooperation with teachers and curriculum advisors, for example: expand the "Saplings" programs for K-6$^{th}$ graders to reach all students in selected grades of major school systems (e.g. all of Seattle Public Schools' approximately 4,500 3rd graders), guided tours, self-guided tours, and Explorer Packs; offer new programs for pre-kindergarten and kindergarten students (including day schools and home school programs), traveling presentations for classes that cannot visit the Arboretum, horticultural career training for 7th-12th graders, new teaching materials for classroom use, community service learning opportunities, and indoor educational exhibits created by local classes for display both on- and offsite

2. Youth education programs that are outside of formal school contexts, for example: increase Arboretum Adventures and Branching Out after-school programs in association with community centers; implement new Arboretum badges for Scouts and Campfire youth, Junior Guides, job apprenticeship programs, summer camps with conservation-education organizations such Seattle Audubon and Science Adventures, collaboration with Youth Tree Corps and TREEmendous Seattle for urban forest youth volunteerism

3. Family programs, for example: increase Family Festivals (fun and learning in the Arboretum) and family-oriented Explorer Packs for all ages; offer new weekend programs of hiking and classes, Storytelling Sundays, festivals of various themes relevant to the Arboretum (e.g. Forests and Cultures of the World), Greenhouse Discovery Days, and cooperative family programs with other organizations such as the Woodland Park Zoo, the Museum of History and Industry, the U.W. Burke Museum, the Pacific Science Center, the Seattle Art Museum, and the Museum Educators of Puget Sound

4. Higher education of students at the University of Washington, regional community and technical colleges, and other state institutions of higher education, for example: improve service to students and classes in horticultural fields, and attract new classes and students in natural history, ecology, wildlife, and biogeography; facilitate class visits and independent student research projects on garden curation, education, and horticultural maintenance

5. Adult education, for adults interested in gardening and natural history, for example: increase guided tours, focus walks, outreach courses, lectures, seminars, offsite garden tours, workshops on propagation and plant care, plant study programs, design studios, and symposia; implement new onsite and traveling exhibit displays, and participation in horticultural shows and expositions throughout the community

6. Professional education, in collaboration with professional organizations and relevant government agencies, for example: increase seminars and field courses in landscaping, arboriculture, plant care, and plant identification; produce new publications and interpretive material for professional education and certificate programs; expand professional themes to include wildlife management, conservation, and parks care

7. Volunteerism and educator training, so that volunteers and educators can participate in all Arboretum programs from curation to education to horticultural maintenance, for example: increase volunteer recruitment, training, and enrichment programs; institute appropriate workshops for educators and volunteer programs, such as Washington State University/County Master Gardeners.

8. General visitor education, so that all visitors to Washington Park have ready opportunities to learn from the displays, staff, and volunteers, for example: increase onsite weekend tours and appropriate interpretive materials (signs, brochures, maps); implement new "Discovery Stations" near the GVC and the outdoor education shelters, self-guided tours, weekend rangers/guides, and computerized learning stations

9. Education for special populations: offer new programs such as work training in landscape horticulture, specialized tours and interpretive materials (e.g. Braille, multi-language), improved Americans for Disabilities Act-mandated accessibility of collections and displays

10. Improved community outreach, for example cultural and arts programs appropriate for Arboretum gardens and facilities affiliated with the Japanese Garden, or the Chilean and New Zealand exhibits. This would include interpretive materials, accessibility for all visitors, or other Arboretum-related activities

11. Staffing and facilities for educational programs and appropriate space for volunteers who assist in these activities: approximately 9 FTE education staff, utilizing new indoor facilities of approximately 3,000 square feet footprint near the GVC, approx. 2,000 sq. ft. of the South Entry education/visitor services facility, and meeting rooms in all buildings; square footage includes offices, classrooms, and storage space; five outdoor education shelters (four new, one existing), totaling approximately 1,500 square feet, also would be used; indoor classroom space is proposed for activities that complement the major educational focus, namely the "outdoor classroom" that is the Arboretum

### 2.3.2 Collections and Exhibits

Plant collections and exhibits are presented according to their type, as defined in Chapter One: taxonomic, horticultural, and ecogeographic. In addition, special attention is paid to the Arboretum's forest vegetation that is native to Puget Sound country, which serves in some cases as an interpreted display of a native forest community and in all cases to benefit wildlife, the ecological function of Washington Park, and its naturalistic environment. Over the following decades, additional exhibit ideas will occur to Arboretum staff and constituents, but the exhibit themes listed below will provide the Arboretum's physical and conceptual framework.

1 Taxonomic exhibits, displaying the diversity of species and cultivars within particular groups of related plants

1.1 Major taxonomic exhibits; see map entitled Collections Plan: Taxonomic Exhibits

- *Salix (*willows*),* along the shoreline and wetland areas

- *Alnus* (alders), *Populus* (poplars), and *Fraxinus* (ashes), in the northern riparian zone

- *Coniferae* (conifers), showing the diversity of pines, cypresses, sequoias, yews, and their relatives, in the Pinetum west of the Wilcox Bridge

- *Quercus* (oaks), as an *allee* north of the trail hub at the site of the present oak display

- *Acer* (maples), maintaining a current taxonomic strength *Acer palmatum* (Japanese maples), cultivar collection in the Woodland Garden

- Plant Ancestry and Diversity, at Yew and Honeysuckle Hills, reflecting the original Dawson plan by which primitive and advanced plants were displayed to demonstrate major aspects of the course of flowering plant evolution

- *Magnolia,* improving an already outstanding exhibit

- *Rhododendron, Prunus* (cherries), and *Cornus* (dogwoods), maintaining the current taxonomic emphasis of Azalea Way

- *Prunus* (Japanese flowering cherries), cultivar exhibit near Azalea Way

- *Picea* (spruces), continuing to emphasize outstanding species for landscape use

- *Sorbus* (mountain-ashes), the Brian O. Mulligan *Sorbus* Collection, with drainage to be improved further

- *Betula* (birches), continued to be sited appropriately in a wet area west of Azalea Way

- *Leguminosae* (pea family), with improved plant selection to show the vast diversity of the family, from *Albizia* to brooms to locusts to Redbuds

- *Ericaceae* (heather family), on the hillside above the south large pond, showing the diversity of one of the most important families of landscape plants

- *Ilex* (hollies), improved as a national "plant consortium" collection.

1.2 Minor taxonomic exhibits, smaller and not illustrated on -the map

- *Berberis/Mahonia* (barberries, Oregon grape, and relatives)

- *Camellia* and *Stewartia,* smaller exhibit than at present but still displaying diverse species and cultivars for landscape use

- *Caprifoliaceae* (honeysuckle family, including *Viburnum),* illustrating the family's diversity and landscape use

- *Hamamelidaceae* (witch-hazel family), supplementing the many species displayed in the Winter Garden

- *Wisteria,* as at present in the trellises around the Graham Visitors Center

2 Horticultural exhibits, displaying plants according to themes relevant to the practice of urban landscape horticulture; see map entitled Collections Plan: Horticultural Exhibits

- A horticultural/ecological exhibit of trees, shrubs, and wildflowers restoring the ecological and wildlife function of a former garbage dump in the area surrounding the SR Route 520 ramps, consistent with environmental regulations

- New boulevard trees at the north entrance to the park; retention and maintenance of existing ones at the south end

- Landscaping for Wildlife, displaying plants and landscape design techniques to encourage native wildlife, in a naturalistic setting especially in the north end

- Children's Arboretum, with scale and themes appropriate for learning by children, near the children's play area

- Synoptic Garden I, a year-'round display near the GVC illustrating the Arboretum's various horticultural exhibit themes

- Synoptic Garden II, presenting an overview of the Arboretum's landforms and plant communities, as well as ethnobotanical significance of native woody species

- Color Garden, woody plants colorful throughout the year, for residential landscaping

- Screening Hedges, along the fence line bordering Broadmoor Country Club

- Winter Garden, maintaining the currently successful exhibit

- Woodland Garden, a current exhibit demonstrating trees and shrubs such as Japanese maples in a shaded woodland landscape setting

- Azalea Way, renovated promenade with improved, disease-resistant plant selections according to historic Azalea Way themes of cherries, rhododendrons, and dogwoods

- Pacific Northwest Rhododendron Hybrids exhibit that displays those cultivars that have emerged over many years from the efforts of this region's hybridizers

- Loderi Valley, the present naturalistic exhibit of *Rhododendron* Loderi hybrids

- Arboretum Rockery, renovating the rockery downhill from the Lookout shelter to create a large-scale rock garden of woody-plants

- Japanese Garden, maintaining the current successful exhibit and improved by additional facilities and complementary landscaping outside the Garden's boundaries (see elsewhere in the plan;

- Parking Lot Shrub and Groundcover Trials, displayed at the appropriate parking lots such as the South Entry and Japanese Garden parking lot.

- Summer Garden, surrounding the Madrona shelter and utilizing species that also are displayed naturalistically in the nearby ecogeographic exhibits.

3. Ecogeographic exhibits, for visitors and students to immerse themselves in accurate, naturalistic recreations of forest communities of the world, for the active conservation of endangered species from those selected forest communities, and for wildlife value; Pacific Northwest native plant communities

    - Pacific Northwest Marshland along the shoreline of Union Bay

    - Pacific Northwest Lowland Forest Community, as befits existing conditions and vegetation

    - Lowland Puget Sound Riparian Forest, along a stretch of Arboretum Creek

    - Pacific Northwest Mixed Coniferous Broadleaf Forest

    3.2 Plant communities of cool winter-rain region of the world, with climates similar to the Pacific Northwest west of the Cascades, installed on the hillsides around the new Madrona Terrace interpretive shelter to simulate natural elevational gradients

    - Chile, emphasizing the forests of the Lakes District in south central Chile

    - Cool Mediterranean, forest of a winter-rain region inland from the coast of the Mediterranean Sea

    - Southern Oregon/Northern California, forests related to our PNW community but with additional trees and shrubs that are northern elements of Californian flora, incorporating existing Madrone and other trees

    - South Africa, Australia, and Tasmania, a small exhibit of plants from regions that are typically considerably warmer than Puget Sound country

    3.3 Plant communities of other Pacific Rim regions, also installed on hillsides to simulate natural elevational gradients

    - New Zealand, representing a high altitude forest community with winter-cold temperatures similar to the Seattle region

    - Japan, on the slopes above the Japanese Garden to simulate Japanese forest and to serve the Garden as genuine borrowed scenery

- China, across Lake Washington Boulevard northeast of the Japanese Garden, representing the forests of Mount Omei

3.4 Other regions

- Alpine Slopes of the World, among the switchbacks of the A.D.A.-accessible trail, displaying recreations of selected alpine plant communities of the world

4 Native forest habitats and exhibits; see map entitled Collections Plan: Native Forest Habitats and Exhibits

4.1 Native forest habitats, serving as a) the forest matrix among which exhibits are placed, b) wildlife habitat, and c) a place for conserving the genetic diversity of Pacific Northwest native tree and shrub species; these native plant assemblages will be those best suited to the environmental conditions of particular Arboretum sites

- Dry Forest Plant Associations, in areas of superior soil drainage
- Intermediate Forest Plant Associations, in areas of somewhat slower drainage
- Mesic Forest Plant Associations, in wetter soils
- Wet Forest Plant Associations, in the wettest, most poorly drained areas

4.2 Native forest exhibits, interpreted displays of particular plant communities or landscape uses of native plants, shown as hatched areas on the map

- The area around the SR 520 ramps (see above under part 2, this section)
- Landscaping for Wildlife (see part 2)
- Synoptic Garden II (see part 2)
- Pacific Northwest Marshland (see part 3.1)
- Pacific Northwest Lowland Forest Community (see part 3.1)
- Lowland Puget Sound Riparian Forest (see part 3.1)
- Pacific Northwest Mixed Coniferous Broadleaf Forest (see part 3.1)
- Southern Oregon/Northern California (see part 3.2)

5 Staffing and facilities for curation and collections management: approximately 7 FTE specialists in the areas of curation, collections management (record-keeping, mapping,

and labeling), and interpretation, housed in facilities at the north end near the Graham Visitors Center

### 2.3.3 Horticultural Maintenance

1 Maintenance of plants and exhibits: care for each plant, exhibit, and native habitat area so that each is healthy and serves its programmatic goals of education, conservation, and display

2 Control of invasive plants, so that the health of desirable plants is not adversely affected, so that native habitat areas can regenerate themselves naturally, and to reduce the Arboretum's role as a source of invasive plants for surrounding natural and naturalistic areas

3 Staffing for horticultural maintenance

3.1 Five levels of maintenance, assigned to different areas of the Arboretum to guide the development of staffing and resources, ranked from high to low intensity of maintenance. Acreage is estimated out of approx. 230 total acres of Washington Park Arboretum.

- intensively managed and groomed collections, e.g. the Japanese Garden, requiring approx. 1.50 FTE per acre to keep exhibits painstakingly maintained throughout the year, including preventive maintenance: approx. 8 acres

- special collections, e.g. Azalea Way and other highly landscaped horticulture: exhibits, requiring approx. 0.40 FTE per acre for plant care and weed/invasive control; approx. 28 acres

- core collections, e.g. the ecogeographic exhibits and others in woodland settings or open turf areas, requiring approx. 0.20 FTE per acre for plant care and weed/invasive control; approx. 64 acres

- open space, e.g. wet naturalized areas, requiring approx. 0.05 FTE per acre to mow during dry season and to control weeds/invasives; approx. 40 acres

- low maintenance collections, e.g.-native habitats, requiring approx. 0.05 FTE per acre to maintain habitat quality and to control weeds/invasives; approx. 80 acres

3.2 Staffing to reach eventual desired level of maintenance: approximately 42.0 FTE, as calculated from above. Arboretum administration and staff will need to develop more refined staffing plans and budget projections as implementation of particular exhibits occurs, not the general estimate presented above suffices for planning of facilities and assessment of the fiscal aspects of the Arboretum's future.

4 Facilities for horticultural maintenance and operations: buildings and open structures expanded from present 4,700 square foot to approximately 10,000 sq. ft., contained within the current Maintenance Yard area northeast of the Graham Visitors Center

### 2.3.4 General Services and Administration

A well-run public garden has active programs in membership, fundraising, marketing, public information, retail services, volunteerism, public events, and security. It is estimated that when the Washington Park Arboretum achieves the full scope of programmatic activity presented in this plan it will require a staff of approximately 22 FTE in the areas above, including general administration, fiscal services, facilities management, and clerical support. Staffing levels are proposed to increase very gradually to these levels over the succeeding decades. Facilities for these staff will amount to approximately 4,000 square feet of floor area and would be accommodated in the MOHAI building once the Museum moves to its new location. If MOHAI is not available when needed for Arboretum use, the equivalent suitable space will need to be found.

### 2.3.5 Visitor Experience and Built Facilities

All square footages for buildings represent approximate footprints that are provided for general consideration. For those buildings where there would be a small second story (such as the Graham Visitors Center), a total "floor area" square footage is included after the footprint figure. Basements, if any, would lack direct access to the outside and would be for storage, not programmatic space (again, comparable to the Graham Visitors Center). Actual architectural forms will be designed to meet programmatic needs and to minimize visual and ecological impact to the site. See Attachment A for a comparison of the current plan, the plan proposed in 1999, the 1997 *Greenprint Plan, and the Olmsted Bothers 1936 plan.*

1. Roadways

    1.1 Modify the intersection of Lake Washington Boulevard (LWB) and the on-off ramps of SR-520 to create a more graceful entry to the Arboretum; maintain existing stop signs and turn restrictions at this intersection and at Lake Washington Boulevard and Foster Island Road; and modify the unused freeway ramp at the north end to make a multiuse (including bicycles and service vehicles) link to the Museum of History and Industry

    1.2 Relocate the northern third of Arboretum Drive eastward, from the Graham Visitor Center (GVC) to just north of the Picea (Spruce) display

    1.3 Leave Arboretum Drive open to through traffic; add measures to eliminate trucks and other inappropriate vehicles; utilize Drive for tram tours and other special-purpose access

    1.4 Install a pedestrian-activated signal at the Lake Washington Boulevard East and East Boyer Street intersection

1.5 Improve the intersection of LWB, Arboretum Drive, and Japanese Garden/playfield parking access including a pedestrian-activated signal.

2 Other Pathways, Non-automobile Transportation

2.1 Reorient pedestrian trails for improved viewing of displays, public access (including more Americans with Disabilities Act grading and surfacing), and three major loop trails, including a ramped switchback trail at The Rise, approximately midway along the north-south axis of the Arboretum; retain many informal trails

2.2 Install a multiuse trail (including bicycles) running lengthwise, along the east side of LWB with two branches near the south end: one crossing Arboretum Drive and passing north of the Stone Cottage to E. Madison St, and the other crossing to the west side of LWB and passing under E. Madison St. to the Harrison Valley

2.3 Add a wheelchair-accessible overpass over Foster Island Drive, including adding earthen fill on the north side to provide a ramping path down to existing grade.

2.4 Make an open-space trail hub west of GVC, without interfering with significant existing vegetation, including Azalea Way

2.5 Extend and improve the pedestrian trail running the length of the Arboretum west of LWB, with 8 pedestrian links to the adjoining neighborhood

2.6 Install an elevated "canopy walk" between the summits of Yew and Honeysuckle Hills for access to tree tops

2.7 Add an overpass over LWB near the Japanese Garden (JG), south of the JG and north of the Washington Park playfield, including bicycle accommodation

2.8 Install sidewalks along LWB from E. Madison St. to Arboretum Drive

3 Parking

3.1 Retain the "Department of Transportation" lot, with 25-car capacity, off Lake Washington Boulevard just west of the SR-520 ramps

3.1 Remove most of the small parking lots at the north end of the park (6 lots, 108 cars)and expand the present GVC lot southward from present 49 cars to 109 cars and 4 buses. Approximately ten parking spaces would be retained on Foster Island Road and would include some spaces dedicated for barrier-free parking.

3.2 Add an 18-car parking lot just northeast of the Woodland Meadow

3.4 Reduce the Arboretum Drive parking lots, presently 10 lots for 102 cars, to 3 lots for 30 cars

3.5 Add a 30-car parking lot in the Madrona Terrace near the south end of Arboretum Drive, to support the new outdoor education shelter at that location

3.6 Reconfigure the LWB/Interlaken parking lot for better landscaping and efficiency, increasing capacity from 26 to 28 cars

3.7 Improve the parking lot between the Japanese garden and playfield to accommodate more cars (present 84 increased to 128) and 4 buses and to improve landscaping

4 Buildings and Open Structures

4.1 Expand the Maintenance and Operations headquarters and maintenance buildings, from approximately 4,675 sq. ft. floor area, to approximately 10,000 sq. ft. floor area; including expanding open structures for equipment storage from current approximately 1,725 sq. ft. to approximately 2,575 sq. ft.; all would be contained in the Maintenance Yard, at the present location

4.2 Renovate the Graham Visitors Center (GVC), keeping its current size (5,690 sq. ft. footprint, 6,700 sq. ft. floor area), for visitor services

4.3 Construct new facility south of the GVC to support curation (approximately 3,000 sq. ft. floor area)

4.4 Construct new facilities northeast of the GVC to support education (approximately 3,000 sq. ft. floor area)

4.5 Replace the greenhouses, lath houses and storage south of the GVC

4.6 Increase the number of "outdoor education shelters" from one to five: retain the 600 sq. ft. shelter at the Overlook, and construct new 300 sq. ft. shelters at Foster Island, at the Yew Hill canopy walk; at the alpine plant display; and at Madrona Terrace

4.7 Retain the three open structures in the Japanese Garden

4.8 Construct an education and visitor services building near the south parking lot and the Japanese Garden (approximately 2,500 sq. ft.. floor area) for education and visitor services, including class/meeting room and rest rooms

4.9 Retain the Stone Cottage

4.10 Add a Japanese Garden pavilion, approximately 1,000 sq. ft., with a small enclosed space and a veranda, against the hillside north of the pond

4.11 Expand the Japanese Garden entrance facility to approximately 1,700 sq. ft. to include a ticket window, gift shop, rest rooms, and small reading room

5 Landscape Features

5.1 Plant boulevard trees along the north end of LWB and Foster Island Drive, similar to the south entrance of Washington Park on LWB

5.2 Construct one viewing platform on the south shore of the baylet south of Marsh Island

5.3 Restore and stabilize the Duck Bay shoreline

5.4 Install new display and demonstration gardens south of GVC complex, with small arbors, terraces, and water features

5.5 Designate Woodland Meadow for special events and community celebrations, maintaining its current ambience

5.6 Retain compost area at its current size, perhaps relocated among the maintenance buildings or displays at the north end

5.7 Increase water flow at the source of Arboretum Creek, by allowing more water into the channel but keeping it in underground culverts via the playfield, emerging aboveground east of LWB near the Interlaken intersection; and enhance the creek bed's natural appearance and ecological function including a possible salmon run

5.8 Expand the pond near Rhododendron Glen to create a visual terminus for the south end of Azalea Way

5.9 Maintain the boulevard trees along Lake Washington Boulevard from E. Madison St. to Arboretum Drive

6 Safety

6.1 Improve lighting at entrances, parking areas, and other strategic locations

6.2 Install emergency telephones and first aid call boxes at strategic locations

6.3 Spread programmatic activities and facilities more evenly throughout the Park to increase "safety in numbers"

6.4 Reduce or eliminate parking in isolated areas

6.5 Clearly mark trail routes and locations on signage

## 2.4 IMPLEMENTATION AND PHASING OF ARBORETUM IMPROVEMENT

A number of variables will affect the phasing and sequencing of capital improvement projects embodied in the plan. Actual development sequence will relate to current programmatic priority, availability of funding for a given capital project, and availability of ongoing funding to sustain new exhibits or capital developments. Many elements of the proposed plan for the Washington Park Arboretum are independent of one another in terms of the possible sequencing of their implementation.

There are some developments that must be implemented in a particular sequence, and they are self-evident, such as the following three examples. When a display is moved, e.g. the renovated *Euonymus* and *Buxus* display should be installed at the new site and given time to begin to mature before the display at the former site is removed, so there is no time that a valuable display is missing or ineffective. Utility provisions should be installed before new buildings are constructed. Consolidated parking at the Graham Visitors Center, South Entry, and Madrona Terrace should be constructed before the small lots they are replacing are removed, so there is no time in which the parking availability is unreasonably reduced.

It should be noted, as it was previously, that the plan will be implemented over many years, on the order of two to three decades at least, in order to minimize the short-term disruption to the Arboretum's ambience at any given time. Furthermore, it is recommended that Arboretum managers, staff, and constituents review the plan periodically to ensure that the Arboretum remains current in its service to the community.

In summary, the general priorities for arboretum improvements would be, in descending order:

1) plant collection maintenance and renovation;

2) infrastructure repair and improvement for the maintenance of the collection;

3) improved visitor amenities including parking, structures, and educational programs

Structures for increased staff and equipment for expanded programs will be phased in over time.

## Attachment A - A Comparison of the Proposed Master Plan with Previous Plans and Existing Development

| Plan elements | 1936 Olmsted General Plan[1] | Existing | 1997 proposed Greenprint plan | | 1999 Alternative Plan (in DEIS) | | Current Proposed Master Plan | |
|---|---|---|---|---|---|---|---|---|
| | | | Existing retained | New construction | Existing retained | New construction | Existing retained | New construction |
| ***Structures (Square feet floor area)*** | | | | | | | | |
| S. Entrance Lodge (Stone Cottage)[2] | 640 | 750 | 750 | - | 750 | - | 750 | - |
| S. Comfort Station | 1,800 | 2,000 | 2,000 | - | 2,000 | - | 2,000 | - |
| N. Entrance Lodge | 1,400 | - | - | - | - | - | - | - |
| Administration/Curation | 8,800 | - | - | 5,600 | - | 5,600 | - | 3,000 |
| Storage and Service | 8,200 | 4,675 | - | 11,200 | 2,800 | 7,200 | 2,800 | 7,200 |
| Shelters, kiosks, and open pavilions | 2,281 | 600 | 600 | 8,100 | 600 | 1,200 | 600 | 1,200 |
| Greenhouses | 12,000 | 5,175 | - | 4,500 | - | 2,700 | - | 5,400 |
| Lath Houses | - | 9,150 | - | 4,000 | - | 2,700 | - | 2,700 |
| Frames | 4,200 | - | - | - | - | - | - | - |
| Greenhouse storage | - | - | - | 1,200 | - | - | - | - |
| Graham Visitors Center | - | 5,690 | 5,690 | - | 5,690 | - | 5,690 | - |
| Japanese Garden tea room | - | 450 | 450 | - | 450 | - | 450 | - |
| Japanese Garden Entrance building | 64 | - | - | 625 | - | 1,700 | - | 1,700 |
| Japanese Garden Pavilion | - | - | - | 2,000 | - | 1,000 | - | 1,000 |
| Education - North @ GVC | - | - | - | 3,050 | - | 3,000 | - | 3,000 |
| South education & visitor services center | - | - | - | 6,700 | - | 5,000 | - | 2,500 |
| Meeting room at North end | - | - | - | 1,500 | - | 1,500 | - | - |
| Administrative offices at MOHAI[3] | - | - | - | - | - | - | - | 4,000 |
| **Subtotals** | | | **9,490** | **48,475** | **12,290** | **31,600** | **12,290** | **31,700** |
| **TOTAL STRUCTURES (SQ. FT.)** | **39,385** | **28,490** | **57,965** | | **43,890** | | **43,990** | |
| ***Parking (No. of spaces)*** | | | | | | | | |
| Automobile | 216 | 377 | 155 | 405 | 188 | 210 | 198 | 180 |
| Bus | - | - | - | 12 | - | 8 | - | 8 |
| **TOTAL PARKING SPACES** | **216** | **377** | **572** | | **406** | | **386** | |
| ***Paths (Lineal Miles)*** | 18.6 | 8.2 | 4.4 | 8.0 | 4.4 | 8.0 | 4.4 | 8.0 |
| **TOTAL PATHS (L.M.)** | **18.6** | **8.2** | **12.4** | | **12.4** | | **12.4** | |

[1] Floor areas for buildings in 1936 Olmsted Plan were derived from area-takeoffs from the Hoggson rendering.
[2] The Stone Cottage was shown in slightly different location on the Olmsted Plan but was similar in size and function to the Stone Cottage
[3] Exact floor area that will be available at MOHAI has not been determined. If sufficient area is not available at MOHAI, additional off-site office space will be needed to accommodate staffing proposed under the plan.