

## **Landscape Management and Development Guidelines**

The Department of the Interior—a federal agency that has established nationally accepted standards for the treatment of significant cultural landscapes—currently recognizes four appropriate treatment alternatives: preservation, rehabilitation, restoration, and reconstruction. These are defined and discussed in *The Secretary of the Interior’s Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes*. The Standards are neither technical nor prescriptive, but are intended to promote responsible preservation practices that help protect cultural landscape resources. They cannot be used to make essential decisions about which features of a cultural landscape should be retained and which can be changed, but once a specific treatment is selected, these standards can provide the necessary philosophical framework for a consistent and holistic approach for future management and change.

Of the four guidelines, Preservation standards require retention of the greatest amount of historic fabric, including the landscape's historic form, features, and details as they have evolved over time. Rehabilitation standards acknowledge the need to alter or add to a cultural landscape to meet continuing or new uses while retaining the landscape's historic character. Restoration standards allow for the depiction of a landscape at a particular time in history by preserving materials from the period of significance and removing materials from other periods. Reconstruction standards establish a framework for recreating a vanished or non-surviving landscape with new materials, primarily for interpretive purposes.

### **Recommended Treatment Approach**

As the significance of the park is centered on its horticultural resources, the recommended approach for treatment is rehabilitation, with an emphasis on preservation of these significant horticultural features as well as the natural and historic resources that enrich their context. This treatment approach was selected based on the inventory and assessment performed for this study, anticipation of FCPA programmatic needs, and community desires expressed in the public workshops. The White Horticultural Park landscape management guidelines and development recommendations are organized around a set of seven identified management zones, which have been delineated in the draft General Management Plan (GMP), see Figure 6-3. These are as follows:

- Horticultural Resource Management Zone
- Caretaker Residence & Visitor Orientation Management Zone
- Historic Preservation Management Zone
- Utilitarian Management Zone
- Woodland Management Zone
- Meadow Management Zone
- Pond Management Zone



# White Horticultural Park

## General Management Plan DRAFT

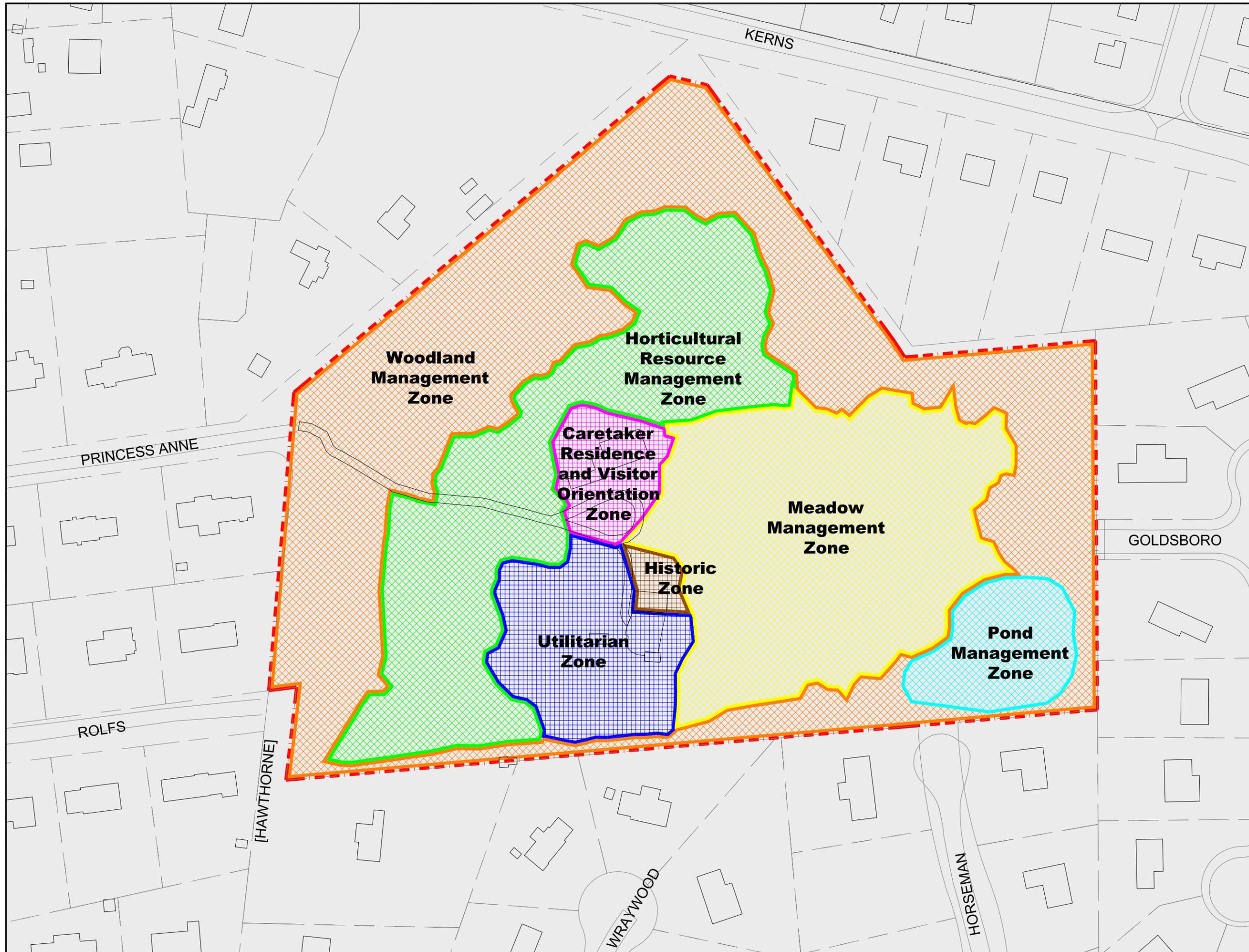
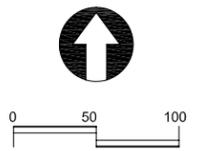


Figure 6-3.

(Source: Prepared by FCPA)

December, 2005



## **Park-wide Guidelines and Development Recommendations**

This section recommends landscape management guidelines and guidelines for new development that are applicable to all zones, based upon the components of the draft CDP. It also recommends landscape management and development guidelines that transcend all zones, and apply to the park as a whole. The following guidelines and development recommendations are consistent with the FCPA Low Impact Development Initiative,<sup>1</sup> see Figures 6-4 and 6-5 for illustration of select recommendations.

### *Park Access Road*

Although the location and alignment of the park access road has yet to be determined, it is recommended that its eventual design complement the natural character and setting of the property. The following guidelines apply:

- Make vehicular access to the site as visually unobtrusive as possible. Consider noise and other impacts that vehicles will have on the site and on visitor experience.
- Alignment should avoid natural and horticultural resources to the greatest extent feasible; consider potential impacts of cut and fill on surrounding resources, in addition to horizontal alignment.
- Minimize road width to the greatest extent feasible per County regulations in order to maintain a rural or park-like character; an 18-20 foot road width is recommended.
- Where shoulders are necessary, install grass rather than paved surfaces.
- Avoid curbs and gutters; grade roadway to work with, rather than against, the natural contours of the site and implement sustainable stormwater practices (see below).
- Choose all-weather surface materials that complement the park's natural character, such as gravel, asphalt, or a chip-seal surface with dark colored aggregate.

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<sup>1</sup> Low Impact Development (LID) initiatives include design techniques that are intended to minimize impacts to the natural environment, including topography, hydrology, vegetation, natural habitat, groundwater recharge, and stormwater runoff. Such design techniques respect these natural systems by employing practices that minimize impacts to these systems both on and off site. The FCPA *Natural Resource Management Plan* provides the basis for LID use by FCPA and promotes use of these technologies as an opportunity to demonstrate community leadership in water pollution and control. Readers should refer to the Fairfax County *Comprehensive Plan* (reference the interchangeable term of 'Better Site Design') and the FCPA *Natural Resource Management Plan* for more information.

- If emergency vehicle access cannot be accommodated by the park access road or the existing entry drive and must traverse the open meadow, the following recommendations apply:
  - Consider using a porous pavement system, such as grasscrete, that allows vegetation to grow within the access road. Ensure construction of the proper subgrade for expected loads.
  - Consider the visual and aesthetic effects of grasscrete installation, particularly if it traverses the open meadow, as vegetative growth with the porous pavement blocks will likely contrast with adjacent vegetation and possibly detract from the views of this area.
  - Consider the water requirements of grass growing within concrete blocks, which may be higher than native meadow grasses; grasses with lower water requirements and higher drought tolerance may be necessary for these areas.
  - If possible, locate the porous pavement along the edges of the meadow to allow for a visually contiguous area of vegetation; consider how this alignment may affect future garden development or interpretive areas.
  - Consider developing this access road as an interpretive feature to educate visitors about alternative porous pavement materials.

### *Parking*

Once the location of the parking area has been determined, it is recommended that it be designed to both mitigate impacts to natural, cultural, visual, and horticultural resources within the park, and also complement the natural character of its setting.

- Provide visitor and staff parking spaces in conformance with County requirements. Consider the number of spaces that are necessary to accommodate visitor access to the site; develop the fewest possible spaces. Coordinate efforts to reduce parking needs, such as designating a location for off-site overflow parking for special events (for example, using a nearby school's parking area and a shuttle bus), and phasing construction of additional spaces.
- Layout should avoid necessitating removal of large trees and ornamental shrubs to the greatest extent feasible; where possible, integrate these features into the design of the parking area by incorporating them into planting islands and/or bump-outs. Ensure adequate protection of these resources during the construction phase (see below).
- If existing conditions do not provide opportunities to integrate existing vegetation into the design of the parking area, consider installing trees and shrubs that can serve as ornamental and/or interpretive features that complement the park character and mission.
- Avoid curb and gutters; grade parking area to work with, rather than against, the natural contours of the site and implement sustainable stormwater practices (see below).

- Use a porous pavement, such as gravel, grasscrete, or porous asphalt on all or part of the parking area, with an appropriately designed subsurface stone bed, and developing it as an interpretive feature to educate visitors about porous pavement alternatives and sustainable stormwater practices.
- Install adequate vegetative buffers between the parking area and key park resources (gardens, views, structures), that protect the quiet naturalistic and isolated character of the park. Ensure these vegetative buffers will provide adequate screening during winter months.

### *Walks and Trails*

It is recommended that an accessible network of paths and trails be developed to connect key features of the park and provide for a recreational and interpretive experience. Specific recommendations are as follows:

- Provide a primary trail to connect the visitor parking area with the visitor orientation zone, to include direct access to the interpretive kiosk and the residence. Consider more formal materials—such as brick paving with sanded joints—that will provide the necessary firm and stable surface to ensure universal accessibility, yet complement the residence and delineate this path as the primary access route.
- Construct a perimeter trail within the woodland and along the woodland edge that provides access to different areas of the site, and doubles as an accessible pedestrian route. This trail could include stopping points for persons who use wheelchairs to have visual access to areas of the gardens that cannot support the addition of accessible paths. Design this trail to be as unobtrusive to the gardens as possible.
- As it will likely not be possible to provide accessible routes to all horticultural resources and features of interest on the property without damaging site integrity, alternative interpretive experiences should be provided in cases where the establishment of accessible routes will diminish integrity.

Proposed technical specifications for trails and outdoor recreational access routes to comply with the Americans with Disabilities Act are still under development by the Regulatory Negotiation Committee on Accessibility Guidelines for Outdoor Developed Areas. In the interim, Fairfax County follows the outdoor accessibility guidelines that have been drafted by the Committee. Under the proposed guidelines, an accessible trail should meet these minimum technical provisions:<sup>2</sup>

- Clear tread width: 36" minimum.

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<sup>2</sup> American Trails, "Accessible Trails: Discussion of Proposed Regulations for Trail Development to Comply with ADA. From: Regulatory Negotiation Committee on Accessibility Guidelines for Outdoor Developed Areas, Final Report, September 1999. <http://www.americantrails.org/resources/accessible/ADATrailDiscussDec.html> (Accessed September 21, 2005).

- Tread obstacles: 2" high maximum (up to 3" high where running and cross slopes are 5% or less).
- Cross slope: 5% maximum.
- Running slope (trail grade) meets one or more of the following:
  - 5% or less for any distance.
  - Up to 8.33% for 200 feet max. Resting intervals no more than 200 feet apart.
  - Up to 10% for 30 feet max. Resting intervals 30 feet.
  - Up to 12.5% for 10 feet max. Resting intervals 10 feet.
- No more than 30% of the total trail length may exceed a running slope of 8.33%.
- Passing space: Provided at least every 1,000' where trail width is less than 5'
- Signs: Shall be provided indicating the length of the accessible trail segment.
- Paving is not required, as long as the surface is "firm and stable." Appropriate materials for the trail should:
  - Be as permeable as possible to minimize runoff and erosion damage and maintain the health of the woodland.
  - Blend into the woodland character. An example of appropriate material is compacted stone dust or crushed stone of a tan to dark brown color.
- If possible, use locally obtained materials such as locally quarried stone.
- While handrails and edge protection are not required, they may be provided and should meet appropriate standards.

#### *Stormwater Management*

- Mitigate the potential increase in stormwater run-off associated with new road, parking, and path development within the property using filter strips, grass swales, rain gardens, or other means that encourage infiltration of stormwater.
- Promote sheet flow of stormwater over lawn and wooded areas rather than concentrating or channelizing flow, which can cause erosion.

#### *Grading and Earthwork*

- Minimize soil disturbance and grading. Preserve existing landforms and natural drainage patterns to the greatest extent possible.

- Minimize cut and fill when introducing new site developments such as parking and paths.
- Avoid grading within the root zones of trees and shrubs to remain (see below for mitigation related to construction access near these resources).

#### *Protection of Horticultural Resources During Construction*

- On site plans, clearly indicate which plants and trees are to be protected and which are to be removed. Ensure that during construction, protective fencing surrounds all plants to remain, with the protected area extending to the edge of the canopy drip line.
- During any construction, repair or maintenance operations that require vehicles to access any part of the site in close proximity to horticultural resources, use low-tire-pressure vehicles only to avoid damage to roots. If low-tire-pressure vehicles are not available, cover the root zones temporarily with four to six inches of gravel (size 21A, washed, crushed or uncrushed). Remove the gravel overburden immediately upon completion of work.

#### *Development of New Gardens*

- When selecting new plants, ensure species are not invasive. Compare proposed plants with known invasive species lists and references prior to final selection and planting.
- Plan new garden areas to blend into the character of the existing park.
- New garden plantings should be ornamental in style, with a preference for native plants where appropriate for the goals of the design.
- See specific zones below for recommendations related to individual gardens in woodland, meadow, or pond areas.

#### *Small-scale Features*

- Fencing & Gates
  - Fences should be unobtrusive, of a natural color and material that blends into the existing wooded vegetation, such as dark brown board fencing.
  - When planning the alignment of a perimeter fence, avoid removing trees and shrubs along the perimeter of the property to the greatest extent possible in order to retain existing visual buffers along the boundary.
  - When excavation for fence and gate post footings begins, enlist an archaeologist to monitor work.
  - Place the minimum number of vehicular gates required for general and emergency access to the site. Post the park hours at the gate, and keep gates locked after hours. Work with neighbors to monitor the park and report unauthorized access.

- Pedestrian gates should be provided at strategic locations where existing access points of the surrounding neighborhood can be extended into the park. Specifically, a pedestrian gate should be located at the end of Goldsboro Court, as an existing sidewalk terminates here. Pedestrian gates at the terminus of Horseman Drive, Princess Anne Lane, and Rolfs Road should also be considered. Post the park hours at the gate, and keep gates locked after hours. Work with neighbors to monitor the park and report unauthorized access. Ensure pedestrian entrances include wayfinding signs that direct visitors to points of interest.
- Site Furnishings
  - Develop standards for site furnishings such as benches and trash receptacles, and parking area features such as bollards or wheelstops to achieve a unique identity and cohesive design aesthetic for the park.
- Lighting
  - Limit site lighting to what is necessary for security and expected evening use.
  - Make all lighting dark-sky compliant. Set security and path lighting on timers or motion sensors wherever possible. Add full cutoff or glare-control louvers on all luminaries to direct light towards the ground and eliminate the upward spill of ambient light, which contributes to light pollution. See the International Dark Sky Association website ([www.darksky.org](http://www.darksky.org)) for further guidance.
  - Consider making all lighting low in profile, such as bollard lights at the parking area and footlights along the main path. Mount security lights in unobtrusive locations on existing features such as the corners of buildings, rather than installing tall poles.
- Interpretive Media
  - When developing interpretive media, consider a graphic identity for the park that includes a complementary system of signs and printed materials such as brochures and site maps in order to assist the visitor in understanding the physical organization of the site.
  - Consider phasing installation of the media by preparing a well-designed brochure/map as an initial interpretive measure before adding any signage. Printed brochures are easily updated as new information becomes available, as site development proceeds, and as plantings are changed or added.
  - Incorporate waysides where possible into bases that are harmonious with the site, are removable, or serve a second function. Locate waysides in ways that fit in with the character of the site. Consider, for example, mounting waysides on removable frames of metal or wood.

### *Maintenance*

- Develop a Maintenance Plan for the park that builds upon the inventory, condition assessment, and treatment recommendations contained within this study. This Maintenance Plan should evaluate and take into consideration the amount and skill level of labor available in comparison to the amount of labor necessary to maintain the park. With this in mind, the maintenance plan should:
  - Establish procedures and schedules for conducting routine field inspections to monitor/evaluate the condition of horticultural resources within the park.
  - Establish a maintenance regime for routine/seasonal tasks, such as pruning, mowing, irrigation, etc., to maintain the overall health and vigor of horticultural resources.
  - Prioritize areas for the removal of invasive species and establish procedures for eradication (see Chapter Four for specific recommendations).
  - Establish procedures for the care and maintenance of developed features, such as walkways, trails, parking area, interpretive signs, etc., including special tasks that may be seasonal in nature, such as walkway snow or ice removal, salt application, plowing, etc.
  - Establish standards for plant recordkeeping that include plant labeling, propagation, installation and/or replacement.
  - Establish standards for tree or plant removal.
  - Establish standards for updating the GIS plant baseline inventory and condition assessment database prepared for this study. Updates to this database should be made when plants/garden beds are:
    - Added to the landscape
    - Removed from the landscape
    - Transplanted
    - Replaced
    - Propagated
    - Treated for wounds, pests, or disease
    - Treated for invasive species
    - Reassessed with a change of condition

- Minimal information should include:
  - Plant species (scientific and common names)
  - Source of plant material. For initial database entries, source would be ‘existing’
  - Location
  - Date of action
  - Treatment action (refer to the above list)
  - Observations or events associated with the feature, including references to associated documents or correspondence
  - Remove dead trees and shrubs, and those identified as potentially hazardous to people or resources because of their health or condition.
- When removing trees with a 9-inch diameter or larger, do so under the supervision of a certified arborist. Undertake tree removal from within shrub beds and other areas with horticultural resources with guidance of an arborist, horticulturist, forester, or landscape architect. Use utmost care to avoid damage to surrounding plantings. Avoid digging or grinding stumps; cut flush with the ground to minimize disturbance of nearby roots.
- Pruning in all areas of the site should be done according to recognized industry (ANSI) standards.



Existing entry drive.

### Park Access Road

Make vehicular access to the site as **visually unobtrusive** as possible. Consider noise and other impacts that vehicles will have.

**Avoid natural and horticultural resources;** consider potential impacts of cut and fill.

Minimize **road width**; an 18-20 foot road width is recommended.

Where **shoulders** are necessary, install grass rather than paved surfaces.

Avoid **curb and gutters**. Grade roadway to work with the natural contours of the site and implement sustainable stormwater practices.

Choose all-weather **surface materials** that complement the park's natural character, such as gravel, asphalt, or a chip-seal surface with dark colored aggregate.



Example of grasscrete used for a fire access road.

If **emergency vehicle access** cannot be accommodated by the park access road or the existing entry drive and must traverse the open meadow, consider using a porous pavement system, such as **grasscrete**, that allows vegetation to grow within the access road.

### Parking

Develop the **fewest possible spaces** necessary to accommodate visitor access to the site, and phase construction of additional spaces if needed.

**Avoid removal of large trees** and ornamental shrubs. Where possible, integrate these features into the design of the parking area by incorporating them into planting islands.

Consider installing trees and shrubs that can serve as **ornamental and/or interpretive features**.

Avoid curb and gutters; grade parking area to work with the **natural contours** of the site.

Consider using **porous pavement**, such as gravel, grasscrete, or porous asphalt on all or part of the parking area.

Install **vegetative buffers** between the parking area and key park resources to protect the quiet naturalistic and isolated character of the park.



Example of gravel parking with a grass filter strip and a pre-filter of loose stone.



Existing brick path in upper garden.

### Walks and Trails

Provide a **primary trail** to connect the visitor parking area with the interpretive kiosk and residence. Consider paving materials, such as brick, that will ensure universal accessibility, complement the residence, and delineate this path as the primary access route.

Connect existing trails to construct one continuous **perimeter trail** along the woodland edge that provides access to different areas of the site, and doubles as an accessible pedestrian route. This trail could include stopping points for persons who use wheelchairs to have visual access to areas of the gardens that cannot support the addition of accessible paths.

As it will likely not be possible to provide accessible routes to all resources on the property without damaging site integrity, alternative interpretive experiences should be provided.

Surfacing should be as permeable as possible to minimize runoff and erosion damage and maintain the health of the woodland.

Blend the appearance of the trails into the woodland character. An example of appropriate material is compacted stone dust or crushed stone of a tan to dark brown color.

While handrails and edge protection are not required, they may be provided and should meet appropriate standards.



Existing trails through woodlands should be connected & improved as necessary for universal access.

### White Horticultural Park

## Figure 6-4. Landscape Management Guidelines and Development Recommendations Park-wide Recommendations

## Grading and Earthwork

**Minimize soil disturbance** and grading. Preserve existing landforms and natural drainage patterns to the greatest extent possible.

## Vegetation

**Remove dead trees and shrubs**, and those identified as potentially hazardous to people or resources because of their health or condition.

When selecting new plants, **ensure species are not invasive**. Compare plants with known invasive species lists and references prior to planting.

Plan **new garden areas to blend into the character** of the existing park. New garden plantings should be ornamental in style, with an emphasis on native species.



## Protection of Horticultural Resources During Construction

On site plans, clearly indicate which plants and trees are to be protected and which are to be removed. Ensure that during construction, protective fencing surrounds all plants to remain, with the protected area extending to the edge of the canopy drip line.

During any construction, repair or maintenance operations that require vehicles in close proximity to horticultural resources, use low-tire-pressure vehicles to avoid damage to roots.



## Small-scale Features

**Fences** should be unobtrusive, of a natural color and material that blends into the existing wooded vegetation, such as dark brown board fencing.

Place the minimum number of vehicular **gates** required for general and emergency access to the site.

Develop standards for **site furnishings** such as benches and trash receptacles, and parking area features such as bollards or wheelstops to achieve a unique identity and cohesive design aesthetic for the park.



Source: Landscape Forms.

Make all **lighting** dark-sky compliant. Add full cutoff or glare-control louvers on all luminaires to direct light towards the ground and eliminate the upward spill of ambient light, which contributes to light pollution.



Example of a full-cutoff light fixture.  
Source: International Dark Sky Association.

Consider making **lighting** low in profile, such as bollard lights at the parking area and footlights along the main path.



Examples of bollard lighting. Source: International Dark Sky Association.

## Stormwater Management

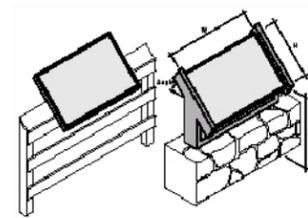
Mitigate the potential increase in stormwater run-off associated with new road, parking, and path development within the property using **filter strips, grass swales, rain gardens**, or other means that encourage infiltration of stormwater.

Promote **sheet flow** of stormwater over lawn and wooded areas rather than concentrating or channelizing flow, which can cause erosion.



Section view of a rain garden.

**Interpretive media:** incorporate waysides where possible into bases that are harmonious with the site, are removable, or serve a second function. Consider mounting them on removable frames of metal or wood.



Source: National Park Service.

## White Horticultural Park

### Figure 6-5. Landscape Management Guidelines and Development Recommendations Park-wide Recommendations

Landscape Management Plan  
Fairfax, Virginia  
Fairfax County Park Authority  
January 2006