

**Olmsted Park** 





#### **Project Team**

- Boston Parks and Recreation Department
  - Michele Folts, Project Manager
  - Margaret Dyson, Director of Historic Parks
- Pressley Associates
  - Marion Pressley and Gary Claiborne
- Tree Specialists
  - Barbara Keene Briggs and David Ropes

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#### Meeting Agenda

- Project Description and Goals
- Historic Considerations and Site History
- Project Area Existing Conditions
- Tree and Woodlands Assessment
- Invasive Plants
- Next Steps
- Discussion/Input

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#### **Project Description**

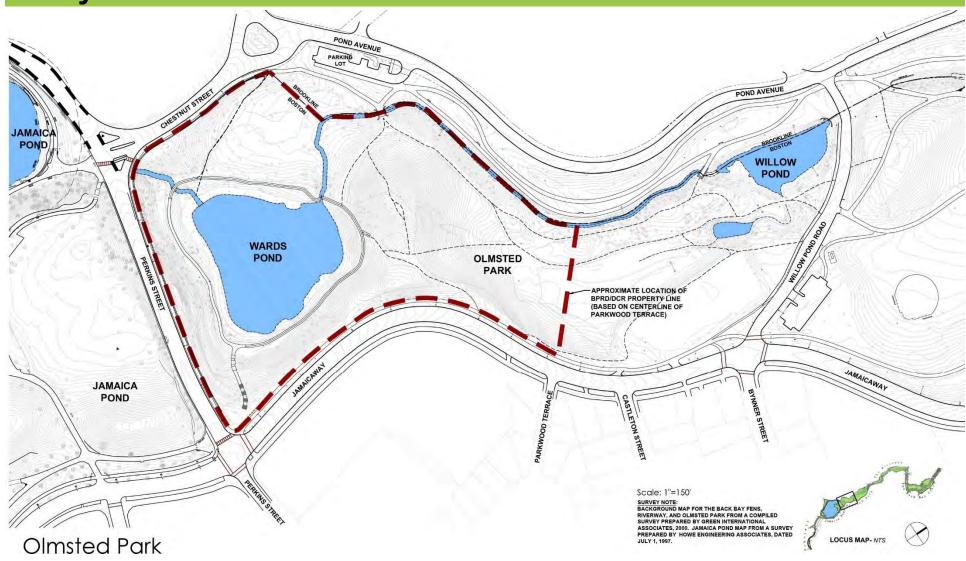
- Pilot project
  - Apply principles and lessons learned to future Emerald Necklace park improvement project
- Landscape rehabilitation
  - Tree pruning
  - Invasive vegetation management
  - New plantings and general woodlands improvements (understory plantings)
  - Slope stabilization
- Historic stair rehabilitation
- Pathway and trail improvements

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Project Area



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Community Meeting #1 – October 27, 2016



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#### **Project Considerations**

- Historic
  - National Historic Landmark
  - Boston Landmarks Commission
- Emerald Necklace Master Plan
- Wetlands
  - Boston Conservation Commission
- Site Ecology
- Park User Experience
- Sustainability of Design

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#### **Historic Considerations**

# Secretary of the Interior's Standards for the Treatment of Historic Properties

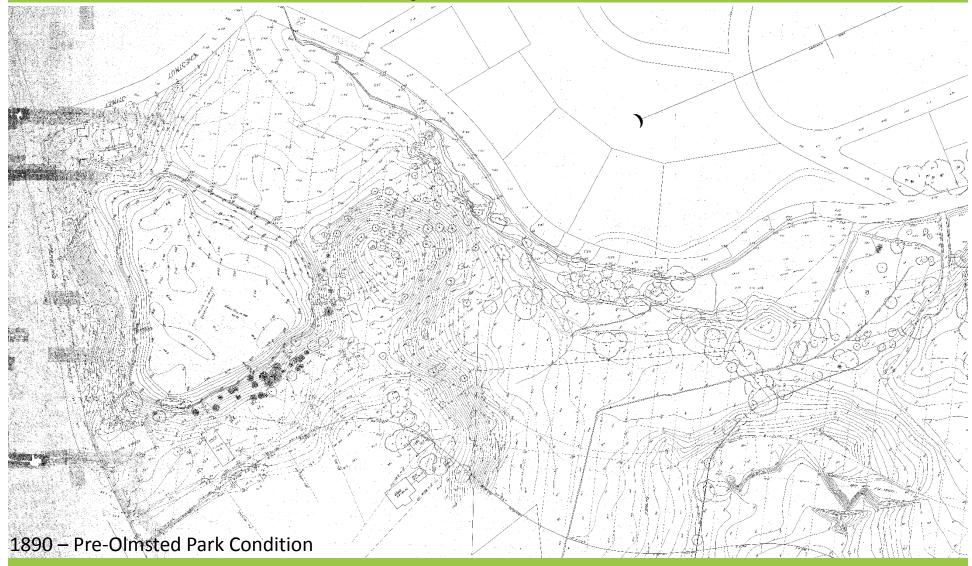
- Preservation: the act or process of applying measures necessary to sustain the existing form, integrity, and material of a historic property, which includes initial stabilization work, where necessary, as well as ongoing preservation maintenance and repair of historic materials and features.
- Rehabilitation: the act or process of making possible a compatible use for a property through repair, alterations, and additions while preserving those portions or features, which convey its historical, cultural, or architectural values.
- Restoration: the act or process of accurately depicting the form, features, and character of
  a property as it appeared at a particular period of time by removing features from other
  periods in its history and reconstructing missing features from the restoration period.
- **Reconstruction:** the act or process of **depicting, by means of new construction,** the form, features, and detailing of a non-surviving site, landscape, building, structure, or object for the purpose of replicating its appearance at a specific period of time and in its historic location.

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Martin J. Walsh, M



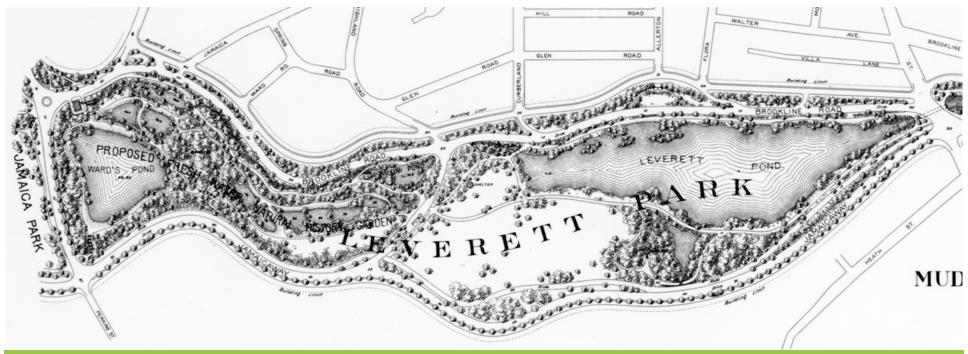
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Upper Valley of Muddy River — "A chain of picturesque fresh-water ponds, alternating with attractive natural groves and meadows". Frederick Law Olmsted, City of Boston 6th Annual Report 1880.

1892 Plan: Three major ponds (Leverett, Willow, and Wards Ponds), a watercourse (the Babbling Brook) connecting them, six historic pedestrian bridges, pedestrian paths, and "The Ride" along the parkway. Park sheltered from the city by woodland areas.



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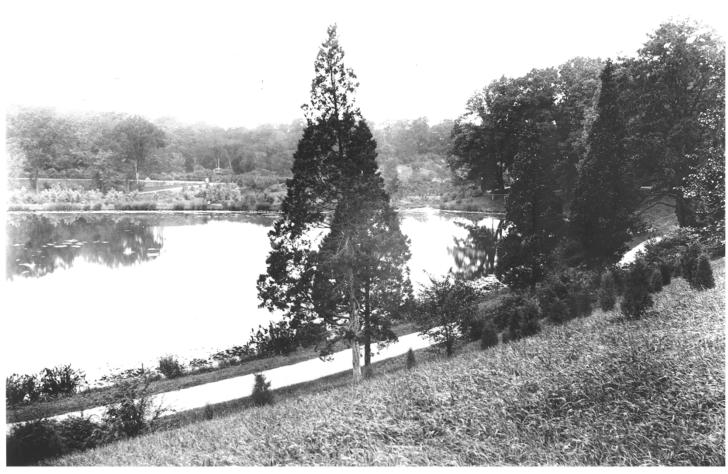


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Wards Pond View from Jamaicaway 1901 (6 years after FLO)

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1904

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1904

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Ward's Pond toward the Jamaicaway: June 1913 (18 years after FLO)

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View down the steps toward Perkins Street June 1913 (18 years after FLO)

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View down to Wards Pond 1920

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Ward's Pond View toward Perkins Street June 1929 (34 Years)

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Ward's Pond, looking down from Jamaicaway June 1929 (34 yrs)

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#### **Project Area Existing Conditions - Paths**



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#### **Project Area Existing Conditions - Paths**















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#### **Project Area Existing Conditions - Slopes**



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#### **Project Area Existing Conditions - Slopes**









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#### **Project Area Existing Conditions - Stairways**





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#### **Project Area Existing Conditions - Stairways**









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#### Project Area Existing Conditions – Trees and Woodlands













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#### Tree Assessment Methodology

#### Data Collection

- Inventoried and assessed individual "Trees of Distinction"
  - Sizes ±30" Diameter at Breast Height (DBH)
  - Additional trees under 30" included if botanically significant or high resource value
- Assess the structural condition and overall vigor of trees
- Develop prioritized pruning or removal recommendations







#### Trees of Distinction

Large framework trees with stem diameters of 30" or greater



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#### **Pruning Goals and Objectives**

Safety through Risk Reduction to address large dead limbs and live limbs with visible structural defects that may pose a threat to visitors on pathways, stairs, roadways, or other high use areas



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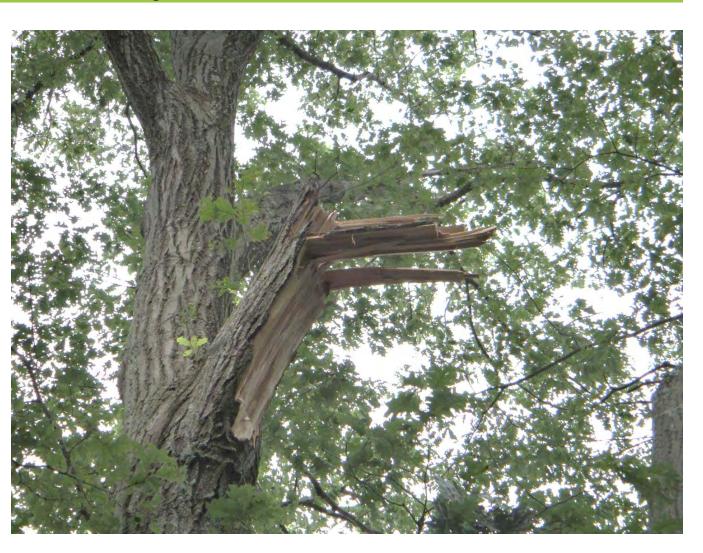




#### **Pruning Goals and Objectives**

#### **Preservation**

through Stabilization to address large diameter limb or stem structures that would significantly damage or degrade the quality or longevity of significant trees.



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#### Pruning Methods – Crown Cleaning

Crown Cleaning is an industry accepted term for the removal of dead...



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#### Pruning Methods – Crown Cleaning



...dying...

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#### Pruning Methods – Crown Cleaning

...or structurally compromised limb or stem structures.



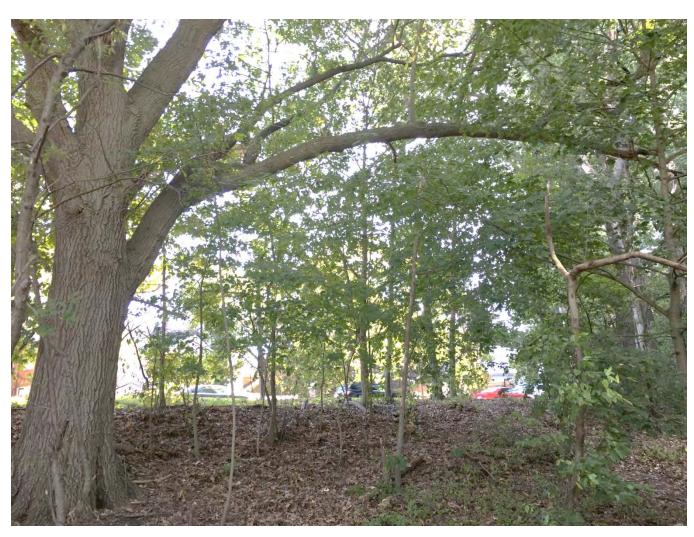
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#### Pruning Methods – Crown Reduction

Crown Reduction is an industry accepted term for the removal of live and healthy limbs, for the purposes of reducing weight...



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#### Pruning Methods – Crown Reduction

...and strain on structurally weak limb or stem structures.



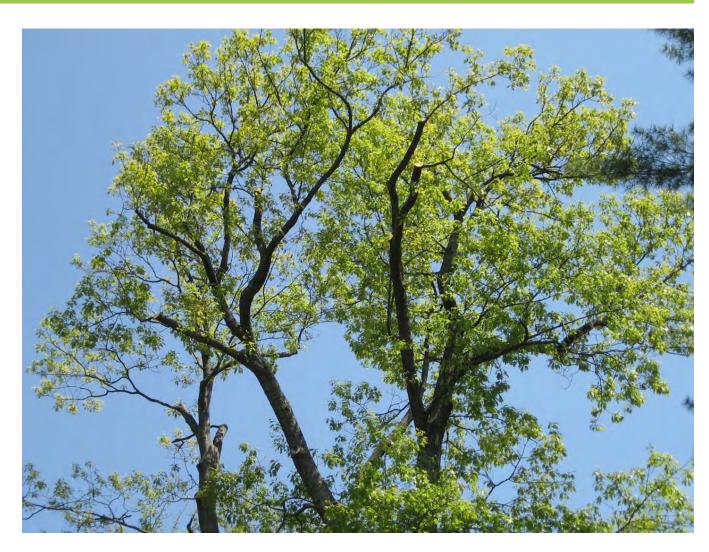
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## Pruning Methods – Crown Reduction

Reduction can be achieved with heading cuts...



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## Pruning Methods – Crown Reduction

#### ...or thinning cuts





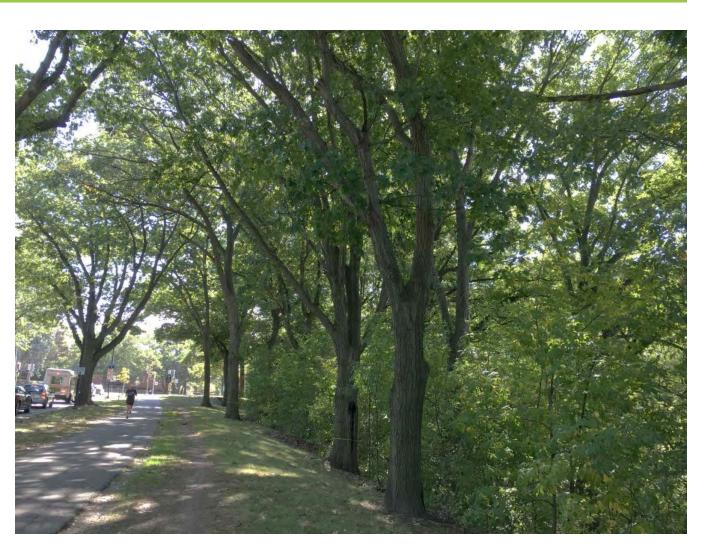
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## **Pruning Specifications**

Crown cleaning over paths, sidewalks, and roadways will address limbs down to 2" in diameter, increased to 3" over woodland areas.



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## **Pruning Specifications**

Crown reduction
pruning will be
targeted at specific
limb or stem
structures based on
an aerial inspection
by the contracting
arborists in the field.



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## **Invasive Plant Assessment Methodology**

- Inventory invasive species
- Evaluate environmental impacts
- Tailor a management strategy specific to each invasive species







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#### **Invasive Plant Assessment**

#### **Colonization**

- Invasive species spread and disrupt ecosystems in natural areas.
- Makes habitat less suitable for native plants and wildlife.



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#### **Invasive Plant Assessment**

#### **Competition**

Young Norway maples growing into the canopy shade lower limbs and reduce area for oak regeneration.



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# Norway Maple Acer platanoides

- Trees produce large numbers of seeds.
- The dense inhibits the regeneration of other tree seedlings, reducing diversity.
- The shallow roots are dense and outcompete with more desirable plants.



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## **Tree of Heaven** *Ailanthus altissima*

- Sends out seeds in enormous numbers
- Forms dense clonal thickets (monocultures)
- Grows quickly, displacing native plants, which also affect wildlife diversity.
- Difficult to manage once established.



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#### **Amur Corktree**

Phellodendron amurense

- Has established in park into large framework trees.
- Displaces more desirable native hardwood species.
- Note: only female plants have potential to become invasive.



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## Japanese Barberry Berberis thunbergii

- Introduced as an ornamental and escaped into naturalized areas.
- Forms dense stands that outcompete with native trees and herbaceous plants.



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### Oriental Bittersweet

Celastrus orbiculatus

- Can quickly engulf vegetation, forming nearly pure stands.
- It can strangle shrubs and small trees, and weaken mature trees by girdling the trunk and weighting the crown making the tree more susceptible to damage.



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# **Burning Bush** *Euonymous alatus*

- Introduced as an ornamental and escaped into naturalized areas.
- Forms dense stands that outcompete with native trees and herbaceous plants.



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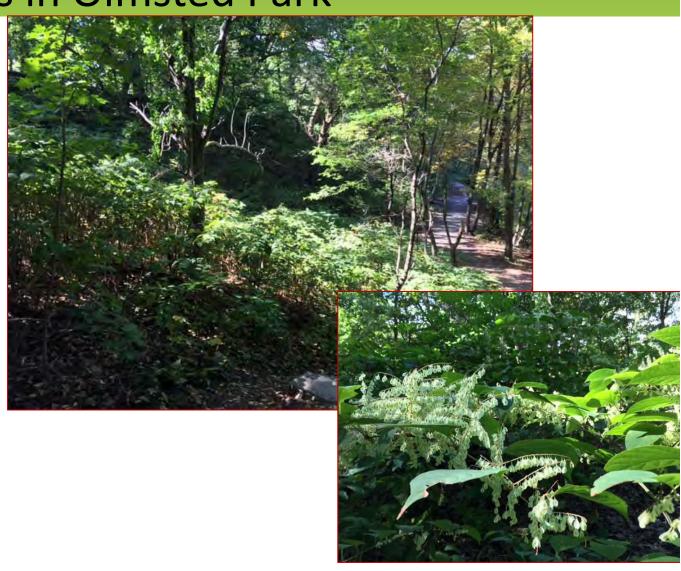




#### **Knotweed**

Fallopia japonica

- Knotweed thrives in disturbed areas.
- Once established, spreads rapidly, creating monoculture stands that threaten native plant communities.
- Can tolerate wide variety of growing conditions, including deep shade, full sun and drought.



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## Invasive Species in Olmsted Park

# Honeysuckles *Lonicera sp.*

- Outcompetes the growth of native plant species.
- It shades out understory growth preventing the success of native understory plants and tree seedlings.



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# **Common and Glossy Buckthorn**

Rhamnus cathartica & R. frangula

- Prolific seeder that adapts to a wide range of conditions.
- Forms dense stands that outcompete with more desirable native plants.



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# Multiflora Rose Rosa multiflora

- Among one of the top invasive plant species in the country.
- Prolific seeder that quickly colonizes and forms large dense shrub masses that outcompete with more desirable native vegetation



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#### **Poison Ivy**

Toxicodendron radicans

- A native plant with high wildlife value.
- Only a problem if plants threatens the health and safety of visitors or arborists.



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## **Next Steps**

- Early Action Project Winter Tree pruning bid package for "High Priority Trees"
- Plan for Landscape Rehabilitation
  - Develop a landscape management strategy
  - Additional tree pruning
  - Invasive plan management
  - Understory planting
  - Slope stabilization details
- Develop Trail Standards and Improvements
  - Possible closure of some trails on Nickerson Hill
  - Trail clearance standards
  - Possible accessible entrance off of Chestnut Street (USDA Forest Service Guidelines)
- Strategy for Historic Stairway Rehabilitation
  - Details and specifications for existing stair granite tread resetting
- Prepare and Issue Bid Package
- Site Construction

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Discussion/Input



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