



# NEW BEDFORD COMMUNITY PRESERVATION COMMITTEE

## STEP II

### COMMUNITY PRESERVATION ACT FULL PROJECT APPLICATION

## FY19

**Application Form Deadline: November 16, 2018**

Applicants must submit this application no later than 12:00PM on Friday, November 16, 2018. Please refer to Submission Requirements within the Application Packet Instructions.

**Full applications will not be accepted--regardless of project eligibility--until the Project Eligibility Determination Form has been submitted and approved.**

Department of Planning, Housing & Community Development  
608 Pleasant Street, 2<sup>nd</sup> Floor  
Patrick Sullivan, Director

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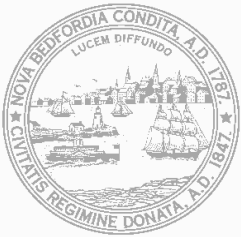
CITY OF NEW BEDFORD  
COMMUNITY PRESERVATION FUND FY 2019

## Project Application

### Submission Checklist

Application items should be presented in the following order. Please check each item included in your submission.

<b>GENERAL</b>	
<input type="checkbox"/>	Application Cover Page(form provided)
<input type="checkbox"/>	Submission Requirements Checklist (this form)
<input type="checkbox"/>	Narratives (prompts provided)
<input type="checkbox"/>	Project Schedule(form provided)
<b>FINANCIAL</b>	
<input type="checkbox"/>	Budget Form (form provided)
<input type="checkbox"/>	At least two written quotes for project costs. Detailed cost estimates and/or written quotes.
<input type="checkbox"/>	Proof of secured funding (commitment letters or bank statements), if applicable.
<b>OWNERSHIP/OPERATION (NON-CITY)</b>	
<input type="checkbox"/>	If the applicant is not the owner, attach documentation of site control or written consent of owner to undertake the project.
<input type="checkbox"/>	Certificate of Good Standing(if operating as a corporation)
<input type="checkbox"/>	501(c)(3) certification (if operating as a non-profit)
<input type="checkbox"/>	Purchase & Sale agreement or copy of current recorded deed, if applicable.
<b>COMMUNITY SUPPORT</b>	
<input type="checkbox"/>	Letters of support from residents, community groups, city departments, boards or commissions, etc.
<b>HISTORIC RESOURCES PROJECTS</b>	
<input type="checkbox"/>	Documentation that the project is listed on the State Register of Historic Places or a written determination from the New Bedford Historical Commission that the resource is significant in the history, archeology, architecture, or culture of New Bedford.
<input type="checkbox"/>	Photos documenting the condition of the property.
<input type="checkbox"/>	Report or condition assessment by a qualified professional describing the current condition of the property, if available.
<b>PLANS &amp; REPORTS</b> <i>The following plans and reports, if available, will strength your application, (submit in digital format only). Applicants are encouraged to submit as much detail as possible.</i>	
<input type="checkbox"/>	Renderings, site plans, engineering plans, design and bidding plans, specifications, and any MAAB variance requests.
<input type="checkbox"/>	Applicable reports (21E, Historic Structure Report, appraisals, survey plan, feasibility studies, etc.)
<b>VISUAL</b>	
<input type="checkbox"/>	Map of the property location (if applicable, show wetlands and wetland buffers, flood plain, water bodies, parks, open spaces, rails, and other features pertinent to the project). Applicants may use the City's <a href="#">interactive mapping website</a> .
<input type="checkbox"/>	Photos of the project site (not more than four views per site) Digital copies required.
<input type="checkbox"/>	Catalog cuts (i.e. recreation equipment) if applicable.
<b>FOR HISTORIC PRESERVATION PROJECTS ONLY</b>	
<input type="checkbox"/>	I/We have read the <b><i>U.S. Secretary of the Interior's Standards for the Treatment of Historic Properties</i></b> and understand that planning for and execution of this project must meet these standards.



## Project Application Cover Page

PROJECT INFORMATION			
PROJECT TITLE			
PROJECT LOCATION			
LEGAL PROPERTY OWNER OF RECORD			
CPA PROGRAM CATEGORY <i>(Indicate all categories that apply)</i>	<input type="checkbox"/> OPEN SPACE	<input type="checkbox"/> HISTORIC PRESERVATION	
	<input type="checkbox"/> RECREATION	<input type="checkbox"/> HOUSING	
ESTIMATED START DATE		ESTIMATED COMPLETION DATE	
ONE SENTENCE DESCRIPTION OF PROJECT			

APPLICANT INFORMATION			
THE APPLICANT IS <i>(Check only one)</i>	<input type="checkbox"/> CITY BOARD OR DEPT	<input type="checkbox"/> NON PROFIT 501c3	<input type="checkbox"/> PRIVATE GROUP/INDIV
APPLICANT / ORGANIZATION			
CO-APPLICANT NAME/ORGANIZATION <i>(If applicable)</i>			
CONTACT PERSON			
MAILING ADDRESS			
TELEPHONE #		EMAIL:	

BUDGET SUMMARY	
CPA FUNDING REQUEST <i>(must match CPA request in attached Budget Summary)</i>	\$
TOTAL BUDGET FOR PROJECT	\$

SIGNATURES		
I/we attest that all information provided in this entire submission is true and correct to the best of my/our knowledge and that no information has been excluded, which might reasonably affect funding. I/we authorize the Community Preservation Committee and/or the City of New Bedford to obtain verification from any source provided. I/we acknowledge and agree that a permanent restriction may be placed on the property as a condition of funding.		
NAME (printed)	SIGNATURE <i>Richard Leary</i>	DATE:
NAME (printed)	SIGNATURE	DATE:

## Project Description

### 1 GENERAL NARRATIVE (1000 Character Maximum)

Provide a description of:

- *The project's location, the property involved and its proposed use.*
- *The proposed scope of work.*

### 2 COMMUNITY NEED (1000 Character Maximum)

- *What community need(s) will this project address? How does the project benefit the public and what populations(s) will it serve? If it serves a population currently underserved, please describe.*
- *How does the project preserve and enhance the character New Bedford?*

## Project Description

### 3 GOALS & OBJECTIVES (1000 Character Maximum)

- Describe the project's goals and objectives. The objectives must be specific, measurable, achievable and realistic.
- How does the project meet the general and category-specific priorities outlined in the Community Preservation Plan or other current relevant planning documents?

### 4 MEASURING SUCCESS (1000 Character Maximum)

- How will the success of this project be measured?

## Project Description

### 5 COMMUNITY SUPPORT (1000 Character Maximum)

- *Explain the level of community support this project has received. If at all possible, please include letters of support from any groups or individuals who have endorsed this project.*

### 6 CRITICAL NEED (1000 Character Maximum)

- *Is this project of an urgent nature?*
- *Is there a deadline or factors not controlled by the applicant (i.e. opportunity for immediate acquisition, opportunity to leverage available non-CPA grant or other financial opportunity)?*
- *For historic resource applications, is the property at risk for irreparable loss? If so, please include a condition assessment from a qualified professional.*

## Financial

### ① FINANCIAL INFORMATION (2000 Character Maximum)

- Describe all successful and unsuccessful attempts to secure funding and/or in-kind contributions, donations, or volunteer labor for the project.
- Will the project require funding over multiple years, and if so, provide annual funding requirements.
- What is the basis for the total CPA request?
- How will the project be affected if it does not receive CPA funds or a reduced amount?

## Project Management

### 1 APPLICANT INFORMATION (1000 Character Maximum)

- Describe the applicant. Are they public, private non-profit, private for-profit, an individual, a partnership, or another type of entity? What is their history and background?
- Identify and describe the roles of all participants (applicants, architects, contractors, etc.), including the project manager.

### 2 APPLICANT BACKGROUND (1000 Character Maximum)

- Describe any past projects of similar type and scale, or experience that demonstrates the applicant's ability to carry out this project.

## Project Management

### 3 PROJECT FEASIBILITY (1000 Character Maximum)

- *List and explain further actions or steps required for completion of the project, such as environmental assessments, zoning or other permits and approvals, agreement on terms of any required conservation, affordability or historic preservation agreements, subordination agreements, and any known or potential barriers or impediments to project implementation.*

### 4 PROJECT MAINTENANCE (1000 Character Maximum)

- *Please explain the long-term maintenance plan for the completed project.*

## Historic Resources Rehabilitation Projects Requirements

### CPA Compliance (1000 Character Maximum)

- Describe how the proposed project complies with the [U.S. Secretary of the Interior's Standards for Rehabilitation](#), as required by the CPA legislation under the definition of rehabilitation.
- Describe how the applicant will ensure compliance with these standards as the project is ongoing, including an identification of who will make historic preservation determinations.

## Accessibility Requirements

### CPA Compliance (1000 Character Maximum)

- Describe how the proposed project complies with the all [ADA/MAAB Regulations](#).

## Community Housing Projects Requirements

### CPA Compliance (1000 Character Maximum)

- Describe how the proposed project complies with CPA affordability requirements.(100%of AMI for New Bedford)
- Describe the number and types of units (e.g.: 1br, 2br).
- Provide a complete Development Budget and an Operating Budget (for rental properties).

**COMMUNITY PRESERVATION FUND ■ PROJECT APPLICATION FY19  
PROJECT SCHEDULE**

**PROJECT SCHEDULE**

*Please provide a project timeline below, noting all project milestones. Please note that because the City Council must approve all appropriations, CPA funds, if awarded, may not be available until up to two months following CPC approval.*

	ACTIVITY	ESTIMATED DATE
<b>PROJECT START DATE:</b>		
<b>PROJECT MILESTONE:</b>		
<b>50% COMPLETION STAGE:</b>		
<b>PROJECT MILESTONE:</b>		
<b>PROJECT COMPLETION DATE:</b>		

**PROJECT BUDGET**

*Please include a complete itemized budget of all project expenses, including the proposed funding source for each expense, in your submission. Note: CPA funds cannot be used for maintenance.*

FUNDING SOURCES		EXPENSES				
		STUDY	SOFT COSTS*	ACQUISITION	CONSTRUCTION**	TOTAL
1	NEW BEDFORD CPA	\$	\$	\$	\$	\$
2		\$	\$	\$	\$	\$
3		\$	\$	\$	\$	\$
4		\$	\$	\$	\$	\$
5		\$	\$	\$	\$	\$
<b>TOTAL PROJECT COSTS</b>		\$	\$	\$	\$	\$

\* Soft costs include design, professional services, permitting fees, closing costs, legal, etc.

\*\* Construction refers to new construction, rehabilitation, preservation, restoration work, and/or accessibility related expenses.

**Project Cost Summary**

*Please explain the status of each funding source (i.e., submitting application on X date, applied on X date, received award notification on X date, funds on hand, etc.). For sources where funding has been awarded or funds are on hand, please include documentation from the funding source (e.g., commitment letter, bank statement) in application packet.*

	FUNDING SOURCE	STATUS OF FUNDING
1		
2		
3		
4		
5		

A **Construction Budget Form** is provided on the following page. Additionally, if you have developed a more detailed Pro-Forma/Capital Budget, please attach that to your application and include the following:

- Total cost, hard vs soft costs and contingencies, and project management.
- Operating/maintenance budget for a ten year period (CPA funds cannot be used for operations and maintenance).

**COMMUNITY PRESERVATION FUND ■ PROJECT APPLICATION FY19  
CONSTRUCTION BUDGET**

**Construction Projects Only**

ACTIVITY	CPA FUNDS	OTHER FUNDS	TOTAL
<b>Acquisition Costs</b>			
Land	\$	\$	\$
Existing Structures	\$	\$	\$
Other acquisition costs	\$	\$	\$
<b>Site Work (not in construction contract)</b>			
Demolition/clearance	\$	\$	\$
Other site costs	\$	\$	\$
<b>Construction/Project Improvement Costs</b>			
New Construction	\$	\$	\$
Rehabilitation	\$	\$	\$
Performance bond premium	\$	\$	\$
Construction contingency (30%)	\$	\$	\$
Other	\$	\$	\$
<b>Architectural and Engineering (See Designer Fee Schedule for guidance):</b> <a href="https://www.mass.gov/files/design_fee_schedule- dsb_2015_2007.pdf">https://www.mass.gov/files/design_fee_schedule- dsb_2015_2007.pdf</a>			
Architect fees	\$	\$	\$
Engineering fees	\$	\$	\$
Other A & E fees	\$	\$	\$
<b>Other Owner Costs</b>			
Appraisal fees	\$	\$	\$
Survey	\$	\$	\$
Soil boring/environmental/LBP	\$	\$	\$
Tap fees and impact fees	\$	\$	\$
Permitting fees	\$	\$	\$
Legal fees	\$	\$	\$
Other	\$	\$	\$
<b>Miscellaneous Costs</b>			
Developer fees	\$	\$	\$
Project reserves	\$	\$	\$
Relocation costs	\$	\$	\$
<b>Project Administration &amp; Management Costs</b>			
Marketing/management	\$	\$	\$
Operating/Maintenance	\$	\$	\$
Taxes	\$	\$	\$
Insurance	\$	\$	\$
Other	\$	\$	\$
<b>TOTAL</b>	<b>\$</b>	<b>\$</b>	<b>\$</b>

**Internal Revenue Service**

**Date:** August 21, 2003

Friends of Buttonwood Park Incorporated  
P.O. Box 2011  
New Bedford, MA 02741

**Department of the Treasury**  
P. O. Box 2508  
Cincinnati, OH 45201

**Person to Contact:**  
Steve Brown 31-07422  
Customer Service Representative  
**Toll Free Telephone Number:**  
8:00 a.m. to 6:30 p.m. EST  
877-829-5500  
**Fax Number:**  
513-263-3756  
**Federal Identification Number:**  
04-3081488

Dear Sir or Madam:

This is in response to your request of August 21, 2003 regarding your organization's tax-exempt status.

In January 1991 we issued a determination letter that recognized your organization as exempt from federal income tax. Our records indicate that your organization is currently exempt under section 501(c)(3) of the Internal Revenue Code.

Based on information subsequently submitted, we classified your organization as one that is not a private foundation within the meaning of section 509(a) of the Code because it is an organization described in section(s) 509(a)(1) and 170(b)(1)(A)(vi).

This classification was based on the assumption that your organization's operations would continue as stated in the application. If your organization's sources of support, or its character, method of operations, or purposes have changed, please let us know so we can consider the effect of the change on the exempt status and foundation status of your organization.

Your organization is required to file Form 990, Return of Organization Exempt from Income Tax, only if its gross receipts each year are normally more than \$25,000. If a return is required, it must be filed by the 15th day of the fifth month after the end of the organization's annual accounting period. The law imposes a penalty of \$20 a day, up to a maximum of \$10,000, when a return is filed late, unless there is reasonable cause for the delay.

All exempt organizations (unless specifically excluded) are liable for taxes under the Federal Insurance Contributions Act (social security taxes) on remuneration of \$100 or more paid to each employee during a calendar year. Your organization is not liable for the tax imposed under the Federal Unemployment Tax Act (FUTA).

Organizations that are not private foundations are not subject to the excise taxes under Chapter 42 of the Code. However, these organizations are not automatically exempt from other federal excise taxes.

Donors may deduct contributions to your organization as provided in section 170 of the Code. Bequests, legacies, devises, transfers, or gifts to your organization or for its use are deductible for federal estate and gift tax purposes if they meet the applicable provisions of sections 2055, 2106, and 2522 of the Code.

Friends of Buttonwood Park Incorporated  
04-3081488

Your organization is not required to file federal income tax returns unless it is subject to the tax on unrelated business income under section 511 of the Code. If your organization is subject to this tax, it must file an income tax return on the Form 990-T, Exempt Organization Business Income Tax Return. In this letter, we are not determining whether any of your organization's present or proposed activities are unrelated trade or business as defined in section 513 of the Code.

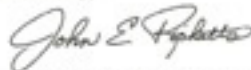
Section 6104 of the Internal Revenue Code requires you to make your organization's annual return available for public inspection without charge for three years after the due date of the return. The law also requires organizations that received recognition of exemption on July 15, 1987, or later, to make available for public inspection a copy of the exemption application, any supporting documents and the exemption letter to any individual who requests such documents in person or in writing. Organizations that received recognition of exemption before July 15, 1987, and had a copy of their exemption application on July 15, 1987, are also required to make available for public inspection a copy of the exemption application, any supporting documents and the exemption letter to any individual who requests such documents in person or in writing. For additional information on disclosure requirements, please refer to Internal Revenue Bulletin 1999 - 17.

Because this letter could help resolve any questions about your organization's exempt status and foundation status, you should keep it with the organization's permanent records.

If you have any questions, please call us at the telephone number shown in the heading of this letter.

This letter affirms your organization's exempt status.

Sincerely,



John E. Ricketts, Director, TE/GE  
Customer Account Services



# City of New Bedford

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## Office of City Council

133 William Street • New Bedford, Massachusetts 02740

(508) 979-1455 • Fax: 508-979-1451

**Kerry Winterson**

*Councillor Ward Five*

December 08, 2017

Patrick Sullivan, Director  
Department of Planning, Housing and Community Development  
City Hall  
133 William Street  
Room – 303  
New Bedford, MA 02740

Dear Mr. Sullivan:

I am writing this letter in support of the Buttonwood Brook Trail and Bridges Project. To restore and improve this location with a trail by the brook and construction of a new bridge are the major improvements projected. The view of the pond has been hindered by substantial overgrowth which needs to be removed. There have been reports of strange activity in that area. Apart from the aesthetic aspect, this would also improve park safety.

I believe that this request falls under the guidelines of the Community Preservation Act Funding Allowable Uses.

Buttonwood Park has been enjoyed by generations of New Bedford residents. Approval of this project would benefit all members the community.

I respectfully ask that you look favorably at this request.

Thank you.

Very truly yours,

*Kerry M. Winterson*

Kerry M. Winterson,  
Councillor Ward Five

KMW: rrr

cc: File



# CITY OF NEW BEDFORD

Parks, Recreation & Beaches

*Jonathan F. Mitchell*



December 11, 2017

To Whom it May Concern,

I am writing to express my support for the development of the trails in the north woods at Buttonwood Park by the Friends of Buttonwood Park. This project is highly desirable for a number of reasons, including its great and unique recreational value. The trails will offer the many walkers in the park a new experience not just walking around the park or only in developed areas such as the concourse, but in a woodlands area, a unique ecosystem. It is well established that time in nature has physical and emotional health benefits. The trails will allow them to walk completely around the pond when completed.

This proposal is for Phase 1, the Buttonwood Brook Trail. The Buttonwood Brook Trail is important because it establishes a firm starting point for the project and enables/encourages people to start to perceive and use the area recreationally. The project directly addresses Open Space and Recreational priorities contained in the City of New Bedford's 2014- 2020 Plan to construct city wide trail systems and enhance recreational opportunities.

Sincerely,

Mary S Rapoza, Director

Administrative Offices  
181 Hillman Street, Bldg. #3  
New Bedford, MA 02740  
Phone 508-961-3015

Mailing Address  
181 Hillman Street  
Box #9, New Bedford, MA 02740  
fax 508-991-6175

Administrative Offices  
181 Hillman Street, Bldg. #3  
New Bedford, MA 02740  
Phone 508-961-3015

Mailing Address  
181 Hillman Street  
Box #9, New Bedford, MA 02740  
fax 508-991-6175



# CITY OF NEW BEDFORD

## PARKS, RECREATION & BEACHES

*JONATHAN F. MITCHELL*



October 13, 2017

Re: Community Preservation Fund FY 2018  
Proposal for Phase 1 work on the North Trails at Buttonwood Park

To Whom It May Concern,

The Department of Parks Recreation & Beaches supports moving forward with the application by the Friends of Buttonwood Park for Phase 1 of the North Trails project. If the project is selected for funding, this department will be the co applicant.

Thank you for your consideration.

Sincerely,

A handwritten signature in cursive script, appearing to read "Mary S. Rapoza".

Mary S Rapoza, Director

ADMINISTRATIVE OFFICES  
181 HILLMAN STREET, BLDG. #3  
NEW BEDFORD, MA 02740  
PHONE 508-961-3015

MAILING ADDRESS  
181 HILLMAN STREET  
Box #9, NEW BEDFORD, MA 02740  
FAX 508-991-6175

# Buttonwood Park North Woods Master Plan

New Bedford, Massachusetts

Prepared for  
The Friends of Buttonwood Park

by  
Ray Dunetz Landscape Architecture, Inc.  
179 Green Street  
Boston, MA 02130  
617.524.6265

LEC Environmental  
12 Resnik Rd # 1  
Plymouth, MA 02360  
508.746.9491

January 2017

# Buttonwood Park North Woods Master Plan

New Bedford, Massachusetts

Prepared for  
The Friends of Buttonwood Park

by  
Ray Dunetz Landscape Architecture, Inc.  
179 Green Street  
Boston, MA 02130  
617.524.6265

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January 2017



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## ACKNOWLEDGEMENTS

In preparing this plan, the project team received a great amount of help from the Friends of Buttonwood Park and the City of New Bedford.

### Friends of Buttonwood Park

Ray Castino, President

Andrea Harrison, Vice President

Laura McLeod, Treasurer

Sharon Pinho, Recording Secretary

Lydia King, Corresponding Secretary

Jean Bennett, Development Committee Director

Anne Eades, Past President

Richard Leary, Technology Committee Director

### Trustees of Reservations

Ross Moran

### City of New Bedford

Zeb Arruda, Commissioner, Department of Public Infrastructure

Mary Rapoza, Director of Parks, Recreation and Beaches

Richard Correira, Superintendent of Highways

Chancery Perks, Superintendent of Park Maintenance

Ronald Labelle, Former Commissioner, Department of Public Infrastructure

Sarah Porter, New Bedford Conservation Commission Agent

## EXECUTIVE SUMMARY

### Park History

In 1895, Charles Eliot of Olmsted, Olmsted and Eliot was hired to prepare a preliminary plan for the park on land purchased as important green space in the center of the City of New Bedford. His plan called for enlarging an existing 6-acre pond and creating an expansive meadow along the pond's edge. Eliot also suggested lawn tennis, ball fields, and a children's playground, with vehicular traffic limited to a carriage road encircling the proposed site and complimentary footpaths strategically located in the interior. The pond expansion and lawn were partially implemented, but the 97-acre park has continued to develop under many of the over arching principles described in Eliot's plan. The open lawn with its deciduous trees creates an important central gathering space, while the pond provides opportunities for boating, swimming, fishing, and ice skating. A baseball diamond was laid out in 1896 and tennis courts were built in 1909. The brick Warming House, a 1930s Public Works Project, serves the community as a Senior Center. As early as 1894 the park maintained a small collection of native animals, which has evolved into the 10-acre Buttonwood Zoo. Buttonwood Park was listed on the National Register of Historic Places in 2000.

In 1986, The Olmsted Program of Massachusetts, a program created to preserve, rehabilitate, public open spaces designed by the Olmsted firm, devoted \$1.5 million dollars to plan the rehabilitation of Buttonwood. By 1988, Landscape Architecture firm, Walker-Kluesing Design Group of Boston, MA created a Master Plan for Buttonwood Park. Between 1996 and 1998 the Historic Landscape Preservation Grant Program invested \$200,000 in the park which funded a 3-acre expansion of the zoo.



*Buttonwood Park and Zoo Context Plan*



*North Woods Project Area at Buttonwood Park*

## **Project Background**

While much of the Park has received attention and planning over recent years, the 19-acre North Woods has remained neglected. Invasive species are overgrown; views to the pond are obstructed by vegetation, and unwanted illicit activities occur in the park. This has drawn the attention of the Friends of Buttonwood Park, the park's stewardship organization, who has recognized the need for restoration and activation of this valuable landscape and ecological habitat.

The North Woods consists of forested upland and wetlands, bordering vegetated wetlands, a former tree farm, Buttonwood Brook and Buttonwood Pond. Buttonwood Brook emerges from a culvert beneath Route 6, flowing south and discharging into Buttonwood Pond.

## **Project Goals**

The goal of the Buttonwood Park North Woods Master Plan is to restore the ecological balance of the North Woods; activate the North Woods in ways that promote good uses within the park; provide unique recreational opportunities that differ in character from the rest of the park; provide educational opportunities, and to improve park safety.

## **Approach**

RDLA created this Master Plan with a thorough analysis of existing conditions and archived data. We walked the site with the Friends of Buttonwood to gain their input for new recreational opportunities. We studied historic plans by Charles Eliot of the Olmsted firm and the 1986 Master Plan authored by Walker-Kluesing Design Group. We reviewed existing conditions surveys prepared by the city to locate existing trees, wetlands, resource areas and topography. New Bedford's Conservation Commission Agent, Sarah Porter delineated wetlands. Our Environmental Consultant, LEC Consultants, provided an Invasive Vegetation Management Report. RDLA and Friends of Buttonwood Park met with the New Bedford Conservation Commission to informally discuss the plans. The Master Plan was created as a result of this research.

## **Master Plan Goals**

In developing their recommendations, the team worked with the Friends of Buttonwood to develop a clear goal for Buttonwood Park North Woods Master Plan.

Activate North Woods section of Park by introducing a trail network and appropriate programming by providing new opportunities for:

- Enjoyment and appreciation of the native woodland landscape and ecology;
- Increasing bio-diversity;
- Providing habitat for fauna and refuge for urban wildlife;
- Exercise and recreation;
- Education;
- Restoration of vistas of Buttonwood Pond, Buttonwood Brook and the wetland meadow.

## **Recommendations**

Based on the park's history, and goals outlined above, RDLA has developed the following recommendations for the North Woods Master Plan:

- a. Restore the native woodland;
  - i. Eliminate invasive vegetation
  - ii. Restore healthy native understory
- b. Create a Woodland Trail Network;
  - i. New accessible gravel trails through the uplands
  - ii. New accessible boardwalk trails over sensitive wetland areas
  - iii. New accessible overlooks
- c. Restore existing and provide new bridges over Buttonwood Brook;
  - i. Connect the North Woods to the western portion of Buttonwood Park
- d. Provide Maintenance Guidelines.

## **Budget**

RDLA and our consultants developed budgeting projections for Buttonwood Park North Woods Master Plan and for the ongoing management of the invasive species. The Master Plan improvements have been separated into zones for the purpose of phasing the construction if desired. The total \$1,003,000 is intended to be the goal for fundraising purposes. More precise calculations will be made as the design is further developed.

## **Management**

The plan concludes with a section devoted to the long term care of the North Woods landscape. It includes a calendar for routine maintenance guiding city staff on a month by month basis.



## ASSESSMENT

The following assessment evaluates the condition of the North Woods' natural, built and functional features including context, access and circulation, existing structures, topography, views, vegetation, soils, and safety. Its purpose is to identify relevant constraints and opportunities offered on site and to provide direction to the master planning process.

### Edges

The North Woods are surrounded by residential development on 3 of its edges and is defined by Kempton Street (Route 6) to the north, Ilion Street and Oneida Street to the East, Buttonwood Pond and Lieutenant Walter E. Fuller Memorial Parkway to the South, and Brownell Ave to the West.

*Kempton Street (Route 6):* Route 6 is a busy, four-lane road with a concrete median, along which are located many commercial businesses. This edge of Buttonwood Park features a freestanding historic stone wall that is well-crafted and in good condition. There are 4 entrances along this edge, one on each end of the stone wall, and two within the stone wall; one accessible entrance at the Joseph F. Waldron Barracks Veteran's Memorial Building, and one inaccessible entrance to the West. The Veterans Memorial Building faces this street.

*Ilion Street and Oneida Street:* Ilion Street creates the northeast boundary to Buttonwood's North Woods, with the park to the west and single-family residences to the east. Ilion Street dead-ends at the park. There is a paper street that continues into the park, allowing for pedestrian access. Oneida Street runs parallel to Ilion Street and is located one block to the east. The small section of North Woods that lies between Oneida Street and the paper street continued from Ilion Street is where Charles Elliot located the tree farm for Buttonwood Park. In this location, there is a parcel of land not owned by the park that needs to be transferred and consolidated into the park's property.

*Brownell Ave:* Along Brownell Ave, there are single-family residences to the west and Buttonwood North Woods to the east. This edge of the North Woods is characterized by lawn and shade trees which lie to the west of Buttonwood Brook. The dense overgrown character of North Woods begins on the east bank of Buttonwood Brook.



Edges of Buttonwood Park North Woods



*View from Buttonwood Dam*



*View from Kempton Street*



*View from Brownell Ave*



*View from Ilion Street*

### **Access and Circulation**

Currently there are no formalized entrances or trails within the North Woods. Visitors have created earthen social or “cow paths” as they traverse through the woods. The width of these informal paths varies. Due to seasonally high water tables within the wetland buffer, these trails are sometimes muddy and eroded as people have increased the path size by trying to avoid the wet conditions. In the uplands, the informal trails become very narrow due to overgrown vegetation. There is no evidence that mountain bikes or mechanical vehicles utilizing the trails.

There are minimal obstacles through the North Woods. Tree roots of mature trees are exposed in some areas, creating tripping hazards. Smaller trails through the uplands are often overgrown and difficult to navigate. Obstacles, such as fallen limbs and rocks along the informal paths are minimal.



*Exposed Tree Roots along Existing Cow Path*

## Existing Structures

There is one existing concrete bridge over Buttonwood Brook along the Memorial Road. The bridge to the North is in good condition and needs minor repair and is fully accessible. A former bridge to the south has collapsed with the concrete abutments in good condition. This bridge has stair access to the east, and the repairs should address accessibility.

The 1972 Joseph F. Waldron Barracks Veteran's Memorial Building serves limited Community use and is only accessible via the pedestrian walk along Route 6. For the purposes of this Master Plan, we assume that the building will remain in place. Consideration should be given as to how to activate this building on behalf of the Park's benefit. Just to the west of the Veterans Building lies a 1996 World War II monument consisting of benches, flagpole and decorative paving.

A freestanding field stone wall provides a buffer to Buttonwood Park along Kempton Ave. This wall was built between 1939-1941 during the WPA era and is in good condition.



*Joseph F. Waldron Barracks Veteran's Memorial Building*



*Stone Wall Along Route 6*



*Concrete Bridge - Northwest Area of North Woods*



*Concrete Bridge - Southwest Area of North Woods*

## Views

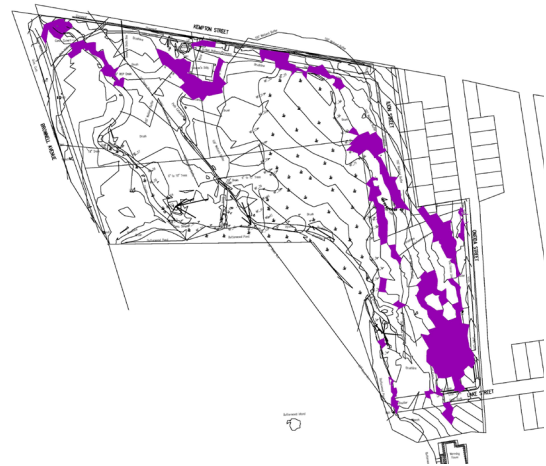
The bucolic and pastoral scenery at Buttonwood's North Woods is captured most expressively at Buttonwood Pond. Expanded views of the pond are offered at the Warming House, and invite the visitor to explore. Once a visitor is within North Woods, views become limited, with dense vegetation along the existing footpaths, and areas along the pond dense with Phragmites. Views of Buttonwood Brook are mostly limited by the dense vegetation along the east bank. Along the west bank the lawn and limited planting allows for narrow views of Buttonwood Brook. Within the forested upland, there are times where the dense vegetation opens into views of the meadow. These moments of expanded views provide opportunities to construct overlooks and viewing platforms to observe natural flora and fauna.



*Limited Views in Buttonwood North Woods*

## Topography

The site is generally flat with approximately 10% of the site having slopes greater than 5%. The area of the tree farm has the greatest concentration of slopes between 5% -12% and a trail proposed here would not be accessible.



*Topography Analysis :  
Highlighted Areas Slopes Greater Than 5%*

## Vegetation

Due to the overall neglect of Buttonwood Park's North woods, the existing vegetation is overgrown.

Biodiversity has been compromised by invasive species. This has negatively affected the appearance of the site, and has contributed to its current unwanted use of illicit activity.

**Forested Upland:** has moderately dense to sparse canopy layer of eastern white pine, red maple, Norway maple, crabapple, and oak. The understory consists of saplings from the canopy layer and shrub layer dominated by multiflora rose, honeysuckle, Japanese knotweed, autumn olive, boxwood, arborvitae, arrowwood, and glossy buckthorn. Groundcover is variably dense, including patches of jewelweed, cinnamon fern, hay-scented fern, black swallowwort, poison ivy, and Asiatic bittersweet.

**Forested Wetland:** has moderately dense canopy layer of red maple, tupelo, and eastern white pine with a dense understory including saplings from the canopy layer, glossy buckthorn, arrowwood, and sweet pepperbush. Groundcover consists of jewelweed, cinnamon fern, sensitive fern, and seedlings from the canopy. A large open meadow dominated by nodding sedge is situated in the forested upland. Poison ivy and black swallowwort were observed on the perimeter of the meadow.

**Invasive species:** include non native and/or invasive species. Trees identified as black locust, Norway maple, and Crabapple. Shrubs include honeysuckle, autumn olive, multiflora rose, and glossy buckthorn. Herbacious vegetation of Japanese knotweed, Asiatic bittersweet, and black swallowwort. Phragmites has taken over areas along Buttonwood Pond, and will be addressed in the Buttonwood Dam Improvement project.

## Soils

The soils that are found at Buttonwood North Woods are primarily well draining sandy soils that are suitable for the introduction of a trail network. There are three types of soils that have been identified within the project boundary:

- 70A -Ridgebury fine sandy loam, 0 to 3% percent slopes
- 72A -Whitman fine sandy loam, 0 to 3% percent slopes, very stony
- 310B- Woodbridge fine sandy loam, 3 to 8% slopes

Approximately 35% of the project area has soils that are in areas that are seasonally inundated with water and are in a wetland area. It is within these identified areas where the proposal for boardwalks would be appropriate. Approximately 10% of the project area has slopes greater than 5%, requiring additional cut and fill with the introduction of an accessible trail.

## Safety

Currently, the overgrown, wild character of the North Woods has encouraged unwanted activities to take place on the property. As it is situated in a dense residential center of New Bedford, many neighbors are concerned with the safety of the park. The Master Plan will address safety concerns with needed programming, activation of the site through the formalization of a trail network, and signage.



*Natural Resources Conservation Services Soil Survey  
Buttonwood Park North Woods 2016-05-03*



*Tarp and Memorial Found in North Woods*



## RECOMMENDATIONS

Our team has developed the following recommendations for Buttonwood Park's North Woods. It is our objective to restore the ecology and realize the potential of North Woods as a resource, connecting its users with the pastoral features of Buttonwood Pond and Brook and its ecology.

The significant site improvements include the introduction of a formal trail network with boardwalks, overlooks and bridges that provide a physical and visual connection to Buttonwood Pond and Brook and the meadow in the forested upland. Clearing and grading for the new trails and boardwalks, the removal of the existing bridge, tree protection, tree pruning, tree removal and erosion control are needed to prepare the site for these improvements.

### **Invasive Species Management**

Fundamental to the ecological restoration of the Buttonwood Park North Woods is the removal of the invasive species as set forth in the Invasive Species Management Report. The removal requires continued maintenance throughout the implementation of the Master Plan, over a five year period in total. RDLA recommends that a test plot for the management of invasive species is created to ensure the effectiveness of the management strategies proposed. A detailed Invasive Species Management strategy is included in the following section of the Master Plan.

### **Access and Circulation**

It is our recommendation that the trail network within Buttonwood's North Woods is accessible with clearly marked access points or trail heads. Our Master Plan proposes four trail entrances; one located on the north side of the project area and west of the Veteran's Memorial Building, one located to the east at the terminus of Ilion Street, one located on the south side of the project area just north of the warming house, and one located to the west along Brownwell Ave just north of Buttonwood Pond. All entrances should be clearly marked, with appropriate signage at trail heads.

The trail network will provide an accessible route throughout North Woods, along Buttonwood Pond and across Buttonwood Brook and into the Forested Upland Meadow. Outside of the wetland buffer, we propose a 6' wide trail surfaced with permeable compacted gravel to provide an even stable surface meeting accessibility standards. As the trail is constructed, erosion control methods should be used to prevent damage to the site. After construction, native groundcovers will be planted along trail edges.



*Gravel Trail*

Through wetland buffers, boardwalks should be constructed with long lasting and smooth materials such as wood or composite decking that meet current accessibility standards. They can be supported with minimally invasive helical piers or concrete footings. The surface of the boardwalks should exceed the height of the 100' foot flood zone and should be less than 30" above finish grade to avoid railings.

## Structures

We propose three access points across Buttonwood Brook that include the renovation of the existing bridge, reconstruction of the bridge that has collapsed, and construction of a new bridge to provide central access across Buttonwood Brook. In all three cases, the bridge design and detailing will meet current accessibility standards. Additionally, the aesthetic of the bridges should reflect the historic character of the park and the naturalistic setting of Buttonwood's North Woods. Precedents for the character of the stone veneer to be used for the bridges can be found by looking to other bridge constructions at Olmsted parks, and should match the high level of craftsmanship.

The bridge that will be repaired located in the north west corner of the site is in good condition. Renovations to this bridge will ensure that it meets accessibility standards.

The southerly bridge that has collapsed into Buttonwood Brook has been removed and will be reconstructed. The bridge abutments are still intact and appear to be in good condition and can be used in the construction of the new bridge. The existing stair located at the west entrance of the bridge should be removed, and the area regraded to provide accessibility.



*Olmsted Bridge in Emerald Necklace, Boston, MA*

The new bridges will be constructed with long-lasting, historically appropriate and durable materials. Guardrails should be added and detailed to meet ADA accessibility standards.



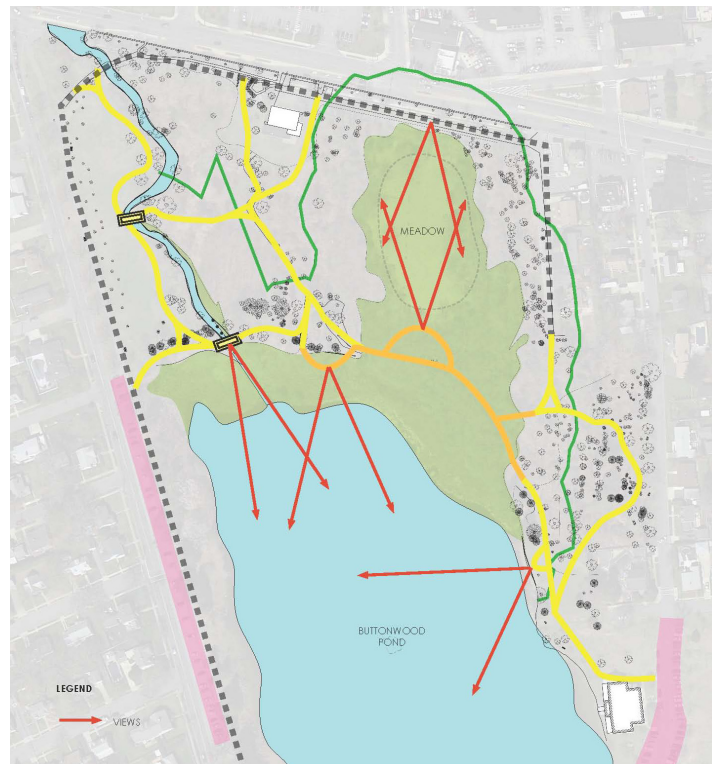
*Bridges Across Buttonwood Brook*



*Buttonwood Pond Overlook*

### **Views and Overlooks**

The pastoral views of Buttonwood Pond, Brook and the Meadow will be enhanced and more effectively captured with the removal and management of invasive species, by using selective native plantings to help frame and enhance existing views, and with the construction of two overlooks which will provide viewing platforms for Buttonwood Pond and the Meadow. Non-invasive existing trees and shrubs should be pruned and new plant material should be planted to help control views. Views of the Pond, Brook and Meadow shall be orchestrated for visitors walking along the trail, with the opening and closing of views to add an element of surprise. The overlooks should include benches or seating structures that allow for visitors to enjoy the views and will include railings to meet ADA standards. Educational and artistic uses and opportunities should be contemplated in the design of each overlook and boardwalk.



*Views along Trails Buttonwood North Woods*

## Vegetation

Native plantings will enhance the user experience along the new trails and boardwalks and help frame and direct views at the overlooks. Our vegetation strategy includes planting native understory trees, shrubs, perennials, and plugs for all areas that have been disturbed along with native groundcovers. We recommend that the city preform a complete tree survey, to document and inventory existing tree species prior to design development.

Within the wetland buffer and along Buttonwood Pond and Brook, the native planting pallet will be tailored to improve and maximize the biodiversity in Buttonwood North Woods, creating a variety of habitats while also offering seasonal interest. Species to be considered are: Silky Dogwood, Redosier Dogwood, Highbush and Lowbush Blueberry, Northern Arrowwood, Speckled Alder, Willows, Winterberry, and Sensitive Fern.



*Wetland Buffer Plants: Silky Dogwood, Redosier Dogwood, Lowbush Blueberry, Sensitive Fern*

In the forested upland, new plantings will enhance the user experience along trails and help frame and capture expanded views at the thresholds between the upland forest and the meadow. Typical plantings in this area could include: Serviceberry, Witchhazel, Sweet Pepperbush, Winterberry, Mountain Holly and Spicebush.



*Forested Upland Plants: Witchhazel, Sweet Pepperbush, Mountain Holly, Winterberry*



*Wayfinding Signage*



*Interpretive Signage*

*Blaze on Tree*

### **Safety & Signage**

The present safety concerns in Buttonwood North Woods will be addressed with the introduction of a formalized trail network. The trail surfacing, accessibility, and signage will inform users that the trails are safe and intended for visitors of all ages and abilities. All entrances should be clearly marked, with appropriate signage at trail heads.

Interpretive signage should be tastefully designed and carefully placed in North Woods and could include information about the historical significance of the park as well as the posting of the park rules, regulations and hours of operation. Interpretive signage can also be used to enhance the connection between the user and the ecology of the North Woods, with signs that describe the types of flora and fauna found in Buttonwood Park. It will serve to assist users in identifying special species, their habitat and the unique vegetation within the forested upland, wetland, Buttonwood Brook and Pond areas.

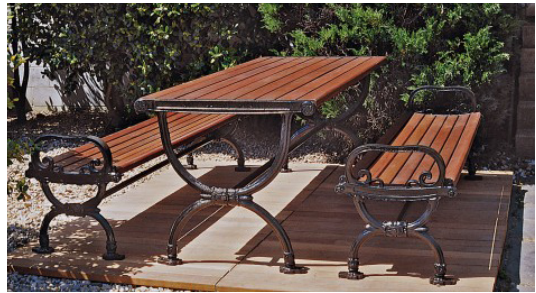
Clear wayfinding should be installed to aid users in navigating the new trails and will provide reassurance at needed junctures. Blazes and limited wayfinding signage should be added to provide a means of wayfinding around the site and will provide visitors with ways to navigate the terrain and understand what to expect. This type of trail marking signage will be visible yet discrete, located on narrow posts or blazes on trees along the side of the trails.

### Site Furnishings

The site furnishings in Buttonwood's North Woods will provide visitors opportunities to enjoy the views of the pastoral setting. It is recommended that a concentration of site furnishing is placed at Buttonwood Pond adjacent to the Warming House where picnic tables and benches will provide ample seating to enjoy the views and some lunch. We recommend that the site furnishing reflect both the historic character of Buttonwood Park and well as the rustic and naturalistic setting of the trail in North Woods. We recommended seating is provided at the overlooks and that 4 benches are placed along the trail the new trail, 4 benches will be added that will provide visitors a place to rest and view Buttonwood Brook.



*Overlook with Seating*



*Historically Informed Picnic Table and Benches*

# Recommendations



## MASTER PLAN

# MASTER PLAN

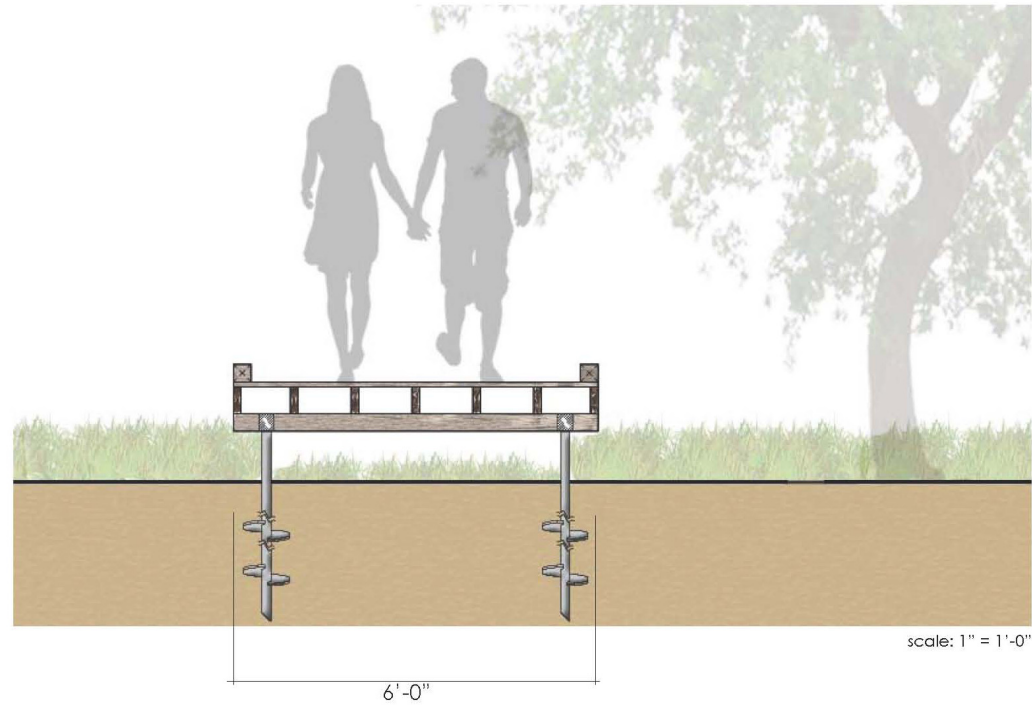
## Buttonwood North Woods



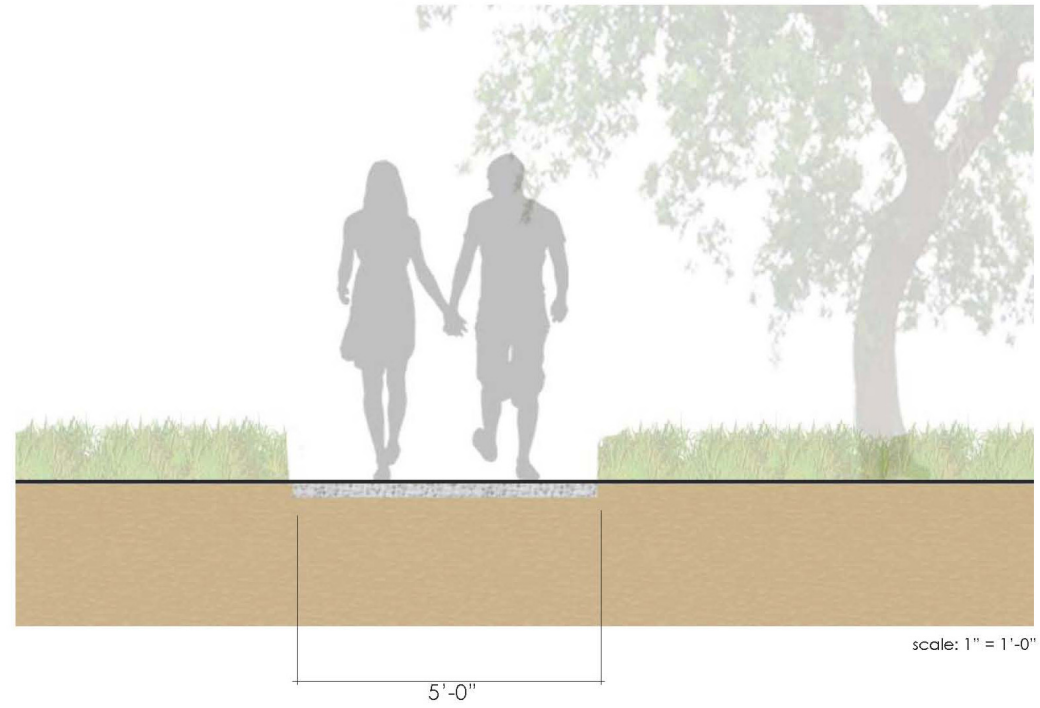
BUTTONWOOD PARK  
 NORTH WOODS  
 MASTER PLAN 2016

Recommendations

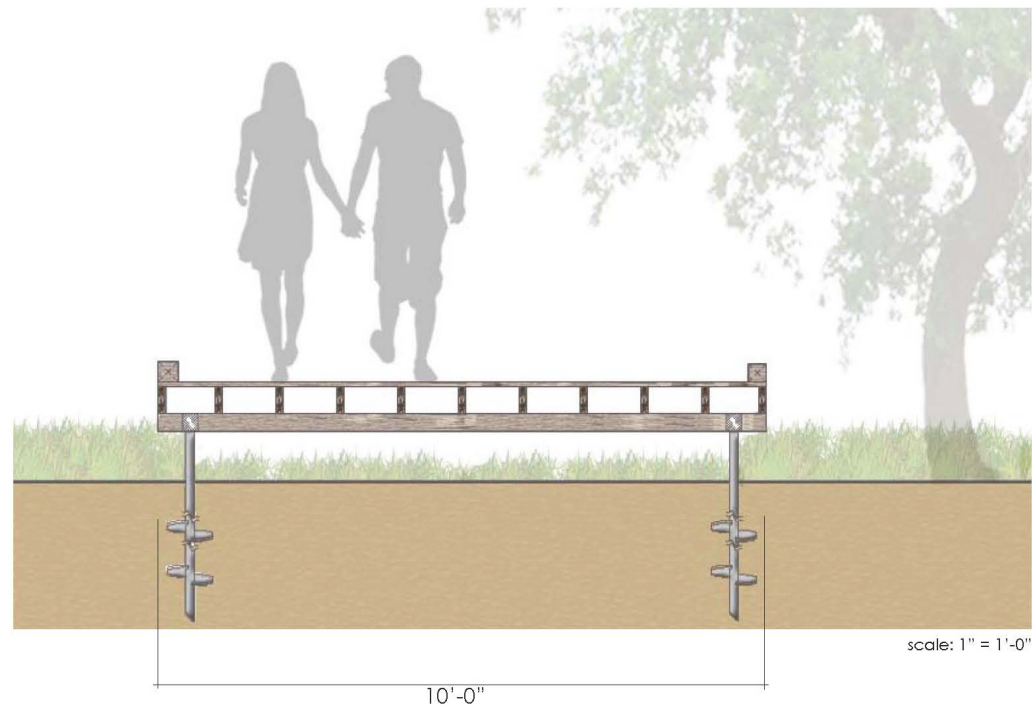
Boardwalk with Helical Pier Section



Gravel Trail Section



Overlook Section



SECTIONS

SECTIONS  
Buttonwood North Woods



## INVASIVE SPECIES MANAGEMENT

LEC Environmental Consultants, Inc., (LEC) conducted a site evaluation in the northwestern portion of Buttonwood Park to identify and characterize the existing invasive plant community. The purpose of this evaluation was to provide the City of New Bedford with vegetation management recommendations for this portion of the park. Their report as follows, provides a description of the existing conditions, invasive plant species observed, and management recommendations.

### Invasive Species Removal

The site evaluation was focused on the northwest corner of Buttonwood Park (hereinafter referred to as the “site”) immediately south of Route 6, north of Lieutenant Walter E. Fuller Memorial Parkway, east of Brownell Avenue and west of Oneida Street and Ilion Street (see Attachment A). The evaluation excluded the existing pond located adjacent to the Parkway and Brownell Avenue as well as the existing lawn and parking/building areas. Dense residential development surrounds the park to the west, east and south, with commercial buildings remaining to the north.

The site consists of forested upland and forested wetlands with a network of well-traveled footpaths extending throughout. Bordering Vegetated Wetland (BVW), delineated by the Conservation Commission Agent of the City of New Bedford, extends from the Pond to the north and east. Buttonwood Brook flows from a culvert beneath Route 6 within the forested area eventually discharging into the Pond. Attachment A shows the existing features including the approximate location of the BVW and forested upland.



*Buttonwood Park Aerial Orthophoto  
September 2, 2015 MASS GIS*

Vegetation within the forested upland includes a moderately dense to sparse canopy layer of eastern white pine (*Pinus strobus*), red maple (*Acer rubrum*), Norway maple (*Acer platanoides*), crabapple (*Malus* spp.), American elm (*Ulmus americana*), black cherry (*Prunus serotina*), black locust (*Robinia pseudoacacia*) and oak (*Quercus* spp.). The understory consists of saplings from the canopy layer and a shrub layer dominated by multiflora rose (*Rosa multiflora*), honeysuckle (*Lonicera* spp.), Japanese knotweed (*Fallopia japonica*), autumn olive (*Elaeagnus umbellata*), boxwood (*Buxus* spp.), arborvitae (*Thuja* spp.), arrowwood (*Vaccinium corymbosum*), and glossy buckthorn (*Rhamnus frangula*). Groundcover is variably dense, including patches of jewelweed (*Impatiens capensis*), cinnamon fern (*Osmunda cinnamomea*), hay-scented fern (*Dennstaedtia punctilobula*), and entanglements of black swallowwort (*Cynanchum louiseae*), poison ivy (*Toxicodendron radicans*) and Asiatic bittersweet (*Celastrus orbiculatus*).

Vegetation in the forested wetland includes a moderately dense canopy layer of red maple (*Acer rubrum*), tupelo (*Nyssa sylvatica*), and eastern white pine (*Pinus strobus*) with a dense understory including saplings from the canopy layer, glossy buckthorn (*Rhamnus frangula*), arrowwood (*Vaccinium corymbosum*) and sweet pepperbush (*Clethra alnifolia*). Groundcover consists of jewelweed (*Impatiens capensis*), cinnamon fern (*Osmunda cinnamomea*), sensitive fern (*Onoclea sensibilis*) and seedlings from the canopy. A large open wet meadow dominated by nodding sedge (*Carex gynandra*) is situated within the forested upland to the south of Route 6 and west of Iliion Street. Poison ivy and black swallowwort were observed on the outer portions of the meadow.

### Invasive Species Removal

During LEC’s site evaluation we observed numerous non-native and/or invasive species as follows:

- Trees: black locust, Norway maple and Crabapple.
- Shrubs: honeysuckle, autumn olive, multiflora rose and glossy buckthorn.
- Herbaceous: Japanese knotweed, Asiatic bittersweet and black swallowwort.

The distribution of these species is generally widespread throughout the upland areas with some isolated individuals and colonies encroaching on the wetlands. For the purpose of evaluating the impact and providing recommendations for management of each species, we have categorized the plants into one of three categories:

1. Scattered individuals
2. widely scattered clusters and thickets
3. dense monoculture.

It should be noted that generally speaking the wetland areas were dominated by native species while the upland areas contained the highest concentrations of non-native and/or invasive species.



*Invasive Species Area*

#### Scattered Individuals:

The three tree species referenced above along with autumn olive and glossy buckthorn are present on the property in numerous locations but were not observed to be widely distributed.

#### Widely Scattered Clusters and Entanglements:

Numerous small to medium sized clusters of multiflora rose and honeysuckle were observed throughout the upland areas. Entanglements of Asiatic bittersweet are also widespread in the upland areas, typically climbing mature trees and saplings. Black swallowwort dominates some areas, particularly on the perimeter of the wet meadow described above. In total, these clusters and entanglements dominate the vegetative cover in the upland areas, leaving only widely scattered individuals and clusters of native species in their midst.

#### Dense Monoculture:

A dense monoculture of Japanese knotweed is located to the east of the pond within the forested upland (see Attachment A). The plant provides nearly 100% coverage in this area and is likely expanding its coverage with each growing season.

### **Management Recommendations**

Management Recommendations are based on the following factors: extent of distribution, potential expansion of distribution and cost to remove, restore and maintain. The specific methods for removal of the most problematic plants may require consultation with a specialized landscaping company experienced with such work. To that end, we consulted with an experienced firm who provided an estimate to perform certain services (Attachment B) based on this analysis. The options for restoring areas occupied by these species may also require further analysis in the context of the City's goals for public use, safety and maintenance of this portion of Buttonwood Park.

Invasive species management in this portion of Buttonwood Park should focus on removal/control of Asiatic bittersweet entanglements, clusters of multiflora rose/honeysuckle and the monoculture of Japanese knotweed. The Asiatic bittersweet has killed numerous trees already and is in the process of choking out others. The clusters of multiflora rose/honeysuckle occupy large swaths of the upland thereby displacing native species. Likewise, the colony of Japanese knotweed is displacing native species and may be expanding rapidly. Together these species dominate the upland areas and are likely to continue expanding into other areas not yet dominated by non-native/invasive species. Successful removal and restoration of areas dominated by these species would result in a significant ecological improvement and could be designed to improve aesthetics, public access and safety in this portion of the park.

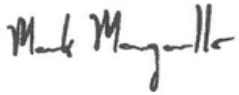
As noted above, the specific management techniques for each of these species may require consultation with a specialized landscaping company. The likely method for removing the invasive species will involve a combination of mechanical removal and pesticide application.

Options for restoration of areas dominated by invasive species typically focusing on re-establishing a native plant community by re-planting native species. This type of restoration can be extremely costly if numerous tree and/or shrub plantings are utilized. As an alternative to tree and shrub plantings, larger restoration areas could be allowed to re-generate naturally after mechanical removal of undesirable species followed by pesticide application as necessary.

## Summary

LEC identified and inventoried non-native/invasive species at the northwestern portion of Buttonwood Park and has offered Management Recommendations for consideration by the City of New Bedford. While we recognize that developing a comprehensive, site-specific Management Plan will require additional consultation involving considerations beyond our area of expertise such as landscaping methods, public use and safety, we would appreciate the opportunity to continue consulting on this project.

For additional information please contact Mark L. Manganello at (508) 746-9491 or mmanganello@



Mark L. Manganello  
Assistant Director of Ecological Services



Claire Staines  
Wetland Specialist

## Invasive Species Control Estimate

Prepared by Groundscapes Express, Inc. for the North Woods at Buttonwood Park Invasive Species Control. The estimate is as follows:

Two days one man with mower with a low impact skid steer \$1800 per day. Estimate two days.  
Total \$3600.00

Three days three men with truck chipper and saws \$2200 Per day. Estimate two days.  
Total \$6600

Today's spot spraying two men equipment and material \$2600 per day estimate two days.  
Total \$5200

Butch Goodwin  
Operations Manager

Groundscapes Express, Inc.  
P.O. Box 737  
Wrentham, MA 02093  
Cell (508-400-5366)  
Office 508-384-7140  
Fax 508-384-0571  
Groundscapesexpress.com

## LANDSCAPE MANAGEMENT

To ensure continued safety and accessibility of Buttonwood's North Woods, there are a few required maintenance tasks required each year. Generally, the site should be inspected and repaired after significant storm events and in early spring once snow has melted.

### *Vegetation*

Prune trees only when necessary to reduce hazards such as a long fallen branch is hanging over a trail. Vegetation should be cleared around and on top of new trail locations. Once the trails are laid out, brush removal should be routinely preformed, by professionals or could be completed by volunteers.

### *Trails*

It is recommended that any fallen trees that are stuck on vegetation and suspended above the ground provides a hazard that should be addressed. These fallen trees should be cut down and removed. Trunks fully in contact with the ground might be left strategically, as they can provide important habitat. Consideration should be made in each case for whether the trunk compromises accessibility. If a trunk is cut, efforts should be made to place the cut segment so it fits naturalistically in its surroundings.

Trails should be regularly inspected to maintain a clear accessible route of travel for all users.

1. Cut and clear trial of fallen stems and large branches
2. Clear trails of small fallen branches: Small fallen branches should be removed and placed off trail to reduce tripping hazards.
3. Cut and remove vegetation on path edges: Vegetation should be trimmed off path edges and overhead where needed to create a clear walking corridor. A maintenance team will need to walk the entire network of trails to note and address areas where growth is obscuring path edges. Trimmings should be removed off site.
4. Brush Removal: Unwanted vegetation should be cleared off path edges.

### *Boardwalks and Overlooks*

Assess each boardwalk and overlook and annually to identify needed decking and fastener repairs.

### *Bridges*

Assess each bridge annually to identify areas that evidence corrosion, and railings that need painting.

### **Management Log**

Before the Town begins caring for the landscape, the Department of Public Works should set up a 'management log,' or ongoing record of inspections, repairs, and introduction of new features, listed by date. The log should include methods and materials employed, as well as names and contact information for any specialists employed for the care of Buttonwood Park North Woods. The log should be stored in both electronic and manual forms, in a secure location within the Town Hall.

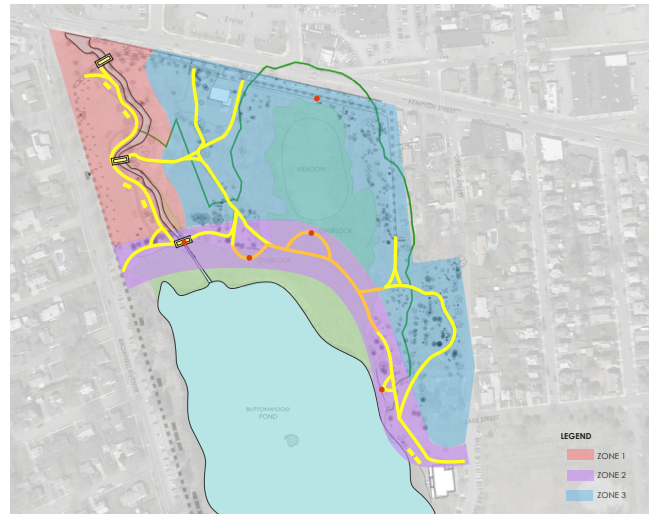
## Maintenance Schedule

The following schedule is a summary of maintenance requirements intended to be used as a general guideline for the annual landscape maintenance needed along the trail network in Buttonwood North Woods. This schedule does not include the maintenance required to manage the invasive species. The specific management of invasive species is outlined and discussed in the previous chapter ““Invasive Species Management.”

January - March	<ul style="list-style-type: none"> <li>▪ If removing snow on any trail entrance, trail surface, minimize (or eliminate altogether) the use of salt.</li> <li>▪ Keep trails, boardwalks, overlooks and bridges free of obstacles, brush and vegetation.</li> </ul>
April	<ul style="list-style-type: none"> <li>▪ Inspect North Woods trails for damage that may have occurred over the winter.</li> <li>▪ Inspect all structural features; overlooks, boardwalks, and bridges for any damage that may have occurred over the winter. Repair any rails, posts, boardwalks as required.</li> <li>▪ Remove leaves and debris along pathways and along edges of overlooks, boardwalks, and bridges.</li> <li>▪ Inspect all paths for signs of improper drainage or resettlement. Address any drainage issues with providing positive drainage and seeding, replanting as needed.</li> </ul>
May	<ul style="list-style-type: none"> <li>▪ Inspect trees for damage that may have occurred over the winter and note any needs for pruning and removals.</li> <li>▪ Inspect shrubs and prune new growth.</li> <li>▪ Keep trails, boardwalks, overlooks and bridges free of obstacles, brush and vegetation.</li> </ul>
June	<ul style="list-style-type: none"> <li>▪ Conduct pruning of lower limbs of shade trees and any tree removal needed.</li> <li>▪ Keep trails, boardwalks, overlooks and bridges free of obstacles, brush and vegetation.</li> </ul>
July	<ul style="list-style-type: none"> <li>▪ Keep trails, boardwalks, overlooks and bridges free of obstacles, brush and vegetation.</li> </ul>
August	<ul style="list-style-type: none"> <li>▪ Keep trails, boardwalks, overlooks and bridges free of obstacles, brush and vegetation.</li> </ul>
September	<ul style="list-style-type: none"> <li>▪ Fertilize plantings.</li> <li>▪ Inspect North Woods trails for damage that may have occurred over the summer.</li> <li>▪ Inspect all structural features; overlooks, boardwalks, and bridges for any damage that may have occurred over the summer. Repair any rails, posts, boardwalks as required.</li> <li>▪ Inspect all paths for signs of improper drainage or resettlement. Address any drainage issues with providing positive drainage and seeding, replanting as needed.</li> </ul>
November-December	<ul style="list-style-type: none"> <li>▪ If removing snow on any trail entrance, trail surface, minimize (or eliminate altogether) the use of salt.</li> <li>▪ Keep trails, boardwalks, overlooks and bridges free of obstacles, brush and vegetation.</li> </ul>

## BUDGET PROJECTIONS

The following are summary budget projections for the Master Plan for Buttonwood North Park. Our Master Plan recommendations have been divided into three zones which can be carried out all at once or in phases to achieve the North Woods Master Plan. This section includes itemized budgets for each zone. Please note that these budgets are schematic and are to be used for fundraising purposes only. More precise estimates will be provided during the future design process for each project.



Zoning Plan

*Master Planning and Invasive Vegetation Removal* **\$100,000**

*Zone 1: Buttonwood Brook Improvements* **\$255,000**

The western edge of the site along Brownell Ave extending just beyond Buttonwood Brook defines the area of Zone 2. The introduction of a trail system along the brook, improvements to the existing bridge over Buttonwood Brook and construction of a new bridge are the major site improvements in this phase.

*Zone 2: Pond Edge Improvements* **\$519,000**

Zone 1 improvements are focused in the area of North Woods along edge of Buttonwood Pond. These improvements are to be made in conjunction with the restoration of Buttonwood Pond Dam and the replication of wetlands associated with that project. This prime priority creates a connection from the warming house to the western portion of the park, providing a woodland experience while creating new views into the meadow and Buttonwood Pond.

*Zone 3: Meadow and Trails Forest Upland* **\$129,000**

The final zones of improvements are to be made in the north east corner of the North Woods where there is forested upland, wetlands and meadows. This area has the highest concentration of invasive species and particular care and attention should be paid to the continued management of this area. The new trail network in this area will provide an accessible route from the Veterans Building to the trails established along Buttonwood Pond and Brook.

**Grand Total \$1,003,000**

		YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
<b>Master Planning + Invasive Vegetation Removal</b>	\$ 100,000	\$ 68,000				
RDLA Master Planning	\$ 30,000	\$ 30,000				
Survey	\$ 10,000	\$ 10,000				
Invasive Veg. Management Report	\$ 5,000	\$ 5,000				
Invasive Veg. Management Removal Plan	\$ 5,000	\$ 5,000				
Remove Invasive Vegetation	\$ 50,000	\$ 18,000	\$ 8,000	\$ 8,000	\$ 8,000	\$ 8,000
<b>Zone #1 : Buttonwood Brook Improvements</b>	\$ 255,000			\$ 255,000		
<b>Site Preparation</b>	\$ 39,000			\$ 39,000		
Trail Clearing	\$ 25,000			\$ 25,000		
Strip Topsoil	\$ 3,000			\$ 3,000		
Tree Protection	\$ 700			\$ 1,000		
Tree Pruning	\$ 5,000			\$ 5,000		
Tree Removal	\$ 5,000			\$ 5,000		
<b>Earthwork</b>	\$ 5,000			\$ 5,000		
Rough Grading	\$ 5,000			\$ 5,000		
<b>Site Improvements</b>	\$ 78,000			\$ 78,000		
New Gravel Trail	\$ 37,000			\$ 37,000		
New Bridge	\$ 25,000			\$ 25,000		
Upgrade Existing Bridge for Accessibility	\$ 10,000			\$ 10,000		
Benches (4 @ \$1500 each)	\$ 6,000			\$ 6,000		
<b>Lawns and Plantings</b>	\$ 41,000			\$ 41,000		
Understory Trees	\$ 5,000			\$ 5,000		
Shrubs	\$ 14,000			\$ 14,000		
Plugs	\$ 10,000			\$ 10,000		
Topsoil	\$ 6,000			\$ 6,000		
Fine Grading	\$ 3,000			\$ 3,000		
Seeding	\$ 3,000			\$ 3,000		
<b>Soft Costs</b>	\$ 30,000			\$ 30,000		
Design	\$ 18,000			\$ 18,000		
Permitting	\$ 2,000			\$ 2,000		
Construction Administration	\$ 10,000			\$ 10,000		
<b>Contingencies, Overhead and Profit, and General Conditions</b>	\$ 62,000			\$ 62,000		
Contingencies 15%	\$ 24,000			\$ 24,000		
O&P 10%	\$ 16,000			\$ 16,000		
General Conditions 10%	\$ 16,000			\$ 16,000		
Inflation (3% per year)	\$ 6,000			\$ 6,000		

		YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
<b>Zone #2 : Pond Edge Improvements</b>	\$	<b>519,000</b>	<b>\$ 519,000</b>			
<b>Site Preparation</b>	\$	53,500	\$ 53,500			
Clear for New Trails and Boardwalk	\$	17,000	\$ 17,000			
Remove Existing Bridge	\$	3,000	\$ 3,000			
Strip Topsoil	\$	2,500	\$ 2,500			
Tree Protection	\$	1,000	\$ 1,000			
Tree Pruning	\$	10,000	\$ 10,000			
Tree Removal	\$	10,000	\$ 10,000			
Erosion Control	\$	10,000	\$ 10,000			
<b>Earthwork</b>	\$	5,000	\$ 5,000			
Rough Grading	\$	5,000	\$ 5,000			
<b>Site Improvements</b>	\$	254,000	\$ 254,000			
New Accessible Trail (6' wide gravel trail 1282 LF)	\$	25,000	\$ 25,000			
Boardwalks	\$	175,000	\$ 175,000			
Viewing Platforms	\$	20,000	\$ 20,000			
New Bridge	\$	25,000	\$ 25,000			
Picnic Tables (2 @ \$3000 ea.)	\$	6,000	\$ 6,000			
Benches	\$	3,000	\$ 3,000			
<b>Lawns and Plantings</b>	\$	28,500	\$ 28,500			
Understory Trees	\$	3,000	\$ 3,000			
Shrubs	\$	10,000	\$ 10,000			
Plugs	\$	7,000	\$ 7,000			
Topsoil (spread stockpiled and new topsoil)	\$	4,000	\$ 4,000			
Seeding (seed disturbed areas)	\$	2,500	\$ 2,500			
Fine Grading (smooth all grade transitions)	\$	2,000	\$ 2,000			
<b>Construction Contingencies, Overhead and Profit, and General</b>	\$	126,000	\$ 126,000			
Contingencies 15%	\$	54,000	\$ 54,000			
O&P 10%	\$	36,000	\$ 36,000			
General Conditions 10%	\$	36,000	\$ 36,000			
<b>Soft Costs</b>	\$	52,000	\$ 52,000			
Design	\$	36,000	\$ 36,000			
Permitting	\$	4,000	\$ 4,000			
Construction Administration	\$	12,000	\$ 12,000			
<b>Zone #3 : Meadow and Trails</b>	\$	<b>129,000</b>			<b>\$ 129,000</b>	
<b>Site Preparation</b>	\$	23,000			\$ 23,000	
Clear for New Trails	\$	5,000			\$ 5,000	
Strip Ex. Topsoil	\$	2,000			\$ 2,000	
Tree Protection	\$	1,000			\$ 1,000	
Tree Pruning	\$	5,000			\$ 5,000	
Tree Removal	\$	10,000			\$ 10,000	
<b>Earthwork</b>	\$	5,000			\$ 5,000	
Rough Grading (Grade trails for improved accessibility)	\$	5,000			\$ 5,000	
<b>Site Improvements</b>	\$	15,000			\$ 15,000	
New Trail (6' wide gravel trail - 729 LF)	\$	15,000			\$ 15,000	
<b>Lawns and Plantings</b>	\$	17,000			\$ 17,000	
Understory Trees	\$	2,000			\$ 2,000	
Shrubs	\$	6,000			\$ 6,000	
Plugs	\$	4,000			\$ 4,000	
Topsoil (spread stockpiled and new topsoil)	\$	2,500			\$ 2,500	
Seeding (seed disturbed areas)	\$	1,500			\$ 1,500	
Fine Grading (smooth all grade transitions)	\$	1,000			\$ 1,000	
<b>Signage</b>	\$	9,000			\$ 9,000	
Interpretive Signs	\$	6,000			\$ 6,000	
Trail Markers	\$	3,000			\$ 3,000	
<b>Soft Costs</b>	\$	26,000			\$ 26,000	
Design	\$	18,000			\$ 18,000	
Permitting	\$	2,000			\$ 2,000	
Construction Administration	\$	6,000			\$ 6,000	
<b>Contingencies, Overhead and Profit, General Conditions and</b>	\$	34,000			\$ 34,000	
Contingencies 15%	\$	12,000			\$ 12,000	
O&P 10%	\$	8,000			\$ 8,000	
General Conditions 10%	\$	8,000			\$ 8,000	
Inflation (3% per year)	\$	6,000			\$ 6,000	
<b>Grand Total</b>	\$	<b>1,003,000</b>				

## HISTORIC CHRONOLOGY

- 1892 Park Commission of New Bedford meets with City Council to discuss establishing a park system. The Board of Park Commissioners buys 62 acres of land, “West End Park”.
- 1894 West End Park is named Buttonwood Park.
- 1894 Charles Eliot of Olmsted, Olmsted, and Eliot is hired to create a Master Plan for the park. A preliminary plan for Buttonwood Park is submitted to the Board of Park Commissioners.
- 1931 Extensive planting of ornamental trees and shrubs at Buttonwood Park is carried out through the generosity of Garden Clubs of the City.
- 1935 Approximately 2 acres west of Oneida Street is taken by the City for failure to pay taxes, and added to Buttonwood Park.
- 1966 Buttonwood Park received a grant from the Federal Bureau of Outdoor Recreation to plan for the renovation and redesign of the park and zoo.
- 1967 Connell Associates, landscape architects and engineers of Malden prepare plans and specifications for the rehabilitation of the park, including new zoo facilities.
- 1986 The Olmsted Program of Massachusetts, a program created to preserve, rehabilitate, public open spaces designed by the Olmsted firm, devoted \$1.5 million dollars to planning the rehabilitation of Buttonwood.
- 1988 Walker- Kluesing Design Group prepared a Master Plan for the Veterans Memorial Park and Zoo at Buttonwood Park.
- 1996 The Historic Landscape Preservation Grant Program invested \$200,000 in the park which funded the 3 acre expansion of the zoo. Walker-Kluesing Design Group developed the Master Plan.

## USDA FOREST SERVICE REFERENCE MATERIAL

The following details are standards from the USDA Department of Agriculture Standards for Trail Plans and can be used as guidance for the plans for Buttonwood Park North Trail.

### *Clearing Limits - Trees and Logs*

For new trail construction all trees and logs should be removed from trails, boardwalks and bridges within a specified zone that extends beyond the limits of the surfacing or structure. Clearing heights and widths will be determined during design development with input from New Bedford Conservation Commission. The maintenance of trails, boardwalks and bridges will ensure that these specified zones are kept clear of trees and logs.

### *Clearing Limits – Brushing*

For new trail construction, all brush should be removed from trails, boardwalks and bridges within a specified zone that extends beyond the limits of the surfacing or structure. Clearing widths will be determined during design development with input from New Bedford Conservation Commission. The maintenance of trails, boardwalks and bridges will ensure that these specified zones are kept clear of unwanted vegetation.

### *Seeding, Fertilizing and Mulching*

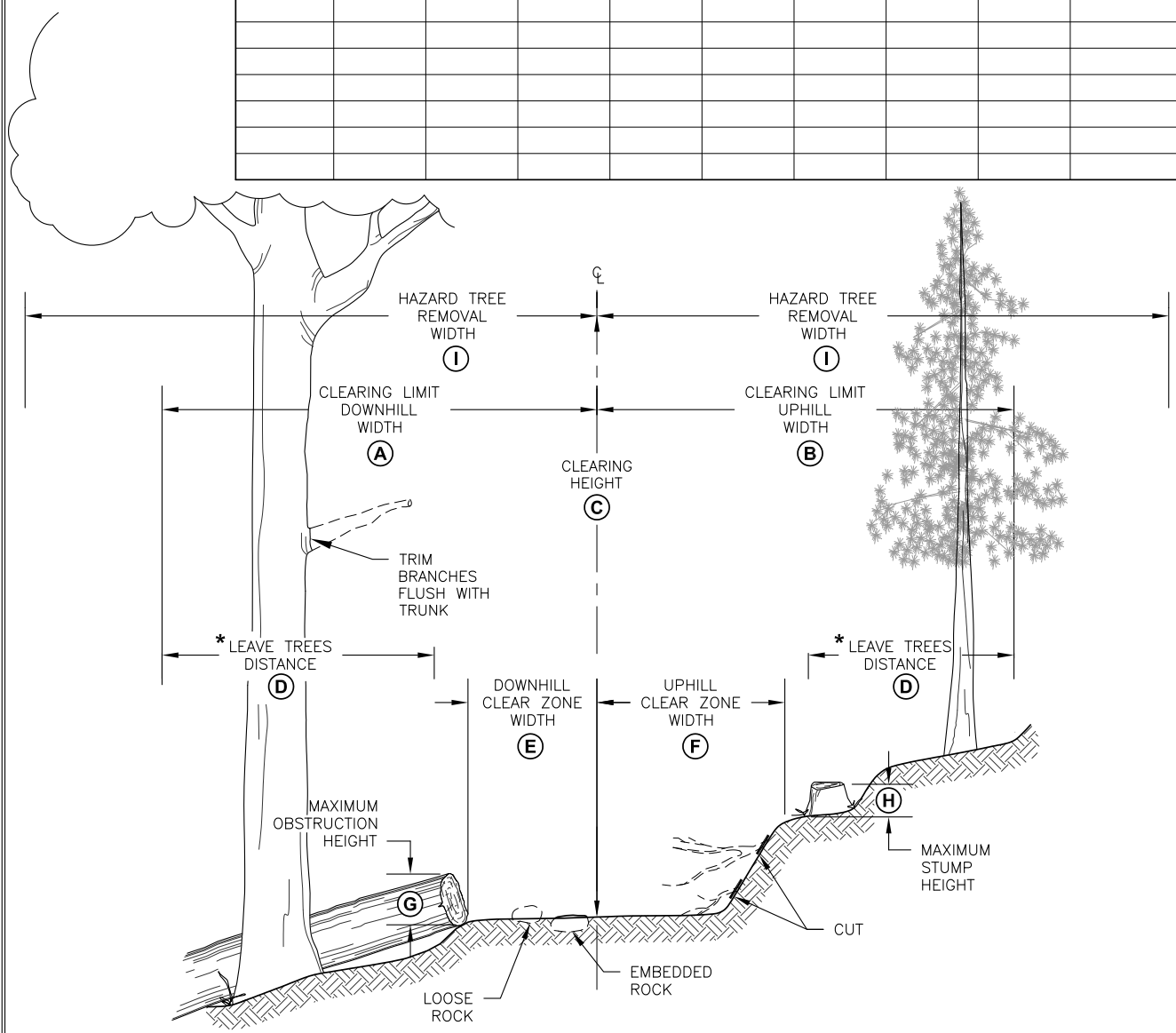
The new trail construction, along with boardwalks, bridges and overlooks, will have areas of disturbance outside the limits of the surfacing or structure. The disturbed areas will be planted with native plant material, and should be mulched and fertilized to ensure optimal health. The limits of the disturbed areas will be identified during design development, and checked during construction.

### *Reassurance Markers*

New trails will be marked with reassurance markers or blazes to provide a means of wayfinding throughout the site. The minimum mounting height for these markers should be 5' from the ground, and can be cut into a tree, mounted onto a tree, or mounted onto a support post. The wayfinding strategy will be developed during design development with the input from the Friends of Buttonwood Park.

CLEARING LIMITS - TREES AND LOGS

TYPICAL ID	CLEARING METHOD	CLEARING LIMITS			* LEAVE TREES		CLEAR ZONE			STUMPS	HAZARD TREE	DISPOSAL METHOD	COMMENTS
		DOWNHILL WIDTH (A)	UPHILL WIDTH (B)	CLEARING HEIGHT (C)	DISTANCE (FEET) (D)	DIAMETER (INCHES)	DOWNHILL WIDTH (E)	UPHILL WIDTH (F)	MAXIMUM OBSTRUCTION HEIGHT (G)	MAXIMUM HEIGHT (H)	REMOVAL WIDTH (I)		
CLT-1	C											D	



CLEARING METHOD

CLEARING TYPE	CLEARING METHOD	COMMENTS
C1	NEW CONSTRUCTION	TREES, PRUNING, & BRUSH
C2	CLEARING LIMIT RESTORATION	TREES, PRUNING, LOGS, BRUSH & MAINTENANCE
C3	TRAIL OPENING	LOGGING OUT, LOOSE ROCK & DRAINAGE CLEARING
C4	HAZARD TREE REMOVAL	ALONG TRAIL CORRIDOR
C5	HAZARD TREE REMOVAL	INDIVIDUAL (AS MARKED)
C6	LOOSE ROCK & ROOT REMOVAL	
C7		

LEAVE TREES: LEAVE TREES SHOULD BE LIVE, SOUND & UNDAMAGED WITH UNCOMPROMISED ROOT SYSTEMS.

HAZARD TREES: HAZARD TREES ARE TREES THAT ARE STANDING OR LEANING DEAD TREES LARGER THAN 8 INCHES IN DIAMETER AND GREATER THAN 90 FEET IN HEIGHT.

DISPOSAL METHOD

DISPOSAL TYPE	DISPOSAL METHOD	COMMENTS
D1	LOP AND SCATTER OUTSIDE TRAILWAY	
D2	LOP AND SCATTER ON FILL SLOPE	
D3	PILE AND BURN	
D4	CHIP	
D5	HAUL TO DISPOSAL SITE	
D6		

U.S. DEPARTMENT OF AGRICULTURE  
FOREST SERVICE  
**STANDARD TRAIL PLAN**

PROJECT NAME & LOCATION

DRAWING NAME  
**CLEARING LIMITS-TREES AND LOGS**

SECTION: **912 - CLEARING LIMITS**      TYPICAL ID: **CLT**

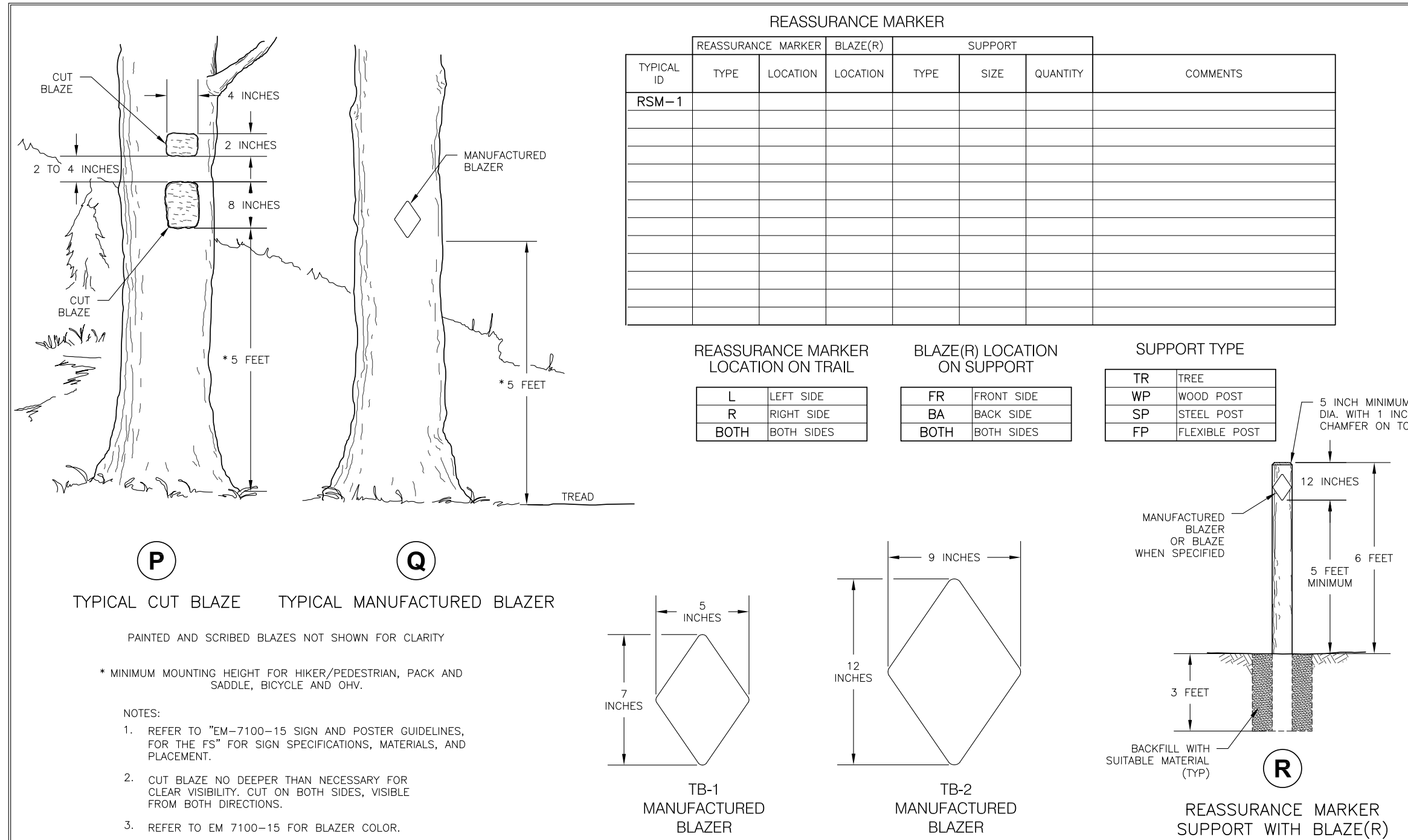
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**XX/XX/XX**

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DRAWING NO.  
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SHEET | OF





U.S. DEPARTMENT OF AGRICULTURE  
FOREST SERVICE  
**STANDARD TRAIL PLAN**

PROJECT NAME & LOCATION

DRAWING NAME  
**REASSURANCE MARKERS**

SECTION  
**953 - REASSURANCE MARKERS**

TYPICAL ID  
**RSM**

REVISION DATE  
**XX/XX/XX**

**NO SCALE**

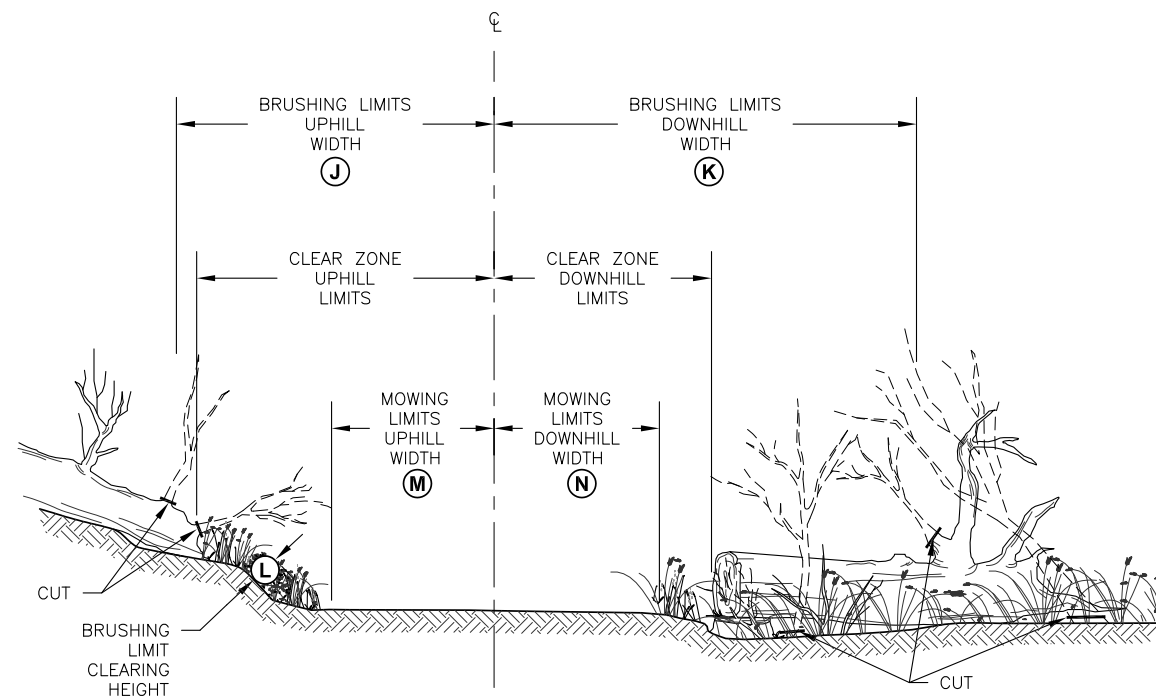
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CLEARING LIMITS - BRUSHING

TYPICAL ID	CLEARING METHOD	BRUSHING LIMITS			MOWING LIMITS		DISPOSAL METHOD	COMMENTS
		UPHILL WIDTH <b>(J)</b>	DOWNHILL WIDTH <b>(K)</b>	CLEARING HEIGHT <b>(L)</b>	UPHILL WIDTH <b>(M)</b>	DOWNHILL WIDTH <b>(N)</b>		
CLB-1	C						D	



NOTE:  
SEE SHEET STD\_912-01 FOR  
CLEAR ZONE LIMITS

CLEARING METHOD

CLEARING TYPE	CLEARING METHOD	COMMENTS
C9	BRUSHING	
C10	MOWING	
C11		

DISPOSAL METHOD

DISPOSAL TYPE	DISPOSAL METHOD	COMMENTS
D1	LOP AND SCATTER OUTSIDE TRAILWAY	
D2	LOP AND SCATTER ON FILL SLOPE	
D3	PILE AND BURN	
D4	CHIP	
D5	HAUL TO DISPOSAL SITE	
D6		

U.S. DEPARTMENT OF AGRICULTURE  
FOREST SERVICE  
**STANDARD TRAIL PLAN**

PROJECT NAME & LOCATION

DRAWING NAME  
**CLEARING LIMITS - BRUSHING**

SECTION

912 - CLEARING LIMITS

TYPICAL ID

CLB

REVISION DATE  
XX/XX/XX

NO SCALE

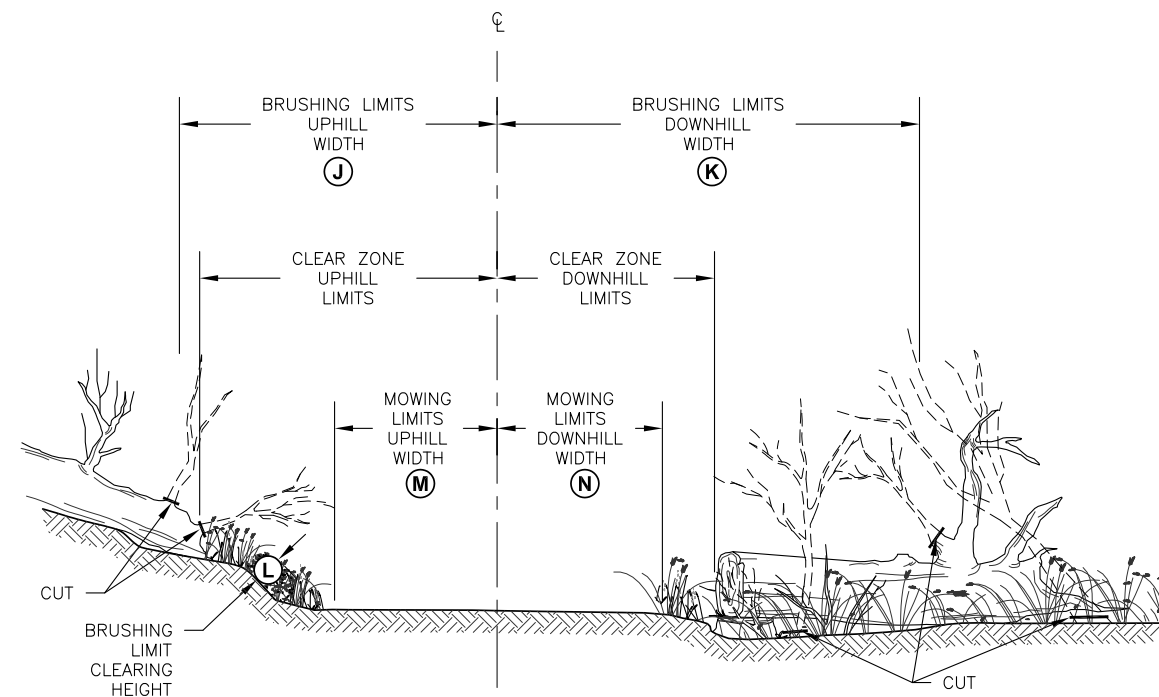
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STD\_912-02

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CLEARING LIMITS - BRUSHING

TYPICAL ID	CLEARING METHOD	BRUSHING LIMITS			MOWING LIMITS		DISPOSAL METHOD	COMMENTS
		UPHILL WIDTH <b>(J)</b>	DOWNHILL WIDTH <b>(K)</b>	CLEARING HEIGHT <b>(L)</b>	UPHILL WIDTH <b>(M)</b>	DOWNHILL WIDTH <b>(N)</b>		
CLB-1	C						D	



NOTE:  
SEE SHEET STD\_912-01 FOR  
CLEAR ZONE LIMITS

CLEARING METHOD

CLEARING TYPE	CLEARING METHOD	COMMENTS
C9	BRUSHING	
C10	MOWING	
C11		

DISPOSAL METHOD

DISPOSAL TYPE	DISPOSAL METHOD	COMMENTS
D1	LOP AND SCATTER OUTSIDE TRAILWAY	
D2	LOP AND SCATTER ON FILL SLOPE	
D3	PILE AND BURN	
D4	CHIP	
D5	HAUL TO DISPOSAL SITE	
D6		

U.S. DEPARTMENT OF AGRICULTURE  
FOREST SERVICE  
**STANDARD TRAIL PLAN**

PROJECT NAME & LOCATION

DRAWING NAME  
**CLEARING LIMITS - BRUSHING**

SECTION  
**912 - CLEARING LIMITS**

TYPICAL ID  
**CLB**

REVISION DATE  
**XX/XX/XX**  
**NO SCALE**

DRAWING NO.  
**STD\_912-02**  
SHEET |  
OF |



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1988. Master Plan for the Veterans Memorial Park and Zoo at Buttonwood Park. Walker- Kluesing Design Group, Boston, MA.

2016. Buttonwood Park Pond Dam, Dam Rehabilitation. CDM Smith, Boston, MA.

### Books

1. Footpaths A practical Handbook. British Trust for Conservation Volunteers, Harvard University 1985.

### Miscellaneous Documents

1. Wetland Trail Design and Construction. 2007 Edition. USDA Forest Service Technology and Development Program Missoula MT.

