NEW BEDFORD COMMUNITY PRESERVATION COMMITTEE

STEP II

COMMUNITY PRESERVATION ACT PROJECT APPLICATION

FY21

Project Application Deadline:

November 13, 2020 by Noon

No late submissions will be accepted.

Applicants must submit this application no later than Noon on Friday, November 13, 2020. Please review the entire application packet before completing the application.

Applications will not be accepted--regardless of project eligibility—unless the STEP I Project Eligibility Determination Form was submitted and approved by the Community Preservation Committee.

COMMUNITY PRESERVATION COMMITTEE
City Hall Room 303 133 William Street
(508)979-1488 cpa@newbedford-ma.gov

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CITY OF NEW BEDFORD

COMMUNITY PRESERVATION ACT FY21
PROJECT APPLICATION

PROJECT INFORMATION			
PROJECT TITLE	Brooklawn Park Green Infrastructure Demonstration Garden Design	WARD	2
PROJECT LOCATION	1997 Acushnet Ave, New Bedford, Ma 02745		
LEGAL PROPERTY OWNER OF RECORD	City of New Bedford		
CPA PROGRAM CATEGORY *(Select relevant categories for your project)*	☐ OPEN SPACE	☐ HISTORIC PRESERVATION	
	■ RECREATION	☐ HOUSING	
ESTIMATED START DATE	July 2021	ESTIMATED COMPLETION DATE	June 2022
ONE SENTENCE DESCRIPTION OF PROJECT	We are requesting funds for design and construction drawings for a green infrastructure demonstration project for the park near the duck pond.		

APPLICANT INFORMATION			
APPLICANT IS *(Check only one)*	■ CITY DEPARTMENT	☐ NON-PROFIT 501c3	☐ PRIVATE GROUP/CITIZEN
APPLICANT / ORGANIZATION	Parks Recreation & Beaches		
CO-APPLICANT NAME/ORGANIZATION *(If applicable)*			
C0-APPLICANT IS *(Check only one)*	☐ CITY DEPARTMENT	☐ NON-PROFIT 501c3	☐ PRIVATE GROUP/CITIZEN
CONTACT PERSON	Mary S Rapoza		
MAILING ADDRESS	181 Hillman St Bld 3, New Bedford, Ma 02740		
TELEPHONE #	508-961-3015	**EMAIL:**	mary.rapoza@newbedford-ma.gov

BUDGET SUMMARY	
CPA FUNDING REQUEST **(must match CPA request-line 1 of Project Budget on page 8)**	$ 60,000
TOTAL BUDGET FOR PROJECT	$ 60,000

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.

APPLICANT NAME (printed) Mary S Rapoza	SIGNATURE	DATE: 11/12/2020
CO-APPLICANT NAME (printed)	SIGNATURE	DATE:

Submission Checklist

The following items should be organized on your submitted flash drive in folders for each applicable section below (e.g., Application, Financial, etc.). Please check off each item on this list if it is included in your submission packet. ***Note: not all items will apply to each project.***

APPLICATION	
☑	Application Cover Page (form provided)
☑	Submission Checklist (this form)
☑	Narratives (form provided)
☑	Project Schedule – Project Budget – Funding Sources Summary (form provided)
FINANCIAL	
☑	Construction Budget Summary – to be completed for construction projects ONLY (form provided)
☑	1 written quote from a contractor and 1 cost estimate from an architect OR 2 written quotes from a contractor
☐	Proof of secured funding (commitment letters or bank statements), if applicable. **Please redact account numbers and any sensitive information.**
OWNERSHIP/OPERATION (NON-CITY)	
☐	If the applicant is not the owner, attach documentation of site control or written consent of owner to undertake the project. Applications will not be reviewed without this documentation.
☐	Certificate of Good Standing (if operating as a corporation)
☐	501(c)(3) certification (if operating as a non-profit)
☐	Purchase & Sale agreement or copy of current recorded deed, if applicable.
COMMUNITY SUPPORT	
☐	Letters of support from residents, community groups, city departments, boards or commissions, etc.
PLANS & REPORTS *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.*	
☑	Renderings, site plans, engineering plans, design/bidding plans, specifications, and any MAAB variance requests.
☑	Applicable reports (21E, Historic Structure Report, appraisals, survey plan, feasibility studies, etc.)
VISUAL	
☑	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 interactive mapping website.
☑	Photos of the project site (not more than four views per site) Digital copies only.
☐	Catalog cuts (i.e. recreation equipment) if applicable.
FOR HISTORIC RESOURCES PROJECTS ONLY	
☐	Documentation stating 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.
☐	Photos documenting the condition of the property. Digital copies only.
☐	Report or condition assessment by a qualified professional describing the current condition of the property, if available.
☐	I/We have read the ***U.S. Secretary of the Interior's Standards for the Treatment of Historic Properties*** and understand that planning for and execution of this project must meet these standards.

PROJECT NARRATIVE

1 GENERAL NARRATIVE (1000 Character Maximum)

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

We are requesting funds for design and construction drawings for a green infrastructure demonstration project for the Brooklawn Park near the duck pond. The Aug 2020 Circulation and Drainage Master Plan for New Bedford's Brooklawn Park, developed by Landscape Architect Ray Dunetz with the Friends of Brooklawn Park and stakeholder input, reviewed the vehicular and pedestrian circulation, made recommendations for the site's poor drainage, and provides maintenance guidelines to shape the Park's development over the next decade. Beautiful constructed wetlands will act as basins to retain and ecologically filter runoff before it infiltrates into the ground or overflows into the existing piped drainage infrastructure in the Park. The constructed wetland, at about 9,000 sf, was included in the Master Plan's Phase 1 recommendations.
Brooklawn Park is located in the north end of New Bedford in a dense urban area. Bordered by Brooklawn Avenue to the north, Irvington Street to the south, Acushnet Avenue to the east, and Ashley Boulevard to the west, the eighty-two acre Park provides a diverse range of recreational opportunities for citizens of New Bedford. The presence of both active and passive recreation makes this a highly visited open space in the City.

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?*

A former natural wetland, the Park is still an important hydrology system within the Acushnet River/Buzzards Bay watershed. The wet character of the site is evident from the frequent flooding of fields and paths during storms. One of the Master Plan's goals is to reduce stormwater runoff by 20 percent by reducing impervious paving, improving drainage, and creating green infrastructure, such as rain gardens, green roofs, and constructed wetlands. The leagues that use the park's diamonds have complained about the maintenance associated with stormwater runoff. The park has several very wet area that are frequently unusable. One of the most visible and wettest of these areas is north and west of the duck pond making it an ideal area for the demonstration project in constructed wetlands.

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?*

*To create a beautiful and functional demonstration green infrastructure installation for general public education
*To solve a stormwater management problem related to wet soils in the area to the north of the duck pond.
*From the CPA plan to preserve and/or protect the city's variety of water resources; provide opportunities for passive recreation and environmental education, and restore filled wetlands or otherwise degraded wetlands.
*From the Open Space and Rec Plan 2021-2028 to Restore threatened and degraded natural resources in New Bedford and Protect and Create native habitats and natural wildlife refuges within the city.
*From the NB Resilient Plan to Take an integrated water resource management approach that considers the needs of the natural water ecosystem, human water use, and potential droughts and flooding and Protect wildlife and their habitat by using native or sustainable species in landscaping throughout the city.

4 MEASURING SUCCESS (1000 Character Maximum)

- *How will the success of this project be measured?*

A successful project will include awarding the contract to a qualified landscape design or engineering firm, robust community involvement in the planning, completed design, construction drawings and budget for a green infrastructure demonstration project for the Brooklawn Park.
Phase 2 will be to pursue funding for the construction of the green infrastructure.

5 COMMUNITY SUPPORT (1000 Character Maximum)

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

The Friends of Brooklawn Park and the leagues that use the park's diamonds have complained about the maintenance associated with stormwater runoff for some time. They identified this as being a primary concern to address in park planning.

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 only, is the property at risk for irreparable loss? If so, please include a condition assessment from a qualified professional.*

The baseball leagues on the Brooklawn Park diamonds expend large amounts of volunteer time and resources to address the concerns caused by stormwater runoff in the park. We have worked with Dept. of Public Infrastructure (DPI) to move forward with recommendations that could be implemented with minimum resources such as varying the mowing pattern in the western area of the park to reduce and slow stormwater runoff. In addition to being a pilot demonstration project, the constructed wetland would also help slow down run-off, improve water quality within the pond, and address the standing water near the pond. The run-off erodes the lawn and ponded water may freeze in the winter becoming a slip hazard. We would like to get the demonstration garden constructed for education and as a model for the construction of a green infrastructure constructed wetland so that we can gain support and understanding for the other mitigations recommended in the 2020 plan. Most people are unfamiliar with constructed wetlands and this project will be an educational experience for stakeholders at the Brooklawn Park and also for residents and others throughout the City. It can be used to further the goal of NB Resilient to take an integrated water resource management approach that considers the needs of the natural water ecosystem, human water use, and potential droughts and flooding.

PROJECT MANAGEMENT

1 APPLICANT INFORMATION (1000 Character Maximum)

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

Public parks, beaches and recreational spaces are managed by the Dept. of Parks Recreation & Beaches (PRB) and maintained by the Dept. of Public Infrastructure (DPI). Project management during design and construction of the project will be by these two departments. Project concept plans will be reviewed by the public at community meeting. PRB has played a vital role in enhancing the quality of life for New Bedford residents since 1892. We provide recreational programs in fitness, the arts, self improvement and other enrichment activities to varied age groups across the City. Our programs provide a safe, structured environment, healthy meals and opportunities for outdoor physical activity to New Bedford's youth. We employ and train over 120 part-time and seasonal staff. It is our responsibility to ensure the satisfactory and sustainable planning, management and maintenance of the City's parks, beaches and recreational facilities and their accessibility to all residents and organizations.
The City of New Bedford PRB and DPI have collaborated successfully to rehabilitate and create multiple park projects. We have collaborated to create new city parks; the Capt. Jack Peterson Dog Park, Custom House Square and the River's End Park and have completed large renovation projects at Hazelwood Park and Pine Hill Park as well as many smaller renovations at parks throughout the city. Each project entailed numerous community meetings, creation of a Master Plan, and all aspects of installation management. The City will work with a qualified engineering and/or landscape architecture firm for development of contract bid documents and needed permits to implement the improvements.

2 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.*

No permitting is required at this time as we develop the design, construction documents and construction budget.

Permitting through Conservation Commission is required for the construction phase. The permitting will be completed as part of that Scope of Work. PRB and DPI are accustomed to the permitting process as well as implementation of the Conservation Commission Order of Conditions.

3 PROJECT MAINTENANCE (1000 Character Maximum)

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

Public parks, beaches and recreational spaces in New Bedford are managed by the Dept. of Parks Recreation and Beaches and maintained by the Dept. of Public Infrastructure. The Friends of Brooklawn Park are diligent stewards of the park offering guidance and hands on help where needed.

COMPLETE FOR HISTORIC RESOURCES PROJECTS ONLY

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.*

COMPLETE FOR PROJECTS WITH ACCESSIBILITY REQUIREMENTS ONLY

CPA Compliance (500 Character Maximum)

- *Describe how the proposed project complies with the all ADA/MAAB Regulations.*

COMPLETE FOR COMMUNITY HOUSING PROJECTS ONLY

CPA Compliance (500 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).*

PROJECT FINANCIAL INFORMATION

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. A bullet point list is acceptable.*
- *Will the project require funding over multiple years? 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?*

The Circulation and Drainage Master Plan for New Bedford's Brooklawn Park was completed in Aug 2020 by Ray Dunetz Landscape Architecture, Inc. after several months of planning with City departments and community members including the Friends of Brooklawn Park and the Brooklawn Park leagues. The plan was secured with funding of $15,000 from the City of New Bedford Planning Dept.

We are requesting funds for a constructed wetland design, construction drawings and budget for this project, which was identified in the plan as a phase 1 project. These documents will allow us to go out to bid for the construction of the wetland garden as an educational and demonstration garden for the community. We will identify garnts and other funding sources for the construciton phase once the construction budget is complete.

PROJECT SCHEDULE – PROJECT BUDGET – FUNDING SOURCE SUMMARY

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
PROJECT START DATE:	design contract awarded	Aug 2021
PROJECT MILESTONE:	first public stakeholder meeting	Oct 2021
50% COMPLETION STAGE:	Concept plans are completed	Feb 2022
PROJECT MILESTONE:	Concept plans are presented to the public	March 2022
PROJECT COMPLETION DATE:	Final design and construction docs are submitted to the City	June 2022

PROJECT BUDGET

*Please include a **complete itemized budget** of all project expenses, including the proposed funding source for each expense, with your application. Note: CPA funds cannot be used for maintenance. If the project received CPA funds in another fiscal year, please include this amount on a separate line, not on line 1.*
******New Bedford CPA (Line 1) amount should match the amount requested on the application cover page.***

FUNDING SOURCES		EXPENSES				
		STUDY	**SOFT COSTS***	**ACQUISITION**	**CONSTRUCTION****	**TOTAL**
1	FY21 CPA grant	$	$60,000	$	$	$
2		$	$	$	$	$
3		$	$	$	$	$
4		$	$	$	$	$
4		$	$	$	$	$
5		$	$	$	$	$
6		$	$	$	$	$
TOTAL PROJECT COSTS		$	$	$	$	$

** 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.*

FUNDING SOURCE 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	FY21 CPA grant	pending this application
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 include with your application.

CONSTRUCTION BUDGET
To be completed for construction projects only

ACTIVITY	CPA FUNDS	OTHER FUNDS	TOTAL
Acquisition Costs			
Land	$	$	$
Existing Structures	$	$	$
Other acquisition costs	$	$	$
Site Work (not in construction contract)			
Demolition/clearance	$	$	$
Other site costs	$	$	$
Construction/Project Improvement Costs			
New Construction	$	$	$
Rehabilitation	$	$	$
Performance bond premium	$	$	$
Construction contingency (30%)	$	$	$
Other	$	$	$
Architectural and Engineering (See Designer Fee Schedule for guidance): https://www.mass.gov/files/design_fee_schedule-_dsb_2015_2007.pdf			
Architect fees	$ 60,000	$	$ 60,000
Engineering fees	$	$	$
Other A & E fees	$	$	$
Other Owner Costs			
Appraisal fees	$	$	$
Survey	$	$	$
Soil boring/environmental/LBP	$	$	$
Tap fees and impact fees	$	$	$
Permitting fees	$	$	$
Legal fees	$	$	$
Other	$	$	$
Miscellaneous Costs			
Developer fees	$	$	$
Project reserves	$	$	$
Relocation costs	$	$	$
Project Administration & Management Costs			
Marketing/management	$	$	$
Operating/Maintenance	$	$	$
Taxes	$	$	$
Insurance	$	$	$
Other	$	$	$
TOTAL	**$** 60,000	**$**	**$** 60,000

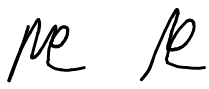
November 2, 2020

To the Community Preservation Committee,

I am writing to express my support for the CPA grant application to receive funding for the Brooklawn Park Green Infrastructure Demonstration Garden Design near the duck pond. The Friends of Brooklawn Park were an integral part of the development of the Aug 2020 Circulation and Drainage Master Plan for New Bedford's Brooklawn Park, developed by Landscape Architect Ray Dunetz. The Friends, which include neighborhood residents and representatives of the park leagues, reviewed the vehicular and pedestrian circulation and made recommendations for the site's poor drainage which will shape the Park's development over the next decade. These concerns were brought to the City for consideration by the Friends group.

Beautiful constructed wetlands will act as basins to retain and ecologically filter runoff before it infiltrates into the ground or overflows into the existing piped drainage infrastructure in the Park. The constructed wetland will also beautify an area that is often very wet and unusable and create a new native habitat in the park. The Friends are active stewards of the Ricketson Nature Trail in the western woodland in the park and are advocates for the development of the Ricketson Nature Center and nature study programs in the park. WE hope that you will agree that this project deserves CPA funding.

Sincerely,



Brooklawn Park

New Bedford, Massachusetts

Constructed Wetland Design

November 2020

Prepared for:

City of New Bedford
Parks, Recreation and Beaches
181 Hillman Street, Building 3
New Bedford, MA 02740

Prepared by:

Horsley Witten Group, Inc.
90 Route 6A
Sandwich, MA 02563

Horsley Witten Group
Sustainable Environmental Solutions
112 Water Street • 6th Floor • Boston, MA 02109
857-263-8193 • horsleywitten.com

November 10, 2020

VIA EMAIL

Valovia Costa
Assistant Project Manager
City of New Bedford
Parks Recreation & Beaches
181 Hillman Street, Building 3
New Bedford, MA 02740
Email: Valovia.Costa@newbedford-ma.gov

Re: Proposal Response – Brooklawn Park Constructed Wetland

Dear Mr. Costa:

On behalf of Horsley Witten Group, Inc. (HW), I am pleased to submit the enclosed scope of work and qualifications to provide professional design services for a proposed constructed wetland at Brooklawn Park in New Bedford, MA. As you know, HW recently partnered with Ray Dunetz Landscape Architecture on the Circulation and Drainage Master Plan for Brooklawn Park. As part of our work on that project, we completed a preliminary drainage assessment and identified the proposed constructed wetland site as a potential option for a green stormwater infrastructure (GSI) retrofit pilot project.

HW has extensive experience with designing and implementing nature-based solutions within a park setting, including GSI retrofits at Roger Williams Park in Providence, RI; GSI retrofits for five Boston School yards; and GSI stormwater and park improvements at Sunset Lake Park in Oak Bluffs. These projects not only helped to manage stormwater but have restored degraded landscapes to provide opportunities for residents, visitors, and students to interact with natural systems. As with all of our projects, HW recognizes that the wetland design must ultimately employ an approach that achieves multiple benefits, including considerations for short-term and long-term capital costs and long-term maintenance efforts.

In addition to our technical expertise, we have extensive experience with community engagement in our design process. This includes collaborative stakeholder meetings as well as community-based onsite and virtual meetings, online surveys, workshops, handouts and websites.

Thank you for the opportunity to provide this proposal. We look forward to working with the City of New Bedford on this exciting project. If you have any questions, please contact me at 508-833-6600 or by email at bkuchar@horsleywitten.com.

Sincerely,

Horsley Witten Group, Inc.

Brian Kuchar, RLA, P.E.
Principal Landscape Architect

Enclosures

Table of Contents

1. Firm Profile

Horsley Witten Group, Inc. is a leading-edge environmental design firm providing sustainable solutions for over 30 years. Over that period, our success can be attributed to a combination of innovation, responsiveness, and client satisfaction. Our dedicated staff of highly skilled professionals manages complex projects in New England and beyond. We have a staff of 58 registered professional civil and environmental engineers (PEs), professional landscape architects (PLAs), surveyors (PLS), wetland scientists, hydrogeologists, hydrologists, licensed site professionals (LSPs), marine scientists, geologists, computer modelers, land use and watershed planners, environmental analysts, and supporting personnel including fully capable graphics, GIS, and AutoCAD experts.

We excel as a liaison between decision makers and the public, translating technical subjects into understandable concepts. Our multidisciplinary-team approach integrates resilience, sustainable civil engineering, urban design, and landscape architecture.

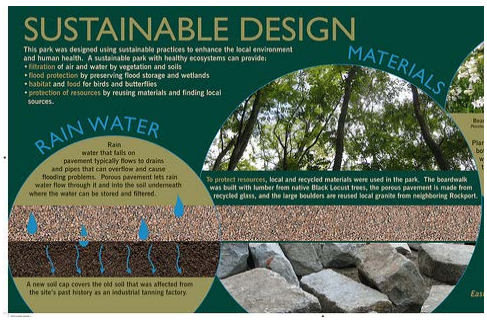
HW's award-winning projects address critical environmental challenges including climate change, community resiliency, watershed health, and open space and natural resource protection. Our services include site design, green infrastructure, smart growth planning and community design, zoning regulation review, water and natural resources assessment, and emergency preparedness.

Whether we are revisioning urban centers, advancing green infrastructure, monitoring groundwater, training emergency responders, or engaging the public, our people are passionate about the environment and sustainable communities. We love what we do

Roger Williams Park – Providence, RI

Veterans Memorial Park – Peabody, MA

Washington Irving School – Roslindale, MA



Park Interpretative Signage – Peabody, MA

2. Project Understanding and Approach

It is our understanding the City of New Bedford Parks, Recreation and Beaches Department is seeking proposals to design a constructed wetland for the treatment of stormwater runoff draining via overland flow from Brooklawn Park (the Park) to Duck Pond as identified in the Brooklawn Park Circulation and Drainage Master Plan. See Figure 1.

As a former natural wetland, the Park is part of an historic hydrologic system within the Acushnet River/Buzzards Bay watershed. The wet character of the site is evident from the frequent flooding of fields and paths during storm events. Surface and subsurface drainpipes, along with overland flow discharge stormwater to Duck Pond, which sometimes overflows onto Acushnet Avenue during large storm events. Poor drainage and a high water table are also evident as the lawns are often wet, spongy, and otherwise show signs of degradation.

The proposed location of the constructed wetland currently receives overland stormwater runoff from the adjacent building, roads and parking area, which causes degradation to the site. See photos 1 and 2. It is our understanding the project would include gutter line improvements and an inlet flume to capture channelized flow from the contributing impervious areas. Runoff would be direct via the flume to a sediment forebay to capture sediment prior to discharge to the newly constructed wetland. The overflow structure from the wetland to the pond would be designed as a landscape feature and incorporated into the existing pathway with a small boardwalk crossing. This approach would not only solve an existing drainage problem but would also improve a landscape eye sore. The wetland will be incorporated into the surrounding landscape and provide additional aesthetic value to the landscape, while maintaining and complimenting the pond and the park's historic character.

1. *Overland Parking Runoff*

2. *Erosion and degraded landscape*

3. *Overflow of uncontrolled runoff*

4. *Overflow at the edge of Duck Pond.*

Figure 1

3. Scope of Services

The following Scope of Work defines the tasks required to meet the goals and objectives as described in the Project Understanding.

Task 1: Meetings and Coordination

HW staff will prepare for and attend the following meetings:

- One "kickoff" meeting (Teams, Zoom or other platform) to discuss the project with the City staff, the Friends of Brooklawn Park and other identified stakeholders prior to commencement of design work. This meeting will provide an opportunity to introduce the project and discuss the project goals, design options, client expectations, schedule, funding and any other areas of concern.
    - Under this task HW staff will also complete a field reconnaissance with City Staff to review the location for the constructed wetland.
- 25% Design Presentation
    - HW will meet virtually with the project stakeholders to review the 25% Designs and discuss design elements and the anticipated maintenance requirements. Input and comments received at this meeting will form the basis of the final design.

This task also includes time for project coordination (internal meetings) and correspondence (phone calls and emails) with City staff.

Deliverables:

- *Meeting agendas and meeting summary notes.*
- *Presentation materials*

Task Budget *$ 3,400*

Task 2: Existing Condition Plans and Wetland Delineation

HW will conduct a field survey within the proposed project limits and 15 feet beyond and compile topographic data according to a one-foot contour interval accuracy level with Massachusetts Plane horizontal control and NAVD 88 vertical control. The survey will locate existing natural and manmade features, including existing structures, paving, curbs, trees (>6" diameter), utilities at grade, and other data as necessary to provide adequate base information. Topographic data will be collected using Total Station field instrumentation and data collectors in digital format and datums established by RTK GPS.

Wetlands Delineation

If necessary, an HW wetland scientist will identify and delineate the boundaries of wetland resource area. This boundary will be survey-located and included on the existing conditions plan.

HW will follow the methodology outlined in the Massachusetts Department of Environmental Protection (MassDEP) handbook entitled Delineating Bordering Vegetated Wetlands Under the Massachusetts Wetlands Protection Act (March 1995) as well as the definitions under the Massachusetts Wetlands Protection Act implementing Regulations at 310 CMR 10.00 and local definitions.

Deliverables:

- *Stamped Existing Conditions survey plan (PDF format)*
- *Up to two sets of MassDEP BVW (310 CMR 10.55) Delineation Field Data Forms (or U.S. Army Corps of Engineers (forms) will be completed in support of the wetland boundary determination.*

Task Budget *$ 4,500*

Task 3: Site Soil Evaluation

HW will perform up to two on-site soil evaluation, which may include infiltration testing in the locations of proposed stormwater management practice. The test pits will be used to determine subsurface soil conditions, depth the groundwater and assess the sites suitability for a constructed wetland. A summary memo of the test pit evaluations and findings will be prepared by a certified Massachusetts Soil Evaluator. This task does not include the fee for backhoe services required for excavation of the test pits and we assume backhoe services will be provided by the City DPW.

Deliverables:

- *Summary memorandum of soil evaluation*

Task Budget *$ 1,500*

Task 4: 25% Preliminary Design

Upon completion of the survey and site soil evaluations, HW will prepare 25% Design Plans and supporting sizing and modeling calculations for review and comment by the City. The 25% Design will include the delineated drainage area, area of impervious cover captured and treated, hydrologic/hydraulic modeling documenting potential pollutant removal, and runoff reduction. A preliminary opinion of probably cost (OPCC) will also be developed.

Deliverables:

- *25% plan set including grading/drainage, general details*
- *Preliminary construction OPCC*
- *Hydrologic and hydraulic computations documenting constructed wetland sizing, treatment volumes, and performance*

Task Budget $ 6,600

Task 5: Construction Plans and Specifications

Following the review and approval of the 25% design plans and coordination with the City, HW will complete final construction bid-ready plans, design calculations, opinion of probable construction costs (OPCC) and preparation of the construction technical specifications for bidding the projects in accordance with the Construction Specifications Institute (CSI) Master Format. We assume the City will supply Division 0 - boilerplate language and Division 1- General Requirements and conduct all bidding related tasks. Under this task HW will also provide a long-term maintenance plan for the constructed wetland.

If necessary, HW will be prepared to review with the City the construction documents and make one round of revision to the plans to produce a final set of construction bid-ready plans.

We also assume that due to the project's proximity to Duck Pond, at a minimum the City will need to file a Request for Determination of Applicability (RDA) with the New Bedford Conservation Commission. It is our understanding that the City will be responsible for all permitting and the deliverables provide under this task will be suitable used for any submissions.

Deliverables:

- *Drainage Analysis Report*
- *100% Construction Plans and technical specifications*
- *Maintenance Plan*

Task Budget $ 7,100

Total Fee - labor:	*$ 23,100*
Total Reimbursables:	*$ 500*
Total Estimated Proposal Fee:	***$ 23,600***

Proposal Elements and Assumptions:

The above scope of work and budget were developed using the following series of assumptions:

1. This proposal does not include the following:
    a. Backhoe services
    b. Geotechnical studies and/or reports
    c. Permitting Services
    d. Assistance with Bid procurement
    e. Construction Administration Oversight
2. It is assumed that the site is free from prior contamination and no historical and/or archaeological elements are present.
3. Any easement plans that may be required would be at an additional cost.
4. The site is not currently mapped for endangered species habitat through the Natural Heritage Endangered Species Program (NHESP). It is assumed that permitting through Massachusetts *Endangered Species Act* (MESA) will not be needed for this site. If NHESP review or permitting is required, we will provide a budget this additional service.
5. Fees for any required permits are not included in our lump sum costs.
6. It is assumed that only one set of revisions to the final plan review and submittal will be required.
7. Any substantial revisions to the design requested by the client or the regulatory agencies once the development of the construction documents has begun will be at an additional cost.
8. It is assumed all permitting and construction plans will be produced on 24x36 size sheets or less.
9. Construction Specifications will be in 3-part CSI 2004 Master Specification Format. HW will supply applicable Divisions for Facility Construction Subgroups for site and infrastructure construction. It is assumed the City will provide all Division 0 and 1 boilerplate bid documents and specifications outlining procurement, contracting and administrative requirements.
10. Any meetings, additional work items, extension of the duration of work items, or additional materials not specifically outlined in this proposal will be billed at HW standard rates, with prior client approval.
11. If any of the above assumptions prove to be false, or if work is required beyond the scope as proposed, HW will discuss those needs and develop any necessary contract amendments.
12. Reimbursable expenses as noted (copies, printing, travel mileage, survey staking materials, etc.) are included in our fee estimate. Additional copies or other reimbursable can be provided at our standard rates.

ATTACHMENTS

Green Stormwater Infrastructure

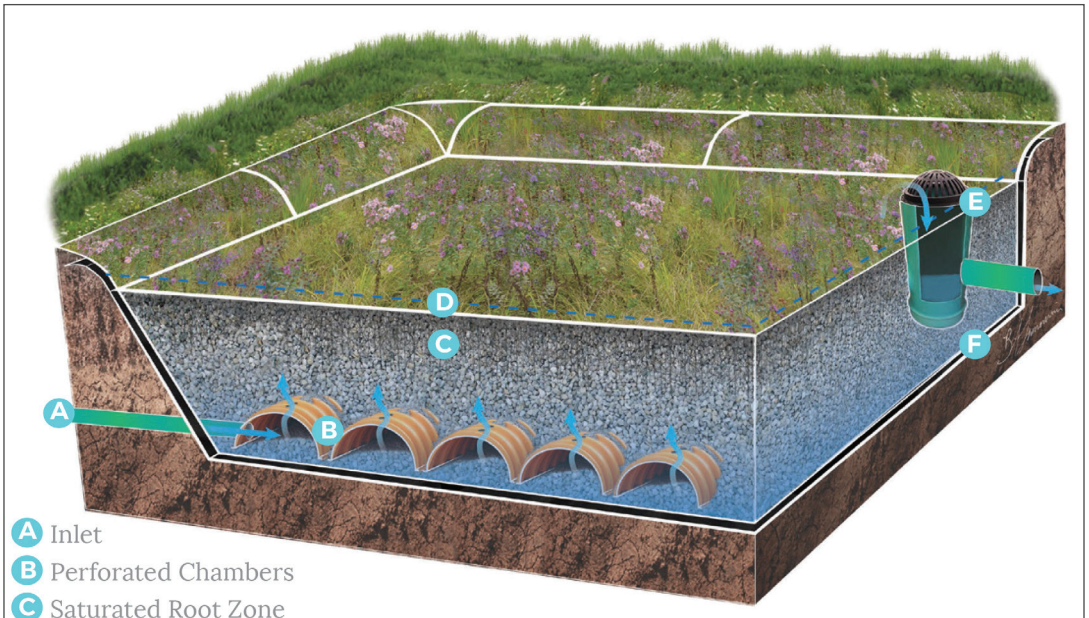
GREEN STORMWATER INFRASTRUCTURE

ASSESS | PLAN | DESIGN | CONSTRUCT | EDUCATE

What's in a name? Green Stormwater Infrastructure (GSI) has been known by many names and acronyms over the years – Smart Growth Practices, Better Site Design, Low Impact Design (LID), Green Infrastructure (GI), and Nature-based Design to name a few. Regardless of what it is called, the design intent is the same. GSI mimics natural processes to manage stormwater runoff while also providing healthier spaces for people, plants, and animals. GSI includes a variety of stormwater practices that reduce and/or treat stormwater, such as rain barrels and cisterns, rain gardens, bioretentions, green streets, underground infiltration, porous pavements, and constructed wetlands.

Horsley Witten Group has been on the forefront of GSI planning and design from its very inception. We work with state and federal agencies, nonprofits, towns, and cities to provide all aspects of GSI services. Our staff is experienced in adapting GSI design for a range of site conditions and contexts, from parks to urban centers. We have developed state and local design manuals that incorporate GSI and have performed code audits to identify GSI opportunities and barriers within local regulations. We have developed GSI curriculums for school systems and conducted hands-on workshops building and maintaining GSI practices. Our staff love getting out into the field for watershed assessments and identifying the best locations for GSI retrofits. We are always following the latest research and data for ways to tweak GSI design to enhance pollutant removals and climate resiliency. We are passionate not only about implementing GSI as we know it today, but pushing it into the future when, who knows, it might be known by another name!

Gravel Wetland Design



A Inlet
B Perforated Chambers
C Saturated Root Zone
D Controlled Water Height
E Overflow Structure
F Impermeable Liner (Optional: based upon specific site conditions)

HORSLEY WITTEN GROUP
Sustainable Environmental Solutions

Our Green Stormwater Infrastructure Services include:

- *GSI Planning, Sizing, & Design*
- *Stormwater Master Plans & Watershed Plans*
- *Permitting Assistance*
- *Soil Evaluations*
- *Field Investigations*
- *Vulnerability Assessments*
- *GIS Mapping/Modeling*
- *Municipal and Public Training*
- *Native Plant Selection and Restoration*
- *MS4 and TMDL Assistance*
- *Phosphorus Control Plans*
- *ORM Plans and Workshops*
- *Grant Funding Assistance*
- *Public Outreach and Engagement*
- *Construction Oversight*

"Green infrastructure is a cost-effective, resilient approach to managing wet weather impacts that provides many community benefits." - *US EPA*

GSI for Park Improvement

Roger Williams Park, Providence, RI

We assisted the City of Providence and the Narragansett Bay Estuary Program with the development of a water quality management plan for Roger Williams Park. The goal was to improve the water quality and biodiversity conditions of the Park's ponds. The project included the identification and prioritization of dozens of GI practices, several of which we have designed and constructed. Our projects will be highlighted as part of a new regional GSI Center at the Park!

Watershed-wide GSI

Three Bays Watershed, Barnstable, MA

HW is working with the Association to Preserve Cape Cod, the Barnstable Clean Water Coalition, and the Town of Barnstable to reduce stormwater pollution in the Three Bays Watershed. We have completed extensive field assessments, identifying and prioritizing over 70 GSI retrofit opportunities! We designed and permitted eight of the top priority sites and have overseen construction on three of them. We will be constructing three more in 2020! We also led numerous outreach activities including hands-on workshops to teach homeowners how to build rain gardens and to train municipal staff, on how to perform GSI maintenance.

GSI at Boston Public Schools

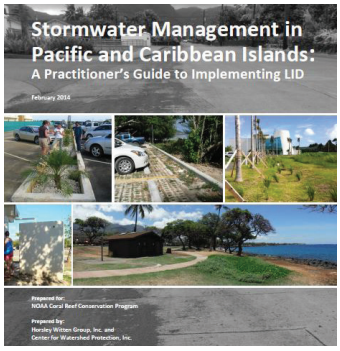
Boston Water and Sewer Commission, Boston, MA

We designed GSI to manage stormwater runoff and engage students at five Boston Public Schools. The schools plan to incorporate green infrastructure into their strategic plan for educational programming and capital investments. With help from several partners, HW provided site investigations, GSI feasibility assessments, soil evaluations, GSI siting and design, and assistance with the stakeholder input process. Integration of stormwater into the science curriculum for fifth and seventh graders was one of the most exciting components of this project.

Implementing GSI for CSO Abatement

New York, NY

New York City is implementing GSI as a cost-effective and green alternative to big tanks/tunnel storage typically used for combined sewer overflow (CSO) abatement. We have helped the City evaluate numerous BMPs including permeable pavements, underground recharge chambers, bioretentions, and blue roofs; providing siting, design, and construction oversight services for a variety of projects. We also collaborated with the City's Office of Green Infrastructure to initiate wide-scale implementation of GSI "bioswales" within City street ROWs and "on-site" practices at several public school sites.



GSI Guidance for Pacific and Caribbean Islands

We developed this guide to help on-island stormwater managers to implement better stormwater management using island examples. It showcases successes from a variety of Pacific and Caribbean islands and provides island-specific information ranging from how to adapt designs using local materials to sizing criteria and rainfall data. This guide is not regulatory but is intended to inspire our island stormwater champions to embrace and implement GSI.

Relevant Projects

Project Profile

Roger Williams Park,
Providence, RI

Client Contact:
Brian Byrnes, CPSI
Deputy Superintendent
Department of Parks & Recreation
401-680-7202

HW Contact:
Brian Kuchar, PE, RLA, LEED AP

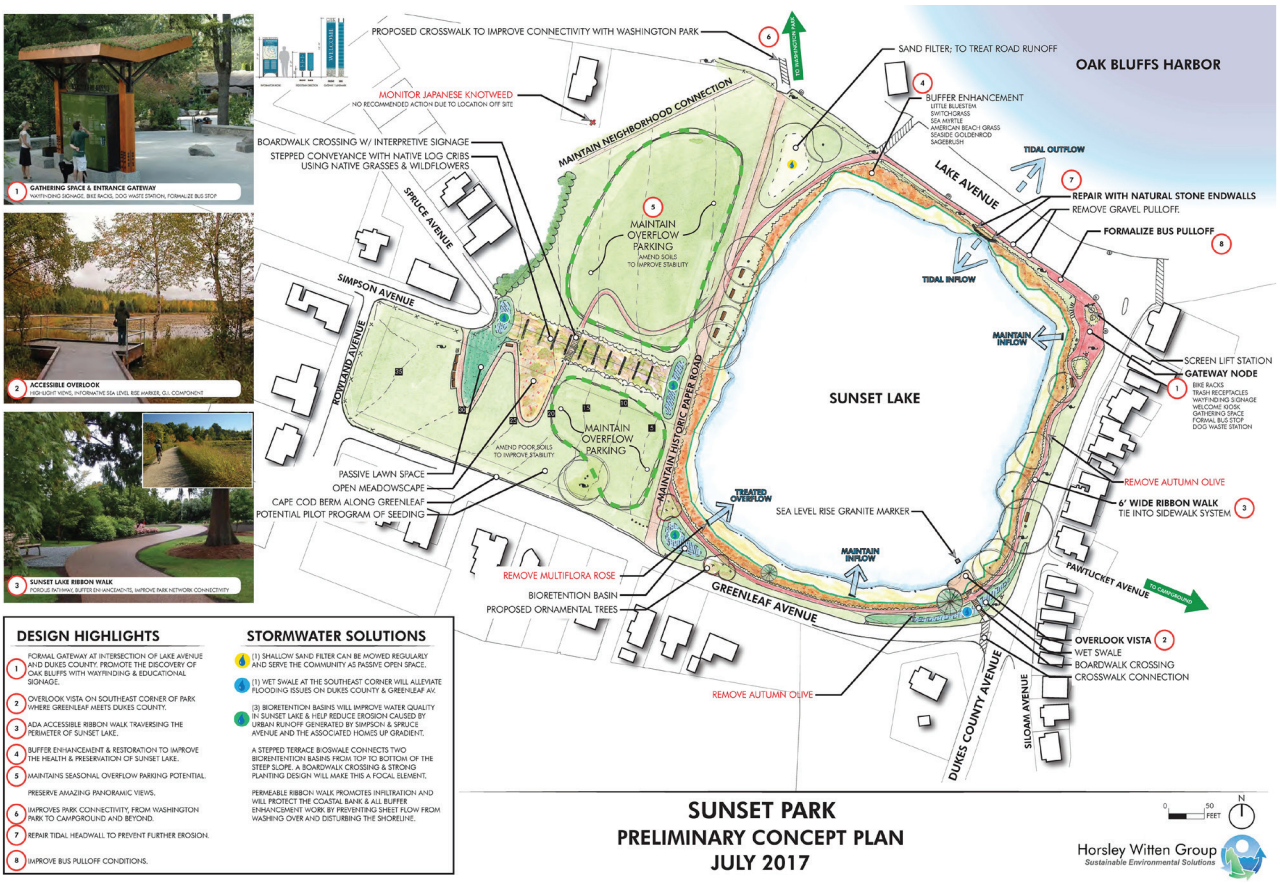
11058CC

Horsley Witten Group

Water Quality Restoration Plan, Visualization & Climate Change Considerations

HW assisted the City of Providence and the Narragansett Bay Estuary Program with assessment and development of a stormwater management master plan for Roger Williams Park. This historic park in southeastern Providence contains approximately 435 acres of landscaped areas, including the Roger Williams Park Zoo. The Park contains a seven-lake complex, which comprises approximately 100 acres. As is often the case with urban parks, runoff from densely developed areas drained into the ponds and severely degraded water quality. To complicate matters, more intense storms and frequent flooding are resulting from climate change. HW developed a stormwater master plan, which improved the water quality and biodiversity conditions of the ponds. The project included the identification and prioritization of low impact development (LID)/green infrastructure practices. These practices were used to retrofit existing drainage infrastructure and manage stormwater runoff from areas upgradient of the ponds. In addition, HW led a public engagement process to solicit input on the proposed restoration measures at key junctions in the project. Following input from the public and the 20+-member steering committee, HW designed, permitted, and provided construction administration services for the highest priority projects.

HW focuses on providing sustainable environmental solutions. Learn more at horsleywitten.com



Project Profile

Oak Bluffs, MA

Client Contact:

Donna Hayes, President

Friends & Neighbors of Sunset Lake

617-413-8581

HW Contact:

Amy Ball, PWS, CWS

12117-16138

Horsley Witten Group

Sunset Lake and Lakeside Park

Sunset Lake is an enclosed salt pond connected to Oak Bluffs Harbor, and ultimately to Nantucket Sound, via a culvert beneath Lake Avenue. Local residents have observed a deterioration of water quality and general habitat over time, including excessive growth of algae and invasive plant species along its shorelines. Friends and Neighbors of Sunset Lake (FANS), a non-profit organization whose mission is the improvement and preservation of Sunset Lake and its surrounding Lakeside Park, initially engaged HW to create a site-specific existing conditions map and a summary of findings regarding the limits of the wetland resource areas, invasive plant species, water quality, and potential sources of degradation, and recommendations for improvements. The results of this study helped to guide a future restoration plan for this estuarine system and surrounding park.

With HW's assistance FANS is currently in the process of permitting and ultimately implementing some of these recommendations. The group has received overwhelming support from the Town of Oak Bluffs as well as grant funding through the Community Preservation Act. With the goal of improving water quality within Sunset Lake, FANS proposes to install green stormwater infrastructure (GSI) stormwater facilities, manage invasive plant species, and re-establish a native plant community to improve water quality and wildlife habitat, while also enhancing amenities within Lakeside Park.

HW focuses on providing sustainable environmental solutions. Learn more at horsleywitten.com

Project Profile
Roger Williams Park
Providence, RI

Client Contact:
Brian Byrnes, CPSI
Deputy Superintendent
Providence Department of Parks & Recreation
Phone: 401-680-7202
Email: bbyrnes@providenceri.com

HW Contact:
Brian Kuchar, RLA, P.E.

17021

Horsley Witten Group

Japanese Garden Pond Improvements

HW is working with the Roger Williams Park Conservancy in conjunction with the Providence Department of Parks and Recreation to prepare a feasibility study for proposed water quality improvements for a Japanese Garden Pond located in Roger Williams Park. This preliminary study includes the collection and analysis of sediment in the Garden pond and a feasibility assessment of conceptual design options to improve water quality. The report includes 10% conceptual designs, preliminary planning level cost estimates and anticipated design costs. The Rhode Island Foundation is funding this project.

HW focuses on providing sustainable environmental solutions. Learn more at horsleywitten.com

GREEN INTERNATIONAL AFFILIATES, INC.
239 LITTLETON ROAD, SUITE 3 WESTFORD, MA 01886
T: (978) 923-0400 | F: (978) 399-0033 | WWW.GREENINTL.COM

October 27, 2020

Ms. Valovia Costa
Assistant Project Manager
City of New Bedford/Parks Recreation & Beaches
181 Hillman Street, Bld 3
New Bedford, MA 02740

Subject: **Survey, Civil Engineering, Landscape Architecture, and Permitting Services for Brooklawn Park**
New Bedford, MA

Dear Ms. Valovia:

Green International Affiliates, Inc. (Green) is pleased to submit this proposal for a constructed wetland at Brooklawn Park in New Bedford, MA. This is a valuable project in terms of management and treating stormwater with an opportunity to add a beautiful and ecologically important feature to Brooklawn Park. Green has in-house expertise wetland biology, engineering, and landscape architecture to design a constructed wetland that will be both functional and attractive.

The scope of our work will cover survey, wetland biology, civil engineering, landscape architecture, geotechnical engineering and permitting services for the project. This work will include design services to locate, size and integrate the constructed wetland into the existing park. These services will include erosion and sediment controls, earthwork, hydrological design, grading, drainage, layout and planting design.

At this time, we do not anticipate having to design any upgrades for existing municipal off site utilities (i.e downstream drainage systems), nor do we anticipate having to prepare extensive drainage studies to assess offsite impacts for permitting agencies. As such, these potential additional services are not included in this proposal.

Based on our understanding of the project and the above assumptions, we have developed the following Tasks to complete the civil engineering work for this project.

SCOPE OF SERVICES

Task 1 – Topographic Survey

We will perform topographic detail survey of the project limits using a Total Station Electronic Distance Meter (EDM) and will locate existing surface features including buildings, walls, fences, curbing, walkways, edges of pavement, surface utilities, trees (greater than 2" in diameter only), landscape features, and above grade site improvements. Green will also locate the existing pond within the site and a portion of its inlet. It is assumed since this is a man-made pond and has a concrete border around it, wetland delineation is not required; therefore, it is not included in our scope.

Project Limits

The limits of survey are shown on the attached Figure 1.

Horizontal and Vertical Control

Horizontal coordinates will be tied into the Massachusetts State Plane (NAD 83) coordinate system and vertical control will be tied into North American Vertical Datum of 1988 (NAVD 88) using GPS methods.

Utility Research, Survey and Plotting

We will compile and plot available utility record information as provided by the client onto the base map. We will open accessible sewer and drainage structures within the project limits, measure invert elevations and conduit sizes, and will note conduit material. Based on the available utility records and invert information obtained, we will show underground utility lines on the base map.

Subsurface utility locations will be plotted to meet utility Quality Level "C" as described in ASCE Standard 38-02 and summarized as follows:

Information obtained by surveying and plotting visible above-ground utility features and by using professional judgment in correlating this information to information derived from existing records or oral recollections.

Green makes no warranty to the accuracy and completeness of buried utility lines compiled from record information. Subsurface investigations or dye testing for buried utilities is not included as part of this proposal. If exact locations of certain utilities are required for future design purposes, we recommend that electronic line tracing and vacuum excavation methods be used to locate such utilities.

Task 2 - Preliminary Plans & Site Assessment

We will prepare a site assessment to review the watershed area to the proposed constructed wetland area. We will do a site analysis for area of the park surrounding the project, including views, pedestrian circulation, existing vegetation and shade. We will prepare preliminary plans and details for the proposed constructed wetland, which can be used for permit applications (NOI Submission). The plan set will likely include the following:

- Title Plan w/ Locus
- C-1 Notes and Legend Plan
- C-2 Erosion and Sediment Control Plan
- C-3 Site Layout & Materials Plan
- C-4 Site Grading & Utility Plan
- C-5 Planting Plan
- C-6-C-7 Site Details

We have included an allowance for geotechnical engineering services for the Stormwater Report that is required as part of the NOI. The geotechnical engineer will establish seasonal high groundwater utilizing test pits. We have assumed two (2) test pits will be performed in the proposed location of the constructed wetland. It is assumed the City will provide the labor and equipment for digging the test pits and we will provide an allowance for a geotechnical engineer to take soil samples for textural analysis and log the test pits.

Task 3 – Meetings

During the course of the design, we will meet with the Owner and other stakeholders to coordinate our work and address comments on the design. We assumed the majority of these meetings can happen virtually. However, we have included two in-person meetings with the Park's Department as part of the design. We anticipate holding these prior to submitting permits so the permit documents can incorporate their comments.

Task 4 - Notice of Intent (NOI)

The proposed work will be located within jurisdictional areas under the MA Wetland Protection Act; therefore, a Notice of Intent (NOI) will be required to be filed with the local Conservation Commission. We will work on minimizing impacts to the adjacent resource areas while still meeting the intent of the Concept plan and the Wetlands Protection Act (WPA). We will utilize the preliminary plans for the NOI submission. As part of the NOI, a stormwater management report noting compliance with the 10 State Stormwater Standards will be required. Stormwater mitigation utilizing the constructed wetland will require knowledge of where seasonal high groundwater is located. The geotechnical engineer will establish seasonal high groundwater utilizing test pits. Permeability testing to establish an infiltration rate is not included. It is assumed the stormwater calculations will utilize the Rawls Rates for infiltration design. We will prepare a NOI and Stormwater Report for filing with the Commission and present at the public hearing.

We will attend the public hearings for the NOI. Two (2) hearings with the Conservation Commission are anticipated.

Task 5 - Final Plans & Specifications (Construction Documents)

In the Construction Documents Phase, we will complete the plans and technical specifications in a format suitable for bidding and construction. We will update the Erosion control plan to include Site Preparation items that was not previously prepared for the permit set. We will incorporate comments from the Preliminary Phase, the NOI submission, and we will coordinate with the Owner, and other team members to develop Construction Documents. We will prepare a cost estimate based on the Construction Documents for Bidding Purposes.

The above drawings will be provided in electronic copy format. In addition, we will develop technical specifications for civil site work following CSI formatting.

Fee:

The following table summarizes the phases and the lump sum fee associated with each task.

TASK	CIVIL FEE
1 – Topographic Survey	$7,440
2 – Preliminary Plans & Site Assessment (includes Geotech allowance)	$17,980
3 – Meetings	$4,080
4 – Notice of Intent (NOI)	$14,490
5 – Final Plans & Specifications (Construction Documents)	$16,000
Total Design Fee	***$59,990***

Exclusions:

The following items of work are not included as part of this proposal but may be added later as an amendment to our contract. It is assumed the work within the park is an added amenity and will not trigger

an Article 97 review. There is a site across the street (2008 Acushnet Ave) that has an Activity Use Limitation (AUL) on it; however, it is assumed that the limitations do not extend to the project parcel.

1. Work during winter or inclement weather
2. Cleaning utility structures to obtain pipe size, direction, and invert measurements
3. Police details
4. Colored rendering plans.
5. Boundary research, survey, determination and plan preparation
6. Staking of property corners including installation of bounds, iron pins, etc
7. Irrigation Design
8. Conservation Commission Filing Fees & Legal Notice fee
9. Site Lighting
10. Hazardous Material Testing and LSP Services
11. Sewer/Drain Dye Water Testing/CCTV Inspections
12. Construction Administration
13. Construction General Permit (CGP) NOI NPDES permit & SWPPP

Thank you for the opportunity to submit this proposal, and we look forward to working with you on this project. If the scope of services, fee and attached provisions are acceptable, we can develop/execute an engineering services contract.

Sincerely,

Green International Affiliates, Inc.

Adel Shahin

Adel Shahin, P.E., PMP
Senior Vice President

Figure 1 – Limit of Work

AS/dhs

L:\Proposal\Municipalities\New Bedford\Brooklawn Park SW Project\Cost\Green Proposal_Brooklawn Park SW_Ver02.Docx

CIRCULATION & DRAINAGE MASTER PLAN

Brooklawn Park

NEW BEDFORD, MA

August 7, 2020

RAY DUNETZ
LANDSCAPE ARCHITECTURE, INC.

179 Green Street
Boston · MA 02130
617 524-6265
rd@raydunetz.com
raydunetz.com

CONTENTS

INTRODUCTION

The goal of this Circulation and Drainage Master Plan for New Bedford's Brooklawn Park is to improve the vehicular and pedestrian circulation, make recommendations for the site's poor drainage, and provide maintenance guidelines to shape the Park's development over the next decade. Working with the City's Parks Recreation & Beaches and Planning Departments, respectively, as well as the Friends of Brooklawn Park, our collaborative process included historic research, site assessment, and public input to better provide recommendations for pedestrian and vehicular circulation. Through the process, we discovered that the plan could only benefit from accentuating the positive aspects of the site's natural features and hydrology.

Brooklawn Park is located in the north end of New Bedford in a dense urban area. Bordered by Brooklawn Avenue to the north, Irvington Street to the south, Acushnet Avenue to the east, and Ashley Boulevard to the west, the eighty-two-acre Park provides a diverse range of recreational opportunities for citizens of New Bedford. The presence of both active and passive recreation makes this a highly visited open space in the City.

The Park is situated on land formerly owned by Daniel Ricketson, a 19th-century lawyer, philanthropist, poet, author, benefactor, and abolitionist. Ricketson drained a tidal swamp to create his estate. The land was characterized by multiple brooks running through vast meadows; hence the estate was named "Brook Lawn." Henry David Thoreau and Ralph Waldo Emerson were among Ricketson's friends who visited his twelve-by-fourteen-foot writing shanty, whose foundation remains in the Park. The house, located near the present playground, was demolished in the 1970s and the foundation was presumably paved over.

EXISTING CONDITIONS ASSESSMENT

EXISTING CONDITIONS

Soils

The soils at Brooklawn Park continue to reinforce its character and development. The soil along the eastern portion is Udorthents, which may be described as areas of disturbed soils where the upper soil has been removed, filled in, or graded. These soils are moderately gravelly and sandy despite the high water table. The soils on the western, forested side of the site are comprised of Ridgebury fine sandy loam and Paxton fine sandy loam, both of which are somewhat poorly drained.

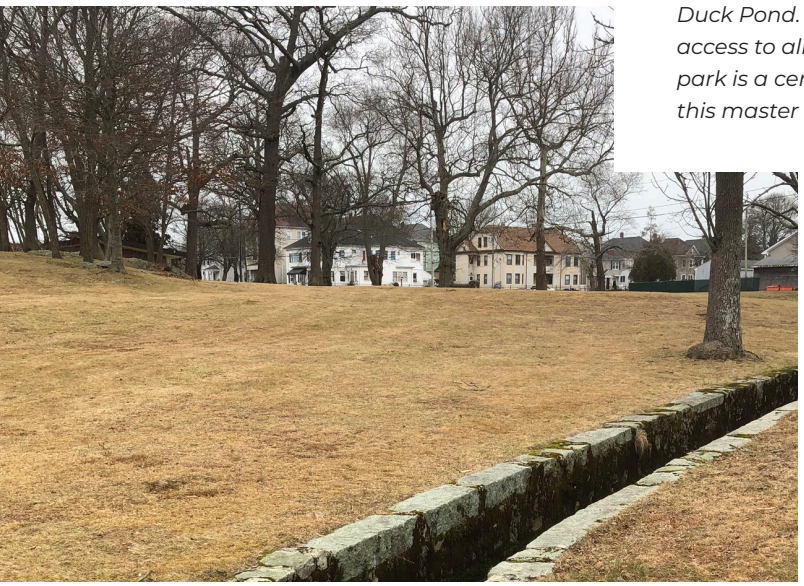
Topography

The Park generally slopes from west to east, with some rock knolls along the sloping southeastern corner of the Park, off Acushnet. The highest point of the land is located at the corner of Ashby and Irvington Streets, at elevation 148 feet, and the lowest at the former wading pool (now parking lot) near Acushnet Avenue, at elevation 92 feet. This represents an approximate 56-foot-change in elevation. The recreational fields are gently graded, appropriate for their use. The slopes surrounding the parking at the former wading pool appear engineered, visually incongruous in a Park experience.

Vegetation

The western quarter of the site is wooded with mature trees (including Oaks, Maples and Pines), typical wetland vegetation, and lawns in the vicinity of Ashley Boulevard. Although the woodland lacks biodiversity, it is generally free of invasives (with the exception of Phragmites, observed near the corner of Ashley and Brooklawn). The rest of the Park is more open, with expansive turf fields and mature trees. Some mature trees show decay from the site's excess moisture and should be replaced with appropriate species at some point. (Success of the mature woody canopy will depend on the ability of trees to handle the wet soil and adapt to climate change.) The lush vegetation of the wet meadow provides habitat for a variety of fauna.

The diverse beauty within Brooklawn Park extends from the forest and wet meadows to the open waterways and the recreational fields and Duck Pond. Improving access to all areas of the park is a central concept to this master plan.



Drainage and Hydrology

A former natural wetland, the Park is still an important hydrology system within the Acushnet River/Buzzards Bay watershed. The wet character of the site is evident from the frequent flooding of fields and paths during storms. Surface and subsurface drain pipes all carry water to Duck Pond which can overflow onto Acushnet Avenue during peak storm events. Existing stone-lined channels may be beautiful remnants of days past, but their paved basins speed runoff, contributing to erosion obvious throughout the site. A high water table is evident in lawns that are often wet, spongy, and otherwise show signs of poor drainage. A centrally located, manmade wet meadow in the Park was designed to provide some runoff relief, but more needs to be done to improve drainage.

City maps indicate a system of gray infrastructure stormwater pipes in the Park, including the recent installation of underdrainage at the soccer field. The visible erosion and sedimentation indicate that these subsurface pipes and basin require cleaning to remove debris, sediment, and tree roots to drain properly and improve runoff outcomes. The Duck Pond also needs upgrades to improve drainage capacity and deter overflows during major storms.

Recreation

Active Recreation

The active recreational facilities are located in the eastern portion of the site and feature (8) baseball fields (3 leagues have license agreements, and are used primarily by the Whaling League), (3) tennis courts, (2) basketball courts, a playground, skateboard park, soccer field, splash pad, outdoor exercise equipment, and wall ball.

The baseball fields are heavily used during the summer and are maintained by the leagues. During storm events, water channelizes and erodes the stone dust infields, surfaces that then require additional maintenance in the form of annual replenishment. Unlike the soccer field, the baseball fields are not equipped with underground drains. Due to their wet and poorly drained soils, these fields would benefit from replacement of the stone dust infields with turf and installation of underdrainage.

Passive Recreation

A range of natural features in the Park offer passive recreational opportunities including: woodlands with nature trails, a wet meadow, a duck pond and a shaded knoll at Acushnet Avenue. However, these special elements are not clearly connected to the rest of the Park through a path network. In addition, the Park lacks a consistent suite of furnishings, such as benches, picnic tables, and trash receptacles to serve visitors and enhance their enjoyment of its natural features.

Structures

Park buildings include a Community Center, DPI maintenance building, (2) concession stands, (6) equipment storage buildings, and a one-story former art center being re-purposed as the Ricketson Nature Center. Many of the structures lack functional appurtenances, such as gutters and downspouts connected to a drainage system, a condition adding to stormwater runoff.

Pedestrian Circulation

Pedestrian circulation throughout the Park is ad hoc; pathways range in materials and condition, terminate abruptly, and do not offer a complete circuit. The Park also lacks pedestrian connectivity between the eastern, more active portion of the Park and the western woodland. Some paths are paved and too wide, others are heaving or are not accessible. The majority of pedestrian paths are paved with impervious materials, such as concrete or asphalt, which contribute to stormwater runoff. The current lack of safe road crossings makes safety a concern for pedestrians.

The pedestrian entrance at Acushnet Avenue, formerly a driveway, is excessively wide and secured with concrete bollards to deter automobiles. This entrance once featured an ornamental metal structure, which in times past gave the Park a sense of arrival and welcome, an emblematic identity.

At the western edge of the Park and accessed from Ashley Boulevard is a pedestrian path that connects the Park to Irvington Street to the south. Formerly a road blocked by bollards, this overly wide path could be narrowed to reduce stormwater runoff. The steep, bituminous concrete path to Duck Pond from the central parking lot does not meet ADA guidelines and the pathway around the pond is eroding and washing out below the pavement.

Vehicular Circulation

Existing vehicular circulation in and around the Park lacks clear and safe entrances, presents convoluted traffic patterns, and lacks logical routes and wayfinding signs. Most roads within the Park are made of asphalt, which are in poor condition and lack curbs to help control stormwater runoff. In addition, without adequate curbing, the antiquated catch basins on the main entrance drive are ineffective, resulting in overflow and erosion of road shoulders in numerous locations.

The roads at the periphery of the Park do not function well during peak summer traffic. While Acushnet Avenue is a busy two-way street, one-way Brooklawn Avenue exacerbates the problem of visitors parking in adjacent residential neighborhoods when they cannot find designated spaces within the Park.

Entrances

The existing vehicular entrances into the Park are located along Acushnet Avenue and Irvington Street. Both entrances lack clear signage and a reassuring sense of arrival.

The main entry, which provides access to the Community Center, playground, tennis courts, and sports fields is located on Acushnet Avenue, where two separate curb cuts present a confusing combination of directional choices. This entrance lacks clear directional signage and safe pedestrian crossings, and can create a bottleneck during peak usage. Further complicating traffic flow, the entrance into the Park splits, with one direction providing access to the Community Center, tennis courts and playground. This road terminates at the tennis courts and a small parking lot, and also provides access to a larger parking area (on the site of a former concrete-lined wading pool). Improving this major point of entry would benefit vehicular access to and use of the Park.

Irvington Court provides another two-way entrance into the DPI yard, and then transitions to a one-way road exiting onto Irvington Street. The proximity to the DPI yard gives this entrance a direct view into the maintenance yard for park visitors.

Roads

The Acushnet Avenue entrance road terminates at a parking lot at the top of the hill adjacent to the tennis courts where the former Ricketson house stood. This asphalt drive lacks curbing to protect the road edge and direct stormwater to drains.

The City plans to remove a turnaround at the Community Center in order to help improve vehicular circulation.

Irvington Court is presently lined with boulders to prevent cars from driving onto the lawn. The road is too wide in its one-way section, and can be narrowed to reduce impervious pavement and runoff.

Parking

The Park features both formal and informal parking areas. Formal parking tends to be striped spaces on paving, and for the most part, informal parking on gravel characterizes areas that serve the sports leagues. There are about 268 standard formal parking spaces and 8 accessible spaces dedicated for visitors. We estimate a total of 45 informal parking -spaces within the Park.

Formal parking spaces are located within the former wading pond lot, along Brooklawn Avenue, and near the future Nature Center. There is informal parking to the north at the edge of the woodland and baseball fields, and to the south off Irvington Court.

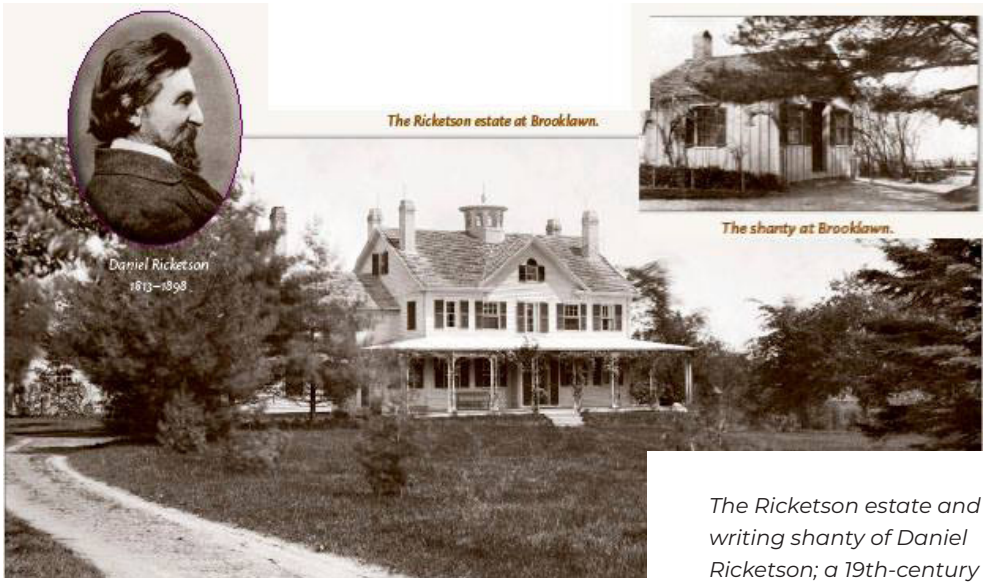
Although additional parking spaces would benefit the park's active uses, for most of the year formal parking within the Park is adequate. During the summer baseball leagues, however, parking appears to be insufficient; visitors tend to use informal parking closer to activities rather than using the closest formal lot. Accessed from the main entrance at Acushnet Avenue, this unusual parking area (a former wading pool) behind the Community Center is located in a sunken area, which is hard to find, underutilized, and inaccessible from the Park's central and popular spots. From this lot, visitors must access the heart of the Park via a concrete stair, which ascends 10 to 12 feet and—despite its steep and abrupt grade change—does not connect to any paved paths. Nearby, at the end of the Acushnet Avenue entrance road, a few spaces are dedicated for the Community Center, tennis courts, and playground.

There are 124 angle parking spaces located along Brooklawn Street. The spaces are oversized and lack ample pedestrian connections to the Park; despite the excessive pavement in this area, there is no public sidewalk. Increased seasonal parking needs and the one-way nature of both Brooklawn Avenue and Irvington Street combine to move overflow parking into residential neighborhoods. Paved angled parking along Irvington Court (located in front of the future Nature Center) appears adequate.

The informal parking is concentrated in two locations during peak baseball season. A gravel lot along Brooklawn Avenue behind a concession stand is unkempt and disorganized; cars parking in this area contribute to soil compaction, compromising root systems of adjacent mature shade trees. Overflow parking also occurs at the baseball fields at Irvington Court in a gravel lot, and in a third location, a grassy spot near the exit to Irvington Street. Here, timber guardrails prevent cars from trespassing onto former bowling greens (behind the Nature Center location).

Cultural Resources

The Park features cultural relics from the Ricketson estate, including the foundation of the former writing shanty, which has served as a focus for interpreting the site. Although the house was demolished in the 1970s, its foundation is probably under one of the tennis court parking lots, but more study is required to confirm the location. Between the playground and Irvington Court, there is a War Memorial, clearly marked and reached by a paved path. These artifacts are important to the story of the Park, and should be stewarded and improved for the sake of public education.



The Ricketson estate and writing shanty of Daniel Ricketson; a 19th-century lawyer, philanthropist, poet, author, benefactor, and abolitionist. Henry David Thoreau and Ralph Waldo Emerson were among Ricketson's friends who visited his writing shanty.

EXISTING LAWN

APPROXIMATE LOCATION OF HISTORIC WRITER'S SHANTY

APPROXIMATE LOCATION OF HISTORIC RICKETSON HOUSE FOUNDATION

EXISTING WAR MEMORIAL

LEGEND

- EX. PEDESTRIAN PATH
- EX. WIDE PEDESTRIAN PATH
- EX. TRAIL
- EX. ROAD
- EX. PARKING
- EX. WETLANDS
- EX. POND
- EX. CHANNEL
- EX. IMPERVIOUS SURFACE
- EX. RECREATIONAL FIELDS
- EX. WOODLANDS
- EX. CULTURAL RESOURCES
- EX. PLAYGROUND

CITY OF NEW BEDFORD

EXISTING CONDITIONS PLAN

BROOKLAWN PARK

NEW BEDFORD, MA

JULY 27, 2020

GRAPHIC SCALE IN FEET

0' 100' 200'

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RAY DUNETZ LANDSCAPE ARCHITECTURE

RECOMMENDATIONS

Green infrastructure lies at the heart of this master plan proposal. Shown here are example of green infrastructure envisioned for the park. Upper left is a wetland meadow and upper right is a bio swale. The bottom images show a boardwalk to the left and a constructed wetland to the right.

RECOMMENDATIONS

Pedestrian Circulation

The Master Plan proposes a continuous pathway throughout the Park, a circuit designed to improve the current disconnected nature of the present system. Improved pedestrian connections to new and existing parking areas have been planned to be accessible, durable, and to reduce the amount of stormwater runoff. Visitors will be able to traverse the park from east to west while experiencing increased options for exercise routines and variation of routes. Plans to narrow overly wide paths and reduce impervious surfaces will help improve stormwater runoff issues. Pedestrian circulation will also be bolstered through improving safe access from parking lots and developing gently sloping paths that serve ADA guidelines.

Narrowing the ad hoc paths (formerly roads) originating from Acushnet Avenue and Ashley Boulevard will not only tailor them to pedestrian-only use, the reduced pavement will help reduce runoff.

Throughout the site, manmade wetlands have been designed to accommodate water during the wetter months, as well as storm events; we have proposed new paths and boardwalks to connect with these constructed ecologies, opportunities for more direct experiences with the natural habitat. And a proposed overlook in the wet meadow provides yet another vantage for visitors to pause and observe the Park landscape.

Just north of the new Nature Center, a proposed wooded picnic area provides a shaded place for families and small groups to gather after sporting events or on special occasions. While this Master Plan does not provide means and methods to improve the existing woodland trail network, access to the trails will be improved. A mown path within a new meadow at Ashley Boulevard and Brooklawn Avenue will connect and open with an area that has been inaccessible to visitors.

As part of improving pedestrian circulation, the sidewalk along Irvington Street should be replaced to better connect neighborhoods south of the Park. To this end, the Plan proposes a new, mown trail from the corner of Irvington and Ashley to the woodland path system.

Materials for any proposed and renovated paths should be evaluated for qualities as water permeability, accessibility, and maintenance requirements.

Vehicular Circulation

Entrances

The Master Plan envisions a single one-way point of vehicular entry at Acushnet Avenue that exits at Brooklawn Avenue. This new main entrance provides drivers clear, safe circulation and emergency access to the Community Center, playground, tennis courts, and sports fields. And converting this to a one-way drive reduces the need to introduce traffic signals at this intersection.

In addition, clearer directional and identification signage will promote a sense of arrival for visitors driving in from Acushnet Avenue. The secondary entrances from Irvington and Brooklawn Streets will be less formal, but should nevertheless present signage consi stent with the main entrance.

Roads

Circulation on the peripheral roads around the Park with the goal of improving access and egress will require further study beyond this master plan. The goal of this proposed study, not addressed in this report, is to improve the vehicular circulation around the Park while preventing overflow parking in the neighborhoods.

To provide better access to the Community Center, playground courts and athletic fields, a new 12-foot-wide one-way drive is proposed off of Acushnet Avenue, just north of Duck Pond. Granite curbing will protect adjacent lawns from snowplow damage and direct runoff to roadside rain gardens, which will help address stormwater issues. The new drive off Acushnet will also feature a drop-off area at the Community Center, for vans and shuttles, to allow safer entry into the building. And, a new lot nearby will better accommodate cars at a more suitable elevation.

Narrowing the one-way section of Irvington Court will improve stormwater runoff while safely accommodating passenger cars and emergency vehicles. Introduced wetland gardens along the roadway are designed to capture and filter stormwater runoff from the paved surface. Due to its gentle slopes, curbing is not necessary along Irvington Court.

Parking

The Master Plan proposes improvements to the formal parking areas and elimination of the informal spaces related to the sports leagues.

Because the parking along Brooklawn Avenue is overly wide and inefficient, the Plan proposes an improved layout, to include a new and safer sidewalk for pedestrians, and introduction of rain gardens to accommodate and treat street runoff water.

When the existing large parking lot at the former wading pond is filled and raised to a better elevation along the proposed roadway and Park access is improved, this lot should become easier to find—and use. Drainage will be improved by implementing green infrastructure strategies and devices, including rain gardens and tree-box filters.

Drainage and Hydrology

One of the Master Plan's goals is to reduce stormwater runoff by 20 percent. This can be accomplished by reducing impervious paving, improving drainage, and creating green infrastructure, such as rain gardens, green roofs, and constructed wetlands.

New channels are proposed throughout Brooklawn Park to guide runoff to constructed wetlands. The stone paved floor of the existing stone channel that presently drains into Duck Pond should be replaced with a natural stone basin over gravel base. This will help slow the flow of water, thereby improving absorption into the ground and mitigating erosion to existing paving as well as the verges of Duck Pond. The Pond should be engineered to improve overflow and prevent erosion.

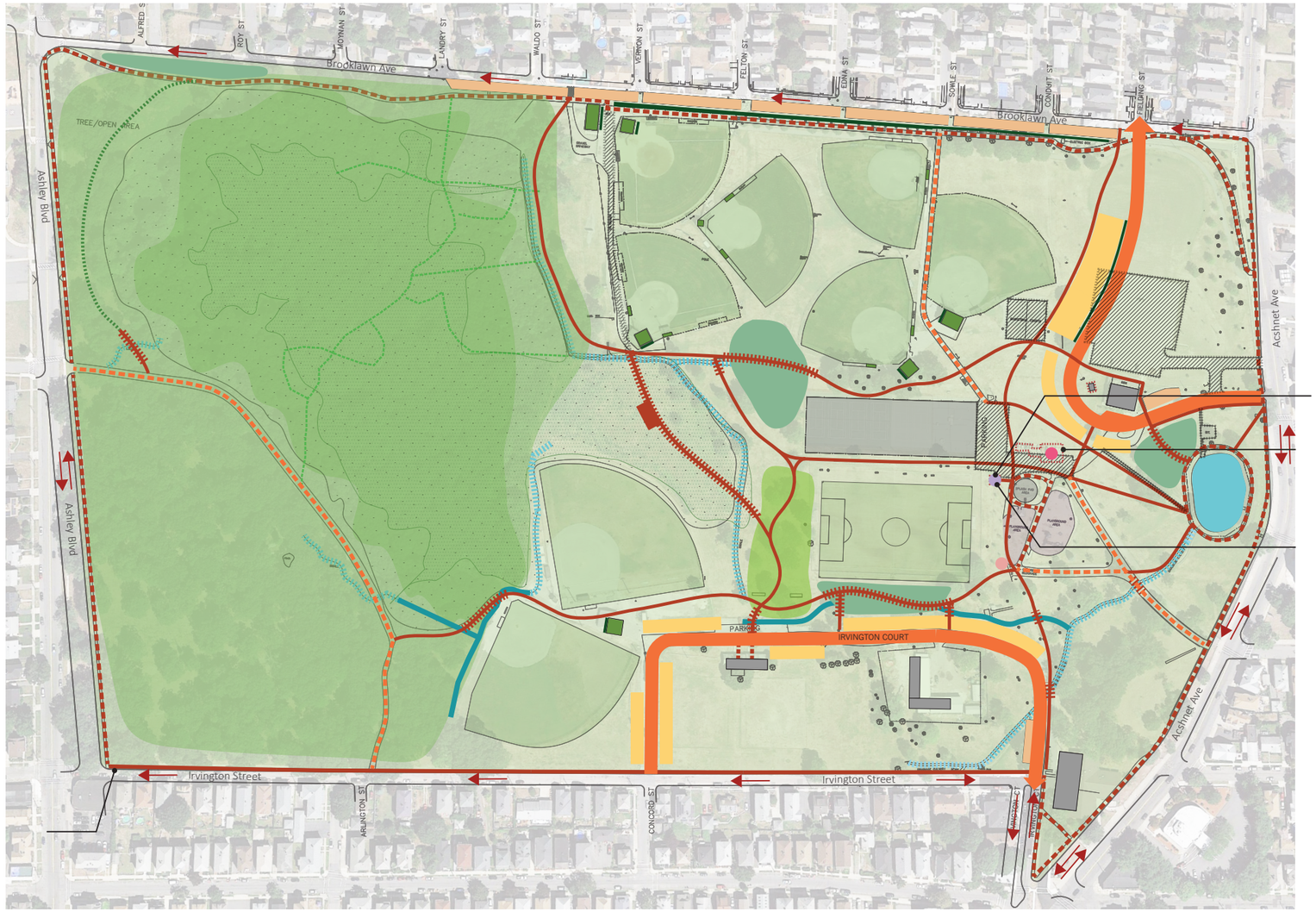
Although existing baseball infields are porous, they are easily eroded and carry sediment downstream. The Master Plan proposes replacing the infield mix with turf, which is more stable and naturally slows overland flow. New underdrainage installed below the turf will also assist in draining groundwater.

Vegetation

Beautiful constructed wetlands will act as basins to retain and ecologically filter runoff before it infiltrates into the ground or overflows into the existing piped drainage infrastructure in the Park. New rain gardens positioned along roadways and structures will function in a similar manner. Green roofs will provide absorptive medium to lower stormwater runoff. Native vegetation should be planted along existing, man-made drainage channels to buffer their engineered appearance and slow stormwater runoff.

Cultural Resources

The Ricketson House site should become a focal point for visitors along the new entrance drive past the Community Center. A granite outline of the foundation and interpretive signage can describe the history of the house and its original owner, Daniel Ricketson. The writing shanty foundation should be stabilized. The existing War Memorial should be relocated to a more central location to be closer to other architectural elements and create a cultural core within the Park.



APPROXIMATE LOCATION OF HISTORIC WRITER'S SHANTY

APPROXIMATE LOCATION OF HISTORIC RICKETSON HOUSE FOUNDATION

RELOCATED MEMORIAL

REPLACE CITY SIDEWALK ALONG IRVINGTON STREET

LEGEND

EXISTING CONDITIONS

- EX. PEDESTRIAN PATH TO REMAIN
- NARROW EX. PEDESTRIAN PATH
- EX. TRAIL
- EX. VEHICULAR CIRCULATION TO REMAIN
- EX. PARKING TO REMAIN
- EX. WETLANDS
- EX. IMPERVIOUS TO REMOVE
- EX. POND
- EX. CHANNEL
- EX. IMPERVIOUS SURFACE
- EX. FIELDS W/ UNDERDRAINAGE
- EX. WOODLAND
- EX. PLAYGROUND
- LOCATION OF FORMER SHANTY
- LOCATION OF FORMER RICKETSON HOUSE FOUNDATION

PROPOSED IMPROVEMENTS

- NEW NO MOW AREA
- NEW ROAD
- NEW PERVIOUS PATHS
- NEW PAVED PARKING
- NEW WETLANDS
- NEW GREEN INFRASTRUCTURE
- NEW DRAINAGE CHANNEL
- NEW MOWN PATH
- NEW BOARDWALK
- NEW OVERLOOK
- NEW PICNIC AREA
- NEW LOCATION FOR WAR MEMORIAL

CITY OF NEW BEDFORD

CIRCULATION MASTER PLAN

BROOKLAWN PARK

NEW BEDFORD, MA

JULY 27, 2020

GRAPHIC SCALE IN FEET

0' 100' 200'

N

RAY DUNETZ LANDSCAPE ARCHITECTURE

COST ESTIMATES

LEGEND

- PHASE 1
- PHASE 2
- PHASE 3
- PHASE 4
- PHASE 5
- PHASE 6
- PHASE 7
- PHASE 8
- PHASE 9
- PHASE 10
- PHASE 11

Phasing the improvements allows the City to secure capital in increments, identifying the improvements of greatest priority to fund first.

BUDGET

The following are summary budget projections for the Circulation and Drainage Master Plan for Brooklawn Park. The Implementation of the Master Plan recommendations has been apportioned into eleven phases. This section includes itemized budgets for each phase. Please note that these budgets are schematic and are to be used for fund raising purposes only.

Summary of Phases

Phase 1 ..... $1,072,672
Wetland and boardwalk at new entry. New paths and new entry signange.

Phase 2 ..... $107,818
New east west connector path.

Phase 3 ..... $746,698
Existing path width reduction. New mown path through woodland. New boardwalk over channel. New Wetland.

Phase 4 ..... $1,168,504
New boardwalk and overlook over existing wet meadow. New picnic area with shade trees, paths and picnic tables.

Phase 5 ..... $188,404
Existing path width reduction, new paths and relocation of existing war memorial.

Phase 6 ..... $197,298
Reduced paving at parking along Brooklawn Ave. New bio-swale. New rain gardens at structures, new east west path.

Phase 7 ..... $2,250,970
New constructed wetland with boardwalk.

Phase 8 ..... $2,181,506
New parking, new path, new channels, new constructed wetland with boardwalk.

Phase 9 ..... $891,172
New entry drive, new parking, new paths, new shade trees.

Phase 10 ..... $891,172
New parking with bio swale, new path.

Phase 11 ..... N.I.C.
New underdrainage at fields.

ITEM	QTY	UNIT	UNIT PRICE	SUBTOTAL	TOTAL
Site Preparation					
Erosion control	1	ALLOW	$ 500	$ 500	
					$ 500
Earthwork					
Rough grading (wetlands, channels, paths, parking, roac	1	ALLOW	$ 3,000	$ 3,000	
					$ 3,000
Paving and Surfacing					
New boardwalks (6' width)	600	SF	$ 125	$ 75,000	
New bit. conc. walks (5' width)	100	LF	$ 25	$ 2,500	
					$ 77,500
Site Improvements					
Signage and wayfinding	1	LS	$ 20,000	$ 20,000	
					$ 20,000
Lawns and Planting					
Replicated wetland	12,700	SF	$ 50	$ 635,000	
					$ 635,000
			Subtotal		$ 736,000
			General Cond, O and P 20%		$ 147,200
			Subtotal		$ 883,200
			Contingency 10%		$ 88,320
			Subtotal		$ 971,520
			Soft Costs 10%		$ 97,152
			Subtotal		$ 1,068,672
			Permitting		$ 4,000
			Grand Total		$ 1,072,672

BROOKLAWN PARK Master Plan — Cost Estimate I PHASE 2

ITEM	QTY	UNIT	UNIT PRICE	SUBTOTAL	TOTAL
Site Preparation					
Erosion control	1	ALLOW	$ 500	$ 500	
					$ 500
Earthwork					
Rough grading (wetlands, channels, paths)	1	ALLOW	$ 1,000	$ 1,000	
					$ 1,000
Paving and Surfacing					
New boardwalks (6' width)	240	SF	$ 125	$ 30,000	
New bit. conc. walks (5' width)	1,600	LF	$ 25	$ 40,000	
					$ 70,000
			Subtotal		$ 71,500
			General Cond, O and P 20%		$ 14,300
			Subtotal		$ 85,800
			Contingency 10%		$ 8,580
			Subtotal		$ 94,380
			Soft Costs 10%		$ 9,438
			Subtotal		$ 103,818
			Permitting		$ 4,000
			Grand Total		$ 107,818

ITEM	QTY	UNIT	UNIT PRICE	SUBTOTAL	TOTAL
Site Preparation					
Selective land clearing (new path in woodland)	1	ALLOW	9,000	$ 9,000	
Erosion control	1	ALLOW	$ 3,000	$ 3,000	
Pavement removal	1,000	SF	$ 2.00	$ 2,000	
					$ 14,000
Earthwork					
Fill	1	ALLOW	$ 12,000	$ 12,000	
Rough grading (wetlands, channels, paths, parking)	1	ALLOW	$ 5,000	$ 5,000	
					$ 17,000
Paving and Surfacing					
New mown path	1,000	SF	$ 3	$ 3,000	
New boardwalks (6' width)	920	SF	$ 125	$ 115,000	
New bit. conc. sidewalk (5' width) along Irvington St.	1,500	LF	$ 25	$ 37,500	
					$ 155,500
Lawns and Planting					
Replicated wetland	6,500	SF	$ 50	$ 325,000	
					$ 325,000
				Subtotal	$ 511,500
				General Cond, O and P 20%	$ 102,300
				Subtotal	$ 613,800
				Contingency 10%	$ 61,380
				Subtotal	$ 675,180
				Soft Costs 10%	$ 67,518
				Subtotal	$ 742,698
				Permitting	$ 4,000
				Grand Total	$ 746,698

ITEM	QTY	UNIT	UNIT PRICE	SUBTOTAL	TOTAL
Site Preparation					
Erosion control	1	ALLOW	$ 1,000	$ 1,000	
					$ 1,000
Earthwork					
Fill	1	ALLOW	$ 1,000	$ 1,000	
Rough grading (paths)	1	ALLOW	$ 1,000	$ 1,000	
					$ 2,000
Paving and Surfacing					
New boardwalks and platform	5,500	SF	$ 125	$ 687,500	
New bit. conc. walks (5' width)	420	LF	$ 25	$ 10,500	
					$ 698,000
Site Improvements					
Picnic tables	8	LS	$ 3,000	$ 24,000	
					$ 24,000
Lawns and Planting					
Shade trees at picnic area	60	EA	$ 1,200	$ 72,000	
New lawn	1	ALLOW	$ 5,000	$ 5,000	
					$ 77,000
			Subtotal		$ 802,000
			General Cond, O and P 20%		$ 160,400
			Subtotal		$ 962,400
			Contingency 10%		$ 96,240
			Subtotal		$ 1,058,640
			Soft Costs 10%		$ 105,864
			Subtotal		$ 1,164,504
			Permitting		$ 4,000
			Grand Total		$ 1,168,504

ITEM	QTY	UNIT	UNIT PRICE	SUBTOTAL	TOTAL
Site Preparation					
Erosion control	1	ALLOW	$ 750	$ 750	
Pavement removal	7,000	SF	$ 2	$ 14,000	
					$ 14,750
Earthwork					
Rough grading (channels, paths)	1	ALLOW	$ 5,000	$ 5,000	
					$ 5,000
Paving and Surfacing					
New boardwalks (6' width)	500	SF	$ 125	$ 62,500	
New bit. conc. walks (5' width)	850	LF	$ 25	$ 21,250	
					$ 83,750
Site Improvements					
Relocated war memorial	1	LS	$ 1,500	$ 1,500	
					$ 1,500
Drainage					
New channels	440	LF	$ 50	$ 22,000	
					$ 22,000
				Subtotal	$ 127,000
				General Cond, O and P 20%	$ 25,400
				Subtotal	$ 152,400
				Contingency 10%	$ 15,240
				Subtotal	$ 167,640
				Soft Costs 10%	$ 16,764
				Subtotal	$ 184,404
				Permitting	$ 4,000
				Grand Total	$ 188,404

BROOKLAWN PARK Master Plan — Cost Estimate I PHASE 6

ITEM	QTY	UNIT	UNIT PRICE	SUBTOTAL	TOTAL
Site Preparation					
Erosion control	1	ALLOW	$ 3,000	$ 3,000	
Pavement removal	3,000	SF	$ 2.00	$ 6,000	
					$ 9,000
Earthwork					
Rough grading (bioswale)	1	ALLOW	$ 5,000	$ 5,000	
					$ 5,000
Paving and Surfacing					
New bit. conc. walks (5' width)	525	LF	$ 25	$ 13,125	
					$ 13,125
Lawns and Planting					
Shade trees at parking	15	EA	$ 1,200	$ 18,000	
Rain gardens	1,200	SF	$ 40	$ 48,000	
Bio swale	1,000	LF	$ 40	$ 40,000	
					$ 106,000
			Subtotal		$ 133,125
			General Cond, O and P 20%		$ 26,625
			Subtotal		$ 159,750
			Contingency 10%		$ 15,975
			Subtotal		$ 175,725
			Soft Costs 10%		$ 17,573
			Subtotal		$ 193,298
			Permitting		$ 4,000
			Grand Total		$ 197,298

ITEM	QTY	UNIT	UNIT PRICE	SUBTOTAL	TOTAL
Site Preparation					
Erosion control	1	ALLOW	$ 3,000	$ 3,000	
					$ 3,000
Earthwork					
Fill	1	ALLOW	$ 1,000	$ 1,000	
Rough grading (wetlands)	1	ALLOW	$ 6,000	$ 6,000	
					$ 7,000
Paving and Surfacing					
New boardwalks (6' width)	1,500	SF	$ 125	$ 187,500	
					$ 187,500
Lawns and Planting					
Replicated wetland	27,000	SF	$ 50	$ 1,350,000	
					$ 1,350,000
				Subtotal	$ 1,547,500
				General Cond, O and P 20%	$ 309,500
				Subtotal	$ 1,857,000
				Contingency 10%	$ 185,700
				Subtotal	$ 2,042,700
				Soft Costs 10%	$ 204,270
				Subtotal	$ 2,246,970
				Permitting	$ 4,000
				Grand Total	$ 2,250,970

BROOKLAWN PARK Master Plan — Cost Estimate I PHASE 8

ITEM	QTY	UNIT	UNIT PRICE	SUBTOTAL	TOTAL
Site Preparation					
Erosion control	1	ALLOW	$ 3,000	$ 3,000	
Pavement removal	2,000	SF	$ 2	$ 4,000	
					$ 7,000
Earthwork					
Fill	1	ALLOW	$ 12,000	$ 12,000	
Rough grading (wetlands, parking)	1	ALLOW	$ 5,000	$ 5,000	
					$ 17,000
Paving and Surfacing					
New bit. conc. paving (parking)	26,000	SF	$ 6	$ 156,000	
New boardwalks (6' width)	3,900	SF	$ 125	$ 487,500	
New bit. conc. walks (5' width)	1,000	LF	$ 25	$ 25,000	
					$ 668,500
Lawns and Planting					
Replicated wetland	15,000	SF	$ 50	$ 750,000	
Rain gardens	179	LF	$ 40	$ 7,160	
					$ 757,160
Drainage					
New channels	1,000	LF	50	$ 50,000	
					$ 50,000
				Subtotal	$ 1,499,660
				General Cond, O and P 20%	$ 299,932
				Subtotal	$ 1,799,592
				Contingency 10%	$ 179,959
				Subtotal	$ 1,979,551
				Soft Costs 10%	$ 197,955
				Subtotal	$ 2,177,506
				Permitting	$ 4,000
				Grand Total	$ 2,181,506

ITEM	QTY	UNIT	UNIT PRICE	SUBTOTAL	TOTAL
Site Preparation					
Erosion control	1	ALLOW	$ 3,000	$ 3,000	
Pavement removal	121,000	SF	$ 2	$ 242,000	
					$ 245,000
Earthwork					
Fill	1	ALLOW	$ 80,000	$ 80,000	
Rough grading (wetlands, channels, paths, parking)	1	ALLOW	$ 17,000	$ 17,000	
					$ 97,000
Paving and Surfacing					
New bit. conc. paving (road)	25,000	SF	$ 6	$ 150,000	
New bit. conc. paving (parking)	9,000	SF	$ 6	$ 54,000	
New bit. conc. walks (5' width)	2,600	LF	$ 25	$ 65,000	
					$ 269,000
				Subtotal	$ 611,000
				General Cond, O and P 20%	$ 122,200
				Subtotal	$ 733,200
				Contingency 10%	$ 73,320
				Subtotal	$ 806,520
				Soft Costs 10%	$ 80,652
				Subtotal	$ 887,172
				Permitting	$ 4,000
				Grand Total	$ 891,172

BROOKLAWN PARK Master Plan — Cost Estimate I PHASE 10

ITEM	QTY	UNIT	UNIT PRICE	SUBTOTAL	TOTAL
Site Preparation					
Erosion control	1	ALLOW	$ 1,000	$ 1,000	
Pavement removal	7,000	SF	$ 2	$ 14,000	
					$ 15,000
Earthwork					
Fill	1	ALLOW	$ 16,000	$ 16,000	
Rough grading (wetlands, channels, paths, parking)	1	ALLOW	$ 5,000	$ 5,000	
					$ 21,000
Paving and Surfacing					
New bit. conc. paving (parking)	15,000	SF	$ 6	$ 90,000	
New bit. conc. walks (5' width)	6,500	LF	$ 25	$ 162,500	
					$ 252,500
Site Improvements					
Signage and wayfinding	1	LS	$ 20,000	$ 20,000	
					$ 20,000
Lawns and Planting					
Street trees at roads	90	EA	$ 1,200	$ 108,000	
Bio swale	280	LF	$ 40	$ 11,200	
					$ 119,200
			Subtotal		$ 427,700
			General Cond, O and P 20%		$ 85,540
			Subtotal		$ 513,240
			Contingency 10%		$ 51,324
			Subtotal		$ 564,564
			Soft Costs 10%		$ 56,456
			Subtotal		$ 621,020
			Permitting		$ 4,000
			Grand Total		$ 625,020

ITEM	QTY	UNIT	UNIT PRICE	SUBTOTAL	TOTAL
Drainage					
New underdrainage at fields	390,000	SF	$ 2	$ 780,000	
New green roofs	1	ALLOW	$ 75,000	$ 75,000	
					$ 855,000
				Subtotal	$ 855,000
				General Cond, O and P 20%	$ 171,000
				Subtotal	$ 1,026,000
				Contingency 10%	$ 102,600
				Subtotal	$ 1,128,600
				Soft Costs 10%	$ 112,860
				Subtotal	$ 1,241,460
				Permitting	$ 4,000
				Grand Total	$ 1,245,460

MAINTENANCE RECOMMENDATIONS

MAINTENANCE RECOMMENDATIONS

For improved performance of the various water features and hydrological systems of the Park, along with planned improvements several maintenance recommendations are proposed:

Mown Paths

Along Ashley Boulevard and Brooklawn Avenue, turf should be allowed to grow and develop into a meadow landscape. A 6-foot-wide mown path should be maintained, per the Plan, to connect the sidewalk along Brooklawn to the new woodland path (formerly a paved road).

Athletic Fields

Fertilizing the turf fields is prohibited by the City of New Bedford and is detrimental to the regional watershed. Athletic leagues should be notified of the regulation and cease this practice. Further investigation is required to determine if the sports leagues are irrigating the fields, but due to the wet nature of the turf, this practice should also be eliminated.

Green Infrastructure

Constructed wetlands and vegetation in rain gardens can be mowed once a year to prohibit woody invasive plants from proliferating. Overflow drains should be cleaned annually.

Snow Removal

Paths should be plowed and sanded. De-icing salts and snowmelt applications are not recommended.

Tree Assessment

Trees should be evaluated on an annual basis for structural stability and general health. Trees showing decay should be pruned or removed to protect public safety and help maintain a healthy Park canopy. The Park canopy should be maintained by introducing appropriate native replacement trees. Consideration can be given to keeping decaying trees in remote wooded areas, to serve as important habitat to wildlife.

Maintenance Calendar

The following schedule is a summary of maintenance requirements intended to be used as a general guideline for the annual landscape maintenance needed throughout Brooklawn Park. Not included in this summary is the maintenance required for the recreational fields managed by sports league. The City should clarify with the league that fertilizers can damage rivers and bays and should be approved by the City prior to their application. Additionally, the City should confirm the irrigation of these fields, to reduce and minimize water run off.

JANUARY FEBRUARY MARCH

- If removing snow on any drives, parking areas, trail entrance, trail surface, minimize (or eliminate altogether) the use of salt.
- Keep trails, boardwalks, overlooks and canals free of obstacles, brush and vegetation.

APRIL

- Inspect Brooklawn trails for damage that may have occurred over the winter.
- Inspect all structural features; overlooks, boardwalks and canals for any damage that may have occurred over the winter. Repair any rails, posts, boardwalks as required.
- Remove leaves and debris along pathways and along edges of overlooks, boardwalks, and canals.
- Inspect all paths for signs of improper drainage or resettlement. Address any drainage issues with providing positive drainage and seeding, replanting as needed.
- Inspect all elements of green infrastructure for signs of improper drainage, ensure areas are free of debris.

MAY

- Inspect trees for damage that may have occurred over the winter and note any needs for pruning and removals.
- Inspect shrubs and prune new growth.
- Keep trails, boardwalks, overlooks and canals free of obstacles, brush and vegetation.

JUNE

- Conduct pruning of lower limbs of shade trees and any tree removal needed.
- Keep trails, boardwalks, overlooks and canals free of obstacles, brush and vegetation.

JULY AUGUST

- Keep trails, boardwalks, overlooks and canals free of obstacles, brush and vegetation.

SEPTEMBER OCTOBER

- Fertilize plantings.
- Inspect all trails for damage that may have occurred over the summer.
- Inspect all structural features; overlooks, boardwalks, and canals for any damage that may have occurred over the summer. Repair any rails, posts, boardwalks as required.
- Inspect all paths for signs of improper drainage or resettlement. Address any drainage issues with providing positive drainage and seeding, replanting as needed.

NOVEMBER DECEMBER

- If removing snow on any trail entrance, trail surface, minimize (or eliminate altogether) the use of salt.
- Keep trails, boardwalks, overlooks and canals free of obstacles, brush and vegetation.


Green Infrastructure
Demonstration Garden
Approximate Location
Children's Paradise
Brooklawn Ave
Brooklawn St
Whaling City Youth Baseball League
Daniel Ricketson Nature Trail
Bay State Girls Softball
Brooklawn Park Farmers' Market
Brooklawn Skateboard Park
Brooklawn Park
Brooklawn Playground
Sylvia St
Brooklawn Ct
Cumberland Farms
Acushnet Ave
Howard Ave
Galley Motor Works
Perry St
Shear Sensations
Ingraham St
St. Joseph & St. Therese Parish
Duncan St
Kearsarge St
N B Auto Repair
Wilks Public Library
Hadley St
Bank of America (with Drive-thru ATM)
Covell St
Legends Sports Pub
Carlisle St
Milford St
Rochambeau St
Brook
Ashley Blvd
Brooklawn Dental Health Center
Irvington St
Greater New Bedford Pony-Colt...
Brooklawn Park Splash Pad
Concord St
Arlington St
Princeton St
Irvington Ct
Diamond Signs
Sign shop
Pleasant Motors
Used car dealer
Google
Map
Imagery ©2020 MassGIS, Commonwealth of Massachusetts EOEA, Maxar Technologies, USDA Farm Service Agency, Map data ©2020
United States
Terms
Send feedback
200 ft
8:31 AM
11/12/2020

FY21 CPA grant application -- Brooklawn Park Green Infrastructure Demonstration Garden Design

Existing conditions at Brooklawn Park northwest of the duck pond-- Nov 2020

Depressions where ponding occurs is evident even during a drought such as we experienced this summer. Maintenance and use of this area are impacted by the wetness and erosion.

The stormwater collecting and pooling on site is collected from a large area which runs down the entrance drive to the impacted site.

The erosion caused by the stormwater results in ongoing maintenance of the area including the addition of crushed stone on the edge of the entrance drive and the impacted area.