

ESSEX COUNTY

# BRANCH BROOK PARK

ESSEX COUNTY, NEW JERSEY

TREATMENT AND MANAGEMENT PLAN: A VISION FOR THE FUTURE

**VOLUME 6** | CULTURAL LANDSCAPE REPORT

ESSEX COUNTY

# BRANCH BROOK PARK

ESSEX COUNTY, NEW JERSEY

TREATMENT AND MANAGEMENT PLAN: A VISION FOR THE FUTURE

VOLUME 6 | CULTURAL LANDSCAPE REPORT

Prepared for: Branch Brook Park Alliance and the Essex County Department of Parks, Recreation, and Cultural Affairs

# TABLE OF CONTENTS

VOLUME 6 | CULTURAL

CULTURAL
LANDSCAPE
REPORT
TREATMENT AND
MANAGEMENT PLAN: A
VISION FOR THE FUTURE

**THANKS** 

INTRODUCTION

**SUMMARY** 

**OVERVIEW** 

PLANNING FRAMEWORK
The Watercourses – 10
Vegetation – 12

Infrastructure – 16

A FOUNDATION FOR THE FUTURE

Treatment of the Historic Landscape: Philosophy and Guidelines – 21

Overall Park Treatment Plans: The Vision – 26

The Southern Division – 32

The Middle Division – 43

The Northern Division - 48

The Extension – 56

Site Elements & Furnishings – 63

MAINTAINING AND MANAGING THE PARK

Introduction – 77

Leadership, Management and Staff – 78

Maintenance Practices and Tasks – 79

Equipment – 82

Interpreting the Park – 83

BEYOND THE CULTURAL LANDSCAPE REPORT

What the Future Holds – 87

Project Team - 89

#### BRANCH BROOK PARK

#### CULTURAL LANDSCAPE REPORT

**VOLUME 1** EXISTING CONDITIONS

**VOLUME 2** HISTORY OF THE PARK AND CRITICAL PERIODS

OF DEVELOPMENT

VOLUME 3 HYDROLOGY,

INFRASTRUCTURE AND HISTORIC FABRIC

**VOLUME 4** STRUCTURES IN THE

PARK

**VOLUME 5** VEGETATION IN THE

PARK

VOLUME 6 TREATMENT AND

MANAGEMENT PLAN: A VISION FOR THE

FUTURE

**VOLUME 7** PARK WIDE ESTIMATE

OF PROBABLE COST FOR

REHABILITATION

**EXECUTIVE BRANCH BROOK PARK** 

SUMMARY RESTORING THE PARK | RENEWING OUR SPIRIT

# THANKS

BRANCH BROOK PARK ALLIANCE, FORMED
IN 1999, IS THE NON-PROFIT ORGANIZATION
WHOSE VISIONARY LEADERSHIP, IN
PARTNERING WITH THE ESSEX COUNTY, NEW
JERSEY DEPARTMENT OF PARKS, RECREATION
AND CULTURAL AFFAIRS, HAS LED TO THE
LARGEST REHABILITATION EVER OF BRANCH
BROOK PARK.

THIS FINAL VOLUME OF THE CULTURAL LANDSCAPE REPORT FOR BRANCH BROOK PARK WOULD NOT HAVE BEEN POSSIBLE WITHOUT THE PERSEVERANCE AND DEDICATION OF BARBARA BELL COLEMAN AND PATRICIA F. RYAN, CO-CHAIRS OF THE BRANCH BROOK PARK ALLIANCE, THE BOARD OF THE BBPA, AND THE GREAT COMMITMENT AND PASSION OF ESSEX COUNTY EXECUTIVE JOSEPH N. DIVENCENZO, JR. AND PARKS DIRECTOR DANIEL K. SALVANTE.

**JULY 2014** 

#### BRANCH BROOK PARK ALLIANCE

#### CO-CHAIRS

Barbara Bell Coleman Patricia E. Ryan

#### EXECUTIVE VICE CHAIR

Patricia A. Chambers

#### VICE CHAIRS

Patricia L. Capawana Robert Curvin, Ph.D. James P. Lecky Mary Sue Sweeny Price

#### TRUSTEES

Fran Adubato
Philip B. Alagia
Gerald M. Frungilio, Sr.
Ruth C. Lipper
Clement A. Price, Ph.D.
Marla S. Smith
Maria Vizcarrondo

#### TREASURER/SECRETARY

Anthony J. Romano

#### ASSISTANT TREASURER

Marla S. Smith

#### EX-OFFICIO

Hon. Joseph N. DiVincenzo, Jr. County Executive, Essex County, NJ

Hon. Blonnie R. Watson President, At-Large Essex County Board of Chosen Freeholders

Hon. Patricia Sebold Vice President

Essex County Board of Chosen Freeholders

Daniel K. Salvante Director, Essex County

Department of Parks, Recreation & Cultural Affairs

Hon. Cory A. Booker Mayor, City of Newark

#### **EMERITA**

Kathleen P. Galop

#### LEADERSHIP COUNCIL

Special Advisors to the Board Alfred A. Koeppe Arthur F. Ryan Sharon Taylor

### BRANCH BROOK PARK ALLIANCE SUPPORT TEAM

Patricia Jarecke

Development/Compliance Officer

Maureen Stapleton Executive Assistant

Meredith Taylor Special Projects Consultant

#### NEW LIONS OF BRANCH BROOK PARK

Representative Donald M. Payne, Sr.

Hon. Joseph N. DiVencenzo, Jr.

Hon. Peter W. Rodino, Jr.

Clive S. Cummis, Esq.

Stephen N. Adubato, Sr.

Essex County Open Space Trust Fund

Hon. Jon S. Corzine

Raymond G. Chambers

Arthur F. Ryan

Lisa P. Jackson

Prudential Financial

Governor Chris Christie

Hon. Thomas H. Kean



## UNTRODUCTION

AS THE PREMIER PARK IN THE ESSEX COUNTY PARK SYSTEM, THE FIRST COUNTY PARK SYSTEM IN THE UNITED STATES, BRANCH BROOK PARK REPRESENTS A NATIONALLY SIGNIFICANT CULTURAL LANDSCAPE.

THIS PUBLICATION IS VOLUME SIX OF SEVEN **VOLUMES COMPLETING THE CULTURAL LANDSCAPE** REPORT, TREATMENT AND MANAGEMENT PLAN FOR BRANCH BROOK PARK. IT IS THE CULMINATION OF COLLABORATIVE WORK BY BRANCH BROOK PARK ALLIANCE AND THE ESSEX COUNTY DEPARTMENT OF PARKS RECREATION AND CULTURAL AFFAIRS IN THEIR EFFORTS TO RETURN THE PARK TO ITS FORMER BEAUTY AND ITS FUNCTION AS AN ACTIVE AND INCLUSIVE PLACE FOR THE HEALTH AND ENJOYMENT OF ALL THE RESIDENTS OF ESSEX COUNTY AND NEWARK. DURING THE COURSE OF PREPARING THE REPORT, MAJOR RESTORATION AND REHABILITATION, IN ACCORDANCE WITH THE PLANS IN THIS VOLUME, HAS ALREADY BEEN COMPLETED.

BRANCH BROOK PARK, COMPRISING 360 ACRES, IS LISTED ON BOTH THE NEW JERSEY AND THE NATIONAL REGISTER OF HISTORIC PLACES, AND IS A MAJOR WORK OF THE RENOWNED FIRM OF OLMSTED • THE NORTHERN DIVISION BROTHERS LANDSCAPE ARCHITECTURE. ORIGINALLY CONCEIVED IN 1867 BY FREDERICK LAW OLMSTED, SR. AND CALVERT VAUX, FAMED DESIGNERS BRANCH BROOK PARK TODAY RETAINS MUCH OF ITS OF NEW YORK CITY'S CENTRAL PARK, BRANCH BROOK PARK IS AN HISTORIC LANDSCAPE AS WELL AS A VIBRANT MODERN DAY PARK. NATIONALLY KNOWN FOR ITS EXTRAORDINARY COLLECTION OF MORE THAN 4,000 JAPANESE FLOWERING CHERRY TREES, THE LARGEST SUCH COLLECTION IN THE UNITED STATES, THE PARK IS ALSO A CRUCIAL URBAN RECREATION RESOURCE, AND A VITAL PIECE OF THE URBAN FABRIC AND NEIGHBORHOODS OF ESSEX COUNTY AND THE CITY OF NEWARK, NEW JERSEY.

THE PARK HAS FOUR DIVISIONS:

- THE SOUTHERN DIVISION
- THE MIDDLE DIVISION
- THE EXTENSION

ORIGINAL SPATIAL QUALITY AND CHARACTER. WITH ITS CAREFULLY COMPOSED DESIGN OF TRANQUIL OPEN SPACES, WOODLANDS, AND RECREATION AREAS ARRANGED ALONG THE SPINE OF ITS DESIGNED WATERCOURSES, BRANCH BROOK PARK HAS BEEN CELEBRATED IN LITERATURE, ART AND FILM, AND HAS BEEN A BELOVED PART OF ESSEX COUNTY AND THE CITY OF NEWARK FOR OVER 100 YEARS.



# SUMMARY OF THE CULTURAL LANDSCAPE REPORT

#### Branch Brook Park Alliance

Branch Brook Park Alliance (BBPA) was formed in 1999 in an effort to bring people, funding, and abundant enthusiasm together to help restore a landscape work of art, Essex County Branch Brook Park, to its highest standards of use and beauty. This task was to be undertaken in a manner that would be respectful to the historic legacy of the park as both the first County Park in the nation, as well as a park designed by the venerable Olmsted Brothers Firm.

The work was accomplished with the collaboration of the Essex County Department of Parks and Recreation and Cultural Affairs. The support and vision of County Executive, Joseph N. DiVincenzo, Jr. as well as Park's Director Daniel K. Salvante was vital and invaluable. Through the years, BBPA helped not only to guide the design of the restoration, but also raise awareness of the park, its history and contemporary needs, carefully balancing the two.

#### THE CULTURAL LANDSCAPE REPORT

One of the early first steps undertaken by the Alliance was to hire the landscape architecture and planning firm of Rhodeside & Harwell to produce a Cultural Landscape Report in order to provide background as well as direction for the park's future. Existing conditions, history of the park (including determining the Period of Significance which helps to guide any future restoration efforts), infrastructure analysis, a structures report and a vegetation evaluation have all been carefully completed. Taken together, these publications become a blueprint for Branch Brook Park in the twenty-first century. This volume, Treatment and Management Plan: A Vision for the Future, is the final portion of the Cultural Landscape Report to be completed.

As a companion to the reports, a series of Treatment Plans were also created for the park. There are four such plans, one for each of the park's divisions: Southern, Middle, Northern and the Extension. Because the amount of available data collected was enormous, and because Branch Brook Park Alliance wished to regain a realistic understanding of the effort to rehabilitate this significant landscape work of art, the Report was divided into multiple volumes. In addition,

due to pressure to supply growing needs for recreation in the region, improvements needed to be made as quickly as possible. Projects began while the Cultural Landscape Report was in process. The Treatment Plans were very useful in helping to determine scope of work and sequencing of projects before they were begun, as well as a documentation and fund-raising tool illustrating projects that have already been completed, and how they fit into the larger picture.

#### SUMMARY OF BBPA PARK PROJECTS

#### Music Court and Prudential Lions

A complete restoration of this key component of the Southern Division was completed in 2011 which included new paving, decorative benches, lights, drainage improvements and a replanting of the historic grove of trees. The balustrade at the water's edge was restored. The comfort stations, or Pavilions, were also renovated, with one serving as a restroom building and the other as a community meeting space. Trellises, reminiscent of the historic trellises at this location, complete

#### PARK MILESTONES

- Extension Road Surfacing
- Tennis Courts Colorcoat Resurfacing
- Clemente Field Improvements

#### 2001

- Southern Division Playground
- Boat House and Roadway Improvements

#### 2003

Southern Division Lake Edge

#### 2004

- Cultural Landscape Report
- Southern Division Perimeter Fence
- Park Avenue Bridge Phase IVision Plan for the Park
- 2005
- Park Avenue Bridge Phase II
- 2006
- Middle Division Ballfields and Remediation:
   Stephen N. Adubato, Sr. Sports Complex
- Fence and Lighting at Park Avenue Pedestrian Bridge

#### 2007

• Extension Ballfields

#### 2008

- Cherry Blossom Visitor Center Improvements
- Octagon Shelter Reconstruction
- Waterway Rehabilitation Study

#### 2009

- Bloomfield Avenue Bridge
- HS Football/Soccer Field

#### 2010

- Extension Road, Path Resurfacing Road and Parking Lot Lights
- Road Paving: Mill Street to Washington Avenue
- Cherry Tree Collection Restoration

#### 2011

- Music Court Site Work
- Music Court Pavilions
- Octagon Field House Restoration
- Lions Sculptures and Balustrade Restoration
- Kiyofumi Sakaguchi Memorial Grove
- Northern Division Woodland Management
- Clifton Avenue Restrooms Rehabilitation

- Althea Gibson Tennis Center
- Care of Swamp White Oak and other Legacy Trees
- Parkwide Signage and Interpretation
- Lopez Little League Baseball Field
- Road Paving
- Statues of Althea Gibson and Roberto Clemente
- Riparian Buffer Pilot Project

#### 2013/2014

- Clifton Avenue Entrance
- Clifton Avenue Roadway and Ornamental Road Lighting
- Concourse Hill Welcome Pavilion
- Parking Lot Resurfacing
- Basketball Court Improvements
- Lenape Trail Two-Mile Walking Path
- Supplemental Well
- Reservoir Stabilization and Interpretation
- Urban Farm Infrastructure Improvements and
- Conversion of Second Greenhouse to Hydroponic System
- Patricia A. Chambers Cherry Tree Grove
- Children's Garden at Cherry Blossom Center

with faux bois columns fabricated to resemble the original rustic tree trunk columns, were built around the pavilions.

The Prudential Lions sculptures, which perched at the edge of the Music Court, were removed from their post in order to be restored. However, due to the amount of deterioration that the sculptures had experienced, cast stone replicas were instead installed; the original sculptures were meticulously restored and now sit at the entrance to Essex County's Hall of Records.

#### KIYO GROVE

Completing the cluster of projects along the western edge of the Southern Division Lake is the Kiyofumi Sakaguchi Memorial Cherry Tree Grove. Dedicated to Kiyofumi Sakaguchi of Prudential, a long-term park benefactor, the existing grove of cherry trees was supplemented with a lush understory and riparian buffer planting of over 15,000 new low-maintenance plants which beautifully stabilize the water's edge, improve water quality, and nurture the cherry trees. The visitor experience is enhanced with new bluestone pathways, historically appropriate lighting, seating areas, and overlook, and two memorials to Kiyo.

#### Concourse Hill

The Olmsted plan for Concourse Hill was never implemented and has been recreated today as an adaptation of the firm's circa 1920 plan. The historic sketches of this area show structures and geometric gardens, which became the ideal place for a Welcome Center. The design includes the open, central pavilion with benches for classroom events and informational signage, demonstration gardens of native and ornamental plantings interpreting the various ecological zones found in Essex County Parks; and an open turf area for small events. The Clifton Avenue entrances leading up to Concourse Hill were also improved with the installation of a grand staircase, low retaining wall, and a diverse mass of shrub planting. Visitors to Concourse Hill Welcome Center will not only learn about Branch Brook Park but have the opportunity to be introduced to special points of interest throughout the County Park System.

#### LAKE EDGE PLANTING

Long-choked with invasive vegetation and burdened with unsustainably-engineered shorelines, the southern end of Branch Brook Lake was rehabilitated in 2003. This environmental restoration included the removal of invasive plants, helped to stabilize the lake edges and buoyed a diverse bird habitat within the confines of the city of Newark. In addition, a robust and varied planting plan was designed and implemented, developed from historic Olmsted firm planting plans.

#### QUARRY PLAYGROUND

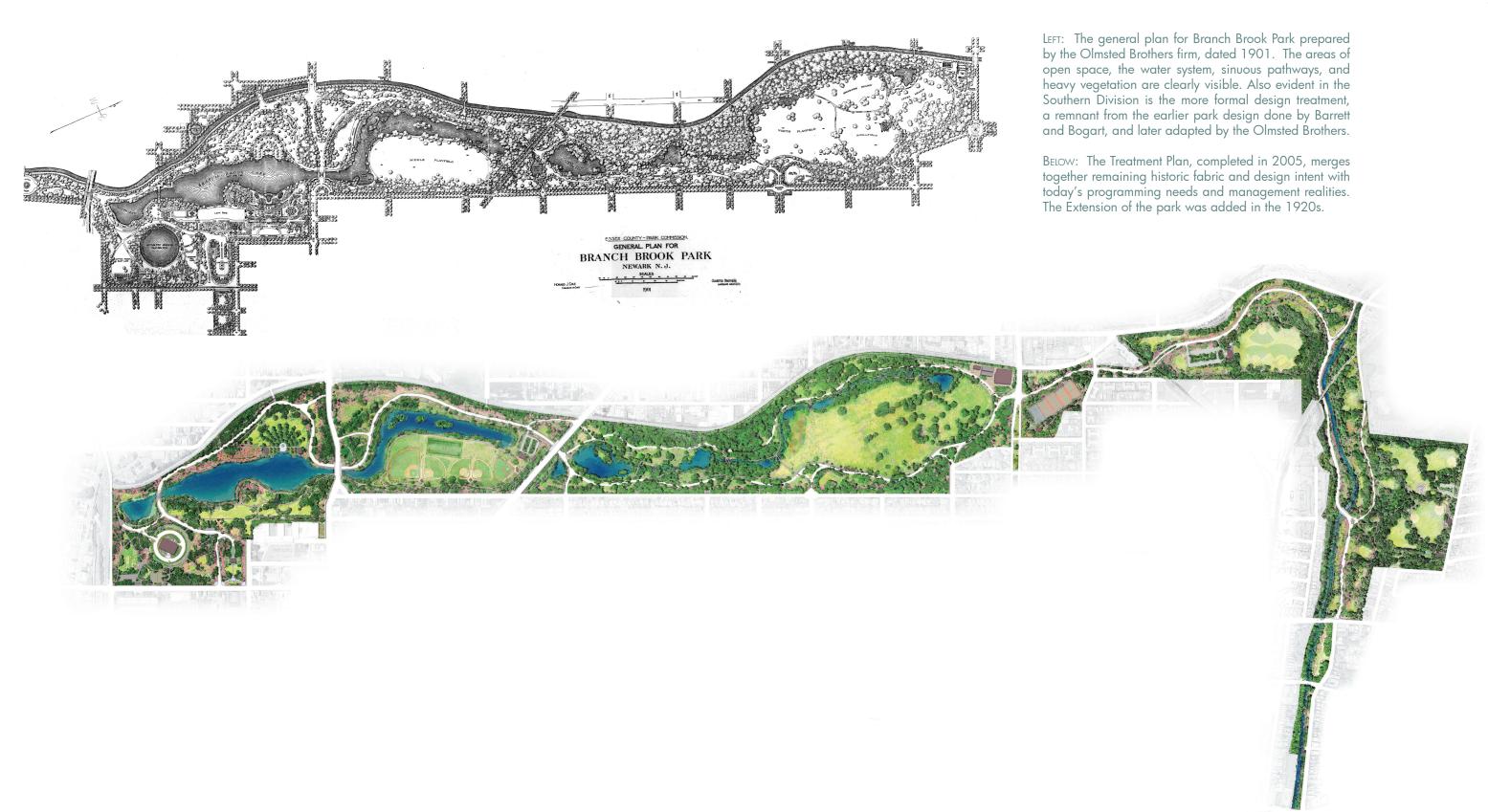
One of the more bold and exciting designs for the park is of a children's area known as the "Quarry Playground", the theme of which is based on the historical usage of parts of the park prior to Branch Brook Park's development. The Quarry Playground, as designed, features areas for active and passive play, overlooks, climbing, water spray, and informal play and gatherings. A significant component of the project is education, focusing on the geology and urban ecology. This project has not yet been constructed.

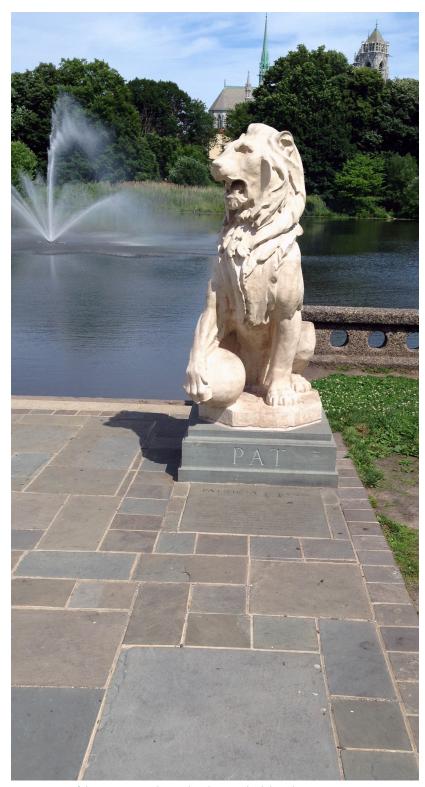


BELOW: Majestic trees create a lush canopy over the greenswards in the park, Source Patrick O'Brien, 2008.









AbovE: One of the museum-quality replica lions at the lake edge, Source: RHI 2014  $\,$ 

#### RESERVOIR STABILIZATION

This project, in Summer 2014, stabilizes the existing, crumbling walls of an historic reservoir in the Southern Division of the park. The intent of this design is to stop the deterioration of the walls, to preserve the remaining areas, and to interpret the area for the public. Fallen stones were selectively maintained or relocated, and vegetation removed as necessary to allow for re-pointing and repair; interpretive signage will be installed.

#### OCTAGON SHELTER

The 1899 Carrere and Hastings shelter perched atop Meeker's Mound until 2005 when it collapsed. The building was reconstructed utilizing the original Carrere and Hastings and Olmsted firm drawings as well as detailed measurements and photographs taken of the original shelter. Historic fabric was re-used to the greatest extent feasible, supplemented by new materials and contemporary construction techniques. Accessible routes along historic pathway alignments were designed, respecting the existing design intent and grading. Planting design included a selection of plant materials compatible with the historic planting design, but also able to thrive in the present conditions of the shade cast by mature oak trees.

## MIDDLE DIVISION BALLFIELDS & LAKE STREET ENTRANCES

Fields for active sports, historically part of the original Olmsted plans for the Middle Division, the existing ballfields were rehabilitated in 2006. The up-to-date ballfield facilities, along with sustainable stormwater and drainage management through vegetated swales, were sensitively integrated into the historic context of the park. New vegetation, a porous asphalt parking area, and streetscape improvements were also included in the rehabilitation. Based on historic plans, photographs, details and postcards, the work provided a face-lift to the Middle Division entrances along Lake Street featuring new steps, cheekwalls, bluestone paving, signage, fencing, and planting.

#### OCTAGON FIELD HOUSE

In December 2010, renovation of the Middle Division Octagon Field House was completed. The building, located along Lake Street, is the historic Rossiter and Wright Field House, constructed around 1920. The original roof, which was severely damaged by a fire in 2005, was replaced with a new roof constructed approximately three feet higher than the historic roof in order to discourage rooftop vandalism. Restrooms which had long been nonfunctional now serve the southern baseball fields and the soccer field in the Middle Division of the park.







ABOVE: Community members enjoy activities in the park.











From treats during a baseball game, walks amongst cheery blooms, and farmers markets to bike races and soccer practice, Branch Brook Park has become a key amenity for many different community groups to experience fresh air and fellowship.

#### LENAPE TRAIL/TWO-MILE LOOP

The Rehabilitation of the Northern Division walkways, completed in 2014, to encourage and facilitate walking and jogging has created a much needed amenity for Branch Brook Park. Using paving that is conducive to "smart" exercise and adding exercise nodes along the route helps to draw more people for active engagement within the Park.

The path's surface is rubberized and provides a durable, comfortable material for walkers, runners, and people with disabilities. The rubberized material also requires much less maintenance than crushed stone and has a lifespan of 10-15 years before re-surfacing is required. Although historically crushed stone was the material used for this part of Branch Brook Park's paths, the rubberized surface is more appropriate for today's heavy use. A major goal has been to make this improved trail as easy as possible for the county to maintain post restoration and to provide a more comfortable walking surface.

#### BALLENTINE GATE

The iconic Ballentine Gates mark one of the entrances into the Northern Division of the Park along Lake Street. The design of the gates were by Carrere and Hastings, with much input from John C. Olmsted, and were to be a memorial gift from the Ballentine Estate. The buildings have elements that need to be restored and have non-historic elements that need replacing. The adjacent landscape should also be improved with the recreation of the historic paving and plantings based on historic documents, including drainage around the building. This restoration project has not yet been completed.

#### SUPPLEMENTAL WELL

The water levels of the man-made brooks and ponds that meander through the Northern Division have been a concern since their conception. Without an adequate flow of water through the streams, the ecological health of the water bodies suffer. In 2013, the County dug a well to pump and supplement the water that currently flows through the brooks and ponds in order to restore the water bodies to re-capture some of John C. Olmsted's desired "brimful effect".

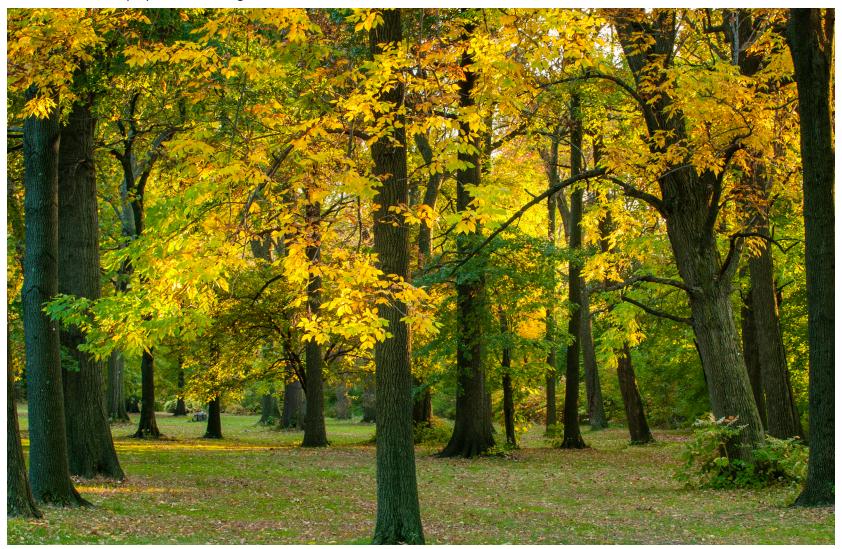
#### URBAN FARM

The Urban Farm is an exciting addition to the park. Housed in the restored greenhouses in the Northern Division, the Urban Farm is a way for the County to reach out to the community, in particular to neighboring public school students, in an effort to teach about healthy food and agriculture.

While Branch Brook Park Alliance's work is coming to a close, its commitment to the park continues. Resources are being left behind to fund the Care of the Park program over the short term; and it is anticipated that proceeds from the Urban Farm @ Branch Brook Park will contribute to the project over the long term.

#### LEGACY TREES / SWAMP WHITE OAK

One of Branch Brook Park's most notable assets is its tree canopy. A handful of particularly special mature trees has been selected to be included in the "Legacy Tree" Collection, a group of trees that warrant special recognition and attention. To be sure, the more than 100–years–old swamp white oak in the Northern Division is one of the park's most well-known and treasured trees, at 50" diameter, an estimated 60–feet tall, and approximately 90–feet in crown spread. This tree has been carefully pruned and tended with a variety of plant health care treatments.



Trees at their autumnal peak with golden foliage, Source: Patrick O'Brien, 2008.

#### RIPARIAN BUFFER PLANTING

In 2012, riparian areas throughout the park were evaluated in order to select a suitable location for a riparian vegetation restoration pilot program. An area in the Northern Division was selected, carefully cleared of invasive vegetation, and planted with appropriate vegetation. The new plantings improve the ecological integrity of the site, increase ecological function, and provide new aesthetic vistas for public enjoyment.

#### WOODLAND MANAGEMENT

The Olmsted landscape of the park is an entirely created landscape, designed to be rich and diverse. The woodland areas in Branch Brook Park are a component of their design. Management of the woodlands, therefore, becomes an important part of the park's legacy and care program, led by certified arborist, Paul Cowie, other arborists, both professionals and volunteers, come to the park regularly to prune vegetation and inspect the health of the tree canopy. Plans for the park envision managing the tree canopy to protect and preserve existing trees. Maintaining native plants in the understory is also essential to protect against erosion and to maintain species diversity, while ensuring open views through the trees to enhance pedestrians' sense of security.

#### EXTENSION BALLFIELDS

Branch Brook Park provides active and passive recreational opportunities to thousands of its nearby residents. The rehabilitation of the ballfields for little league and youth league baseball provides an additional facility. The area was originally designed by the Olmsted firm to be open playfields with minimal visual hard obstructions, such as bleachers and fences, intruding into the open space. The rehabilitation design respects this intent. The drainage was improved, in part through vegetated swales, and new pathways, benches, drinking fountains and plantings were implemented as part of the project. The adjacent forested areas were also improved by clearing invasive plant species and providing care of existing trees and protecting mature plants at woodland edges.

#### CHILDREN'S GARDEN

Working with Branch Brook Park Alliance (BBPA) and urban agriculture specialist Meredith Taylor of the Branch Brook Park Urban Farm, RHI developed a two area concept for the Garden, built in 2014, near the Essex County Cherry Blossom Center in the Extension. One area provides space for active learning – planting and cultivating. The other space allows for more passive activities, including gathering space for a group leader and small groups of children.

The focus of the active portion of the site is a series of raised planting beds, sized to fit the small hands that will be working there. The passive portion provides benches and informal seats made from natural stone and cut logs from the removal of dying trees that will provide for activities like teaching and storytelling.

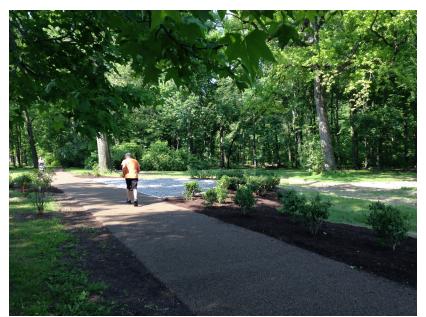
The surrounding area will be made safe, by removal of dying trees, pruning of dead wood from the adjacent mature trees, and beautiful, by planting native perennials to frame the space.

#### CHERRY TREE RESTORATION

Inspired by the cherry tree blossom plantings in Washington, DC in the mid 1920's, Caroline Bamberger Fuld, in 1927, donated a collection of Japanese flowering cherry trees to Essex County to be planted in the Extension of Branch Brook Park. By the turn of the century, through natural attrition and also benign neglect, a park-wide tree inventory verified that this collection had dwindled to less than half of its original numbers. Using historic plant lists as guides in the selection of species, new trees have been planted in accordance with the Olmsted firm's master plans. The more than 17 different cultivars have restored—indeed, expanded in numbers and locations—this collection back to its former seasonal spectacle.

#### WATERWAY STUDY

The waterways in Branch Brook Park constitute the park's most important ecological resource, and one of the park's most important historic resources. In the past, poor water circulation, the accumulation of silt, banks lined with concrete checkerblock and a lack of riparian buffers have degraded water quality, contributing to algal blooms and pond scum. A Waterway Rehabilitation Feasibility Study in 2008 was conducted to establish a Baseline Ecological Evaluation. Treatment recommendations were also provided and included measures such as dredging water bodies to remove excess sediment, increasing baseflow to the waterways, restoring vegetated buffers, and filtering stormwater.



A portion of the newly-installed Two-Mile Loop. The node just off the path is awaiting the forthcoming exercise equipment, Source: RHI, 2014

#### ESSEX COUNTY ACCOMPLISHMENTS

Concurrent with BBPA's capital projects efforts noted above, Essex County made major improvements in the park. Those accomplishments are:

- Renovation of the Southern Division Boathouse
- · Renovation of the basketball court and the children's playground
- Refurbishment of the high school football/soccer field in the Middle Division
- The addition of the Roberto Clemente statue
- The restoration of the Althea Gibson Tennis Complex
- The addition of the Althea Gibson statue
- Renovation of the Cherry Blossom Visitor Center
- Refurbishment of bocce courts at the Visitor Center
- New park signage
- Roadway, lights, pathway, fencing improvements in select areas

#### MAINTENANCE & MANAGEMENT

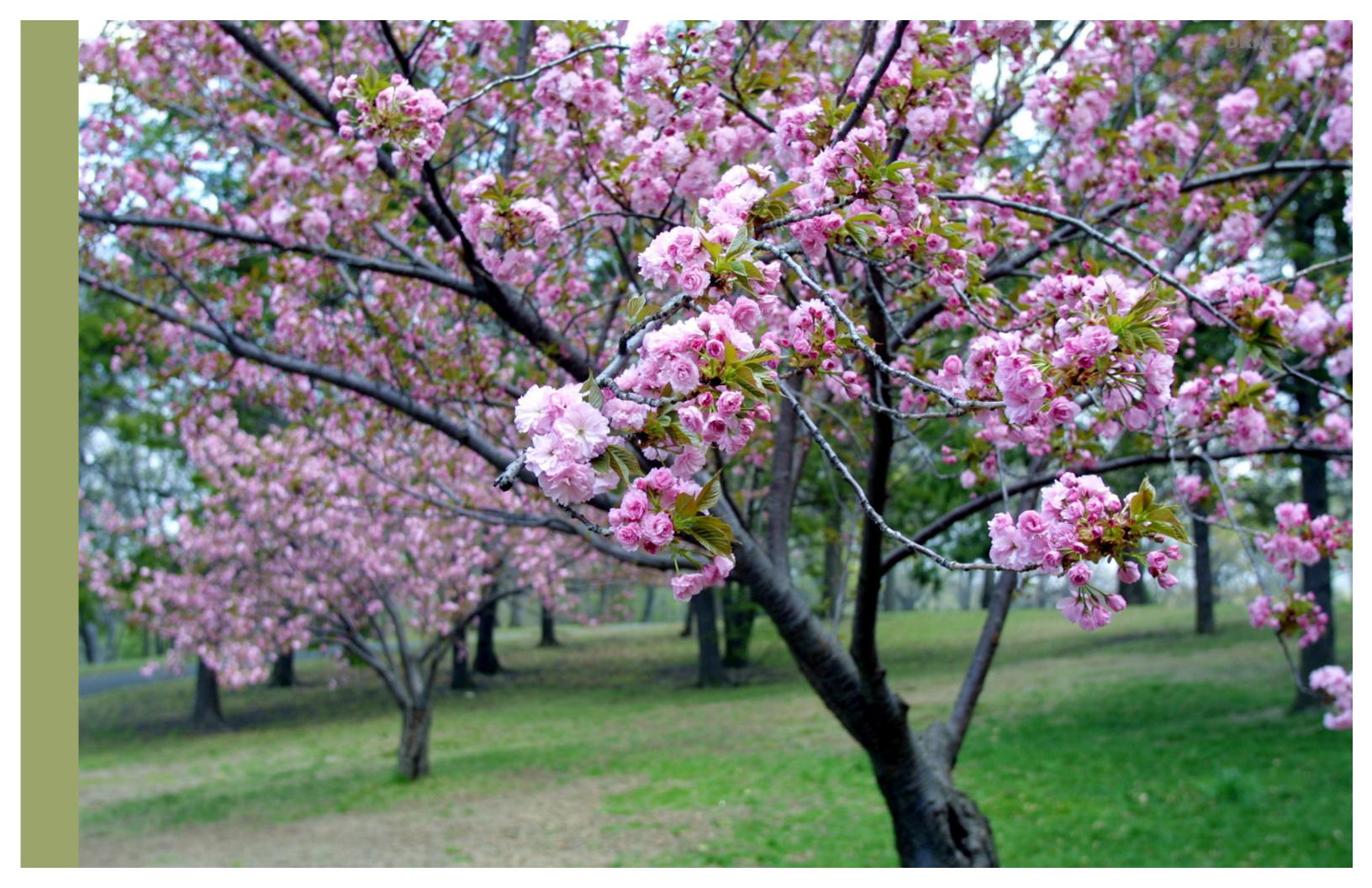
The restoration of Branch Brook Park over the past fifteen years has breathed new life into the park and its many assets, expanding its programing to reach a greater and more diverse population. It is now up to Essex County and a myriad of established public/private partnerships to continue to preserve the park.

With much of the park's infrastructure newly restored or refurbished, a significant key to the future management of the park's softscape is the Cherry Tree & Zone Garden Manager, currently a New Jersey Certified Tree Expert, Paul Cowie. In collaboration with the Rutgers Master Gardening Initiative, Mr. Cowie has been overseeing and helping to form a variety of primarily volunteer-based programs that include cherry tree Maintenance and "Zone Gardening," the latter dividing the park into geographical sections in which each will be under the guidance of a Master Gardener.

Indeed, much of the future maintenance of the park's vegetation will be tended to by volunteers. The establishment of clear expectations and tasks for these volunteers, that are always based on or informed by the Olmsted drawings and intent, is vital to insure that the historic park legacy is maintained.

#### LOOKING TO THE FUTURE

For well over a decade, Branch Brook Park Alliance (BBPA) has been working to advocate for Branch Brook Park's future. From forging strong new community relationships, to fund raising for necessary projects and overseeing design, BBPA has played an integral part in building a solid foundation to help the future of the park. However, with much of the park's restoration complete, BBPA will now transition to a more traditional park conservancy roll, and will help to provide quidance to keep Branch Brook Park moving on its forward trajectory.



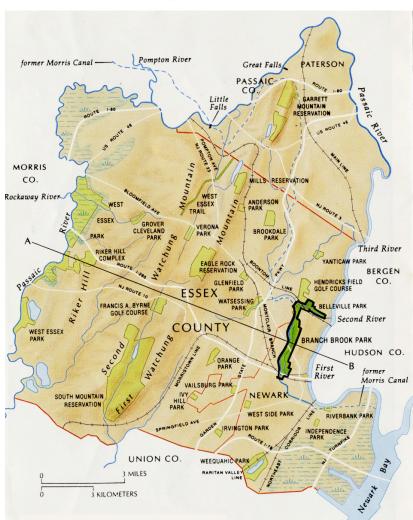


OVERVIEW

## OVERVIEW

This Volume of The Cultural Landscape Report for Essex County Branch Brook Park, *Volume 6: The Treatment and Management Plan*, provides a vision for the continuing rehabilitation and the future preservation of the park. This document serves as a 'road map' to ensure that Branch Brook Park's cultural and historical integrity and diverse ecosystems are preserved for future generations.

A brief overview of the history of the park from its inception to today is included in this volume and further detailed in *Volume 2:* History of the Park and Critical Periods of Development. It is apparent that, although Branch Brook Park has evolved and transformed throughout the last century, the park's design intent is clear and much of its historic fabric remains. This report provides park managers with an accurate historical interpretation of the Olmsted design while balancing the current ideology and needs for the 21st century.



#### Beginnings

The completion of Central Park in the late 1800s sparked a country-wide movement that encouraged the placement of parks, for reasons of health, recreation, and aesthetics, in cities across America. In 1867, the Newark Park Commission was formed, and hired the partnership of Frederick Law Olmsted, Sr. and Calvert Vaux, designers of both Central Park in New York City and Prospect Park in Brooklyn,

to aid in the selection of a site that would be suitable for a park. Olmsted and Vaux chose a 700 acre site in the City of Newark. In 1871 the proposal died (see, sketch, right, of Olmsted and Vaux' proposed parkland).

Although the original proposal for the park was short-lived, by 1894, the idea for a park system reappeared. A temporary commission was set up by a legislative bill prepared by members of the Boards of Trade from Newark and neighboring Orange. Charged

with exploring the creation of a park system, the Commission looked once again to professionals for advice, taking proposals from five

respected designers: Frederick Ehrenberg and A. L. Webster from New York; Gray and Blaisdell from Boston; Nathan Barrett of New Rochelle, NY; John Bogart from New York, and finally Olmsted, Olmsted and Elliot, of Brookline, Massachusetts. Nathan Barrett and John Bogart teamed together, and were chosen by the Commission as the architects and engineers in charge of the undertaking.

"As the premier space of the nation's first county park system, Branch Brook Park presents a notable example of the prescience of early community and city planning."

(Arleyn Levee, Branch Brook Park CLR, Volume 2)



\* Stahm

LEFT: Map showing Branch Brook Park (outlined in black) in the Essex County Park System, Source: The Greensward Foundation, 1995

ABOVE: Aerial photograph showing Branch Brook Park and its dense, urban surroundings, Source: Google Earth Pro



Above: Historic photograph of the elaborate floral garden terraces as planted in the Southern Division, Source: Photograph #137, National Park Service Frederick Law Olmsted National Historic Site (hereinafter "ONHS").

Below: John Bogart and Nathan F. Barrett's "Design for Branch Brook Park," 1896-7,

#### BARRETT AND BOGART PLAN

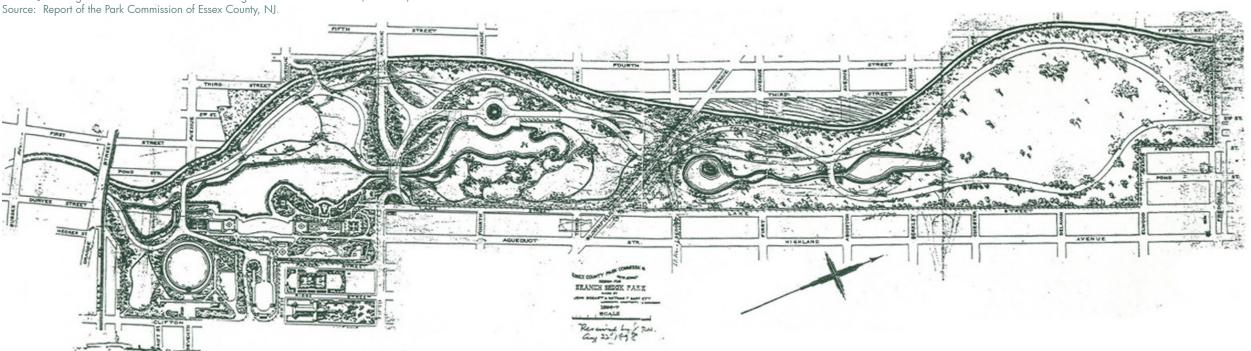
By 1896, Barrett and Bogart had helped the Commission to secure an irregularly shaped, long piece of land including the Blue Jay Swamp which would be used for the creation of the park. Existing roads divided the large site, of approximately 280 acres, into three sections: the Southern Division, Middle Division, and Northern Division. Already existing on the site was a large lake, a circular reservoir, a canal directly to the west, and a large stand of oaks and elms.

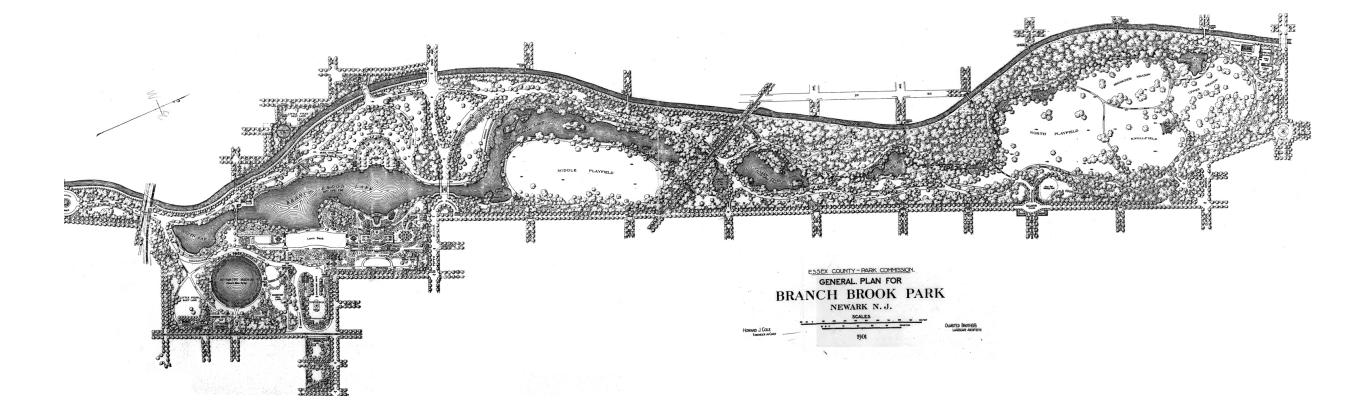
Barrett and Bogart completed plans for the Southern Division of the park, and began work there in June of 1896. Although Barrett and Bogart's description of the site's future gave the impression of a park that was to be reminiscent of the existing natural features, the plan was actually very formal and suggestive of ornate, Victorian design ideals. Lake edges were terraced, formal flower beds were planted, paths were laid out focusing on shape instead of following natural topography. Roads and bridges had little relationship to each other or to other elements in or around the park, and stands of native oaks and elms were removed. The plan did, however, retain several existing features, including the circular reservoir and lake, the latter of which was often used for skating.

The Commission was unhappy with the expense, complexity and extravagance of Barrett and Bogart's plan, and soon terminated their work. Once again, the Commission sought the expertise of the Olmsted firm to continue the work of Branch Brook Park.

"Each of [the] designers of the Olmsted firm worked within the defining principles of landscape artistry established by the senior Olmsted — to design with respect for inherent landscape features and to create a setting of beauty, accessibility and usefulness for the citizens of city and county over the decades."

(Arleyn Levee, Branch Brook Park CLR Volume 2)





#### **OLMSTED BROTHERS**

The Olmsted Brothers began a professional working relationship with the Essex County Park Commission in 1898, which continued well into the 1930s. By the time the Olmsted Brothers were hired, much of Barrett and Bogart's plan had been implemented in the Southern Division of Branch Brook Park, although very few of the architectural features indicated on their plan had been implemented. No construction in the Middle or Northern divisions of the park had yet been accomplished.

As in other major works by the Olmsted Brothers, their design for Branch Brook Park was a response to the existing characteristics of the site, manipulated to create a new and seemingly natural landscape. Their desire to create a series of understandable spaces in the long, narrow stretch of land set aside for the park is clear in the design of the open greenswards, linked by more heavily planted spaces along the varied settings, streams and pools. The park's four divisions were conceived and designed as a single unit. Respecting and enhancing the spirit and atmosphere of the area resulted in a beautiful, naturalistic design that focused on the watercourse as a spine and fit well into the existing linear site. This aesthetic, coupled



with the Olmsted firm's desire to retain existing vegetation, led to the final design. The Olmsted Brothers were also masterful in their ability to interweave the circulation (both carriage and pedestrian) as well as the water system throughout a series of distinctive, integrated spaces. Most of the park was completed by 1906. Receiving the same

Above: The Olmsted Brothers' 1901 plan for Branch Brook Park, Source: Plan #2121-501, ONHS.

#### Left: Historic postcard view of a pool in the Northern Division

sensitive treatment as the rest of the park, design and implementation of the Extension, the fourth section of the park, began around 1925 and was completed in 1937. Volume 2: History of the Park and Critical Periods of Development describes this history in detail, and the designation of the Park's period of significance as 1898-1937, covering the years of involvement by the Olmsted firm.

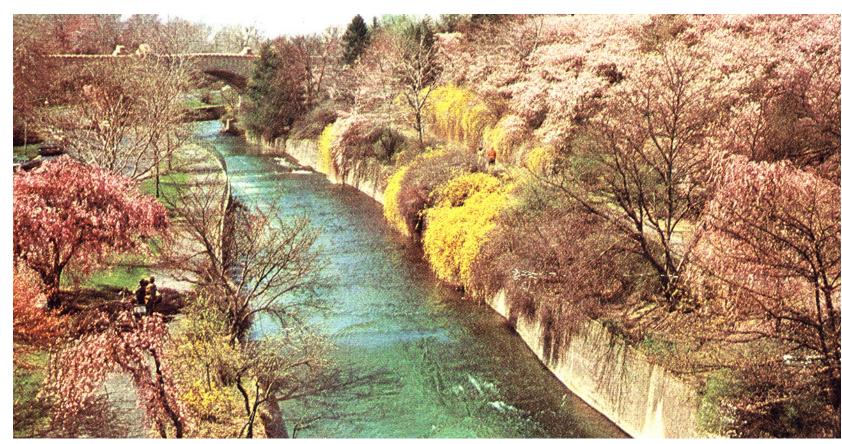
#### THE FULD CHERRY TREE COLLECTION

The Fuld Collection of Japanese Flowering Cherry Trees is a magnificent cultural landscape resource that originally enhanced the northernmost extension of the park. Significant not only in Essex County and Newark, but in the eastern United States as well, it has become America's largest collection of such trees on a single site. Around 1913, with construction of the initial phases of Branch Brook Park almost complete, the idea of adding flowering cherry trees to the design was suggested by the Essex County Park Commission. In 1927, inspired by the springtime show of cherry blossoms around the Potomac Basin in Washington, DC, philanthropist Caroline Bamberger Fuld gave the Essex County Park Commission a gift of the original grove; her intent was to create a display of Japanese flowering cherry tree specimens to rival that of the collection in Washington, DC.

"To see the cherry trees in bloom, rising one above another, as they ascend the sloping ground, or again sometimes to look down upon the blossoms fringing the river's edge, and at other times, to view them at a distance across the valley, will offer a never ending range of flowering effects that will prove, we have no doubt, highly picturesque and notable, Indeed, there is much about the conditions here that will prove singularly reminiscent of the country from which the cherry tree has come." (Percival Gallagher, Olmsted Brothers Landscape Architects)

Mrs. Fuld turned to the Olmsted firm, and Percival Gallagher was assigned the task of creating the design for the collection. Gallagher wrote, "A most effective display could be made in the extension of Branch Brook Park". When in bloom, the trees would be "a predominating and striking feature in the valley that they would occupy." Planting began in 1928 and the collection was completed by 1932. (See Volume 2: History of the Park and Critical Periods of Development for further discussion of the Fuld cherry tree planting and for sources.)

Just over 2000 flowering cherry trees of more than fifteen varieties were selected at various nurseries, primarily in Pennsylvania.



In addition, a diverse group of evergreens and shrubs was selected, designed to contrast with the pale flowered trees in spring, and to create a lush and textured shrub backdrop through the changing seasons. Later, Hans Koehler, also of the Olmsted firm, supervised the installation. Koehler wrote that the Washington collection had "... the mirroring advantage of the Potomac Basin...," but in Branch Brook Park "...the steep sides of the valley and the varied topography... afford opportunities for picturesqueness and beauty in arrangement... of the landscape effects with cherries depicted in Japanese and Chinese paintings."

The design aim was to provide a collection mostly of single-flowered forms, chosen for their long lasting flowers and their mass effect, especially in vistas, and contrast these trees with groupings of the double-flowered variety, to provide interest not only in the long distance view, but at a closer, more intimate scale. The designers' intention and understanding of the Fuld gift was that "...in Branch Brook Park Extension should be the outstanding Cherry display of the whole Essex County Park System. [The display] should occur in Branch Brook Park Extension, to such a degree, in fact, that it would be very evident to the average public that this display overshadowed all others and was so remarkable and of such preeminent beauty

Historic postcard showing the cherry trees and forsythia in bloom along Second River, Source: Newark Public Library postcard collection

and magnificence that pilgrimages from afar would be made to it annually".

Today, the Fuld Collection of Japanese Flowering Cherry Trees in Branch Brook Park has been rehabilitated from only 964 remaining when this study began to 4,300 specimens. It outshines the collection in Washington, DC by the total number of trees as well as by the number of different varieties, and the complexity of its setting and scenery. Evergreen trees and a diverse range of native and easily naturalizing shrubs have also been planted in accordance with the careful study of the Olmsted plant lists and themes, to provide contrast and texture (see also section III of this report). Flowering cherries of fifteen varieties have been planted in selected areas of the park to realize John Charles Olmsted's wish for specific areas, while preserving and protecting the intent of the spatial characteristics of his and the Olmsted firm's design.

With a regional week-long Cherry Blossom Festival, a dedicated collection manager, a Susan G. Komen grove, Japanese cultural festival events, and many other celebratory activities focused on the flowering cherry trees, the Collection has once again become a



ABOVE: Freshly dug cherry trees in early spring, waiting to be unloaded and planted in Branch Brook Park's Extension, Source: RHI

revered cultural landscape feature, and a source of pride and national significance for Essex County, Newark, New Jersey, and the region.

#### THE 1950's - 1980's

Providing for the changing recreational needs of Essex County as the surrounding communities expand and evolve, while working to preserve the park, is a critical focus as Essex County Branch Brook Park matures. In the second half of the century, and extending into present-day, is the constant need for park maintenance, with decreasing available dollars needing to stretch further and further.

Throughout Branch Brook Park, once celebrated for its rich and diverse plantings, much of its vegetation layers were lost as a result of natural attrition without replacement planting. Maintenance practices needed simplification/streamlining, and much vegetation that was lost due to the thought that vegetation needed to be removed to avoid perceived security concerns. Construction along the park perimeter of large-scale or high-rise buildings also impacted views. And as a result of 1981 road improvements, the southern end of the park was shortened with the construction of State Route 280. At this time also, much of the park drives were curbed with Belgian block.

In the Southern Division, changes to architectural features and the areas immediately surrounding them were significant. An open-air multi-functional roller skating rink opened in 1957 in what was once the reservoir, and was later enclosed in the late 1960s. Changes to the edges of Branch Brook Lake occurred as a result of adjacent roadway and path construction. Particularly jarring due to design and placement was the construction of a new concrete bridge in 1971. Basketball courts were installed and, as a result of a land exchange between the county and city in 1961, Barringer High School was built. In the Concert Grove, from the 1950s through the 1970s,



concerts continued to be held. In 1959 the Karl Bitter lion sculptures, once adorning the Prudential Building in downtown Newark and later donated to the people of Essex County by the Prudential Company of North America, were placed along the edge of the water and became an icon of the park.

The Middle Division and Northern Division also experienced changes to vehicular circulation. Changes to the water bodies (the lake in the Middle Division and the pond and brook system in the Northern Division) were made as well. In the Extension few major alterations of the area occurred in the 1950s-1980s, with the exception of the construction of an information center and bocce courts.

#### THE 1990's

The 1990's saw few significant changes to the park. Besides the design of the present-day Roller Rink along with a small boatshed at the southern lake shore in the Southern Division, the bulk of the changes to the park came from simple lack of maintenance, wear, and deterioration due to aging structures and landscapes.

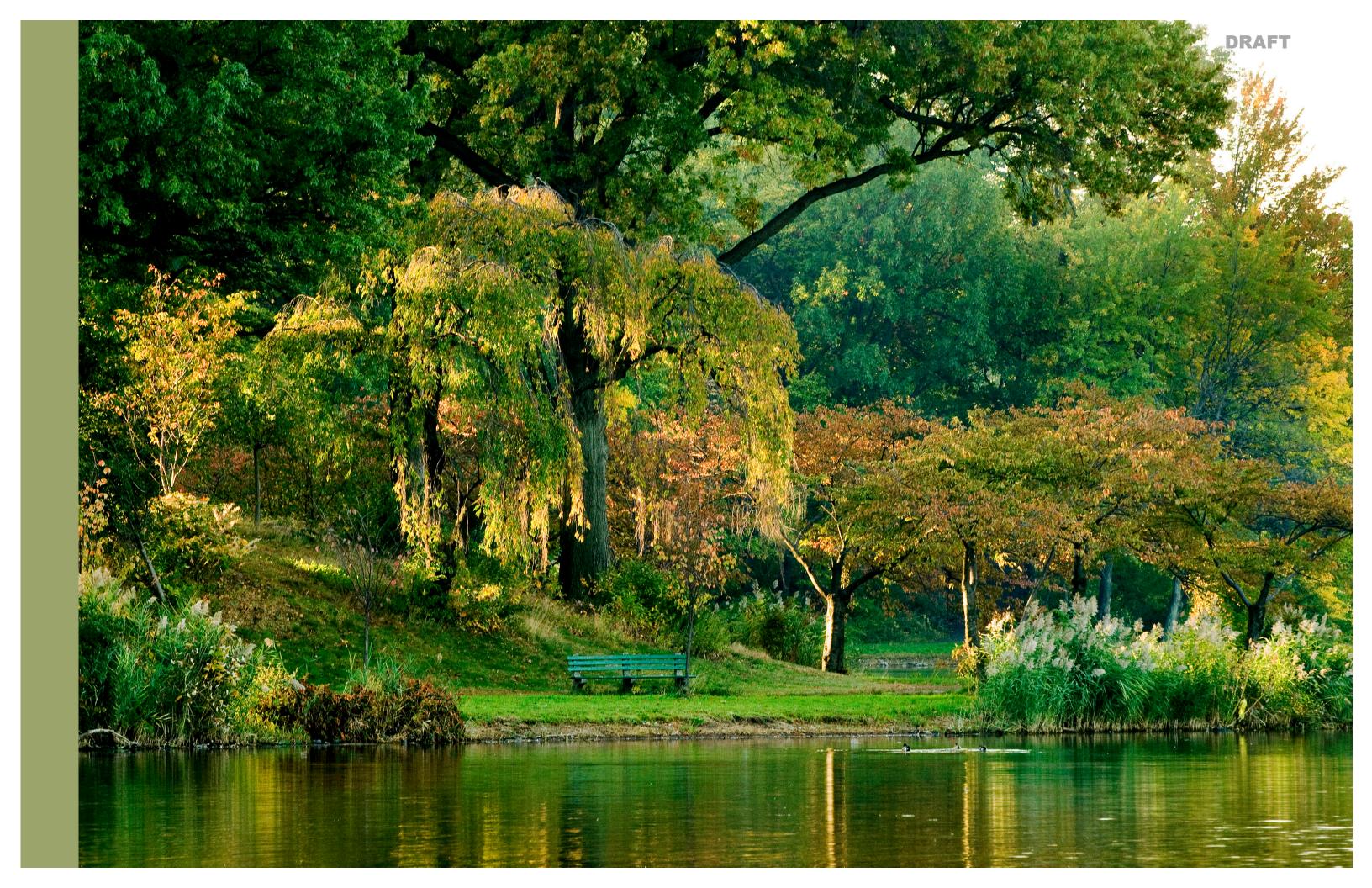
ABOVE: Cherry trees burst into bloom in Branch Brook Park's Extension, Source: Jake Rajs, March 2008.



Historic postcard view along Branch Brook Drive in the Southern Division

#### Period of Significance: 1898-1937

Discussed in detail in *Volume 3: Hydrology, Infrastructure, and Historic Fabric,* the Period of Significance, the span of time when the park's design was realized to its greatest extent, is between 1898 and 1937. This period encompasses the Barrett and Bogart design and construction (in the Southern Division), as well as the hiring of the Olmsted firm, and the dates during which their design was completed and constructed: from 1898-1906. Work on the Extension began around 1925 and was mostly completed in 1937, also by the Olmsted firm.





## PLANNING FRAMEWORK

## PLANNING FRAMEWORK

The water courses and vegetation in Essex County Branch Brook Park are two of the most prominent and important elements in the Olmsted Brothers' design for the park. The vegetation provides shade, enables individual sections of the park to work as a whole, improves the ecology of the site, and creates spaces of great visual diversity. The water course, with its unique stone bridges, weirs, ponds, and lakes, is a visual spine along which all of the park's components are arranged and creates places for active and passive recreation, and a habitat for wildlife as well. Over time, the condition of the water and vegetation throughout the park had declined for a number of reasons, such as sedimentation and lack of water depth. In addition, the well supplying water to the man-made streams was no longer functional (see Volume 3, Chapter 7: The Hydrologic System in Branch Brook Park). Problems of erosion had also become a park-wide issue. The resulting lack of vegetation, increased runoff, decreased soil infiltration, and poor water quality has been a major restoration concern and much vegetation has been reintroduced into the park in recent years to improve this situation.

New vegetation on steep slopes slows down the rate of water runoff, stabilizes soil and discourages damaging foot traffic on pathways. Several treatment approaches for restoring the water supply are a part of the treatment described in the following pages.

While vegetation plays a role in the ecology of the water system, the waterway system was also neatly interwoven by the Olmsted firm with the pedestrian and vehicular circulation systems. Paths generally were laid out along the water's edge, and unified the three main divisions of the park. Historically, there have been two main circulation types: one for pedestrian traffic and the other for carriage/vehicular traffic, the Olmsted firm's technique of 'separation of ways'. The two routes, in some locations, are separated with 'subways' (underpass structures) and bridges. In addition to providing routes throughout the park, the pathways and roadways, conform closely to the topography, and create separated spaces of different uses and character.



#### THE WATERCOURSES

From the earliest design concepts through the history of the park, the waterways in Essex County Branch Brook Park were used as both design features and ecological systems. While much of the water system is still present in the park, changes over time have resulted in several lost features, connections, and declining ecological soundness.

A framework plan for the park's water system was created to guide future restoration. The map (below) is the integration of the Olmsted Brothers' historic design, existing conditions, and general recommendations from the earlier volumes of the Cultural Landscape

Besides illustrating the existing water courses through the site, the plan also indicates other important water-related components that should be considered for the park's future:

• Possible areas for re-establishment of historic water elements and/ or stormwater management

RIGHT: Brownstone Bench Bridge showing the lack of water flow in the Northern Division's stream and pool system, Source: RHI, 2004.

BELOW: The framework plan for the water systems in Branch Brook Park

- The 75' riparian buffer zone (which plays an important part in controlling sediment, pollution, and erosion)
- Areas of erosion along the shoreline
  Historic locations of the beaches intended to provide access to the water in selected locations
- Restoring the well to full productivity in the Northern Division to establish water flow through the pools and streams.





**Existing water** course

Re-establish historic water elements

Restore riparian buffer zone for water quality management

Re-establish Abeona Pool for stormwater management

Rehabilitate eroded shoreline

Clean hazardous materials adjacent to well, and restore well to full productivity

Restore historic beaches

Rhodeside & Harwell/Pennoni Engineers

#### THE LAKE, BROOKS AND POOLS

Creating a significant presence in the Southern and Middle divisions is Branch Brook Lake. Historic postcards of the lake illustrate what was a stunning feature of the Olmsted Brothers' design. The historic beauty of the stream and pools in the Northern Division are clear today. However, these bodies of water are currently exhibiting signs of eutrophication, excess sedimentation, and algal blooms. Erosion remains a problem along shorelines. Intervention has begun and is still needed to return them to their original splendor.

To clearly understand what measures should be taken, and to establish a Baseline Ecological Evaluation, a Waterway Rehabilitation Feasibility Study was undertaken in 2008. The key findings of this report were:

- Pollution levels do <u>not</u> suggest costly remediation. Effective stormwater filtration may be the best course of action;
- Sediment levels in the Northern Division waterways are detrimental/dredging is feasible;
- Additional information is needed on whether the lake in the Southern Division can be dredged;
- Stormwater management strategies can be implemented to supplement the groundwater and flow in the water bodies;
- A new source of water outside the First River watershed is recommended to avoid lowering groundwater levels in the Northern Division. A supplementary water supply for the stream system in the Northern Division is important to support a healthy stream in the future.

RIGHT: Panoramic view of Branch Brook Lake, Source: Jim Lecky, June 2008 BELOW: Algae bloom in Branch Brook Lake, Source: RHI







#### SECOND RIVER

Second River is located in the Extension of Essex County Branch Brook Park. Because parkland around the river was narrow, often with steep slopes, and a parkway was constructed adjacent to it, Second River was channelized. The Second River walls are made of concrete while the river bed has a variety of surfaces: granite blocks, a man-made stone bed, and a natural river bed. Today, some of the concrete and other masonry is cracking. There are also areas with significant debris and silt accumulations that impede the river course from running to its full flow. Paths along the hillside above Second River are muddy and need repair in many areas. While Second River is less eroded than the Southern, Middle and Northern Divisions, improved stormwater management in the future can still improve the river's water quality.

LEFT: The channelized Second River in spring, Source: Patrick O'Brien, April 2008

#### **VEGETATION**

Open Space

**Cherry Trees** 

Trees in Open

Lawn

Riparian

From the outset, the Olmsted Brothers were meticulous in their attention to vegetation, both existing and proposed, in Essex County Branch Brook Park. John Olmsted once stated that in a public park, the grounds must be "more highly improved; ... the turf must be finer...the trees must be more perfect." (Volume 2). It appears that Branch Brook Park was developed with this in mind. Through the Olmsted Brothers' planting plans, the park was carefully divided into smaller landscape components and styles. From the broad open greenswards, to the uncluttered trees with modest understory plantings, to the dense scrubby plantings at the park's edges, the setting offered a variety of landscapes and spaces to the public.

According to Volume 3 Hydrology, Infrastructure and Historic Fabric, as a result of attrition, removal, simplified maintenance

procedures or perceived security measures, Branch Brook Park has lost many of its plantings. Much of the vegetation that does remain requires attention. The park, known in the past for its layers of lush, diverse, textured, carefully-placed vegetation, has either thinned or grown out of control, in some cases with the invasion of non-native aggressive plant species such as phragmites and Japanese knotweed. As a result, much of the historic intent and character of the vegetation must be rediscovered.

Preserving the spatial qualities and the original Olmsted design intent is paramount to the future of Essex County Branch Brook Park. With this in mind, a vegetation framework plan was developed. This plan illustrates the categorization of the various types of vegetation into six zones, each representing a different character of plantings and

spaces. Specifically, the zones illustrate the goal to regain much of the historic vegetative diversity, denseness or permeability that once existed. The zones—open space, cherry trees, trees in open lawn, riparian plantings, semi-transparent screens, and woodlots—range from simple greensward to thickly layered plantings. The framework map integrates historic Olmsted treatments, current schematic treatment plans and what exists in Branch Brook Park today. A more detailed explanation of the vegetation zones follows.

BELOW: The framework plan for the vegetation in Branch Brook Park



Key Areas For Special Attention

To Vegetation

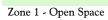
Semi-transpar-

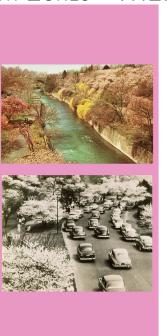
ent Screen

Woodlots

#### Character of Vegetation Zones - THEN



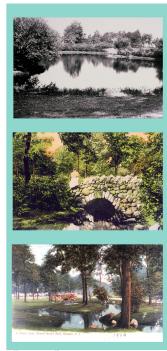




Zone 2 - Cherry Trees



Zone 3 - Trees in Open Lawn



Zone 4 - Riparian



Zone 5 - Buffer



Zone 6 - Woodlo

#### Character of Vegetation Zones - NOW



Zone 1 - Open Space



Zone 2 - Cherry Trees



Zone 3 - Trees in Open Lawn



Zone 4 - Riparian



Zone 5 - Buffer (maintain visibility)



Zone 6 - Woodlots

#### OPEN SPACE

One of the goals for the future of Essex County Branch Brook Park is to recapture the open spatial quality of the Olmsted firm design. While this objective applies to most of the park's vegetation, the open space areas of lawn or meadow has been kept mostly intact through the years. The expanses of open space bounded by woody vegetation, in the manner of many Olmsted designs, provide broad vistas and can be used for a variety of recreational uses. In some cases, particularly in the greenswards of the Northern Division, there are occasional large specimen trees that have been designated as 'Legacy Trees.' The Legacy Tree program is a grouping of notable trees found through out the park that are specially monitored and celebrated. To preserve the character of the park, it is critical that these spaces be maintained as open greensward.

#### CHERRY TREES

The Japanese flowering cherry trees are a character-defining feature of the park and are discussed in detail in the Overview (page 4) as well as in the A Foundation for the Future section (page 30).

#### Trees in open Lawn

Essex County Branch Brook Park's tree canopy consists of more than 6,000 individually inventoried shade and ornamental trees. Many of these trees are located in the areas designated on the framework plan as 'trees in open lawn'. This zone represents a vegetation type that should have an ample number of specimen trees and tree cover, with lawn or groundcover layers unimpeded by shrub plantings; it is generally large shade trees in an open lawn. Much of the 'trees in open lawn' zone runs along the edges of the park's main drive creating an enjoyable, parkway-like experience.

#### RIPARIAN PLANTINGS

In 2002, a ground cover analysis was conducted of the more than two miles of stream banks and pond and lake shorelines. The ground surface cover was comprised of turf grass, herbaceous plants, and woody plants and covered about 75% of the lake, pond and stream banks. Wetland vegetation was in existence along approximately 90% of these areas. These plants make up the riparian buffer and are integral to a healthy water system. The buffer helps stabilize slopes on the water's edge, slows rainfall and erosion,

TOP RIGHT: Swamp oak tree in the Northern Division's open lawn/meadow, Source: RHI, October 2007

BOTTOM RIGHT: Restored lake-edge riparian planting along Branch Brook Lake, Source: Patrick O'Brien, May 2008







preserves breeding areas, maintains balanced oxygen, and regulates light and temperature entering the water body. In general, a healthy riparian buffer and a healthy body of water are concurrent.

Therefore, the area of the framework plan indicating riparian plantings plays a very important role in Branch Brook Park. Historic postcards of pools and the brook in the Northern Division indicate a planting with little understory as well as dense shade trees mixed with pockets of shrubs and grasses. The shoreline of Branch Brook Lake was open (turf up to the shoreline) in some areas, but also included many areas planted with a diverse layer of shrubs and trees. Many of the riparian planting zones on the framework plan are currently overcome with invasive species, or have only grass along their shoreline. Throughout the riparian buffer, but in these areas especially, the vegetation should be carefully re-established, responding both to historic intent and ecologic health. In 2003, the southern edges of Branch Brook Lake were replanted. In 2012, the majority of the lake's western edge in the Southern Division was planted with native perennials.

#### SEMI-TRANSPARENT SCREENS

As noted in *Volume 2* of the cultural landscape report, a clearly delineated boundary "was an important aspect of an Olmsted park, an element to separate the park landscape from the city, while still being inviting and accessible." Indeed, the majority of the 'semitransparent screen' vegetation zones on the framework plan indicate a transition or separation—from the dense woodlots, roads or the surrounding environs. (When Branch Brook Park was constructed, industrial sites that were visible from inside the park were hidden.) Acknowledging the Olmsted Brothers' plans, these areas would mostly be shade trees with a mix of understory trees and shrubs. Some areas would have trees with an open understory or possibly a diverse planting of shrubs with few or no trees. The semi-transparent screen



would need to respond to security concerns, but still visually contain, or edge, the park as a refuge from the city and streets beyond.

#### Woodlots

In 2004-2005 Paul Cowie and Associates, arborists, prepared a survey and assessment of the existing woody vegetation in Branch Brook Park (the results of which comprise Volume 5: Vegetation in the Park). While individual trees were inventoried and mapped, the unmaintained, dense stands of trees were not. Instead, a general characterization of the masses, each termed a woodlot, was given. Recommendations for each woodlot were also provided and include instructions such as remove invasive species, prune along edges, increase visibility, improve woodlot structure, and "other treatments that may be necessary to address the client's objectives."

Responding to Cowie's report, a woodlot vegetation zone was also added to the framework plan. Most of the woodlot zone indicated on the plan is also an existing woodlot on the Cowie survey. On the framework map, this zone runs along Branch Brook Park's western edge. Along this boundary, the Olmsted Brothers wanted to screen out the commercial traffic on the adjacent, elevated Morris Canal. Particular attention was given to mounding the steep slopes with vegetation. The character of the woodlot on the framework plan would also be a screen, layered, and the densest of all the map's vegetation zones. However, while the planting would be thick and comprised of a variety of trees and shrubs (with plenty of evergreen elements) it would certainly need to respond to the security needs of the area with ample visibility from pathways.



Top left: A range of vegetation types from riparian in the foreground, trees in open lawn in the mid-ground, to woodlot in the far background, Source: Patrick O'Brien, October 2008

ABOVE TOP: Early spring photograph of trees in open lawn with drifts of low, flowering groundcover massing in bloom, Source: RHI

ABOVE BOTTOM: A vegetated swale in bloom, installed in 2006/2007. Eighty-year old azaleas were preserved during construction. Boulders create vegetated checkdams along the hillside path, Source: Patrick O'Brien, May 2008

#### **INFRASTRUCTURE**

Over the years, infrastructure in the park has had major updates only in the 1950s and 1980s. Today, drains may or may not be functional in some areas, roads that were once quiet park carriage drives now carry considerable through-traffic. Circulation, utilities, and drainage are being upgraded on a project by project basis to encourage more pedestrian friendly passages through the park, updated electrical service, lighting for visitor safety, and more sustainable drainage and storm water management. With each rehabilitation project, drainage corrections have been made within the project limits. This practice should be continued to upgrade drainage park-wide over time.

#### CIRCULATION THROUGH THE PARK

Historic & Missing

Re-introduce

Existing &

Non-historic

Historically, Branch Brook Park's circulation elements, the result of skilled and careful grading, enabled a park visitor to experience the park through a graceful and mostly uninterrupted passage of spaces. This treatment, along with meticulous planting design and other park features (such as stone walls, bridges and pergolas), helped to distract

the visitor from the urban surroundings of the parks. Today, much of the original circulation route remains. The circulation framework plan illustrates both the vehicular and pedestrian circulation elements, categorizing them as:

- existing and historic
- historic and non-existing
- existing

Historic & Missing

Re-introduce

Existing &

Non-historic

non-historic

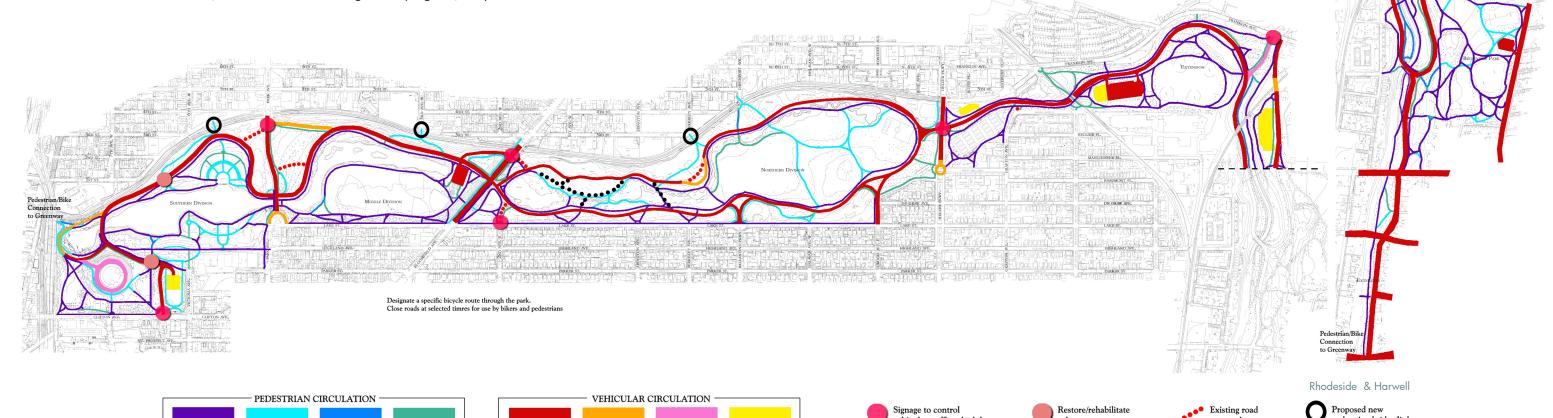
The map also notes areas requiring special attention, areas to address for vehicular traffic control, and an area lacking pedestrian circulation linkage.

 $\mbox{Right:}\ \mbox{Pedestrians flock}$  to the park to see the Cherry blossoms, Boonton Line bridge is in the background, Source: Shelley Kusnetz, 2008

BELOW: The framework plan for the pedestrian and vehicular circulation systems in Essex County Branch Brook Park



Historic alignment



vehicular traffic schedule (close at certain times)

#### **Automobiles**

As with the vegetation, the ideal automobile circulation goals (where feasible) are to maintain the existing historic fabric, increase safe and pedestrian-friendly access, and repair/restore any compromised areas. Currently there is use of the park as a commuter route, with a large volume of traffic during morning and evening rush hours. While access to and through the park is important, the park's primary use should not be simply as a vehicular thoroughfare. With that in mind, closing the entire, or parts of, the road system on a more frequent, regular schedule would allow for the enhanced use of the park by cyclists, roller-bladers, and pedestrians. Tests of this approach have been made from time to time by the Essex County Department of Public Works and the Department of Parks, Recreation, and Cultural Affairs. Parking should also be kept at current levels to encourage access to the park via foot and via public transit. Rehabilitating the Mid-Lake Crescent to its historic design would calm traffic and present a more attractive community appearance. Finally, roads may also need gentle realignment on a project by project basis to re-establish the historic spatial quality in selected areas of the park.

#### Pedestrians and Bicycles

The pedestrian circulation mirrors and responds to the main roads. However, there are additional pedestrian trails that also allow direct access and contact with many features of Branch Brook Park to which cars are not allowed. While most of this circulation remains intact, there is room for improvement. Circulation should be simplified and clarified by adding new paths or removing duplicative paths. The major pedestrian routes through the park should be surfaced with asphalt (special paving where appropriate) to avoid 'washouts' and erosion from heavy use. In the Northern Division, one two-mile long length of path, the Lenape Trail Two-Mile Loop, has been paved with rubberized asphalt of a soft color to not detract from the vegetated landscape. Community requests for a limited number of 'fitness stations' have been accommodated by sensitively placing these along the path and adding new native plantings to discreetly 'fit' them into the park. Continue to provide accessible routes where historic path alignments are not accessible in accordance with ADA standards, to the extent possible without degrading the historic design. The existing 'subway' passages should be rehabilitated and upgraded, including new lighting, for safety.

To encourage more pedestrian and cyclist opportunities, access to the park should be improved. Missing paths from the Olmsted plan should be re-established, especially where this will enhance access. To re-integrate the park with the neighborhoods to its west, at least two new entrances along the western edge of the

park, including the potential for new pedestrian bridge crossings over New Jersey Transit/City Subway, should be provided if possible. At existing park entrances, and along the park perimeter, the paving, plantings and lighting should continue to be upgraded on a project by project basis to create a welcoming approach to the park throughout. Where historic fabric exists, salvage, repair/restore it and rehabilitate adjacent facilities to complement. Lastly, work with the City of Newark to upgrade the streetscape on the park's perimeter with new sidewalks, trees, and appropriate lighting and signage.

#### Utilities & Drainage

Utilities and drainage have been upgraded on a project by project basis to meet current codes and to improve park appearance and infrastructure function. This strategy should continue with other projects over time. To date, new lighting and drainage have been installed in much of the Southern Division, the Middle Division, and the Northern Division. A new well, to supply improved flow to the waterway system, are being implemented at the writing of this report.







# A FOUNDATION FOR THE FUTURE

# A FOUNDATION FOR THE FUTURE

# TREATMENT OF THE HISTORIC LANDSCAPE: PHILOSOPHY AND GUIDELINES

The methodology for rehabilitating Essex County Branch Brook Park is based on the US Secretary of the Interior's Standards for the Treatment of Historic Properties. More than 700 drawings by the Olmsted firm, Essex County Park Commission Reports, photographs, postcards, and other documents were reviewed by the project historians and form the basis for the design recommendations of this report. The design intent for the park is clear, as a result of this research, and much of the historic fabric remains. While there have been some additions or changes to the park that are not consistent with the Period of Significance, the approach for the site's overall treatment is, as explained in Cultural Landscape Report Volume 3, "to restore the historic, contributing elements to the Period of Significance to the maximum extent possible, while providing for modern day needs and minimizing the impact of non-contributing elements that must remain." The major design elements considered in the Treatment Plan are vegetation, watercourses, circulation and bridges, updating recreation opportunities, the Japanese Flowering Cherry Tree Collection, appropriate site furnishings, lighting, and signage.

Throughout the following vision plan, vegetation, water, structures, and spatial character are treated consistently throughout most sections of Branch Brook Park.

"....historic parks, particularly those created by the Olmsted firm over its many generations, are significant components of the national artistic legacy, more than simply local places for active or passive recreation. These parks constitute a distinctly American, three-dimensional art-form, where utility and beauty merge, adding value and prestige to their communities."

(Arleyn Levee, Branch Brook Park CLR, Volume 2)







The photos on this page are of the rehabilitation of two restroom facilities located in the Southern Division's Concert Grove. Designed by architect Wilson Ely in 1920, these two structures, as seen in the existing condition photo from 2010 (top) were in poor condition. They were rehabilitated in 2011 as part of the overall restoration of the Concert Grove. A new roof and new stucco finish were applied (above). A custom wooden arbor was also reconstructed using the original architectural drawings (installation photo, top right). The top, far right photo shows the final product, including new paving, planting, arbor and building, Source: RHI.



# TREATMENT GUIDELINES FOR CULTURAL LANDSCAPES

As previously noted, work to bring back the lost splendor of Essex County Branch Brook Park began in a robust manner at the beginning of 2000. This work has been shaped by the US Secretary of the Interior's Guidelines. The Guidelines outline four sets of standards that delineate steps to be taken during the planning and implementation of project work in a historic landscape:

- preserve
- rehabilitate
- restore
- reconstruct

'Preservation:' involves actively sustaining the "existing form, integrity, and materials of an historic property". Thus, the



historic fabric of the park should remain and be incorporated into future rehabilitation plans to the maximum feasible extent. This includes historic vistas and open spaces, bridges, structures and other architectural features, plantings, circulation alignments, and site furnishings, as well as spatial quality crucial to 'reading' the design. These areas should be managed to ensure their long-term maintenance in historic conditions.

'Rehabilitation:' allows for some repairs, alterations, and additions, but still preserves the elements that reflect its historical, cultural, or architectural values. For the park, this includes bridges, structures, and other architectural features, as well as circulation alignments. The non-contributing resources in the park should be rehabilitated using appropriate materials in accordance with framework plans which have been developed as part of this study (see Section Two). Much of the work needed to be done in Branch Brook Park falls under the rehabilitation standard.

Also needing rehabilitation are the layers of vegetation in the park, which should be improved in accordance with *Volume 5: Vegetation in the Park.* This vision includes: tending to the woodlands by removing dead or hazardous trees; pruning trees; and invigorating the understory vegetation layer in accordance with the Olmsted firm's plans, while allowing for the reduction of invasive plantings and

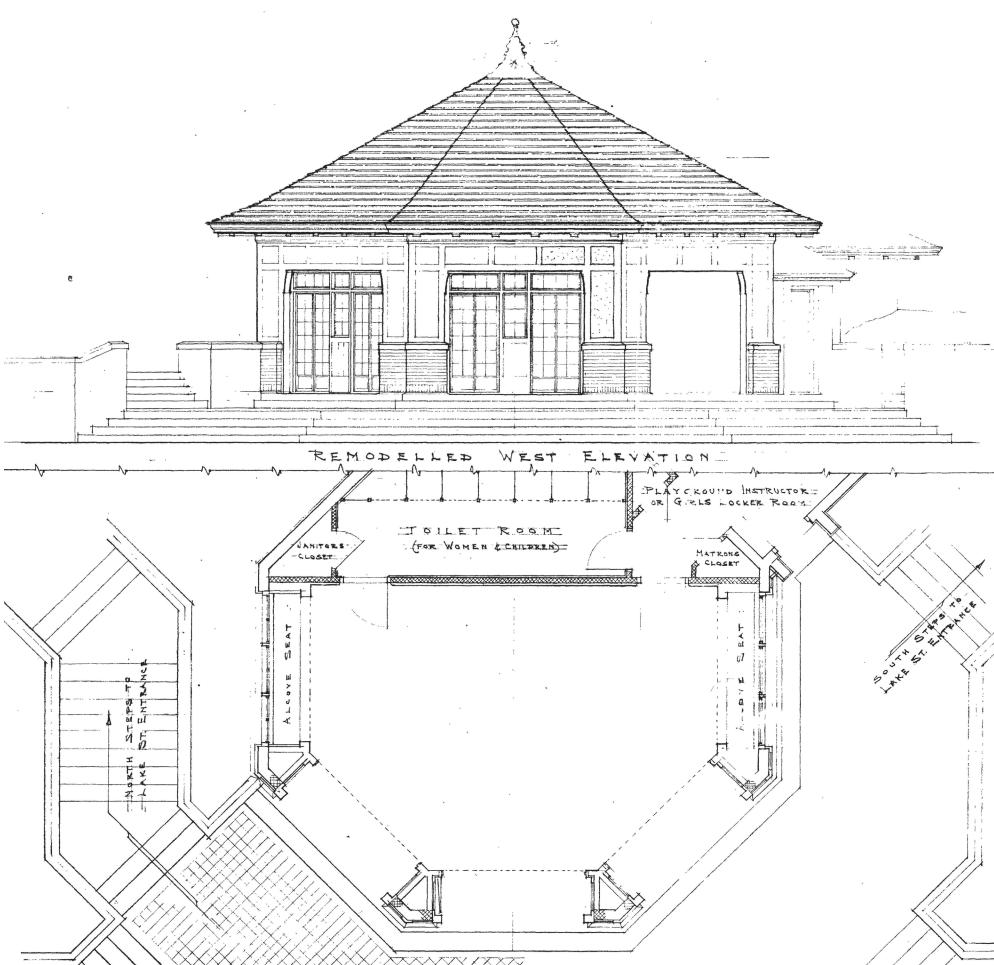
providing for secure visual access. Much of this work is being accomplished with each rehabilitation and restoration project, however many areas of the park remain in need of vegetation management.

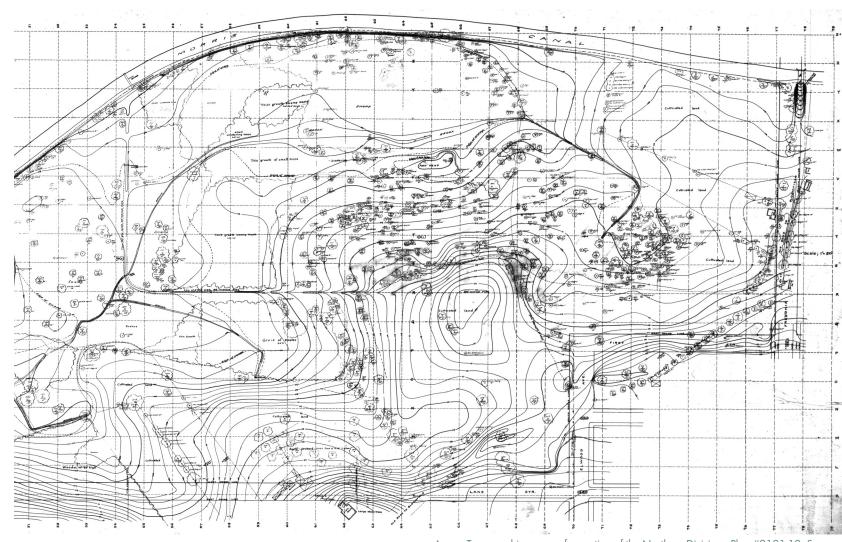
Finally, Branch Brook Park is being reactivated by using rehabilitation as an opportunity for updated recreation opportunities, new programs, events, and changeable elements appropriate to the historic setting.

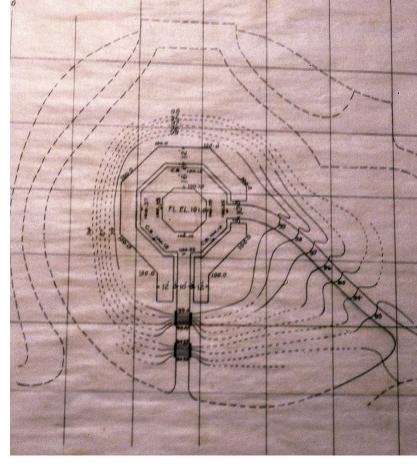
'Restoration:' of a cultural landscape, according to the *Standards*, is the act of depicting or capturing that property as it was at a specific time period. Therefore features that do not fall into the time period are removed and elements that are missing are reconstructed. For Branch Brook Park, missing or damaged fabric includes open space, water bodies, and vistas. There are also site elements that should not be a part of the restored landscape and should be removed accordingly. Again, this task is being accomplished with specific projects.

It is fortunate that many of the historic features and much of the design intent behind the creation of Essex County Branch Brook Park remains. However, there are a few instances where an historic element no longer remains, and a replacement should be built as a replica of the original feature. In these such occasions, careful research must be conducted to be sure that the reconstruction is accurate, and that it captures the character of the original. Before any reconstruction, restoration, rehabilitation, or preservation work commences, previous volumes of the Cultural Landscape Report should be referenced and the resulting course of action should be in accordance with all volumes.

RIGHT: A plan and west elevation for the Octagon Shelter in the Middle Division, originally designed to be used exclusively by women and children using a nearby wading pool. Today, it's an overlook for the lake. Source: ONHS







# Contributing Resources

Most of the existing physical fabric of Branch Brook Park is historic. These 'contributing resources' are part of the period of significance for the site and include elements such as buildings, structures, bridges, walls, stairways, fences, railings, sculptures, paths, roadways, and parking areas. Water bodies, open space, and vegetation are artificial components that further knit together to form the park's status as a nationally significant cultural landscape. Discussed above, the historic features should be preserved, rehabilitated, restored, or reconstructed as much as is feasible. (Volume 3: Hydrology, Infrastructure, and Historic Fabric)

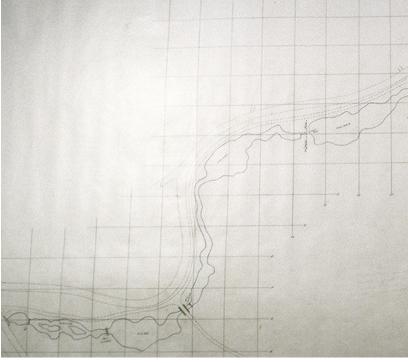
There are also 'non-contributing' resources on the site. These features, according to *Volume 3*, "consist of elements that were either constructed after the period of significance, are of inappropriate design, or have been compromised to such an extent that they now detract from the original design intent of the park or a specific area of the park". The approach to handling these elements should be considered on an individual basis, but the general goal should be to remove what can be reasonably removed; for elements that remain, they should be enhanced to harmonize with their surroundings or be appropriately screened to lessen visual intrusion.

ABOVE: Topographic survey of a portion of the Northern Division, Plan #2121-10, Source: ONHS

RIGHT: Grading study of Meeker's Mound/the Octagon Shelter in the Southern Division, Drawing 2121-63, Source: ONHS



ABOVE: 1902 John Charles Olmsted photo of the Sand Court Shelter at the playground in the Southern Division, Photo 2121-128, Source: ONHS



### RECOMMENDATIONS:

#### A SUSTAINABLE LANDSCAPE APPROACH

Rehabilitation of Essex County Branch Brook Park to date has been based on sound principles of ecological design, with the goal of creating a more sustainable park landscape that focuses on Best Practices Management for the future. This course of action has been since 2000, and must continue to be, a fundamental basis of rehabilitation/restoration treatments planned for the park, with careful attention being paid to respecting and preserving the historic fabric as well as supporting ecological needs and current and future recreation

demands. These principles are also fundamental to management and maintenance practices, and can help Essex County Branch Brook Park become a model for environmentally responsible landscape management.

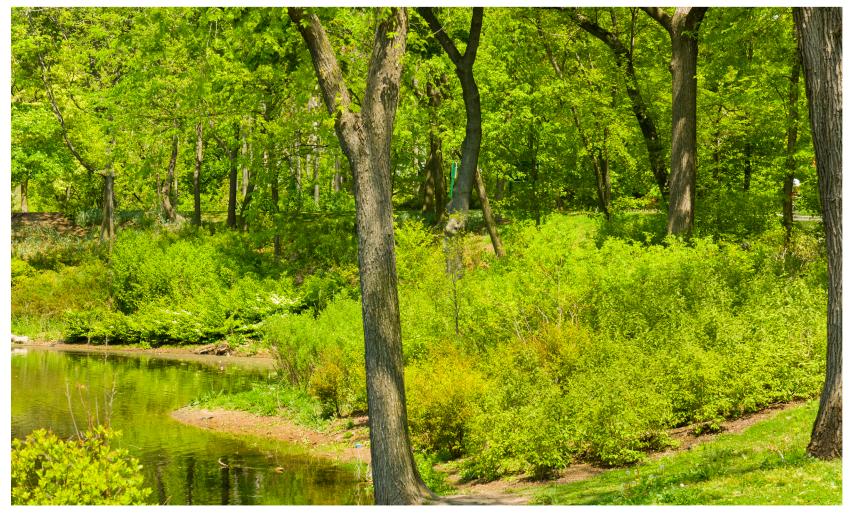
Today, sustainable approaches for a cultural landscape such as Essex County Branch Brook Park are many and varied. Techniques or practices such as careful selection of stormwater management, choosing drought tolerant native plants where compatible with the park's historic planting design, planting the riparian buffer zones, removing invasive plants, using integrated pest management and organic approaches to turf and vegetation management, organic practices for 'urban farm' vegetation, using porous paving, providing wildlife habitat, limiting the use of fertilizers/herbicides and pesticides, and reducing water usage with the introduction of artificial turf for ball fields can all help improve Essex County Branch Brook Park's green footprint.



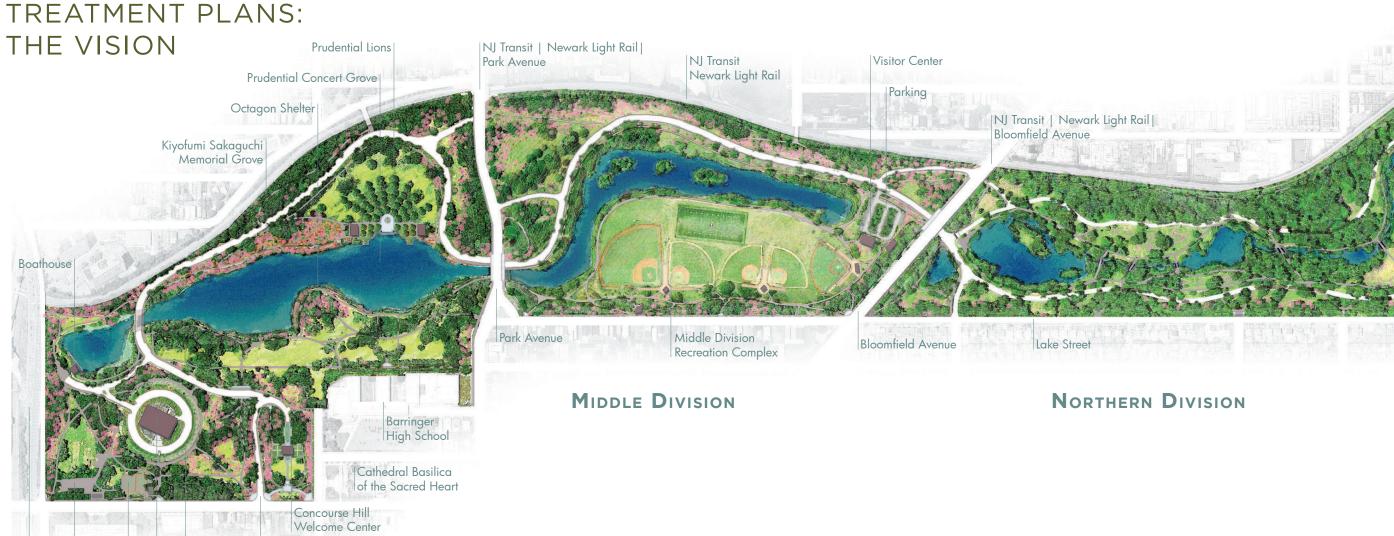
ABOVE TOP: Location of the pools and waterways as constructed in the Northern Division, Drawing 2121-530, Source: ONHS

Above Bottom: View from the Cobble Bridge looking north of the wide brook in the woods south of Ballantine Pool, Photograph 2121-80, Source: ONHS

RIGHT: The restored lake edge in the Southern Division, completed in spring 2008, Source: Patrick O'Brien, May 2008



# **OVERALL PARK** TREATMENT PLANS:



#### PARK-WIDE TREATMENTS:

- Rehabilitate pedestrian paths with ADA accessibility where feasible •
- Provide park lighting throughout
- Provide park benches, trash receptacles throughout
- Update park furnishings and wayfinding system
- Preserve historic open spaces and landforms, manage turf, shrub, and tree cover per Olmsted plans
- Reintroduce historic alignments where missing with ADA accessibility where feasible
- Improve entrances and rehabilitate streetscape: work with city of Newark and the town of Belleville to improve sidewalks, trees, and
- Provide pedestrian connections into park; address all pedestrian crossings into park by pavement markings, signage, and ADA accessible ramps

- Work with City of Newark to rehabilitate pedestrian sidewalks along Lake Street and connecting avenues
- Restore/replace perimeter fencing to match rehabilitated historic fencing
- Provide at least two new entrances along the Western edge of the park, including potential new bridge crossings over New Jersey Transit to re-integrate the park with neighbors to its west.
- Keep parking to current levels to encourage park access via foot and via public transit
- Close the entire road system on a more frequent, regular schedule to allow enhanced use of the park by cyclists, roller-bladers, and
- Develop a hierarchy of signs throughout park, maintain a coherent design that ties signs together graphically; signs should be kept at a minimum, be modest in scale with minimized hardware

## SOUTHERN DIVISION

Reservoir Walls

Roller Skating Center

Basketball Courts

Sandcourt Shelter

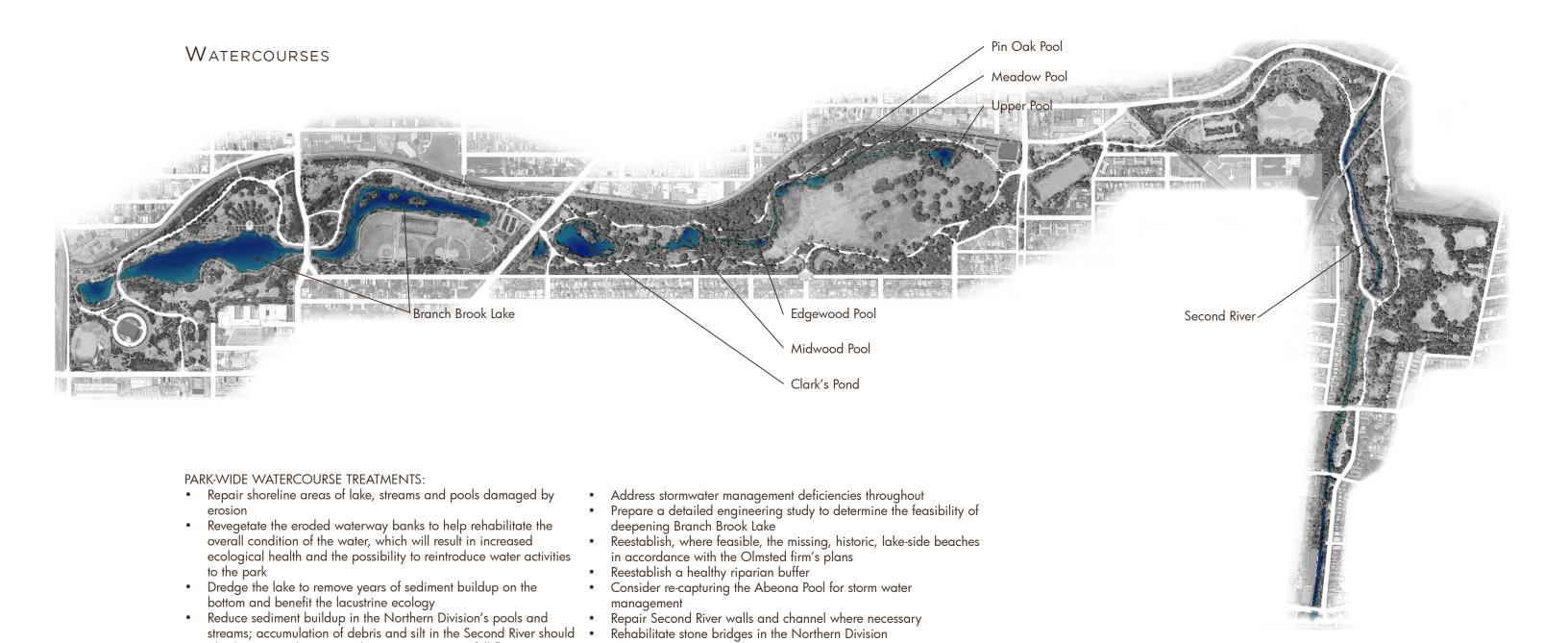
Interstate 280

Essex County Parks

Clifton Avenue Entrance

Administration Building





Repair existing weirs as necessary

also be removed to restore the river course to its full flow

#### VEGETATION

#### PARK-WIDE VEGETATION TREATMENTS:

- Carefully prune and manage existing vegetation
- In areas where the original design intent has been compromised, retain, enhance, replant, and restore historic plantings to reflect the period of significance of the park
- Reestablish feature plantings from the Olmsted firm plan
- New plants should be selected based on the Olmsted firm plant lists, favoring native plantings to maintain species diversity and to enhance sustainability.
- In areas where non-contributing features have been added to the park, utilize vegetation to screen these elements that are visually intrusive, both inside and outside of the park
- Carefully design and prune vegetative screening to maintain visibility for security and safety
- Remove invasive plant species park-wide and replant those areas with plants sympathetic to the original design
- Remove hazardous trees, dead trees, and stumps
- Establish a capital program or maintenance endowment with an annual budget for annual tree care in the park
- Utilize the 'Treefiles' program created for management of the park's valuable woodland resources installed at the Branch Brook Park Alliance
- Diversify tree species and planting sequence in order to maximize long term stability in the park's tree population
- Restore/replace street tree plantings in coordination with the City of Newark



ABOVE: Mature canopy trees near the restored Octagon shelter, Source: Patrick O'Brien, May 2008

- Establish a woodlands manager position in coordination with cherry tree management and begin training for this as soon as possible.
- Manage 'woodlots' in accordance with Volume 5: Vegetation in the Park





ABOVE TOP: Signage on the construction fencing announcing the lake edge restoration along Branch Brook Lake, Source: RHI, 2005

ABOVE BOTTOM: Invasive groundcover in the Northern Division woodlands, Source: RHI, 2010



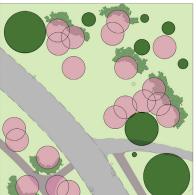


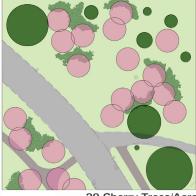
Above Top: Fall color vegetation in the Middle Division, including a stand of invasive phragmites, Source: Patrick O'Brien, October 2008

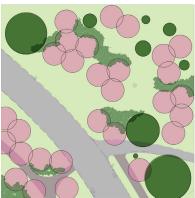
ABOVE BOTTOM: Over-grown vegetation, much of it invasive, along a path in the Northern Division, Source: RHI, 2010

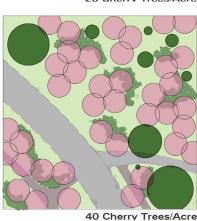
#### CHERRY TREES RESTORING & EXPANDING THE HISTORIC COLLECTION

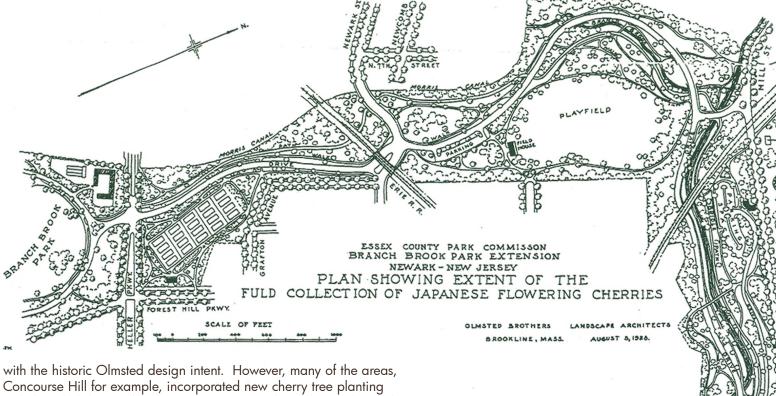
As discussed in the Overview section, the Japanese flowering cherry trees were given to Branch Brook Park in 1928 as a gift from Caroline Bamberger Fuld and were primarily planted in masses along the Extension portion of the park. When restoration of the Fuld Cherry Tree Collection began in earnest, in 2006, the collection's condition was severely degraded (see analysis maps, opposite page). Most of the flowering cherries had been planted over a short span of time, resulting in an even-aged monoculture of rapidly declining trees. In response, a replanting program was established that included planting new trees, and the selective removals and pruning of existing trees. The current total of cherry trees in the park is 4,300. The plant spacing was also meticulously considered (see cherry tree planting study diagrams below) to ensure that the Olmsted design was respected. The diversity of the collection was also increased, to include a total of seventeen different species of trees (see chart of ornamental Japanese flowering cherry trees in Branch Brook Park). In the future, any additional cherry tree planting should not conflict











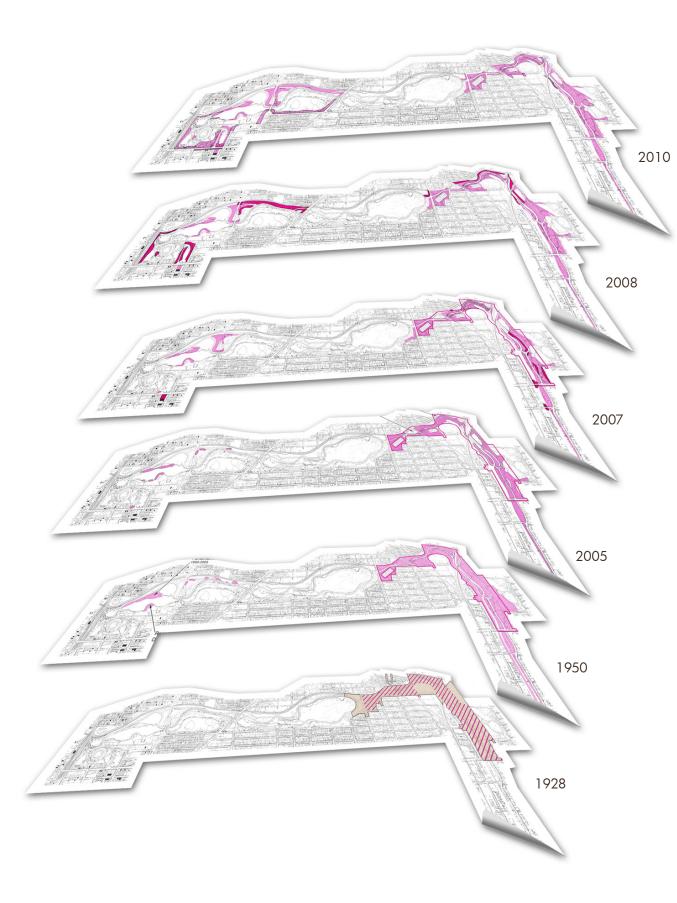
Concourse Hill for example, incorporated new cherry tree planting with the rehabilitation/restoration construction documents outlining the work to be done in the area.

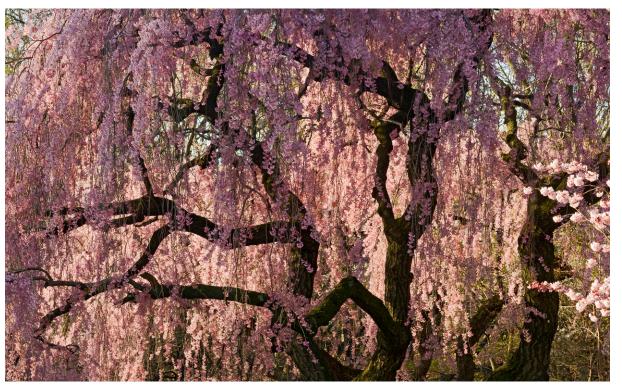


ABOVE: Plan showing the extent of the Fuld Collection of Japanese flowering cherries, August 1928, Source: Plan #2121-757,

FAR LEFT: Cherry Tree Density Planting Study diagrams: Spacing of the cherry trees was carefully studied before planting commenced, as a balance between the cherry trees and existing open space was sought.

LEFT: Cherry trees in bloom with new trees carefully integrated between historic specimens, Source: Jake Rajs, March 2008





LEFT: These planting/analysis maps by RHI show where cherry trees were first planted for the Fuld collection (1928), areas of cherry trees that had expanded by 1950, and their subsequent demise, shown on the 2005 map, when the areas planted with cherry trees—shown by light pink—had greatly diminished. New areas of cherry tree planting—shown by hot pink—were added from 2006 to 2010, bringing the total cherry trees to 4,300 as of 2013.

ABOVE: A part of Branch Brook Park's
Legacy Trees Collection, this weeping
Higan cherry tree is a show-stopper
when in bloom, Source: Jake Rajs,
March 2008

Prunus serrulata
(various pink of Prunus subhirtella Prunus subhirtella (arafted and no

# ORNAMENTAL JAPANESE FLOWERING CHERRY TREES IN BRANCH BROOK PARK:

#### **Botanical Name**

Prunus sargentii

Prunus padus 'Summer Glow'

Prunus sargentii 'Columnaris' Prunus serrulata 'Kwanzan' Prunus serrulata 'Royal Burgundy' Prunus serrulata 'Snow Goose' Prunus serrulata (various white cultivars) (various pink cultivars) Prunus subhirtella 'Autumnalis' Prunus subhirtella 'Pendula' (grafted and non-grafted) Prunus subhirtella 'Pendula plena rosea' (grafted) Prunus subhirtella 'Snow Fountains' (grafted and non-grafted) Prunus subhirtella 'Yae Shidare Higan' Prunus x 'Okame' Prunus yedoensis Prunus yedoensis 'Akebono' Prunus yedoensis 'Pendula'

#### **Common Name**

European Bird Cherry
Sargent Flowering Cherry
Columnar Sargent Flowering Cherry
Kwanzan Flowering Cherry
Royal Burgundy Flowering Cherry
Snow Goose Flowering Cherry
Flowering Cherry Trees (unidentified varieties from 1930s to 1950s)
Flowering Cherry Trees (unidentified varieties from 1930s to 1950s)
Higan Flowering Cherry
Weeping Higan Flowering Cherry

Weeping Higan Flowering Cherry

Snow Fountain Dwarf Flowering Cherry

Weeping Yae Shidare Flowering Cherry

Okame Flowering Cherry Yoshino Flowering Cherry Akebono Flowering Cherry Weeping Yoshino Flowering Cherry



one of the park's most diverse and intricate landscapes. It retains many remnants from Barrett and Bogart's more formal and 'gardenesque' design of the park, but still has much of the Olmstedian character that makes the division seamlessly integrated with other divisions.

Between 2003 and 2014, many significant restoration and rehabilitation projects were completed. The restored Concert Grove provides space for the community to gather, the Kiyo Grove, brimming with textural and colorful masses of perennials and sculptural cherry trees, is fast becoming a favorite place to stroll. The Concourse Hill Welcome Pavilion, atop a prominent hill that provides views to Manhattan, the adjacent cathedral, and to the historic Parks Administration building, is today a central location to showcase all of the parks in the Essex County Park System. Seven projects were completed by Branch Brook Park Alliance in partnership with Essex County.

#### **HIGHLIGHTED AREAS:**

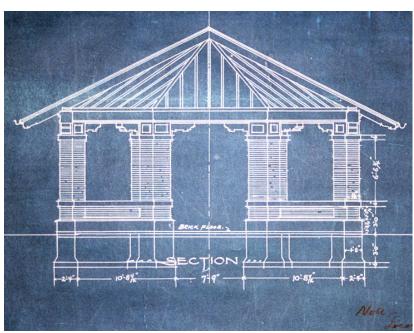
- A. Meeker's Mound & The Octagon Shelter
- B. The Concert Grove And West Lake Edge Rehabilitation (Kiyo Grove)
- C. The Prudential Lions
- D. Quarry Play (unbuilt concept)
- E. Concourse Hill
- F. Lake Edges Restoration
- G. Reservoir Stabilization

#### A. MEEKER'S MOUND & THE OCTAGON SHELTER

By the time the Olmsted firm took over design of the park from Barrett and Bogart much had already been completed in the Southern Division. There was little support for the firm to completely change the Southern Division to satisfy their vision. By 1904, the architectural firm of Carrere and Hastings had designed the Octagon Shelter on Meeker's Mound. By the year 2005, the original shelter collapsed and was removed. The structure was reconstructed in accordance with Carrere and Hasting's original drawings and reopened to the public in 2007. Eventually, the rehabilitation of the Octagon shelter area will include the structure, a lakeside overlook terrace, lawns and plantings nearby, and connection of the site to the rest of the park by an accessible walkway.

#### TREATMENTS:

- Reintroduce lake overlook
- Rebuild octagon shelter on Meeker's Mound [completed]
- Re-implement cherry trees and reconnecting paths with the rest of the park



ABOVE: Historic Olmsted drawings of Shelter No. 1, 1899, Source: OHNS







ABOVE BOTTOM AND RIGHT: Octagon Shelter prior to its reconstruction in 2007, Source: RHI







ABOVE TOP: Historic postcard, Source: #2121-196, ONHS

ABOVE BOTTOM: The newly reconstructed Octagon Shelter, Source: Patrick O'Brien, May

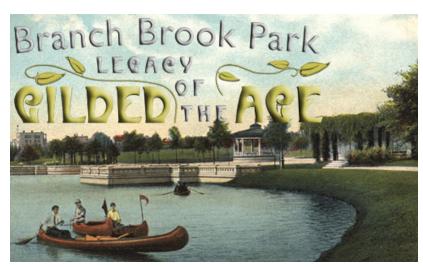
# B. THE CONCERT GROVE AND WEST LAKE EDGE REHABILITATION

Historically, the Concert Grove has been one of the most used areas in Branch Brook Park. Records indicate that at times, the Concert Grove has hosted crowds that numbered over 10,000 people. The area was designed by the Olmsted Brothers with five paths, lined with trees, radiating from a central performance pavilion near the edge of Branch Brook Lake. The lake edge with balustrades was penetrated by central stairs on axis with the formal gardens on the other side of the lake. Each side of the concentric design also had a viewing platform which extended into the lake. Later added to both ends of the space, not far from the lake edge were two comfort stations, carefully tucked under vine-covered trellis structures.

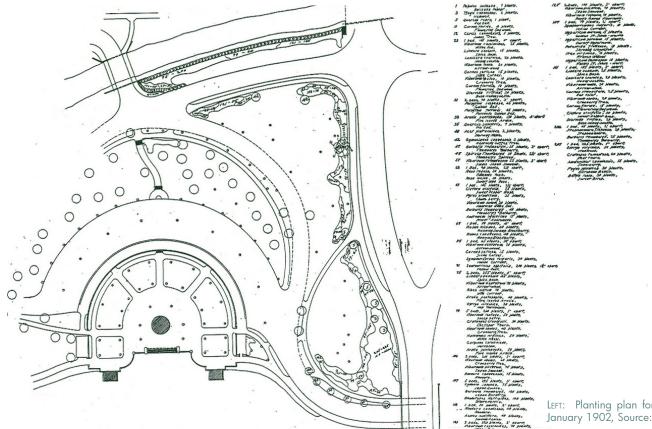
In April 2012, a ribbon cutting ceremony was held to celebrate the restoration of the Concert Grove, the lake balustrade and stairs, paths, pavilion and the trellises to their original glory. The Kiyo Grove western lake edge (and beyond) planting was also completed with much acclaim.

#### TREATMENTS:

- Rehabilitate subway: renovate silted pathways; clean graffiti from stone [completed]
- Reintroduce bandstand structure
- Renovate restroom structures in Concert Grove, reintroduce trellis shade structures [completed]
- Rehabilitate Concert Grove [completed]



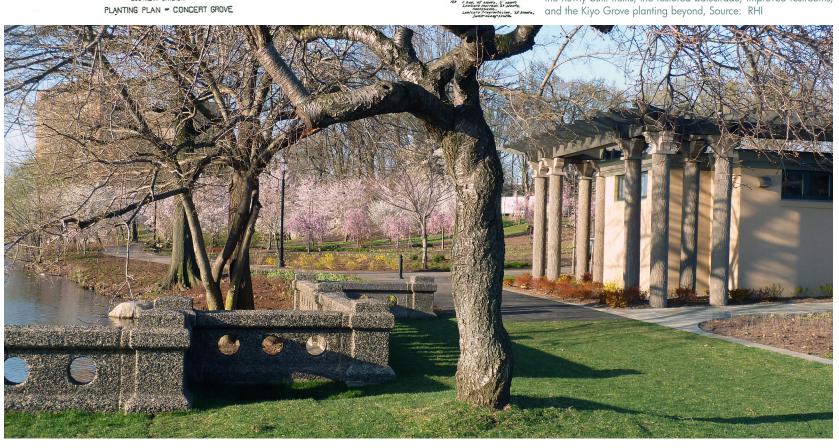
ABOVE: Historic postcard featuring the Branch Brook Lake, the Concert Grove and band shell



BRANCH BROOK, PARK

LEFT: Planting plan for the Concert Grove, Plan #2121-576, January 1902, Source: ONHS.

BELOW: Photo of Concert Grove post construction in 2012, showing the newly built trellis, the restored balustrade, improved restrooms, and the Kiyo Grove planting beyond, Source: RHI

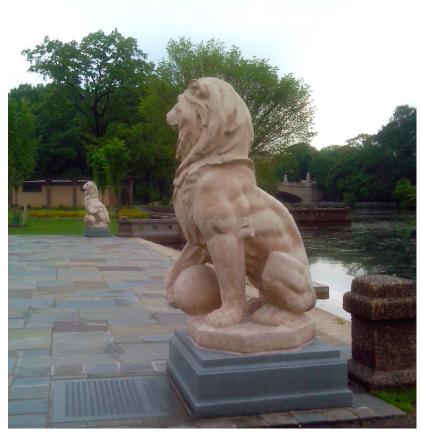




Right: The Concert Grove, Prudential Lions, and restroom pavilions in early spring 2002, before reconstruction, Source: RHI

BELOW: The balustrade along Branch Brook Lake in the Concert Grove, 2003. Note the vegetation growing in the pavement cracks, the poor condition of the balustrade, and the graffiti-tagged lion sculpture, Source: RHI











#### c. Prudential Lions

As discussed in the Overview section, the Branch Brook Park lions by sculptor Karl Bitter, were given to Essex County by Prudential in the 1950s, and were placed in the Music Court until 2011. At that time, severely eroded and painted with graffiti, the lions were removed for museum-quality conservation and restoration. Sturdy replicas of the finished sculptures were created and were installed back in Essex County Branch Brook Park. The original sculptures were placed outside the Hall of Records, where they can be closely monitored for the future.





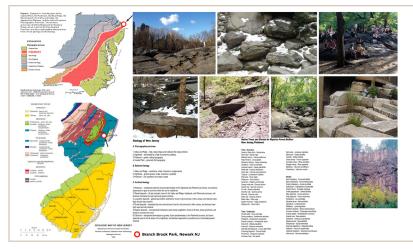




#### D. QUARRY PLAYGROUND

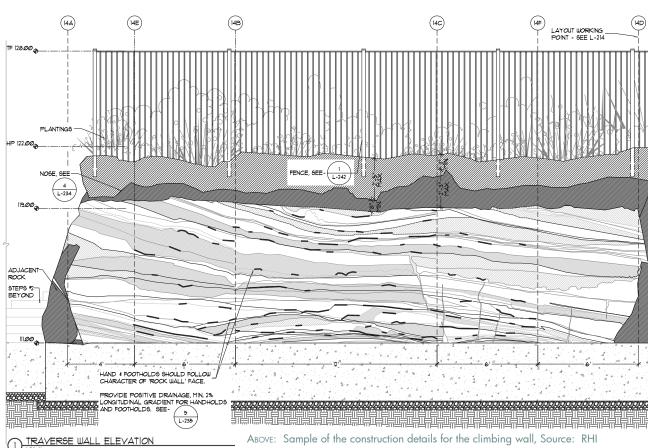
The design for a new children's area called 'The Quarry Playground' in the Southern Division, the theme of which is based on the historical usage of parts of the park as a quarry prior to Branch Brook Park's development, features areas for active and passive play, overlooks, climbing, water spray, and informal play and gatherings. A significant component of the project is education, focusing on the geology and urban

ecology. The new playground, designed for ages 6-12, would be constructed of natural stone, with equipment integrated into the slope against which the rockwork will be set. Interpretive signage and interactive elements such as child operated water jets and mist will also be included. To date this project is not implemented.

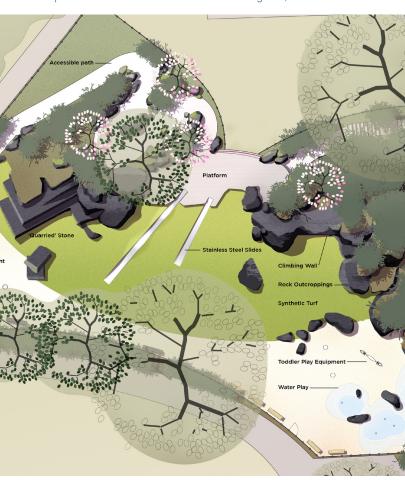


ABOVE: An illustration of the geology of the piedmont area of New Jersey. Much of the inspiration of the design is based on area geology, Source: RHI RIGHT: An enlargement of the Quarry Playground illustrative plan, Source: RHI

LEFT TOP (GOING CLOCKWISE): Close up of one of the Prudential Lions before restoration; the sculptor perfects the details of the replica model; the restored, original sculpture being placed at the Essex County Hall of Records; and, a replica of the restored sculpture installed at the music court, Sources: RHI



ABOVE: Sample of the construction details for the climbing wall, Source: RHI



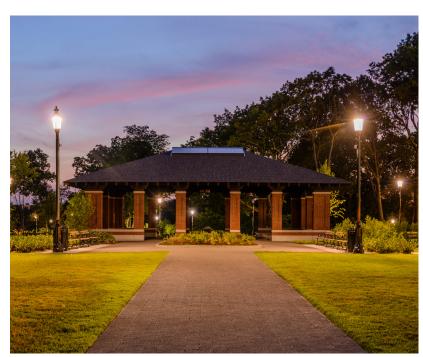
#### E. CONCOURSE HILL

The feature known as the Concourse is thought to be a natural remnant of glacial ridges. In the Olmsted Brothers' design of Branch Brook Park, the Concourse area was a raised carriage and pedestrian concourse, providing views into the park and towards the New York City skyline. The Olmsted design was never implemented. In recent years, the flat top of the hill was used as storage for the city's mulch and the awkward stepped slopes were held in place by historically and aesthetically inappropriate juniper shrubs.

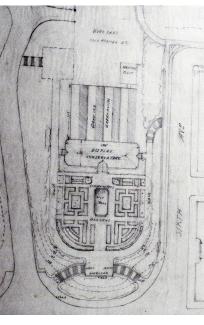
Today, however, there is a new open-air pavilion on the site that functions as a welcome center for the entire Essex County Park System. The slopes have been adjusted and are covered with lush shrub masses which frame a newly installed grand entrance stair and terrace from Clifton Avenue.

#### TREATMENTS:

- Coordinate proposed Barringer High School entrance with park entrance at Victoria Avenue
- Relocate Mendelssohn bust base and add sculpture (future)
- Reintroduce pine tree arbor structure (future)
- Work with city of Newark to enhance adjacent streetscape (future)
- Improve pedestrian connections between the Concourse and the rest of the park



ABOVE: The Concourse Hill Welcome Pavilion at twilight, Source: Jake Rajs, 2014















Historic aerial photo, Concourse Hill, circa 1920;

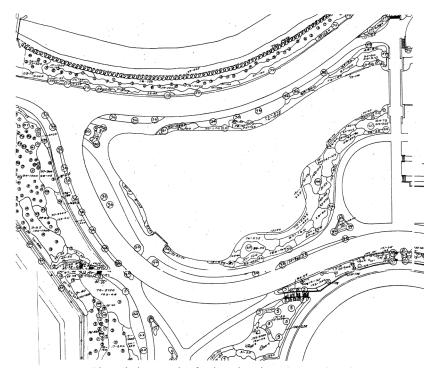
The terraces of Concourse Hill and the Clifton Avenue entrance before rehabilitation, Source: RHI;

And, the illustrative plan by RHI (2012) for Concourse Hill and the primary entrance to Branch Brook Park's Southern Division.

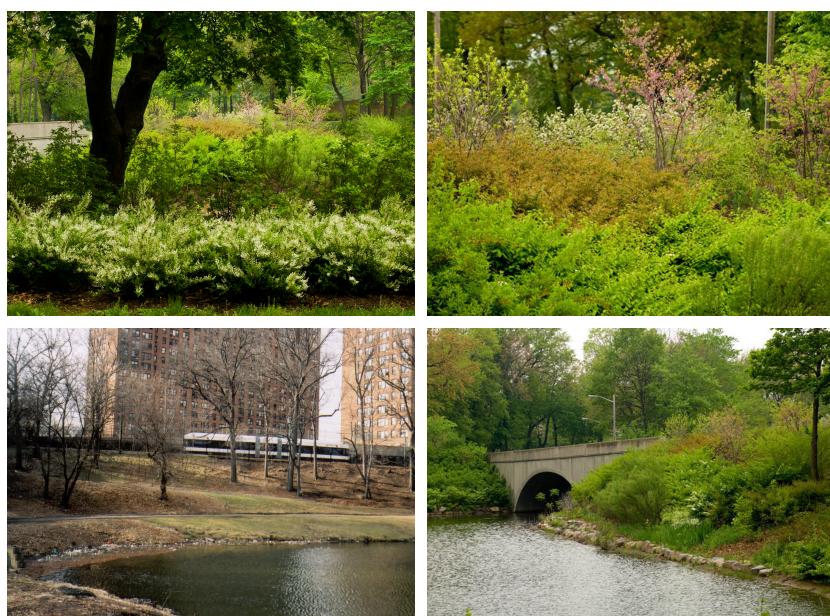


#### F. Lake Edges Restoration

In 2004, design work began in order to restore the lake edges at the southernmost end of Branch Brook Lake. Much of the existing edges had been covered with concrete checkerblock. Invasive vegetation was rampant, and the shoreline was suffering from erosion problems. Planting plans were developed from the historic Olmsted firm plans. Work was completed in 2005 and included the removal of the checkerblock and invasive plant material. The shoreline was stabilized and a the newly planted lake edge is now a vibrant bird habitat within the confines of the city of Newark.



ABOVE: Historic Olmsted planting plan for the Lake Edges, Source: ONHS.



ABOVE TOP (GOING CLOCKWISE): First three photos: post-restoration lake edges in early spring, Source: Patrick O'Brien, 2008; Barren lake edge conditions before restoration, Source: RHI

#### G. RESERVOIR STABILIZATION

The reservoir has been a feature in the park that has remained a challenge to designers (Barrett/Bogart and Olmsted), to Park Commissioners and to park programmers. Its use has ranged from a low service reservoir, later becoming more of a park attraction with a billowing fountain, eventually drained and used as a baseball field in the summer and an outdoor skating rink in the winter. In 1945, a bicycle track ringed its bottom rim and in 1969, the rink was enclosed for all-weather use. The rink was converted to a roller rink in 1991 and is still in use today. However, the existing stone walls are crumbling. Restoration is under way at the time of this writing.

#### TREATMENTS:

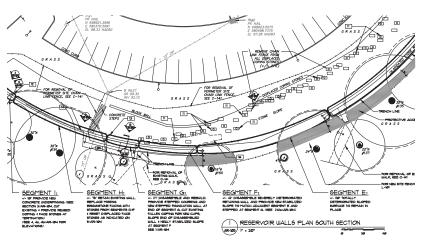
- Stabilize walls protect and preserve remaining areas
- Selectively maintain fallen stones in fallen position to portray industrial archaeology 'ruin'
- Selectively relocate/replace stones and fasten all stones to stabilize
- Provide interpretive signage



ABOVE: Historic photo taken from the top of the Administration Building, looking west over the Reservoir up 7th Avenue, Source: #2121-140, 1898 ONHS









ABOVE TOP: Existing condition of walls before stabilization, Source: RHI, 2008
ABOVE BOTTOM: Panorama of the Reservoir, Source: RHI, 2002

ABOVE TOP: The Reservoir walls in 2009, Source: RHI
ABOVE MIDDLE: Detail from the construction documents prepared for the site's restoration,
Source: CTS Group



# SOUTHERN DIVISION ADDITIONAL TREATMENTS:

- 1. Rehabilitate pedestrian promenade
- 2. Remove pavement wall steps around manhole structures close to Park Avenue bridge, regrade and revegetate area
- 8. Refurbish restrooms near sandcourt shelter
- 4. Existing sandcourt shelter: use for picnics; add outdoor picnic tables
- 5. Remove/relocate existing pre-fabricated playground
- 6. Evaluate potential to reconstruct bridge crossing the south end of the lake to maximize lake views and improve pedestrian access
- 7. Provide one-way vehicular link to Branch Brook Park Drive
- 8. New construction of the Southern Division Center for: boat rental; classroom/meeting rooms; restrooms; snack concession; as well as a geology/urban hydrology interpretive center
- 9. Rehabilitate subway: renovate silted pathways; clean graffiti from stone
- 10. Repair high mound terrace walls, repoint and repair stone work, provide safety railing on top of wall, renovate plantings, preserve historic landforms, wall fragments and interpret
- 17 11. Renovate fieldhouse at basketball courts per structural recommendations
  - 12. Preserve existing basketball courts
  - 13. Replace Clifton Avenue fence with historically appropriate fence.
  - 14. Investigate possibility for land acquisition/linkage south of park
  - 15. Remove existing vehicular access drive from Park Avenue, revegetate and add pedestrian path
  - 16. Provide bridge for pedestrians entering park from west (over light rail tracks)
  - 17. Establish historic design of Midlake Crescent at Park Avenue bridge
  - 18. Replace Park Avenue bridge railing and related hardware with historically appropriate railing
  - 19. Re-introduce the Mendelssohn bust (with the base) back to the park

# Southern Division Historic Photos and Conditions circa 1999-2004







ABOVE LEFT: Historic photo of the poplar tree allee with the Cathedral Basilica of the Sacred

ABOVE: Historic photo of the trellis on the east side of Branch Brook Lake, Source: #2121-156, ONHS







ABOVE TOP: Remnants of the English Garden's arc wall, Source: 2002

ABOVE TOP: Remnants of the English Garden's arc wall, Source: 2002

ABOVE MIDDLE: Clifton Avenue Sand Court Shelter designed by Carrere & Hastings Architects in 1899, Source: 2004

ABOVE BOTTOM: East Subway, Source: RHI



#### A. MIDDLE DIVISION BALLFIELDS

In the park's 'Middle Division', the ballfields, which were part of the original Olmsted plan, have been completely rehabilitated.

Plans included the integration of up-to-date ballfield

facilities within the historic context and setting, creating sustainable management of stormwater and drainage, rehabilitating access into the park according to the historic plans, managing historic and new vegetation, and providing porous asphalt parking.

Included in the ballfield rehabilitation were also improvements

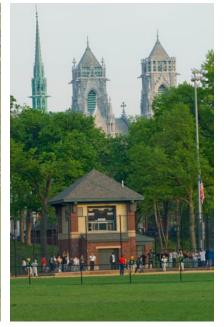
to the adjacent streetscape along Lake Street between Bloomfield and Park Avenues, incorporating entrance features, fencing and signage.





Street. The building along the path ahead is the new Press Box, Source: RHI, 2008









ABOVE BOTTOM: The restored eastern path. The path branching to the right leads to Lake RIGHT (ALL THREE PHOTOS): The ballfields area before restoration, in 2003, Source: RHI

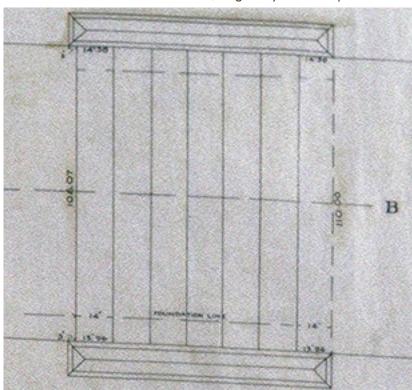


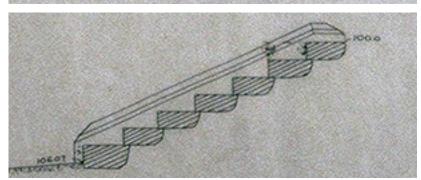




# F. THE MIDDLE DIVISION PARK ENTRANCES

To provide access to the Middle Division from the east, four entrances into the park were reconstructed along Lake Street. As the elevation of Lake Street and the adjacent neighborhood is higher than most of the Middle Division, these entrances were originally built as small graceful staircases, often at a gentle curve to merge with the park pathways. However, by the turn of the century, and like many parts of the park, the existing stairs and adjacent paths had fallen into disrepair or had been replaced in a manner less refined than the original. The entrances were therefore reconstructed, during the Middle Division Ballfields renovation, to grandly welcome park visitors.





 $\label{eq:Above:original} \textit{Above: Original details for the steps at Bloomfield Avenue and Lake Street, Source: ONHS}$ 











LEFT (ALL THREE PHOTOS): Conditions of the entrances before reconstruction, Source: RHI

ABOVE: Post reconstruction photos of Middlefield and Midlake Crescent entrances, Source: Patrick O'Brien, May 2008









Above Top Panorama: The Bloomfield Avenue entrance before reconstruction in 2003, Source: RHI  $\,$ 

 $\label{eq:Above Middle Panorama: The park entrance after reconstruction with new fencing, benches and paving, Source: RHI$ 

ABOVE BOTTOM LEFT AND RIGHT: Entrance details, Source: Patrick O'Brien, May 2008

# c. Octagon Field House

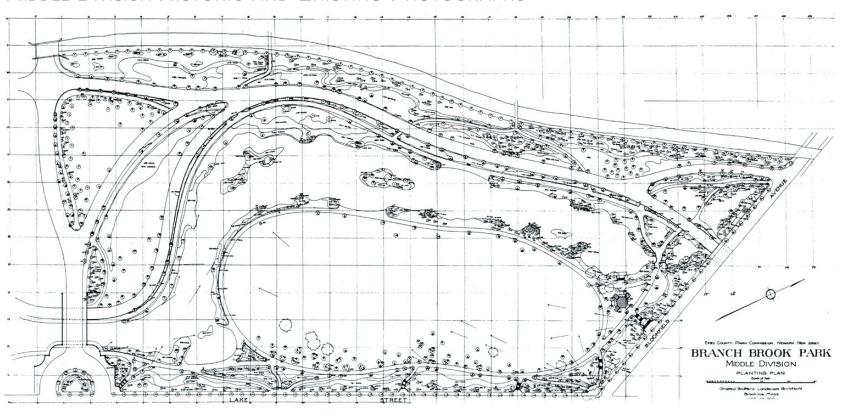
The Octagon Field House was constructed around 1920 with showers and lockers for the children that were playing in the nearby wading pool. The structure was built partially tucked into the slope along Lake Street. Having fallen into disrepair, with the surrounding landscape severely eroded, the site was rehabilitated in 2010/2011. In order to avoid easy access (and possible vandalism or injury) to the roof from Lake Street, the building's roof was raised during rehabilitation. New restroom facilities were also installed.





The Octagon Field House being rehabilitated (top) and completed, as viewed from Lake Street (bottom), Source: RHI

# MIDDLE DIVISION HISTORIC AND EXISTING PHOTOGRAPHS





ABOVE TOP: The Olmsted Middle Division planting plan, plan#2121-454, Source: ONHS
ABOVE BOTTOM: Aerial photo of the Middle Division in 2007, before the installation of an artificial turf soccer field, Source: Steve Uzzell

ABOVE BOTTOM: Running onto the field for Opening Day at the ball park, 2004, Source: Shelley Kusnetz

ABOVE BOTTOM: Running onto the field for Opening Day at the ball park, 2004, Source: Shelley Kusnetz







ABOVE TOP: Warming up before a ball game, Source: Patrick O'Brien, May 2008

# MIDDLE DIVISION HISTORIC AND EXISTING PHOTOGRAPHS





ABOVE TOP: Historic postcard of Bloomfield Avenue bridge

ABOVE BOTTOM: Wading pool with barrier island, playfield beyond, circa 1905, Source: Newark Public Library postcard collection





ABOVE TOP AND BOTTOM: A path leading to the ballfields beyond in 2005 (top, before restoration) and in 2008 (bottom, after restoration), Sources: RHI and Patrick O'Brien

# The Northern Division

The Northern Division is home to the Branch Brook stream system with its meandering channels and wide pools. Crossing this system are eight custom-designed footbridges and two stone weirs. The landscape is pastoral in character, turf dotted with large shade trees on gentle topography. Branch Brook Drive provides a one-way driving loop through this part of the park.

Dense plantings at the park's west and east edges provide
separation and screening from the city just beyond the park's border.



# **HIGHLIGHTED AREAS:**

- A. Northern Division Woodland Management
- B. The Ballentine Gates
- C. Supplemental Well
  D. The Lenape Trail/Two-Mile Loop ••••••
- E. The Urban Farm Greenhouses

# STONE BRIDGES & WEIRS:

- 1. Weir 1
- 2. Laurel Wood Boulder Bridge
- 3. Crossover Drive Bridge
- 4. Midwood Pool Bridge
- 5. Midwood Drive Bridge
- 6. Weir 2
- 7. Brownstone Bench Bridge
- 8. Crossover Bridge
- 9. Brookside Meadow Bridge
- 10. Brownstone Lintel Bridge



## A. NORTHERN DIVISION WOODLAND MANAGEMENT

The woodlands along the western edge of the Northern Division have grown dense, impassable, are choked with invasive plant species, and are a perceived security hazard. Restoring the woodland will require carefully balancing the existing conditions with historical planting plans to come up with an action plan that will involve a mixture of clearing, pruning, large tree removal, as well as the preservation of some existing conditions, and possible new plantings. Pathway refurbishment will also occur.

#### TREATMENTS:

Trail

- Selectively clear invasive plants; prune remaining vegetation and control of views for security
- Refurbish existing woodland and existing paths
  Develop native plant understory to reduce mowing and to enhance species diversity while maintaining visibility through the woods

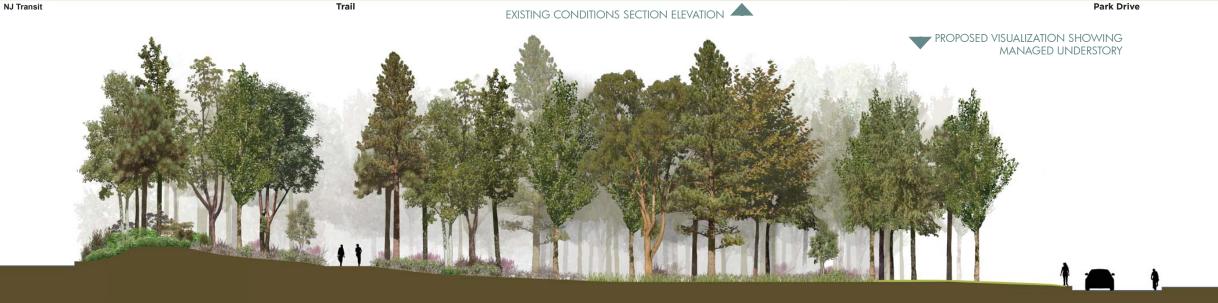
 $\mbox{\sc Right:}$  The existing woodland, dense with many invasive plant species and volunteer vegetation, Source: RHI

BELOW: Section elevations to illustrate existing conditions (top) and how the woodland should look post restoration, Source: RHI



Park Drive





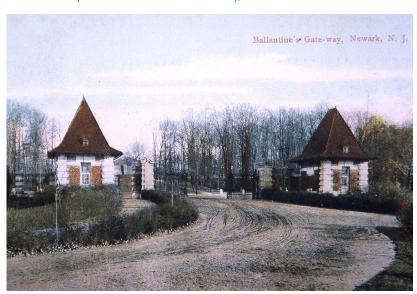
#### B. THE BALLENTINE GATES

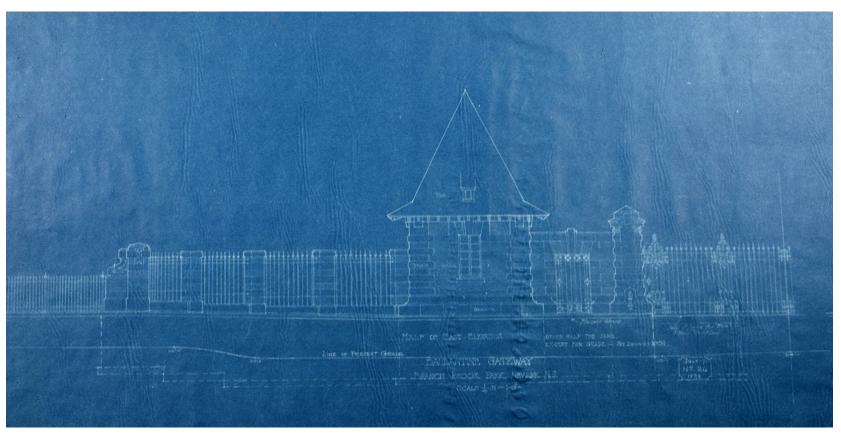
The Ballentine Gates serve as one of the primary entrances into the Northern Division, and certainly the most iconic. The Olmsted Brothers conceived of the Northern Division as the more natural of the park's divisions. The planting design in the area was only to use native trees and shrubs so the scenery was rural and simple. Few architectural features were to be in the Northern Division. However, along the perimeter, and at the terminus of the formal Ballentine Parkway, an exception was made. The design for the Ballentine Gateway, done by Carrere and Hastings (with guidance from John C. Olmsted) was completed by 1899. The buildings, columns, fencing as well as the adjacent paths, plaza, and plantings were all finalized by the spring of 1901.

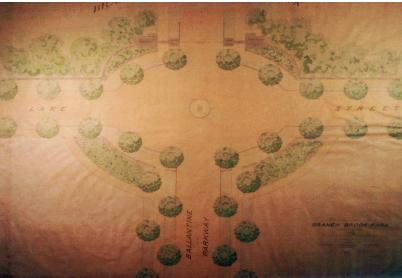
#### TREATMENTS:

- Repair brick masonry on walls
- Repair damaged, settled brownstone/restore damaged stones
- Repair/selectively replace copper gutters, downspouts, and roof (shingles and beadboard support)
- Replace non-historic windows, doors, and trim, based on historic research
- Illuminate structure as appropriate
- Remove vegetation and roots impacting the structure (within 5' of the building), and repair structure accordingly
- Recreate historic paving and plantings based on historic documents, including drainage around the building
- Refinish/repair fence as required

BELOW: Historic postcard of the Ballentine Gateway, date unknown







ABOVE: Front elevation of Ballentine Gateway blueprint, drawing E048, Source: ONHS
LEFT: Preliminary plan for Ballentine Gate, 1899, plan #2121-119, Source: ONHS





PROPOSED PLAN & VISUALIZATION

ABOVE TOP: Panorama of the current Ballentine Gateway, Source: RHI

Above Bottom and Right: Proposed visualization and plan for the Ballentine Gate restoration, Source:  $\mbox{RHI}$ 



#### C. SUPPLEMENTAL WELL

From the outset of the design of the brooks and pools in the Northern Division, there was concern about the availability of water to supply the water system during dry spells. The waterway was carefully designed by John C. Olmsted who desired the water level to have a "brimful effect". In the original installation of the waterway, the water was supplemented.

Until 2014, many of the brooks were dry (or only moist), the pools suffered from algae bloom, and the whole system barely functioned with built-up silt and debris. The park's waterways were carefully studied. As a result of recommendations from the study, to begin bringing this system back to health, a supplemental well is under construction at the time of this report.





ABOVE TOP: Stream in the Northern Division. The bottom is moist, but no surface water is present, August 2008, Source: RHI
ABOVE BOTTOM: Algal bloom in one of the pools, June 2010, Source: RHI

## D. THE LENAPE TRAIL/TWO MILE LOOP

The Branch Brook Park Alliance announced the Two Mile Loop project in early 2013. This project, under construction at the time of this report, will provide a comfortable, safe walking path, with cobble mile markers, along the most accessible and heavily used of the park's paths. Stations with various fitness equipment installed will also be part of the plan. This design, encouraging visitors to stroll or run through some of the park's most intimate and pastoral areas, helps to reinforce a core principle that was part of the original conception of the park: a place to promote well-being and health, an escape from the stresses of urban living.

#### TREATMENTS:

- Install a rubberized walking surface along the two mile loop
  Provide rumble strip markers for safer pedestrian crossing points
- Include entry signs at key locations
- Add fitness stations along loop in appropriate areas
- Build a pedestrian entrance to the park greenhouses

RIGHT: Artist's conception of the Two Mile Loop and fitness station, Source: RHI

BELOW: Illustrative map showing the location of the Lenape Trail/Two Mile Loop in the Northern Division, Source: RHI

### E. URBAN FARM GREENHOUSES

The Essex County Urban Farm was launched as an effort to help encourage and to provide for the community access to more fresh, affordable produce. Recognizing the need for increased awareness for public health, the greenhouses were renovated in 2012 and now regularly grow food in hydroponic and soil-based systems. Programs involving area school children and teachers are also a large part of the greenhouse programming.





The restored Urban Farm greenhouses, Source: photos courtesy of the Branch Brook

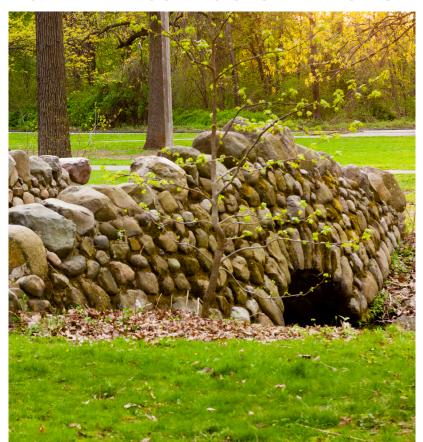


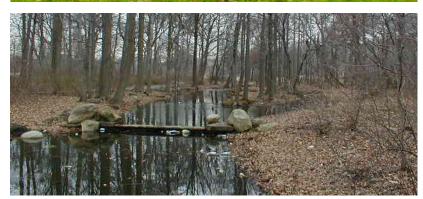
- 1. Reintroduce historic Bloomfield field house entrance, an important visual park connection across Bloomfield Avenue at street level
- 2. Renovate existing maintenance facility building in a style appropriate to the park design, including: Replace windows, replace fencing, replace alarm system and electric gate
- 3. Remove angle parking along south Branch Brook Drive near maintenance facility to improve safety and allow parallel parking along both sides of drive to maintain current parking count
- 4. Retain small portion of access drive to maintenance facility twoway for ease of access to facility
- 5. Rehabilitate 6 pedestrian bridges and 2 historic road bridges over Branch Brook per structural recommendations
- 6. Propose new children's play ground near Ballantine Gateway entrance per historical documents
- 7. Re-establish historic Sycamore walk between Ballantine and Delavan entrance east
- 8. Reintroduce historic pedestrian path alignments throughout meadows where possible. Pave with appropriate material consistent to historic design.
- 9. Provide pedestrian link at Heller Parkway and Branch Brook Parkway
- 10. Improve pedestrian entrances along Lake Street to historic

- design and provide ADA accessibility where possible: historic Crossover Drive entrance; historic Bloomfield Avenue and Lake Street entrance; historic 2nd Avenue entrance; historic Abington entrance; historic Berkley Avenue entrance; and Delavan Avenue pedestrian entrance.
- 11. Re-establish pedestrian links into park from western edge where possible per historic design: historic Abington entrance west; historic Berkeley Avenue entrance west; historic Beechwood walk from Davenport Avenue entrance west; and historic Delavan entrance west
- 12. Re-establish historic pedestrian connection from Elwood Avenue
- 13. Reintroduce meadow fieldhouse on Knoll. Possible uses to include: restrooms; picnic shelter; police command post (1 parking space); concessions (2 parking spaces); Parks Keeper-Park Manager Headquarters (1 parking space); special events space (2 parking spaces)
- 14. Consider converting Abeona Pool area into a rain garden.
- 15. Provide traffic calming devices at select locations throughout park where pedestrian and vehicular traffic conflicts would most likely occur: Davenport Avenue subway stop; Bloomfield Avenue subway stop; and, Franklin Street connection.\*
- 16. Study potential to close northern division loop drive during

- selected hours for special events and/or recreational uses, such as festivals, bicycling, or a jogging loop. This would require a traffic study and closures of (5) entrances along Lake Street as well as bypass traffic from Middle Division to 2nd Avenue entrance and Bloomfield Avenue (closures at Heller Parkway, Elwood Avenue entrance, Ballentine entrance, 2nd Avenue entrance, Bloomfield Avenue entrance.)\*
- 17. Designate loop on one side of Branch Brook Parkway north and south for bicycles and jogging only. Mark pavement to designate this use. Allow parallel parking on opposite side of parkway as needed to maintain current count.\*
- 18. Explore potential to re-align south Branch Brook Drive by reclaiming angle parking on east side of drive to reclaim area on west side of drive for needed berming and planting screen to buffer views into maintenance facility.\*
- 19. Retain current parking counts throughout division. Add additional parking where possible.\*
- \* Number is not included on illustrative plan above

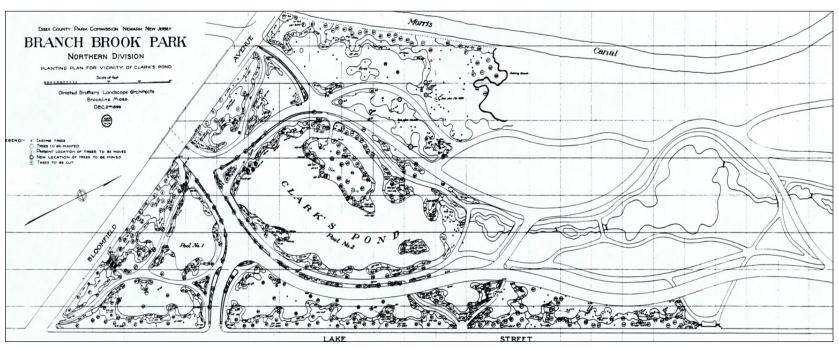
## Northern Division Historic and Existing Photographs





ABOVE TOP: Laurel Wood Boulder Bridge, Source: Patrick O'Brien, May 2008

ABOVE BOTTOM: Weir north of Midwood Drive bridge, Source: RHI



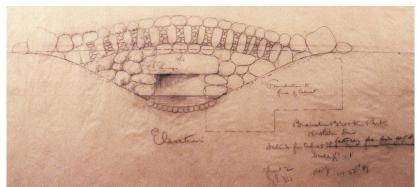


ABOVE TOP: An Olmsted planting plan of the area adjacent to Bloomfield Avenue and Clark's Pond, plan #2121-383, Source: ONHS

ABOVE BOTTOM: The 'North Playfield' and meadow, Source: Patrick O'Brien, May 2008

## Northern Division Historic and Existing Photographs







Above Top: Midwood Drive Bridge, Source: RHI
ABOVE MIDDLE: Detailed sketch of the Midwood Drive Bridge, Source ONHS
ABOVE BOTTOM: Steps in the Northern Division, Source: Patrick O'Brien, May 2008





ABOVE TOP: View of the Midwood Pool Bridge at the outlet of Abington Pool, Source: ABOVE: Historic postcard of a pool and weir in Northern Division. photograph #2121-77, ONHS
ABOVE BOTTOM: Path at the Brownstone Lintel Bridge, Source: photo #2121-176, ONHS

Tool, Source: ABOVE: Historic postcard of a pool and weir in Northern Division.

## A. EXTENSION BALL FIELDS

The ballfields in the Extension were rehabilitated in 2006 to be used primarily for little league and youth league baseball. The Olmsted firm had originally designed the area to be simple open playfields, with minimal equipment such as fencing or bleachers to visually intrude on the green expanse. The improvements that were made were compatible with the historic treatments. The turf outfields remain uncluttered, without fencing to separate the fields. In addition, new irrigation, pathways, lighting, backstops, and benches are tucked along the newly-planted perimeter, as well as under existing large canopy trees.

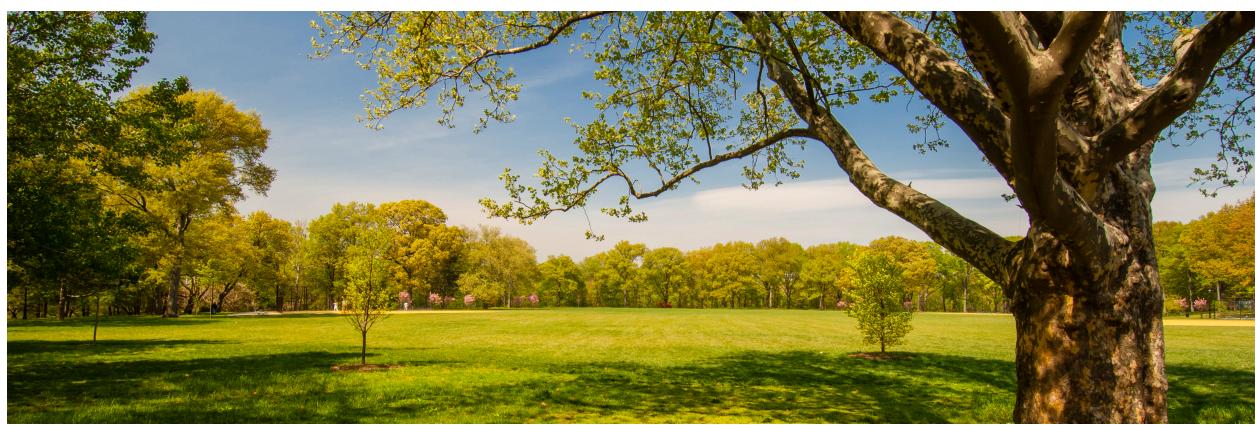
RIGHT: Aerial photograph of the Extension ballfields under construction. The fields were regraded and the soil was amended to improve drainage, Source: Steve Uzzell, 2007

 $\ensuremath{\mathsf{FAR}}$  RIGHT: Infield showing minimal furnishings treatment at the edge of the trees, Source: Patrick O'Brien, May 2008

BELOW: Looking across the fields, note the absence fencing to obstruct the view, Source: Patrick O'Brien, May 2008







## D. CHERRY TREE DEMONSTRATION PROJECT

By 2001, the famed Branch Brook Park Japanese flowering cherry tree collection, was severely degraded. The remaining trees were deteriorating rapidly, having dwindled to 984 individually inventoried trees—with the majority being in fair or poor condition. In an effort to focus on this slowly disappearing collection, and to once again restore it to its original glory, the Cherry Tree Demonstration Project was planned. This project, completed in 2006, became the launching point to not only re-establish the Fuld Collection, but to expand it, both in numbers and in location. In addition, the Demonstration Project was more than just planting cherry trees, it also included new lighting, benches, evergreen tree and shrub planting, and refurbished pathways.





ABOVE: The 'before' photo of an area in the Demonstration Project, Source: RHI







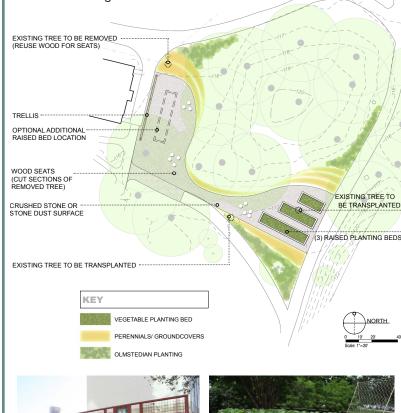
Above Top Left: Cherry trees tagged at a nursery, ready for delivery to the park, Source RHI

Above Top Right: Newly planted cherry trees, Source: RHI

Above Bottom: Visualization (2006) of the Cherry Tree Demonstration Project, Source: RHI

## E. CHILDREN'S GARDEN

At the edge of a small mossy mound covered with canopy trees, a Children's Garden was envisioned. Adjacent to the Essex County Cherry Blossom Center and behind an elementary school, this area will become a space for active learning, planting, and cultivating.
Under construction at the time of this report, the garden will be
used by local children for them to become better acquainted with plants and their benefits, as well as for junior Master Gardener's training. An "art trellis" with panels created from children's/ paintings, raised planting beds, along with wood log and boulder seats provide elements for children and small groups to feel welcome in this garden.







A plan of the design concept, as well as "inspiration" photos that the Children's Garden is based upon, Source: RHI

## EXTENSION HISTORIC AND EXISTING PHOTOGRAPHS

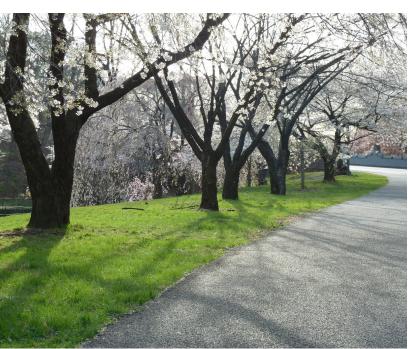








photograph collection



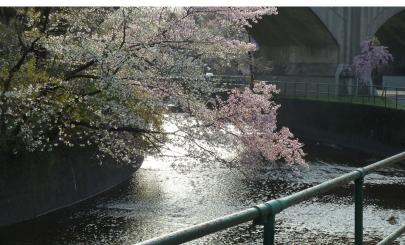
ABOVE BOTTOM: The channelized walls of the Second River, Source: Newark Public Library ABOVE TOP: The Second River from the pedestrian bridge at Dow Street, Source: RHI ABOVE BOTTOM: The cherry trees in full bloom, Source: Bob Hartman, March 2012



BELOW TOP AND MIDDLE: Wide walks and newly installed benches along a restored pathway, Source: Patrick O'Brien, 2008







Above Top: Olmsted Brothers' 1927 planting plan for a portion of the Extension, Source:  $\ensuremath{\mathsf{ONHS}}$ 

ABOVE BOTTOM: Community members enjoying the bocce ball court at the Essex County Cherry Center, Source: RHI



- recommendations
- 11. Rehabilitate Second River walk plantings per Olmsted plans
- 12. Rehabilitate historic 1931 footbridge per structural recommendations
- 13. Rehabilitate historic path alignment connections to 1931 bridge where missing, per Olmsted plans
- 14. Rehabilitate historic path alignments along eastern edge of park to provide access from adjacent neighborhood
- 15. Reconfigure intersection to reduce vehicular speed and improve pedestrian safety

- 16. Study narrowing road along the Second River
- 17. Rehabilitate North Branch Brook Drive Bridge per structural recommendations and historic design
- 18. Rehabilitate historic "Linear Mall" and Linden tree allee along eastern edge of park
- 19. Rehabilitate children's wading pool/splash pad at Linden Mall
- 20. Renovate Belleville Park bathrooms/children's shelter and tool house in a manner consistent with historic design and per structural recommendations

- 21. Renovate Belleville Park Senior's Center in a manner consistent with historic design and per structural recommendations; create 'building identity' along Belleville Avenue
- 22. Remove one entrance at Senior's Center turnaround area and reconfigure circulation so all traffic can use remaining entrance
- 23. Reconfigure parking/pedestrian circulation pattern adjacent to Senior Center to improve safety; current pattern allows vehicle/pedestrian conflict where main pedestrian loop path intersects parking lot ingress and egress.
- 24. Improve plantings around playground to better fit into park setting
- 25. Rehabilitate Mt. Prospect Avenue Bridge per structural recommendations and historic design
- 26. Rehabilitate Summer
  Avenue Bridge per structural
  recommendations and historic
  design
- Rehabilitate footbridge at intersection of Mill, Dow and Sylvan Streets per structural recommendations and historic design
- 28. Study possibility/assess need to provide basketball courts (4), volleyball courts (4)
- 29. Explore possibility of reestablishing historic parking area to accommodate existing and potential recreation
- 30. Rehabilitate old quarry area: Remove baseball field and regrade to open site lines and views; explore possibilities to reestablish historic circulation through quarry area; create zones to interpret historic quarry (investigate reintroduction of pool system as interpretive feature (rain gardens?)); provide picnic shelter and tables
- 31. Provide traffic calming devices at select locations throughout park where pedestrian and vehicular traffic conflicts would most likely occur: Grafton Avenue crossing and Branch Brook Drive Bridge (at Second River crossing)\*
- \* Number is not included on illustrative plan above

## SITE ELEMENTS & FURNISHINGS

Branch Brook Park's linear layout can make orientation challenging. A coherent 'kit of parts,' established 'standards' to use throughout—including in the extension—will help to knit the park's four divisions into a more integrated whole. Over the last decade, as pieces of the park have been rehabilitated/built, careful attention has been paid to developing a catalog of details that respect and reflect

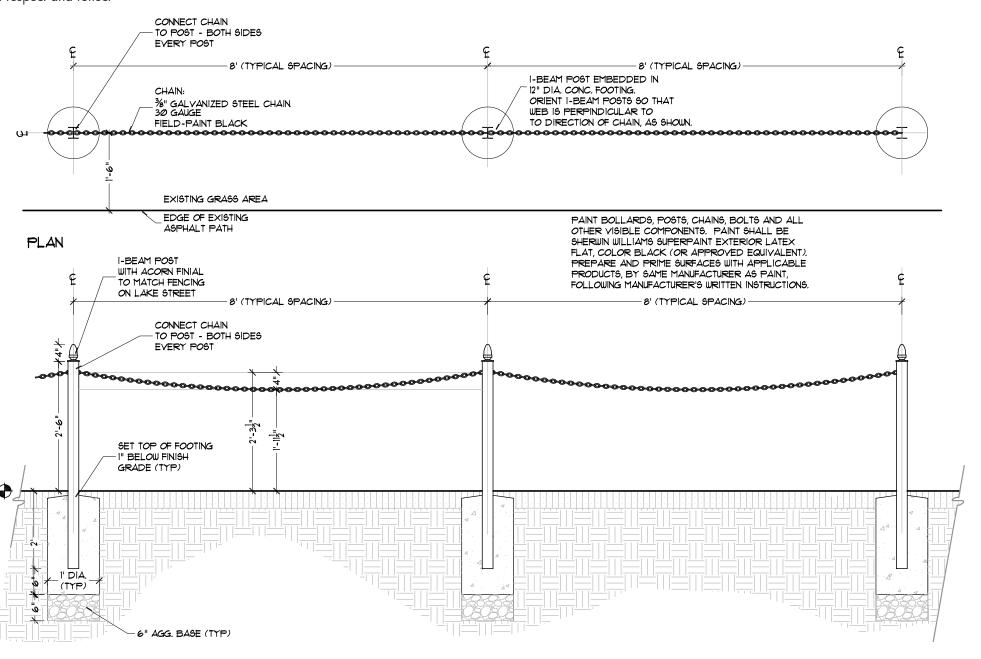
the park's history, but can be embraced in the future as the park continues to evolve. These site elements, that include access control, furnishings, lighting, hardscape and signage, are important as they reinforces Essex County Branch Brook Park's history, stature, and community presence. Any new designs for rehabilitation/reconstruction should incorporate these standards into the design. Any deviation or addition to these details should be reviewed and approved by a park advisory committee.

## Access Control

## **Post and Chain Barrier:**



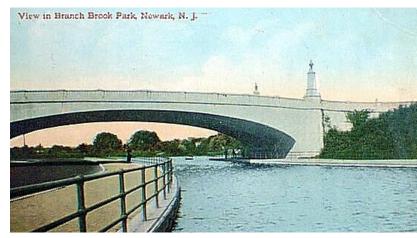
To be used in limited areas where access needs to be more tightly controlled, this post and chain barrier system has semigloss black 30" posts connected with a black chain.

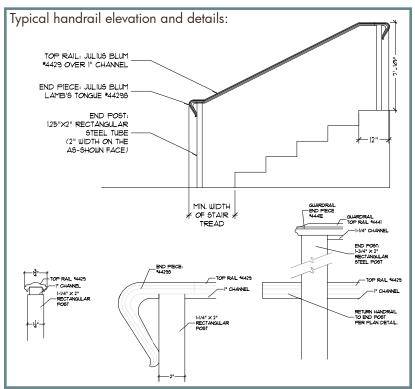


## ACCESS CONTROL

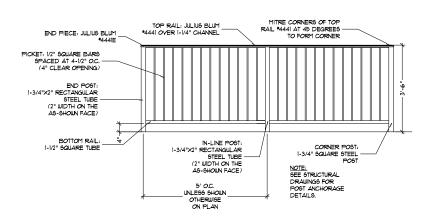
## Handrails and Guardrails:

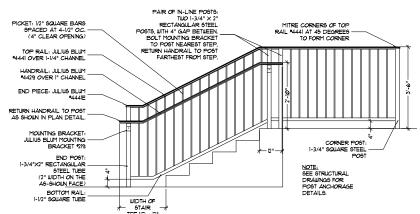
The handrails and guardrails chosen for Branch Brook Park were designed by considering and interpreting the historic design (see below for post card from 1915 of the guardrail along Branch Brook Lake), while complying with the current Americans with Disabilities Act (ADA) specifications. Cost and ease of maintenance were also factors in the design.

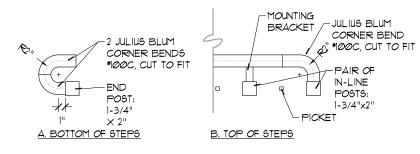




Typical guardrail elevation (with and without handrails) and handrail return to guardrail plan

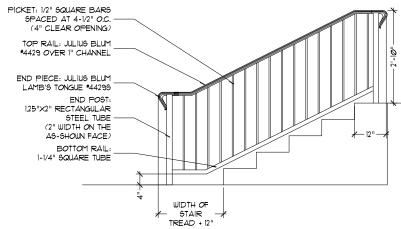






RIGHT: Newly installed handrails and guardrails in Branch Brook Park, Source, RHI

## Typical handrail with pickets elevation



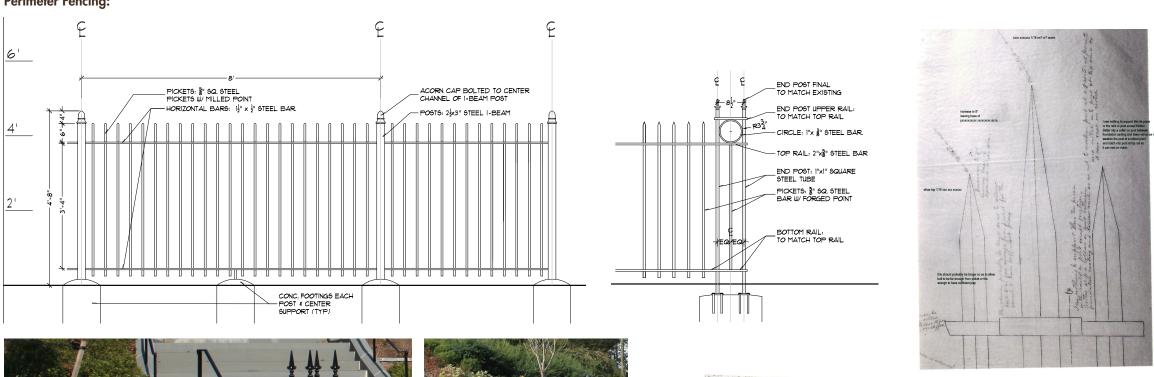






## Access Control

## Perimeter Fencing:

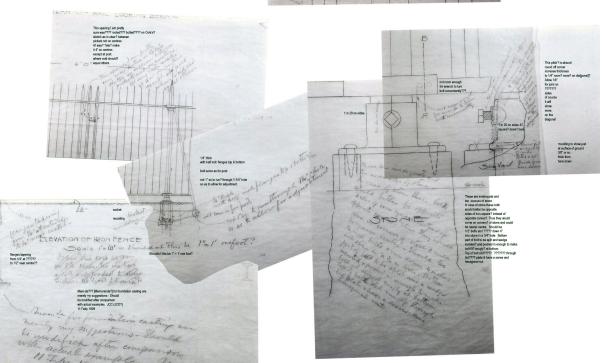




When restoration began in the park, much of the perimeter fencing was in disrepair. Before new fencing was installed, careful analysis of the historic drawings as well as of the existing perimeter fence was conducted. From that investigation (see far right for a sample of the



study), a prototype for the new fence, including the more ornate end post, was designed. All railings and fence elements are to be semi-gloss black.

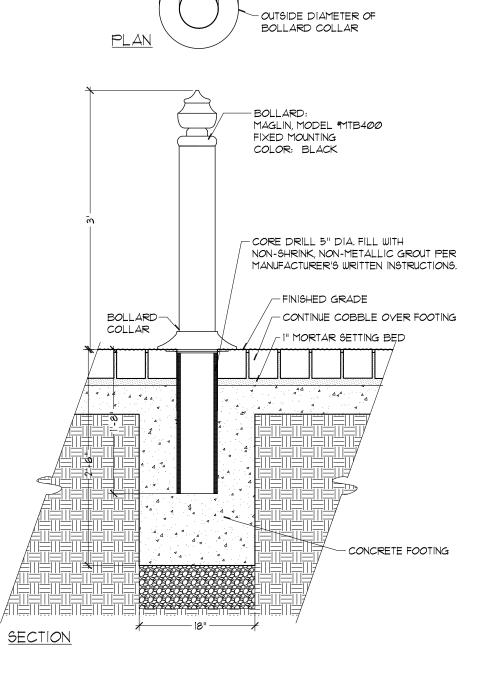


## Access Control

## **Bollard:**

Typical spacing: On 10' path, minimize number of bollards by placing bollards at 3' from edges of path (rather than bollards at very edge of path). On 8' path, place bollards 2' from edges of path.





OUTSIDE DIAMETER OF BOLLARD POST

## Chain Link Fencing (permanent): Chain link fence is to be only used for league recreation barriers. The fencing should be black vinyl-coated and the shortest effective height should be selected. PHOTO ABOVE: Chain link fencing around the Middle Division ball fields FENCE GUARD ON OUTFIELD FENCES TYP. BY FIRST SERVICE OR EQUAL COLOR: DARK GREY Detail and photo, RHI STEEL POST & 2" NOMINAL O.D. RAIL W/ 2" MESH GALV. CHAIN LINK FENCE FABRIC (9 GUAGE), DARK GREY UNYL COATED MOUND FOR DRAINAGE -BOTTOM TENSION WIRE (CONNECTED TO ALL POSTS) -FENCE TO BE FLUSH WITH GROUND - CONCRETE FOOTING FOR POST (VERTICAL SIDES) 4' CHAIN LINK FENCE

## **FURNISHINGS**

## **Bench**

The standard bench for Branch Brook Park is a custom fabricated (by Maglin) bench that is based on the original park bench design. An original bench was available to provide measurements for the metal work. The standard bench length is 6' long, the decorative end pieces are semi-gloss black cast aluminum metal and the wood slats are ipe.





The above, top image is an historic photo showing Branch Brook Park's original benches. The bottom photo offers a close-up of the new installed bench, source: Bob Hartman 2012.

## **Bleachers:**

Galvanized frame; vinyl-coated black seats. Height set to avoid the use of guardrail, at the time of this writing International Building Code allows a maximum height of 30" and 3 rows of seats.



## **Picnic Tables:**

By Victor Stanley (model C-7 from the Classic Series) semi-gloss black cast ductile iron frames with slats made of ipe.



## Trash Receptacles:

Fabricated by Maglin, the standard trashcan is galvanized semigloss black steel with a 32 gallon capacity (model MLWR200-32).



## **Drinking Fountains:**

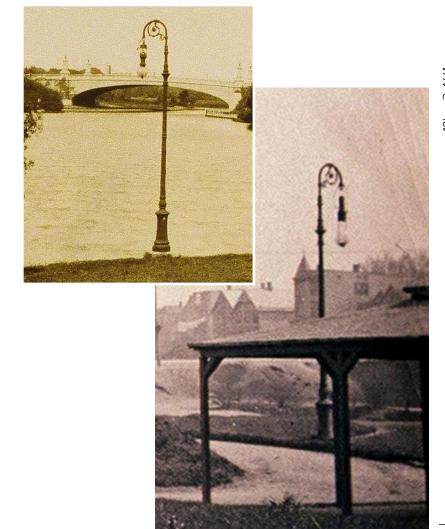
Single-bowl drinking fountain with wheelchair arm by Murdock Fountains (model mc-76-1). Solid brass bowl, color: black, frost-proof.



## LIGHTING

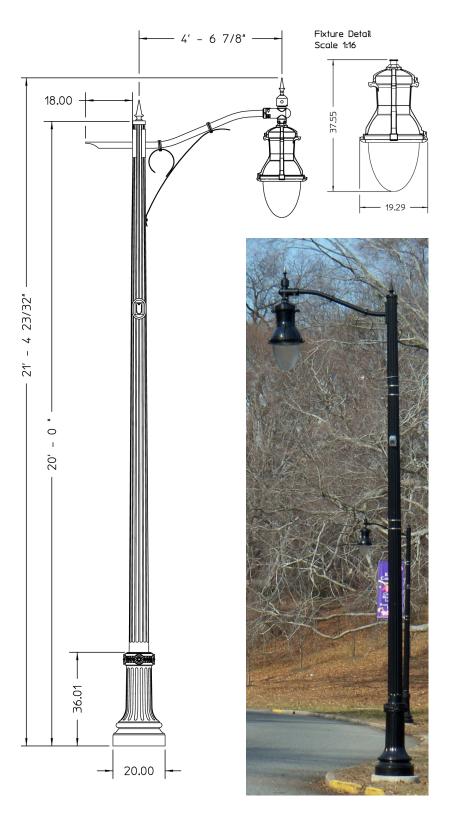
Historic photos and postcards (some of which are seen below) were studied for guidance in determining the appropriate lighting for Branch Brook Park.

Two different types of light fixtures were selected, both semi-gloss black in color. One fixture should be used when lighting pathways in the park, and is slightly shorter, offering a more pedestrian scale (near right). The second light, with a drop-down teardrop fixture, is taller with an extended arm and should be used to light roadways (far right). Both of the fixtures are manufactured by HADCO, and approved by Public Service Electric and Gas Company (PSE&G).









## HARDSCAPE

There are many different paving materials used at Branch Brook Park. The location and the use, along with studies of historic photos and drawings, helps to determine which material is best suited. The following is a catalog of the different paving materials used in the park. In some cases, such as with the cobblestone, a construction detail is also provided.

## **Bluestone Pavers**

Color: Natural bluestone in color ranging from grays to light browns. Do not use 'blue' or 'maroon' colored stones. Pattern is to be random rectangular (to match paving at Middle Division entrances along Lake Street). Provide a border of 8" x 8" square pavers around random rectangular fields.

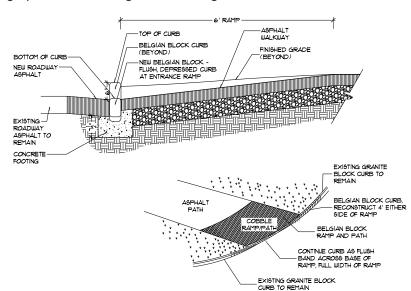


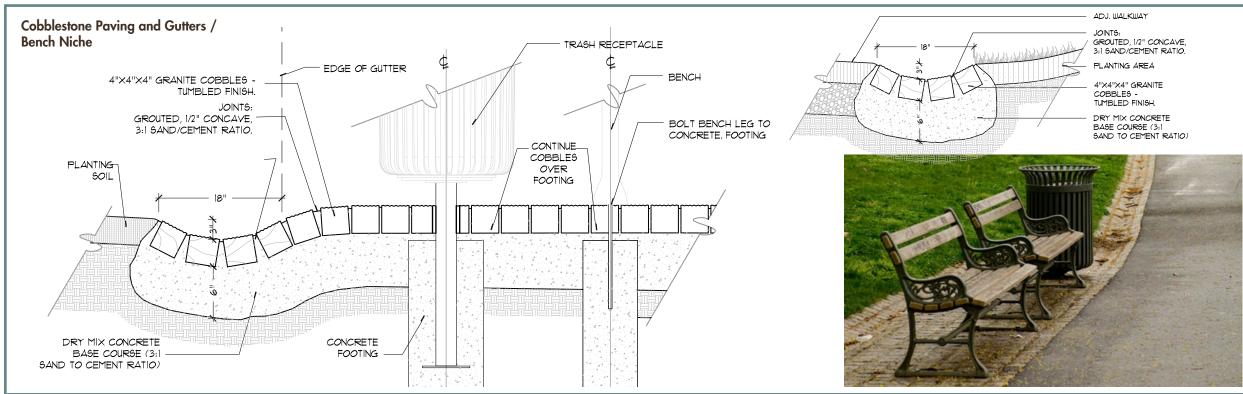
## **Bluestone Steps and Cheekwall**



## Curb Ramps: Asphalt and Cobble (with depressed cobble curbs)

Granite "Belgian block" cobble is 4" wide, the color should be light gray to match existing cobbles along Branch Brook Drive.





## HARDSCAPE

## **Asphalt Paving/Block Pavers**





Top: Asphalt paving for pathways: standard primary path is 10' wide, standard secondary path is 8' wide. Cross slope path (do not crown) to allow for snow removal. Use standard NJDOT asphalt mix. Bottom: Asphalt block paving is Hanover asphalt block pavers, color matrix A80012, finish "Heavy Tudor"; size: 12" x 5" rectangle or 12" x 6" rectangle. Border paving areas with 12" wide rowlock course, while the field of pavers should be set in running-bond pattern.

## **Brick and Brownstone:**

Brick used in Branch Brook Park should match the historic brick at the Ballentine Gates, or the new Cerone Building press box in the Middle Division. The mortar joints should provide minimal contrast with the brick (Cerone building color was 'Red Clay' 48B by Lehigh Cement Co.).

The brownstone should also match existing features in the park—either the Middle Division entrances along Lake Street or the Northern Division bridges over Branch Brook. At the time of writing this report, brownstone has become very difficult to obtain due to the quarry closing. Bluestone may be a suitable substitute, but its use should still be reviewed before installation by the Branch Brook Park Alliance advisory committee.



## Stucco (Portland Cement Plaster) and Cast Stone:

The finish for stucco should be a light stippled pattern; the color, beige color to match the Cerone Building (see photo right). Note that for the Middle Division, the color "Travertine" by the Lehigh Cement company was selected; future projects may require a slightly darker color.

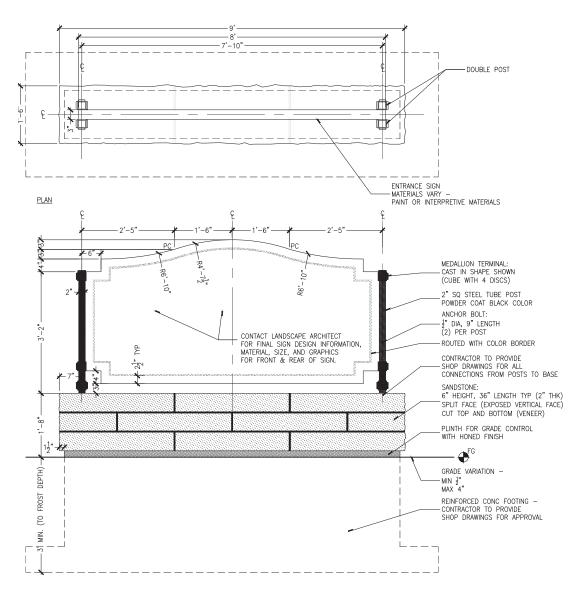
Cast stone should be 'limestone' color, fabricated to match the historic cast stone at the Ballentine Gates, or the new Cerone Building press box in the Middle Division. A light sandblast texture should be applied and the color of the mortar joints should match the cast stone (for the Middle Division the color "Ivory" 12B by Lehigh Cement company was selected).



## SIGNAGE RECOMMENDATIONS

## **Primary Entry Signage**

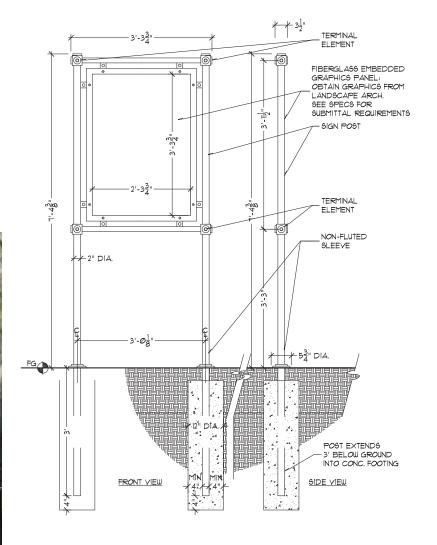
The sign detailed below is based on the design of other Essex County park's signs, but has been slightly modified to better fit within the family of furnishings in Branch Brook Park. The base of the sign has been modified to be large, split-face sandstone (bluestone) and the posts that hold the sign have been replaced with black steel posts. The County does have a smaller version of its typical sign. If this version is needed for Branch Brook Park, the smaller sign should mimic the base and the streamlined proportions as shown in this detail.



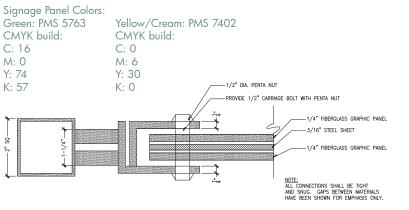
## Permanent signage

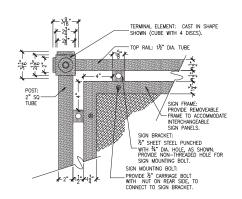
The sign shown and detailed below and to the right should be used for permanent signage needs in the park beyond the Primary Entry Signage. The metal frame of this sign should be semi-gloss black to match the other site furnishings within the park. The use of this sign should be limited in order to keep Branch Brook Park from becoming littered with too many signs.





Signage Panel Fonts: Sans Serif: Gill Sans Bold Condensed Serif: ITC Galliard, Roman and Italic





## **Temporary Signage**

Temporary signage is needed in the park. The images on this page provide examples of some of the different temporary signs that have been effectively used. From a sign describing some construction work taking place, announcing a new project, providing supplemental interpretive information, or reinforcing an important (We're Saving Trees!) message to the public, these types of signs should be used to keep the community informed.

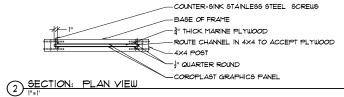
The detail on the far right is provided so even temporary signs can fit in with the park's design standards. This sign is ideal for when temporary signage needs to be more substantial and have a stronger presence in the park.

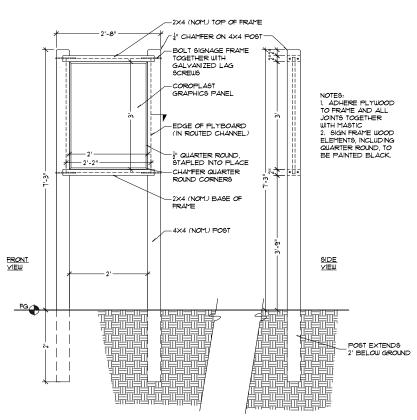












## MEMORIALS AND NAMING

New memorials within Essex County Branch Brook Park should be limited. The Olmsted firm wrote often about not 'cluttering the landscape'. Memorials should be approved by the Park Advisory Committee and should be kept simple, low-key, and away from major views and vistas in the park. Examples of this treatment are shown in the photos with letters carved into stone. Naming of facilities should be discreetly integrated into functional architectural features.





Where historic memorials, i.e. those dating to the Period of Significance (1898–1937), are damaged, they should be restored in place, or relocated to another appropriate site in the park. New locations and/or restoration work should be approved by the Park Advisory Committee.



The photos to the right and above are examples of memorials with letters carved in stone. The top two photos on the right are from the Kiyofumi Sakaguchi Memorial Grove, photo at the immediate right is of the engraved boulder honoring Patricia A. Chambers, and the photo above shows the integration of the memorial in the paving combined within the lion statue replica in the Concert Grove.

Left top: An appropriate opportunity should be identified to relocate Mendelssohn's pedestal to a more visible area of the park to discourage vandalism. The bust should then be reset on the pedestal.

Left bottom: Mendelssohn's Bust, from the Newark Public Library postcard collection















Above top, bottom, and left: Future recognition/ memorials that hawve a notable impact to the landscape should be approved by the Park Advisory Board.

## COLORS AND SURFACES

The following have been successfully used during the restoration of Essex County Branch Brook Park. They are listed here for reference. Equals approved by the park Advisory Board would also be appropriate.

## **Exterior Paint:**

Exterior paint for wood and simulated wood trim:

Benjamin Moore Soft Gloss, Premium Exterior Coatings, Fortified Acrylic House Paint.

- Undersides of soffits / horizontal faces only: Color, HC 104, Deep Base 3B, Copley Gray.
- All other exterior trim, including roll-up "garage" doors, hinged doors, door trim, brackets, fascia, etc.: Color, 2122-10, Deep Base 4B. Dark Pewter

## EXTERIOR PAINT FOR METALS:

Semi-gloss or matte black (high-gloss finishes should <u>not</u> be used). Matte or flat finishes, recommended historically by the Olmsted firm, are preferred to semi-gloss; however, semi-gloss finishes are easier to clean than matte finish products. (Note: Research may be required to determine the best products available at the time of design as most manufacturers periodically update their products to comply with environmental regulations and new technologies.)

## Asphalt shinales:

To match the Cerone building in Middle Division: Certainteed, Landmark TL Series; Color, Granite Gray

## Simulated wood:

Historically, natural wood was used for building construction, especially roofs, brackets, etc. as seen in the Sand Court Shelter of the Southern Division. Rot-resistant species such as locust, which is rarely now available, were used. In the absence of the availability of similarly durable woods, simulated wood trim may be used, painted as described above. Products should be researched at the time of design and specification to determine the best products currently on the

## GRATES AND DRAINS

## Storm drainage grates:

Iron with clear corrosion-resistant finish

FIRST CHOICE: non paved areas (turf); ONLY IF NEEDED: paved areas

## Storm and sanitary manholes:

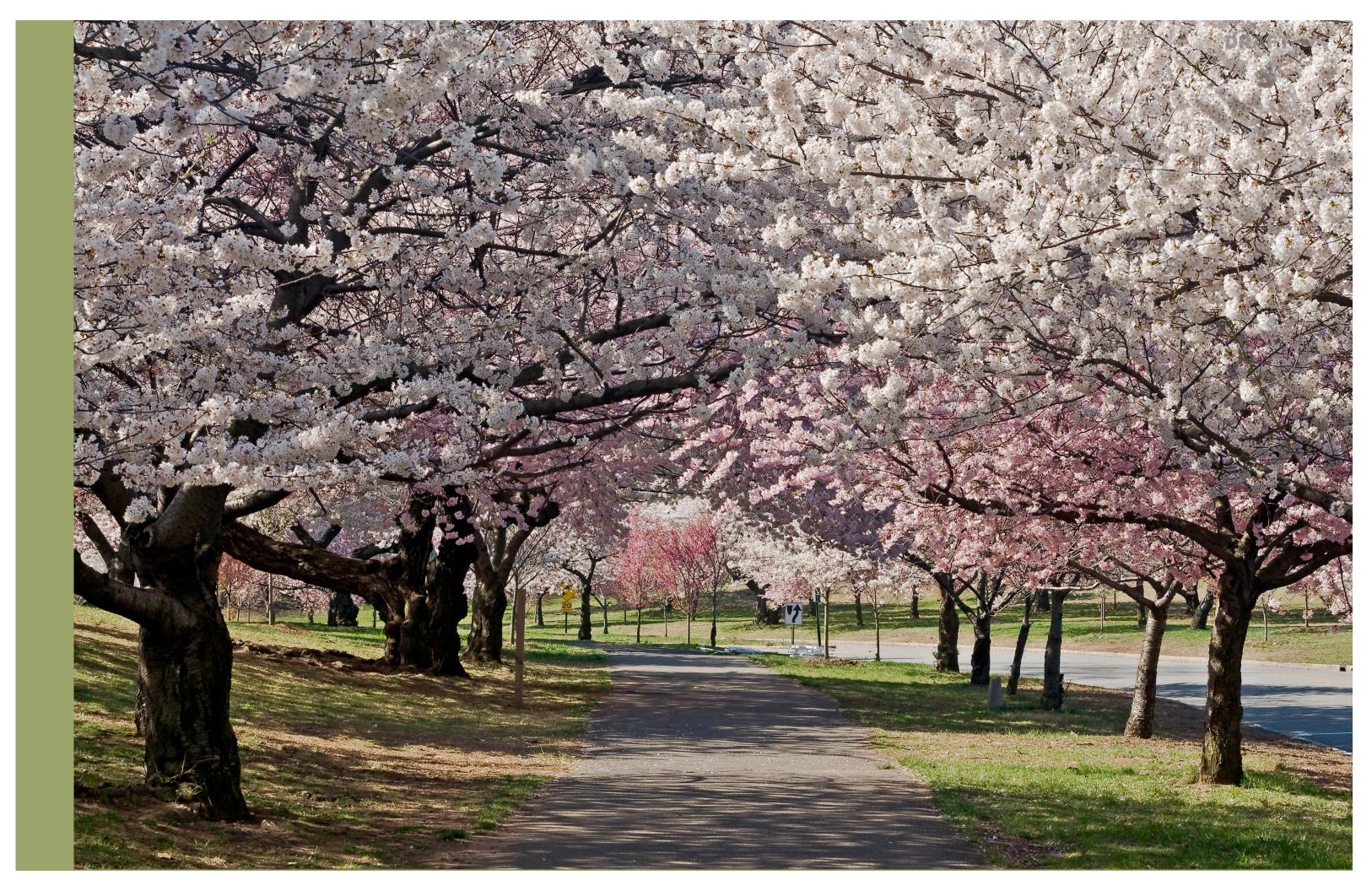
Iron with clear corrosion-resistant finish. Size is to be the minimum as calculated to meet drainage requirement and is to be approved by the Park Advisory Committee.

FIRST CHOICE: planted areas; SECOND CHOICE: turf areas; ONLY IF NEEDED:

manholes placed in paved areas Cleanouts for underdrains, sanitary, etc.:

NON PAVED AREAS: Buried, black color is preferred PAVED AREAS: Set flush with paving, bronze is preferred







# MANAGING THE PARK

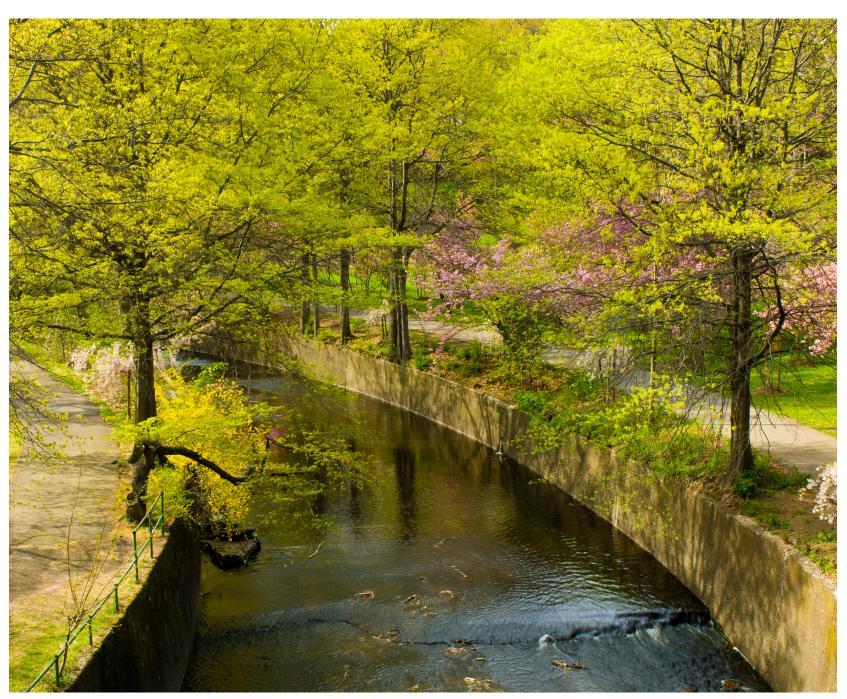
## Maintaining and managing the park

## INTRODUCTION

From 2002 to the date of this report, millions of dollars have been invested in capital improvements throughout Essex County Branch Brook Park as part of the first ever significant rehabilitation of this National Register historic Olmsted park. The park has truly shed years of neglect. The surrounding community is again beginning to consider the park as a beautiful amenity; the goal of bringing people to the park is realized! However, there are still areas of the park that have not yet been restored, or have only had minimal, if any, improvement or focused care. In the past, maintenance practices for the park included mowing, refuse removal, emergency response (such as removing a large tree that toppled across a path), and vegetation management/pruning.

Going forward, the gradual expansion beyond basic park support must continue. Adding a continuous, clearly defined maintenance program is critical in order to protect valuable capital improvements—from plantings and buildings to infrastructure—that have already been made or will be made in the future in the park. Capable management supported with a clear maintenance program becomes a vital force equipped to end the cycle of 'restore and decline'. Management and regular maintenance will also slowly improve the areas of the park that do not need major rehabilitation efforts, but rather could be improved with consistent, positive intervention.

Today, the park is transitioning. Branch Brook Park Alliance is transferring its reins to the newly established Care of the Park Legacy Initiative, which will steward the park into the future. As this changeover occurs, BBPA and the County are working together to establish a network of staff and volunteers to help maintain the park and to establish a regular maintenance program. The following pages further discuss park leadership and maintenance.



Second River in springtime, Source: Patrick O'Brien, April 2008

## LEADERSHIP, MANAGEMENT & STAFF

How Essex County Branch Brook Park will look through the 21st Century will very much depend on how the park is managed and maintained.

Large capital projects completed over the past decade have greatly improved many of the park's significant spaces. However, such capital projects must receive ongoing attention and appropriate maintenance beginning immediately after completion. The successful implementation of this management plan provides a strong foundation to ensure that the park does not fall into the same disrepair that it faced in the latter part of the 1900s. Of course, starting with fixing what is broken, quickly removing graffiti, and prohibiting the addition of non-standard furnishings is a step in the right direction. A holistic approach establishing a long-term path towards the future is needed. For Branch Brook Park, the successful combination will be capable and dedicated County leadership, strong community participation, and a robust volunteer base (see a general organizational chart illustrating these connections on the opposite page).



ABOVE: Student Conservation Association Volunteers working near the Cherry Blossom Center. Source: RHI

## CHERRY TREE & ZONE GARDEN MANAGER & VOLUNTEER RECRUITMENT COORDINATOR

Pivotal for this management plan was Branch Brook Park Alliance's hiring a Cherry Tree and Zone Garden Manager to oversee all aspects of the Japanese flowering cherry tree collection's maintenance and to help establish the Zone Gardening Program.

In general, the Cherry Tree and Zone Garden Manager is responsible for:

- Helping to ensure that the capital investment in the cherry tree
  collection, restoration, and expansion is well cared for (see:
  'Maintenance Practices & Tasks / Cherry Tree Collection, below)
  At the time of this writing, the Cherry Tree and Zone Garden
  Manager is certified arborist Paul Cowie.
- Maintaining the cherry tree inventory database
- Developing the Zone Gardening Program, recruiting Zone Gardeners (including volunteer professional arborists), and overseeing implementation of the program.
- Recording maintenance tasks needed/completed for the Park

Working in conjunction with the Manager is a volunteer Recruitment Coordinator, employed by the County. Tasks for this position include:

- Collaborating with the Manager to identify, prioritize, and keep a checklist of maintenance tasks need in the Park
- Coordinating regular maintenance tasks throughout the park, including regular mowing, facilities maintenance, and other regular county maintenance functions.
- Coordinating County crews, equipment and materials when needed to complete certain maintenance tasks, as requested by the Zone Gardeners/Manager
- Assist in the recruitment and on-going management of park volunteers

## COMMUNITY PARTNERSHIPS

Many local corporations, institutes of higher learning, law firms, etc. have given to the park in either/both monetary and volunteer hour donations. The relationships formed with these businesses should continue to be solidified. These strong partnerships enable the planning for Branch Brook Park's bright future and help make legacy initiatives possible.

## Volunteers

The assistance provided by dedicated volunteers is critical in helping to overcome today's budget realities. Many parks have implemented successful partnerships with pools of individual volunteers, school groups, or even corporate sponsorship. Such arrangements have helped community members become more connected to and feel more ownership of public spaces, as well as helped them to develop a deeper understanding of their environment. Many volunteers are exposed to Best Management Practices and they develop new skills and acquire knowledge through their efforts.

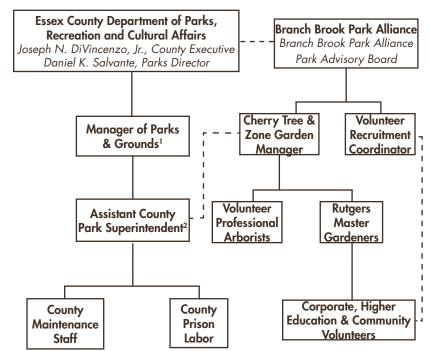
For parks, without the dedication of volunteers, many tasks would either be pushed further down a growing "to-do" list, or would not be done at all. Essex County Branch Brook Park has already been the grateful recipient of many volunteer hours. In fact, community volunteers working with the Cherry Tree & Zone Garden Manager are already making considerable progress in helping to ensure the successful establishment and subsequent health of newly-planted cherry trees and other vegetation in the Park. This volunteerism is presenting terrific opportunities for cultivating an enduring network of care for the park's plants. Respecting the time and skills that volunteers offer, along with cultivating greater community participation will be something to continue and, where possible, expand upon. As such, any long-term plan for the park should carefully consider this important resource. While the Zone Gardening Program—that divides the park into specific areas, each under the charge of a trained Master Gardener—is already being successfully established, a volunteer plan could further explore the following:

- A Volunteer Field Guide: A printed volunteer field guide developed to outline critical tasks and critical knowledge necessary, such as identification of cherry trees, recordation of necessary maintenance, and team contact information
- Maintenance "Field Day" Events: Large-scale, festive events which include massive work efforts (such as the mulching of 1000 cherry tree rings), and which serve as vehicles for recruitment and

training of community volunteers. These events would have a significant public relations and visibility component

- Professional Arborist Volunteers: Volunteer professionals responsible for monitoring and reporting cherry tree conditions in a defined area on a regular schedule
- Community Volunteers: Persons who would not necessarily have any horticultural, arboricultural or related formal education or experience, who would receive training and be responsible for additional monitoring and completion of certain maintenance tasks within an assigned area on a regular schedule and during maintenance events.
- Training Sessions: Bringing together professionals that have a deep knowledge of the park to contribute to the continuing education of the volunteers, for example professional arborists, landscape architects, Olmsted park historians.

## Care of the Park Legacy Initiative Organizational Chart



At the time of this writing: 1. Carmine Raimo, 2. Joe Guarino

## MAINTENANCE PRACTICES & TASKS

All components of Branch Brook Park's infrastructure require ongoing or periodic maintenance. This includes a wide range of items such as paving material, steps, handrails, cobble gutters, benches, storm drains, lighting and electrical systems, trees, shrubs and turf. It is a large park with many pieces and, being a landscape, it is also a living and evolving tapestry. While there have been parts of the park that have been fully restored, other parts of this landscape need greater attention than they have had through the years. Despite the significant improvements made in the park over the past decade, there are still remaining projects that can be restored relatively quickly, all at once. There are also areas which will require slow and methodical restoration, such as in the woodlands, where wide-spread disturbance all at once may cause more problems than offer solutions. This variety of landscapes and treatment methods means that different skill and input is required. A detailed, systematic approach-carefully plannedis the way to tackle Branch Brook Park's maintenance needs. Below are specific tasks to be performed by the park staff maintenance crew(s), volunteers, or contractors with specialized skills.



ABOVE: Clearing away accumulated debris blocking a drainage grate, Source: RHI

## MAINTENANCE MANUAL

A simple maintenance manual, created and adapted from the information included in this document, could be a useful guide for maintenance managers, volunteers and crews. The first edition of such a maintenance manual may be brief and include only those tasks that are essential to complete at that time. However, this could be an evolving document, updated every few years, that incorporates any additional tasks, responsibilities, or improved 'Best Management Practice' approaches. A continual planning process, that incorporates assessment and subsequent revision as it progresses, is appropriate. At a minimum, the manual should include:

- Documents intended for use by management in guiding maintenance practices, appropriate details for park features, colors and materials
- Checklists for use by supervisors, workers and volunteers to guide regular operations.

## Tasks for Improved Maintenance

### **Driving**

- Explain to maintenance staff that driving trucks within turfgrass areas of the park compacts soil to the detriment of the turf as well as nearby trees
- Delineate specific vehicular maintenance routes within the park; record these routes on a map for distribution to all park employees
- Tour the park with maintenance crews to point out areas where driving is and is not allowed
- Make minor hardscape adjustments as needed to facilitate reasonable access, such as relocation of trash receptacles, minor widening of pathways or adjustment of pathway intersection radii
- Enforce improved driving habits by staff through the park.

### Mowing

- Purchase new narrow-deck / small radius mowers to facilitate mowing between trees, especially the cherry trees
- Discontinue use of large-deck mowers except in large, open fields.
   Train maintenance crews to keep mowers two- to three-feet away from cherry trees; this will be best facilitated by early and repeated improvements of tree ring mulching practices

## Tasks for Improved Maintenance (cont.)

## Weeding

- Train maintenance crews/volunteers to distinguish between desirable species and weeds (including invasive species identification)
- Improve weed management in the park by increased frequency of manual weeding, application of environmentally safe pre-emergent herbicides in planting beds, and selective application of postemergent herbicides
- Assign dedicated crews to weed management seasonally.

## Mulching

- Designate a place within the park to store piles of wood chips from tree trimming, pruning and tree removals
- If pruning and tree removals within the park produce more wood chips than the park can utilize, offer excess wood chips to the community (for free or for a fee)
- If the park requires more wood chip mulch than is produced within
  the park, arrange for local tree contractors to provide wood chips
  as a byproduct of their operations; this arrangement would ideally
  be free of cost to the County and would be for a fixed amount of
  clean wood chips to be deposited
- Train maintenance crews to recognize appropriate mulch levels within planted beds, around tree trunks, and in woodland areas, generally 2-3" depth within shrub beds and around tree trunks, with the top elevation set to expose root flares and kept 3" away from trunks. Mulch accordingly.
- Utilize coarse wood chips for mulching in most planted beds within the park. Utilize more finely ground mulch within more highly visible areas. Utilize leaves as mulch within woodland areas.

## Leaf Management

- Utilize leaf collection methods that do not disturb existing soil.
   Option 1: Purchase a leaf collection truck with suction hose and shredder.
- Option 2: Contract with a private leaf removal service
- Compost leaves for use in planting beds as soil amendments.
   Offer excess compost to the community (for free or for a fee).

## **Pruning**

- Train maintenance crews in best practices for pruning shrubs, small trees and young trees, and management of perennials and groundcovers.
- Purchase appropriate pruning tools
- This item does not include pruning of large trees which should be handled by a professional arborist.

## **Waste Management**

- Designate specific vehicular access routes for trash collection (as noted above under 'Driving') in order to avoid the need for maintenance vehicles to drive off paved pathways.
- Determine and implement a specific schedule for emptying trash receptacles within the park.
- Determine and implement a specific schedule for litter collection within maintained areas and woodland areas of the park.
- Determine areas of the park which require extensive one-time trash removal (such as removal of large piles of debris including mattresses and tires). Identify costs and a schedule for clean-up of these areas.
- Replace "oil drum" type trash receptacles with new standard trash receptacles park-wide.
- Determine and implement a program of recycling within the park.

## Irrigation Management

• Continue with current practices of maintaining the park's irrigation systems via annually renewed contract with a private contractor.

### **Turf Management**

- Develop a park-specific specification and management plan for turfgrass management.
- Determine appropriate staffing level or contractual costs associated with the management plan.
  - Option 1: Hire a Turfgrass Manager; this person should have formal training and preferably a degree in turfgrass or golf course management. One crew would be responsible For turfgrass management during growing season (approximately April to September). From September to April, that crew could augment other crews such as leaf management, snow removal, or woodland management.
  - Option 2: Contract with a private landscape contracting firm to only provide turfgrass management during the growing season.

Turfgrass management crews would be responsible for:

- Mowing
- Delineation of mown lawns and edging
- Topsoiling and seeding or sodding areas of turgrass which require elevation due to presence of large, exposed tree roots
- Aeration
- Fertilization
- Overseeding

## Infill Plantings

- Maintain a file of all planting plans and plant lists produced for the park, during the Period of Significance (by Olmsted Firm) and during rehabilitation efforts. Make plans available to Zone Gardening, Woodland Management, and Horticultural crews.
- Crews and managers would report to the supervisor any needs for infill
  plantings, based on observance of missing plants. A list of suitable
  replacement plants, fully vetted by the park advisory board, would
  need to be developed before the order is placed for installation.

### Physical Plant Management

Develop a management plan and possibly a manual with checklists and schedules for physical plant management, including regular inspections and repairs of park infrastructure, including:

- Furnishings such as benches and trash receptacles
- Fencing
- Pavement, steps and walls
- Signs
- Soil erosion
- Mechanical and plumbing equipment, including drinking fountains
- Electrical equipment, including lighting
- Storm drainage systems
- Graffiti removal
- Park buildings
- Determine staffing needs and/or costs of contracted physical plant management.

## Large Tree and Woodland Management

Develop a specific management plan for woodland areas and individual large trees, based upon CLR *Volume 5: Vegetation in the Park.* The plan would include:

- A database of existing canopy trees was established in 2005.
   This database has been re-evaluated in the pre-design phase of park projects, but not in its entirety. The database and the park's tree canopy should be re-evaluated every 5 years.
- Infill plantings of native species within woodland areas, particularly to increase biodiversity and provide effects consistent with the design intent of the Olmsted Firm
- Removal of invasive species and severing climbing vines within woodland areas through ongoing monitoring and management, done in concert with Invasive Species Management crews
- Removal of dead or dying trees parkwide, especially trees designated as fall hazards and emergency removals
- Pruning of large trees parkwide via a plan for regularly scheduled pruning arranged by park Divisions (south, middle, north, extension).
- Monitor health of large, specimen trees.

## INVASIVES SPECIES CONTROL

There is an abundance of invasive plant species currently thriving in the park which should be addressed as soon as possible. Actions for controlling could include:

- Hiring an Invasive Species Manager or Consultant. This
  person should have formal training and preferably a degree in
  horticulture, agronomy, botany or other plant-science-based field.
- The Invasive Species Manager and crew would be responsible for implementation of current best management practices for invasive species control throughout the park, including the ornamental grass Phragmites and knotweed.
- This person would also work with others to manage the less aggressive invasive plant species such as Norway maple, ailanthus and mulberry.
- The Invasives Species Manager should also help to shape and guide the community volunteer's help in invasive vegetation removal
- Finally, while full eradication of the invasive species in the park may not be realistic, the Invasive Species Manager should be involved with the creation of a park-wide "road map" towards getting the invasive plants under control within the park.



ABOVE: A clump of highly aggressive and invasive ornamental grass, Phragmites, at the edge of Branch Brook Lake, Source: Patrick O'Brien, October 2008.

## THE CHERRY TREE COLLECTION

The Park's famed Japanese flowering cherry tree collection has a distinct maintenance plan to ensure that the collection is able to thrive and endure, building on the legacy of the Fuld's gift. Much of the cherry tree maintenance is being performed by trained volunteers, and the park's Cherry Tree and Zone Garden Manager embraces this approach. A detailed plan of action for the future includes:

## Continuing to update the existing tree inventory

Regular reevaluation of the tree inventory database is necessary to keep the 2005 vegetation survey updated. The resulting updated inventory can be regularly used to delineate management zones and facilitate ongoing monitoring, reporting, and maintenance efforts. Database should be updated every 5 years.

## Monitoring existing cherry trees

Through a combination of volunteer staff and maintenance staff, the cherry tree collection can be inspected and their findings reported. Issues such as insect and disease, mulching, removal and replacement needs, pruning needs, supplemental watering, weeds, encroachment and competition from surrounding trees and other plants, bloom timing, and maintenance issues that exist beyond the cherry tree collection (such as shade tree pruning and removal needs, overgrowth of undesirable vegetation, etc.) can be recorded and addressed.

Overall tree maintenance /training existing staff on proper cherry tree maintenance

The possible inclusion of monitoring and maintaining the park's "Legacy" trees

## Creating an approach for handling volunteers working on the cherry tree Collection

- Develop a Volunteer Field Guide to distribute to community volunteers. The Guide would include:
  - Information and photos of key problems to identify
    A submission form with check boxes to note any problems
  - A map of the park, including delineation of each Garden Zone A list of cherry trees by tag number for each Zone so volunteers
  - can record problems noted for individual trees, track bloom sequence by variety, etc.

    An organizational chart with contact information and reporting
- Help Identify and Train Volunteers, both professional arborists and

procedures for each Cherry Tree Zone

- community volunteers
- Organizing and scheduling a reoccurring "Field Day" event (2-3 times a year) to bring together the community volunteers, professional arborist volunteers, and park maintenance staff for a one-day cherry tree improvement 'blitz'. Field Day activities may include:

Replacing or correcting mulch around cherry trees Removing stakes and guy wires, when appropriate Providing supplemental irrigation Weeding Pruning



ABOVE: Newly planted cherry trees along the Second River, Source: RHI

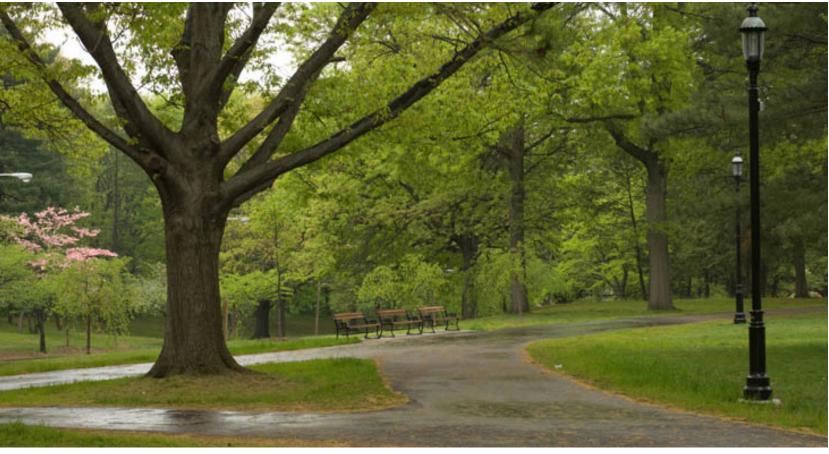
## **EQUIPMENT**

Regular crew and volunteers working in Essex County Branch Brook Park should be able to have the right equipment to do the job well. Volunteers will be recruited and relied upon as a cost-effective maintenance strategy, as such they should be provided with effective tools.

The following is a suggested list of the equipment necessary, much of this has been accomplished already.

## EQUIPMENT NEEDS

- Mowers: New appropriately sized mowers should replace existing mowers (see Mowing section above).
- Pruners: New hand pruners and orchard saws should be purchased.
- Uniforms: Provide simple, professional uniforms, similar to those
  worn by private landscape contractors. Each worker could be
  provided a specific quantity of shirts, one cap with sun brim,
  and 1 jacket (each with identifying patch) paid for out of an
  annual budget; additional shirts or jackets could be purchased by
  workers. Workers would provide their own uniform pants (khakis),
  belts and boots.
  - Volunteers could be provided with high-visibility vests, but may prefer not to have any additional identifying information written on the vests
- Watering truck: Supplemental watering is needed for watering
  of plants installed by volunteers during the first two years after
  installation. (Watering of plants installed by contractors is usually
  provided by the contractors for two years.) An inexpensive tank
  with removable hose could be skid-mounted onto an existing
  heavy-duty pickup as needed. This would avoid purchase and
  maintenance of a dedicated watering vehicle.



## VOLUNTEER MAINTENANCE EQUIPMENT

Identify current availability of maintenance equipment needed for volunteer efforts. Large quantities of equipment will be needed for Field Day events, as these events are envisioned as hosting a few hundred to one thousand volunteers on a given day. Equipment used for Field Day events should be stored within the park and available for use throughout the year by volunteer groups and may also be the same equipment used by Parks Department maintenance crews. Equipment needs listed below are based upon a Field Day attendance of 400 volunteers.

• Equipment needs:

Wheelbarrows (40)

Shovels (75)

Leaf rakes (40)

Bow rakes (40)

3-tine or 5-tine long-handled cultivators (25)

3-tine or 5-tine short-handled cultivators (25)

ABOVE: Pathways in the Extension, Source: Patrick O'Brien, May 2008

Gardening hoes (10) Hand pruners (50) Orchard saws (20) Safety orange vests (450)

- Disposable items (quantities not listed):
  Inexpensive gardening or worker gloves (single-use type)
  - Inexpensive gardening or worker gloves (single-use type Trash bags
- First aid kits

## Additional Equipment

Possible additional equipment may be determined as necessary. Items such as a bobcat or small backhoe/loader, small utility vehicles, or back-pack blowers – for example – may also be required.

## INTERPRETING THE PARK

Today, more and more people are visiting Essex County Branch Brook Park. Capital improvements are evident, new amenities such as the Middle Division and Extension ball fields are being programmed, events are being scheduled, news media celebrate the Park's cherry blossoms. Strategically building upon this good-will toward the park is important. Attention must be paid to visitors and their perceptions of the park. (See Signage Recommendations, page 70, for appropriate signage designs.)

Educating the public about on-going ecological or historic restoration work, helping to build upon the public's steadily-growing knowledge and respect for the environment, or organizing special programs for users of all ages is already fundamental to future management and maintenance of the park. Like volunteers who come to care more about the park as they contribute their time to it, visitors who are offered educational opportunities will also gain greater sensitivity and awareness. Access to additional recreational opportunities also helps. Essex County staff should take advantage of this situation and future outreach plans can include more programs; from 'fun runs' to nature walks, or outdoor summer movies to seasonal festivals, programming is a key tool to reach out to park visitors. Consider coordinating with – or encourage fraternization among! – different park user groups (birders, bikers, runners, fishermen, etc.) in efforts to develop a comprehensive public education effort.

One clear way of offering an element of public education in a park is with signage. Signage in Branch Brook Park should be used sparingly and be "low impact" and minimal; installation should be part of an overall park signage plan, and not be approached piecemeal. While there are examples of poor park signage (wrong scale, style and certainly quantity), signage can play an important role in educating the public about the park, its history, or ecology. It can begin to explain a complicated and fragile woodland restoration or even inform park users of appropriate behavior and help to provide effective enforcement on how park amenities should be properly used. The Welcome Pavilion at Concourse Hill provides an example of well-placed and appropriately used signage (see sign graphic right, top).

For the future, electronic means of interpreting the park should include web-based information, self-guided cell phone tours with small, elegant location signs, and eventually an Essex County Branch Brook Park Park interpretive mobile phone 'app'.









PHOTOS: Concourse Hill, including the Welcome Pavilion and entry staircase, Source: Jake Rajs, 2014.





## BEYOND THE CULTURAL LANDSCAPE REPORT

## SECTION FIVE CONCLUSION

## BEYOND THE CULTURAL LANDSCAPE REPORT

## WHAT THE FUTURE HOLDS

This volume of the Cultural Landscape Report summarizes nearly 13 years of work, describing the history of Branch Brook Park and the strategies to rehabilitate and refresh the park for future use, while staying true to the Olmsted design and design intent for this state and nationally registered historic place.

Though many projects have been accomplished, much remains to be done:

- Restoration of the waterway system and bridges in the Northern Division
- Management of woodlands and other park vegetation for continued ecological health
- Preserving existing open spaces from intrusion of non-park uses, new monuments, and inappropriate signage
- Protecting the historic design and ecological function of the Second River and Branch Brook Lake

As these and other projects are undertaken, it is hoped that future park managers will continue to recognize the importance of the park and will use the Cultural Landscape Report and the many design details shown in this volume as firm guidance in order to maintain the visual consistency and harmony through the park that has been achieved over this past decade.

We look forward to seeing the work of art that is Essex County Branch Brook Park continue to shine through the 21st Century and beyond.







## PROJECT TEAM

## Rhodeside & Harwell Landscape Architects and Planners

Faye Harwell, FASLA, CLA | Project Director

Adam Alexander

David Carro

Heidi K Cohen CLA PP

Brad Garner

Agron Feldman-Gross

Edward Hamm

Stan Johnson

Mark Mastalerz

John Meisel

Kurt Parker

Sandra Pereira

Melissa Rainer

Thomas Rainer

Deana Rhodeside

Monica Streeper

Drew Taylor

Mary Zimmerman

## BRANCH BROOK PARK ALLIANCE STAFF

Barbara Bell Coleman, Co-Chair Patricia F. Ryan, Co-Chair

Adrienne Geller, Former Executive Assistant Lorraine Gibbons, Branch Brook Park Urban Farm

Trish Jarecke, Development Coordinator (in memoriam)

James P. Lecky, Former Executive Director

James Livengood, Branch Brook Park Urban Farm

Elina Maxwell

Michael Nairn, Former Executive Director

Nikia Simmons

Maureen Stapleton, Executive Assistant Meredith Taylor - AqWorks in the City

, 3

## ESSEX COUNTY

Joseph DiVincenzo, Essex County Executive

Daniel Salvante, Director of Parks - Department of Parks, Recreation and Cultural Affairs

Philip Alagia, Chief of Staff, Essex County

Philip Livecchi, Former Director, Essex County Department of Public Works

Darlene Musucci, Executive Assistant – Department of Parks, Recreation and Cultural Affairs

Anthony Burke, Assistant Director - Department of Parks, Recreation and Cultural Affairs

Joe Lanzara, Archivist - Department of Parks, Recreation and Cultural Affairs, Historic Documents Library

Bruce Devita, Essex County Department of Parks, Recreation, and Cultural Affairs

Tara Casella, Essex County Parks Environmental Center Sanjeev Varghese P.E., County Engineer – Essex County Department of Public Works

Luis Rodriguez, Essex County, Department of Public Works Henry Chamesian, Essex County, Department of Public Works Ayman Botros, Essex County, Department of Public Works Nick Salvante, Essex County, Department of Public Works

Frank Palmer, Essex County

## Consultants

David V. Abramson Architects

Charles E. Beveridge, Historian

CTS Group Architecture/Planning P A

Clough Harbor & Associates, Engineers

Arleyn Levee, Landscape Historian

Neglia Engineers

Pennoni Associates, Engineers/Hydrologists

Paul Cowie Arboriculture & Urban Forestry Consulting

Green Shield Ecology Inc.

Robert Hartman Graphic Design

Weidlinger Associates Structural Engineers

Patrick O'Brien Photography

Steve Uzzell Photography

Jake Rajs Photography

Sara Cedar Miller Photography

## CONSTRUCTION TEAMS

Air Metal Works

Atlantic Irrigation

**Babikow Nurseries** 

Barcia Brothers Fencing

**Barton Nurseries** 

Beaver Electric Company

Bismark Construction Corp.

Bluemel Nurseries

Dave's Architectural Iron

Digital Atelier

Friendly Tree Service

George Anderson LLC

George Young Co. Rigging

IBN Construction Corp

Kreilick Conservation, LLC

Maglin Site Furniture

Metropole Architectural Concrete Casting

Millennium Landscaping

Paragon Construction

Pavel Efremoff, Sculptor

Positive Flow Electric

PSE&G

Thomas & Betts/Hubbell

Vincent Gallo & Sons, Inc.

Zenith Construction Services, Inc, Nick Naik