Battery Lane Park

Facility Plan Report

Prepared for:
The Maryland National Capital Park and Planning Commission

Prepared by:
OCULUS

With:
VIKA
Ecotone

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1.0 Project Description

1.1 Introduction

This Facility Plan proposes a set of improvements to Battery Lane Park, a 2-acre park between Battery Lane and Rugby Avenue on the edge of the Bethesda Central Business District in Bethesda, Maryland.

The goal of this project is to improve the park's amenities while preserving the cherished qualities of a neighborhood park. The existing range of active and passive recreation opportunities in the park will be retained and improved upon in a way that acknowledges the desires of the community while expressing a vision for a vibrant urban park.

1.2 Project History

The Approved and Adopted (1994) Bethesda Central Business District (CBD) Plan recommends the expansion of the Battery Lane Urban Park with landscaping, path extension, and a possible seating area for residents and employees in the area. The Woodmont Triangle Sector Plan Amendment (2006) to the Bethesda CBD Plan lists Battery Lane Urban Park as a public amenity and facility. It recommends the completion of a facility plan as part of a CIP project or to be prepared by a private developer, who receives additional density under the optional method of development.

In April 2008, the Planning Board approved Site Plan 820070260 for the Rugby Condominium with a requirement to complete a Facility Plan for Battery Lane Urban Park.

In March 2008, M-NCPPC sponsored a Community Vision meeting to solicit ideas from the community in order to provide initial guidance for the preparation of the Facility Plan.

In June 2008, M-NCPPC held a second community meeting at which staff presented 3 concept diagrams for different types of park programming: Urban Oasis, Enhanced Park, and Sustainability Park. The "Urban Oasis" plan suggested removing sport courts to make way for a large central open lawn area, a larger relocated playground, and more trees and seating. The "Enhanced Park" concept suggested retaining but re-locating the sport courts to make space for a larger green open space and a larger playground. The "Sustainability Park" Concept suggested installing a rain garden and environmental education displays. In general, community respondents preferred the "Enhanced Park"

concept.

In June 2008, the developer of the Rugby Condominium hired a consultant team to complete a facility plan for improvements to Battery Lane Park. The consultant team consisted of lead consultant, OCULUS (landscape architecture), and subconsultants, VIKA (civil engineering), and Ecotone (environmental consultant).

1.3 Facility Plan Process

The facility plan phase of this project began in February 2009 with a kick-off meeting attended by representatives of the Department of Parks and the prime consultant, OCULUS. The kick-off meeting attendees reviewed the consultant team's scope of work, introduced a draft program of requirements for the park and established a schedule for the development of the facility plan.

At the second meeting, held on February 23, 2009, OCULUS presented a site analysis and two preliminary concept options. M-NCPPC Staff reviewed the preliminary options and provided OCULUS with comments that recommended moving the basketball court as far from residential buildings as possible and emphasized the importance of ease of maintenance and maintenance access to all parts of the park. OCULUS developed a new alternative that responded to these comments and presented it at the third team meeting, held in April 2009. Staff approved of the new option. A fourth meeting was held to share the new design alternative with representatives of Horticultural Services and the Park Manager. All present approved of the new concept.

In May 2009 OCULUS and M-NCPPC staff presented the park design to the community at a public meeting. Attendees voiced objection to the removal of the tennis court. The team concluded that the park design should respond to this community input. OCULUS produced a fourth design option that included a tennis court. The team approved of this scheme. With a preferred concept chosen, Vika proceeded with the Forest Conservation Plan and the Stormwater Management Concept Plan (SWMCP).

The Natural Resources Inventory/Forest Stand Deliniation (NRI/FSD) was approved in April 2009; the Stormwater Managment Concept Plan was approved in June 2009.

1.4 Program of Requirements

Background:

The following program of requirements was based on extensive input from community members as well as from the Bethesda Urban Partnership, representatives of the arts in Bethesda, and staff of the Planning Department and the Department of Parks. A range of programming alternatives were presented during the initial stage of the community participation process. In the end, the community wanted the active recreation program to remain similar to the existing program and requested that the plan focus on several key goals: improve quality of facilities, improve maintenance, offer more seating opportunities, and save trees where possible.

1.4.01 Pedestrian Circulation

Pedestrian circulation pathways need to be improved to accommodate access to park facilities while offering opportunities for casual walking, jogging, dog walking, and biking; and to accommodate the heavy foot traffic and bicycle traffic on the Bethesda Trolley Trail. Pathways need to be organized and sized to help minimize conflicts between users. Since the Bethesda Trolley Trail serves primarily as a north-south commuter passage, the trail should hold a reasonably direct route through the park, offering an efficient conduit for pass-though traffic. Other park pathways should seek to embrace the experience of the park with less direct, casual connections.

Circulation pathways should be sized to fit their function without over-paving the park. Primary foot paths should be constructed to a minimum width of 6' and maximum width of 8' unless the pathway also serves as a maintenance vehicle route. Minor foot paths should be constructed to a minimum width of 4' and a maximum width of 6'. The Bethesda Trolley Trail should be constructed 10' wide to accommodate the heavy pedestrian/bicycle traffic and to give adequate room for maintenance vehicles.

Entryways to the park should be improved to help make the park easier to find and improve public image. Park access occurs at three locations: one at the intersection of Rugby Avenue and Norfolk Avenue and two along Battery Lane. The Rugby Avenue entry is narrow and difficult to detect. It should be improved by reorganizing pedestrian and vehicular pavements to clearly define the park entrance and access onto the Bethesda Trolley Trail. Emphasis of the entry could also be reinforced by strengthening tree plantings along Glenbrook Road. The northern access points along Battery Lane should also be improved in a manner that helps announce the park from the street and neighboring properties. Existing evergreen trees located along Battery Lane's narrow sidewalk diminish visibility of the park and make it less inviting. Opening views into the park is critical to improving the park's image and strengthening its presence in the community. To achieve this goal, and to conform with M-NCPPC guidelines, improvements to the Battery Lane streetscape must be developed in accordance with the Bethesda Streetscape Standards which include, but are not limited to, a broad sidewalk, street trees, ornamental street lights, and high quality site furnishings.

1.4.02 Natural Resources

There are several natural conditions that should be considered when developing the site plan. Perhaps the most significant feature on the site is an existing knoll that is populated with numerous large Cottonwood trees. Design of the park should consider saving the knoll and its Cottonwood trees and possibly using them as a focal element. Preservation of significant trees was identified by the community as a primary issue. Except for invasive

species, the design should try to save trees. Trees, large and small, located along the east and west boundaries should be saved where possible to help screen parking and services areas.

The park should be developed in an environmentally sensitive way. The design should consider using environmentally sustainable elements including, but not limited to, recycled materials, pervious pavements, native plant materials, dark-skies compliant lighting, storm water cleansing and infiltration, and measures to reduce heat island effect.

1.4.03 Active Recreation Program

A court for basketball should be incorporated into the design of the park. It should be surfaced with a high quality, durable material that performs well and is aesthetically pleasing. In order to lessen visual impact and allow the court to blend in with the surrounding park spaces, the basketball court should not be fenced.

A tennis court should also be incorporated into the design of the park. It should be surfaced with a high quality, durable material that performs well and that is aesthetically consistent with the basketball court surfacing material. The court should be fenced with high quality wire mesh fencing, preferably not chain link. The design should consider including openings in the fencing at strategic locations where likely ball movement is at a minimum. This will help reduce the visual impact of the fencing and offer opportunities for development of spectator observation areas.

A playground should be incorporated into the design of the park and should be of a larger size than the existing playground. It should accommodate children of ages 2 to 10 years old and be designed to offer upper and lower body exercise opportunities. Apparatus should be of a high quality that is durable, sculptural in form, fun, and aesthetically pleasing. Playground surfacing should be a high quality poured in place synthetic surfacing that is porous and certified safe for children.

1.4.04 Non-programmed Open Space

Design of the park should consider including an open space that can accommodate multiple uses. It should be mostly surfaced with lawn and sized to be large enough to accommodate Frisbee throwing, playing pitch and catch, sunbathing, relaxation, kicking a ball, or other non-programmed activities. Most important, the space must allow for flexible use.

1.4.05 Site Furnishings

Site furnishings should be carefully integrated into the design and distributed throughout the park. High quality seating should be placed along walkways as needed to accommodate park users. Attractive trash and recycling containers, bike racks, and one drinking fountain should also be placed throughout the park near pedestrian walkways and gathering spaces. The drinking fountain should be of a design that is ADA compliant.

1.4.06 Lighting

Lighting is an important site element that needs to be designed in accordance with local, state, and national regulations. Fixture selection should consider aesthetics, public safety and security, shielding light spill onto adjacent properties, and dark-skies compliancy. While all pathways must meet minimum code light levels requirements, the Bethesda Trolley Trail should receive a slightly higher level of lighting than the rest of the park. Lighting located along Battery Lane must be designed in accordance with the Bethesda Streetscape Standards.

1.4.07 Public Art Program

Public art has been and remains an important public amenity throughout Bethesda's streets and civic spaces. Inclusion of public art within Battery Lane Park should be considered. Public art could take form as a stand alone element or it could be incorporated into one of the functional elements of the park such as custom seating, earthworks, or sculptural play elements. The art element should be placed so that it is visible from the Bethesda Trolley Trail.

1.4.08 Stormwater Drainage and Management

Existing stormwater drainage within the park is unsatisfactory and needs to be improved. In some areas, the topography is too flat causing ponding and wet soils. In other areas topography is too steep causing erosion. Portions of the site will need to be regraded in order to permanently solve these drainage and erosion problems. In addition, the underground storm sewer system will need to be expanded or replaced in order to properly drain the site. Existing storm drain inlets are large, unattractive, open-throat inlets that pose tripping hazards and attract rodents. New storm drain inlets should be installed using flat or domed grate inlets.

Stormwater management facilities need to be installed as necessary to meet state and local regulations. To the extent possible, the park design should minimize impervious pavements and incorporate measures that encourage storm water infiltration.

1.4.09 Undergrounding of Overhead Utilities

Existing overhead utilities that currently bisect the site are unsightly, limit programming opportunities, and pose conflicts with tree growth. Overhead utilities should be relocated underground.

1.4.10 Code Compliance

Park design must comply with all local, state, and local codes including Crime Prevention through Environmental Design (CPTED), ADA, and the Bethesda Streetscape Standards.

1.4.11 Maintenance

Maintenance of the park is a critical issue that must be considered in design of all park elements. Currently, maintenance vehicles are unable to maneuver through the park without traveling off of paved surfaces which causes damage to adjacent lawn areas. To accommodate maintenance vehicles, the Bethesda Trolley Trail should be widened to 10' and serve as the primary service access way. In addition, 10' wide paved connections should

be provided to all recreation courts and the playground. To help reduce maintenance, care should be taken to select materials and furnishings that are durable and easily maintained. Trash and recycling containers should be placed at locations that are reasonably close to the maintenance vehicle travel pathways.

1.4.12 Future Park Expansion

At some point in the future, the County may pursue acquisition of the two residential properties located at the southern end of the site. If acquired, this additional land will give the park a stronger neighborhood presence along Rugby Avenue and expand the park's usable land area. Design of the park should consider this possibility and offer ideas for future park development, but should not rely on acquisition of the land in order for the park to succeed.

1.4.13 Program of Requirements

- Increase play opportunities to accommodate ages 2-12
- Provide court for basketball
- Provide court for tennis
- Improve system of pathways for joggers, dog-walkers, and cyclists that minimizes conflicts between users
- Improve entryways so that the park is easier to find and is more attractive
- Provide environmentally sustainable elements as appropriate
- Improve lighting, seating, drinking fountain, drainage, landscaping, trash and recycling receptacles, and bike racks
- Improve stormwater management
- Conform with CPTED and ADA
- Include maintenance access and design that minimizes maintenance
- Underground utility lines
- Consider retaining the knoll
- Consider public art opportunities
- Provide unprogrammed open space suitable for a variety of activities
- Comply with Bethesda Streetscape Plan as applicable
- Design should consider the potential future acquisition of two residential lots on the south side of the park
- Preserve mature, specimen trees

2.0 Existing Conditions

2.1 Site Assessment

Site Context

Battery Lane Park is an urban park located on the edge of the Bethesda Central Business District, approximately 1 mile from downtown Bethesda. The park is bordered to the north by Battery Lane, to the east by low-rise rental apartments, a parking lot, and Glenbrook Road, to the west by mid-rise condominium towers and their parking lots, and to the south by the intersection of Glenbrook Road and Rugby Avenue. Battery Lane Park provides a welcome green space in a central urban location. Any new design interventions in this landscape should respond to the park's urban context and provide the surrounding communities with both active recreational opportunities and more relaxed, "passive" activities.

Circulation

A major bicycle and pedestrian commuter path, the Bethesda Trolley Trail, crosses the east side of the park, travelling in a north-south direction between Battery Lane and the intersection of Rugby Ave and Glenbrook Road. This trail connects downtown Bethesda to the NIH, and north-Bethesda neighborhoods. This is a heavily used path, especially during the morning and evening rush hours. A secondary pedestrian path, also running in a north south direction, serves the west side of the park and connects the northwest end of the park to the south entrance. Both walks are approximately 6' wide asphalt paths. A 4' wide concrete sidewalk borders the park along the north and connects the two north entrances to the park.

The park's segment of The Bethesda Trolley Trail is too narrow to comfortably accommodate heavy bicycle and pedestrian traffic. It is also to narrow for the service vehicles used to maintain the park. This trail should be widened to 10' to accommodate these multiple uses. The sidewalk at Battery lane is also too narrow and has no street trees or green strip separating it from the road. It would benefit from widening and the addition of street trees.

The primary path and bike trail is narrow and should be widened to accommodate pedestrians, cyclists, and service vehicles.

Trees

The park has a mix of large mature trees and small weed trees such as White Mulberry. There is a significant grouping of mature Cottonwoods at the small knoll near south end of park. A group of evergreen trees on the north edge of the park blocks views in and out of the park along Battery Lane. Two large Leyland Cypress trees along this edge are some of the largest in Montgomery County and will be preserved. The mature canopy in Battery Lane Park is one of the park's most important assets and should be preserved wherever possible. Some of the smaller volunteer weed trees and short-lived species should be replaced with high quality native hardwood trees. Trees planted in rows along Battery Lane and along Glenbrook Road could help define the edges of the park and mark the

Natural features such as this mature tree canopy and knoll should be preserved.

entrances. The existing trees are catalogued in the Natural Resources Inventory.

Edges

To the east and west, low and mid-rise residential buildings and associated parking lots border the park. Bare chain-link fence separates the park from parking lots and dumpsters. While some evergreen and deciduous trees and shrubs screen the lots and buildings in spots, the park is largely exposed to the fencing, parking lots, and buildings to the east and west. At the north end of the park, along Battery Lane, a dense stand of evergreens blocks views in and out of the park. Along Glenbrook Avenue a narrow dirt slope and small scrubby trees separate the street from

The east and west edges of the park with exposed chain-link fences should be softened with tree plantings.

the Bethesda Trolley Trail. Overall, the edges are poorly defined; some simple grading and planting strategies could be employed to better define the park's edges and make the park a more welcoming and comfortable place.

Sport Courts

An un-fenced 85' x 47' bituminous asphalt basketball court, oriented north-south, is located near the center of park. A tennis court measuring 65'x130' made of bituminous pavement is located near the north end of park and oriented in a north-south direction. The court is surrounded by a 10' chain link fence. While both sport courts are in good condition, their location and orientation in the park breaks up the park green space, resulting in a series of small, fragmented areas of open space. Consolidating the location of the sport courts would open up a much larger area of green space for informal active and passive recreation.

The playground is small and needs updated equipment

Playground

The playground is located at the south entrance to the park, measuring approximately 70' x 40'. A low timber wall contains bark mulch, a small swing set and a jungle gym with slides. The playground is small and does not provide a wide variety of play opportunities for different age groups. The playground should be updated and enlarged to accommodate a wider age range and set of activities.

Park seating is scarce and in need of improvement.

More attractive garbage and recycling receptacles should be provided for the park.

Seating and Site Furnishing

There are 7 small wooden benches in the park - two along each path, one near the basketball court, and two in the play area. This seating is insufficient and some benches

Above ground utilities that traverse the park detract from the park and should be placed below ground.

are in poor condition. Battery Lane Park's urban surrounds and high level of foot and bicycle traffic warrant ample seating of high quality and durability. The trash receptacles are steel drums fastened to wood supports. More visually pleasing receptacles should be provided.

Overhead Utility Lines

Overhead utility lines and poles run the length of the park in a north-south direction. Undergrounding these lines would improve the visual character of the park.

Turf

Turf is the only existing ground-plane planting. Because of poor drainage, the turf is in poor condition in some locations and should be renovated where necessary.

Entrances

The South entrance that connects the park to downtown Bethesda is un-signed and hard to find. There are two park entrances on the north side of the park. A painted wooden sign marks the northwest entrance. Some strategic, organized tree planting would help define the entrances to the park.

Lighting

There are 11 lamp posts along two paths in park. With realignment of paths, the lamps will be replaced with energy efficient, dark-skies compliant fixtures.

Grade change, erosion, and weedy trees along Glenbrook Road.

Erosion is occurring around two open throat inlets.

Signage

A painted wood sign marks the northwest entrance to the park. Green metal signs on steel posts mark the “Bethesda Trolley Trail” at the north and south ends of the park. Signage should be improved as part of an enhanced entry design with appropriate landscape plantings.

Grading and drainage

There is some erosion at low points of the park along the primary path and near large drain inlets. The primary path sits several feet below Glenbrook Road along the southeast side of park, creating an eroding bank between the path and road.

2.2 Stormwater

There are currently no stormwater management quality or quantity control measures that are being implemented on the site. There are two concrete open throat inlets located along the Bethesda Trolley Trail that convey the current site runoff into the existing 66” concrete pipe that runs through the site. One is located near the northeast park entrance, the other toward the center of the park. The grass swales that lead to these inlets have eroded and do not meet current State (MDE) and County (DPS) regulated stormwater management design requirements.

2.3 NRI / FSD and PFCP

The Natural Resource Inventory / Forest Stand Delineation (NRI / FSD) for the park was prepared by VIKA, Inc. and Ecotone, and approved in April 2009

The Preliminary Forest Conservation Plan (PFCP) was prepared by the consultant team and submitted to the M-NCPPC Environmental Planning Division. The Environmental Planning staff has reviewed the PFCP and recommends approval of the plan.

Existing Conditions Plan

Figure 2.1

Site Analysis Plan

Figure 2.2

3.0 The Facility Plan

3.1 Design Concept Alternatives

Several design alternatives were developed for Battery Lane Park that incorporated the program of requirements while striving to preserve the neighborhood park character. The alternatives aimed to improve the quality of the park without making it a regional attraction. The design team explored different options for circulation, placement of the primary program elements, and environmental strategies.

Early in the process, the design alternatives were developed based on a program of requirements that excluded the tennis court. Instead of tennis, emphasis was placed on incorporating an expanded playground, providing a large flexible open space, and allowing for generous interstitial spaces between programmed recreational elements. This direction was met with deep community concern and a call for inclusion of a tennis court. In response, the Preferred Concept design was then developed to include a court for tennis as part of the program of requirements

3.2 Preferred Concept

The preferred design offers improved site amenities and seeks to give the park well defined edges and entries, better circulation, and enhanced recreation. It addresses numerous technical problems such as drainage, erosion, utilities, and maintenance while also redefining its public image by improving its aesthetic quality and strengthening its neighborhood presence. Prominent new seating, in the form of seat walls and abundant benches, will give the community ample opportunity for relaxation and observation of park activities.

3.2.01 Pedestrian Circulation

Pedestrian circulation for the park has been organized to accommodate access to park facilities, provide direct pass-through circulation on the Bethesda Trolley Trail, and offers opportunities for casual walking, jogging, dog walking, and biking.

The primary pedestrian circulation path is the Bethesda Trolley Trail which runs north-south along the eastern side of the park. Since much of its pedestrian and bike traffic is pass-through, the trail has been configured to offer the shortest and most direct passage across the site. The trail surface shall be paved with asphalt or an equivalently smooth surface compatible for biking. In order to accommodate the heavy flow of pedestrian and bike traffic, the trail has been designed to a width of 10'.

Another important pedestrian circulation pathway is the sidewalk along Battery Lane, the most publicly visible edge of the park. The sidewalk and associated streetscape has been designed in accordance with the Bethesda Streetscape Standards and unlike the existing 4' sidewalk, the proposed streetscape offers a generous 8' wide sidewalk and a comfortable pedestrian experience with street trees and shaded seating. In addition, the proposed design helps redefine the park image and improve its presence in the community. The new Battery Lane edge portrays a gracious, inviting aesthetic with a refined landscape that opens views from the street into the park.

Secondary pathways within the park provide casual connections between park facilities, the Bethesda Trolley Trail, and Battery Lane. In addition, these pathways offer opportunities for users to stroll through the numerous non-programmed spaces of the park.

Primary pedestrian entries to the park are located at the north and south ends of the Bethesda Trolley Trail where it intersects with Rugby Road to the south and Battery Lane to the north. At the southern entrance, the design calls for reorganization of pedestrian and vehicular pavements to more clearly define the park entrance and improve pedestrian safety. To further strengthen the sense of arrival, a row of street trees is proposed along Glenbrook Road. Similarly, the north entrance along Battery Lane is also marked by a well defined urban streetscape treatment that includes rows of street trees and organized paving.

Maintenance vehicle access ways have been integrated into the pedestrian circulation system by widening key walkways that provide vehicle access to the playground, tennis court, and basketball court. The Bethesda Trolley Trail, already widened to 10' to accommodate bike and foot traffic, will serve as the primary service road and provide service access from both Rugby Road and Battery Lane

3.2.02 Recreation Courts

The recreation courts for basketball and tennis are located side-by-side in the northern portion of the site and away from the residential buildings located along the park's eastern and western borders. The design concentrates the courts to one location in an effort to use less land area, thereby alowing more space to be used for other functions like the non-programmed open space defined in the program of requirements. Also, instead of having two separate small paved areas, the design is able to offer one large multipurpose space that accommodates tennis and basketball, but could also be used for other purposes such as a community gathering and event space. Four contiguous gates located along the courts' common border allow for separation when gates are closed and the creation of one interconnected space when gates are open.

The tennis court will be fenced except for a 50' opening along its western side and centered on the court where likely ball movement is minimal. The break in fencing helps mitigate the visual impact of the fencing and it offers a clear view of the court from the terraced lawn viewing area beyond. Fencing materials shall be a high quality welded wire mesh fencing system with vinyl coating. The basketball court will not be fenced. The tennis and basketball courts shall be finished with a high quality surfacing material that employs an artistic use of color.

3.2.03 Playground

The playground design has been developed to accommodate children of ages 2 to 10 years old and offers a range of exercise opportunities. It is located in the southern portion of the site near the existing playground. It is organized as a series of event spaces that wrap around the western side of the knoll. Parents can observe the play activities from seating elements that border the western edge of the playground or relax on the knoll that overlooks the playground from the east. The play apparatus shall be fabricated of high quality materials that are sculptural in form and aesthetically pleasing. Playground surfacing shall be a high quality, poured in place synthetic surfacing that is porous and certified safe for children. Together, the play apparatus and surfacing are designed as an artful composition of color and form.

3.2.04 Central Open Space

The central open space is located in the center of the park and is bordered by the knoll to the south, recreation courts to the north, the Bethesda Trolley Trail to the east, and buffer planting along the parks western edge. It is designed as an open lawn space that can accommodate numerous uses including Frisbee throwing, playing pitch and catch, sunbathing, relaxation, kicking a ball, or other non-programmed activities. While providing space for non-programmed activities, the central open space also offers some visual relief from the structured programmed spaces of the recreation courts and the playground.

3.2.05 Site Furnishings and Lighting

Site furnishings include a collection of off-the-shelf and custom designs that are complementary to each other and to the overall neighborhood park character. They are high quality, low maintenance furnishings provided for comfort, function, and aesthetic contribution. Benches located along Battery Lane shall be the teak bench as defined by the Bethesda Streetscape Standards. Benches located along park pathways and in basketball court shall be custom benches fabricated of precast concrete and wood. Seating located along the edges of the playground shall be custom designed to complement the sculptural forms and playful colors of the playground composition. An improved drinking fountain that is ADA compliant will be installed. Trash and recycling containers are located along park pathways and are easily accessible from maintenance access ways. The containers are off-the-shelf items fabricated of metal with a durable, enamel finish. Bicycle racks located in the park shall be U racks fabricated of stainless steel or galvanized steel with powder coated finish.

Park lighting is achieved by use of pedestrian scale pole lighting located along pathways. Park lights are dark skies compliant and of a design that is complementary to the neighborhood park character. The basketball and tennis courts are not lighted.

3.2.06 Planting

The conceptual planting design for the park offers a simple, native palette of tree plantings with a lawn ground plane. The design aims to complement the numerous existing trees preserved by the design and to strengthen the park's spatial definition. Within the body of the park, tree plantings are casually organized in a naturalized manner with denser buffer plantings located along the east and west park boundaries and less dense tree plantings in the central portions of the park. Special attention needs to be made to insure that plantings do not create spaces for people to hide or engage in illicit activities. Proposed street tree plantings along Battery Lane and Glenbrook Road are more ordered and rhythmic in their placement. This contrast helps to punctuate park entries and strengthens the urban character along its public edges.

3.2.07 Public Art

While it was not within the scope of this facility plan to provide a specific proposal for public art, there is ample space and opportunity in Battery Lane Park for public art. Public art could take the form of a stand-alone sculptural element or be incorporated into custom seating, earthworks, or play features. The art element should be placed so that it is visible from the Bethesda Trolley Trail.

3.2.08 Stormwater Management

The Stormwater Management Plan was submitted the Montgomery County Department of Permitting Services for review in May of 2009. The Stormwater Management Concept was approved in June 2009.

The approved concept stormwater management plan proposes that the site be treated for water quality by utilizing grass swales. Grass swales are an Environmental Site Design (ESD) element as denoted in the latest issue of the Maryland Stormwater Design Manual. These swales will provide conveyance, water quality, and flow attenuation of stormwater runoff. They provide pollutant removal through vegetative filtering, sedimentation, biological uptake and infiltration into the underlying soil media. The proposed design eliminates the use of the existing concrete inlets due to their size and possible hazards. Three new inlets are proposed to collect the grass swales needed to treat water quality on the site.

Recharge will be captured throughout the site by use of the grass swales and a stone recharge area below the permeable play surface. The stone layer will allow the required recharge volume to be held so it can be infiltrated into the ground. An over drain will discharge higher storm events into the existing storm drain network.

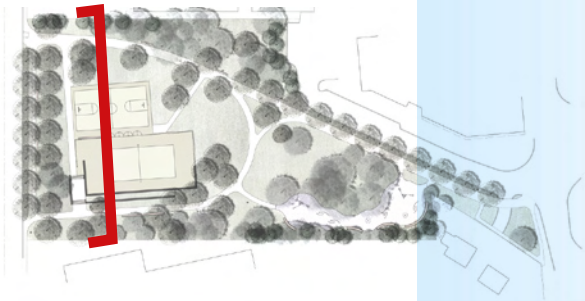
Hydrological analysis of the quantity discharged from the site shows that the one-year discharge is less than 2 cfs. Therefore, based on Montgomery County guidelines at the time of approval, water quantity volume attenuation is not required.

Recommended Facility Site Plan

Figure 3.1

Illustrative Sections

Figure 3.2

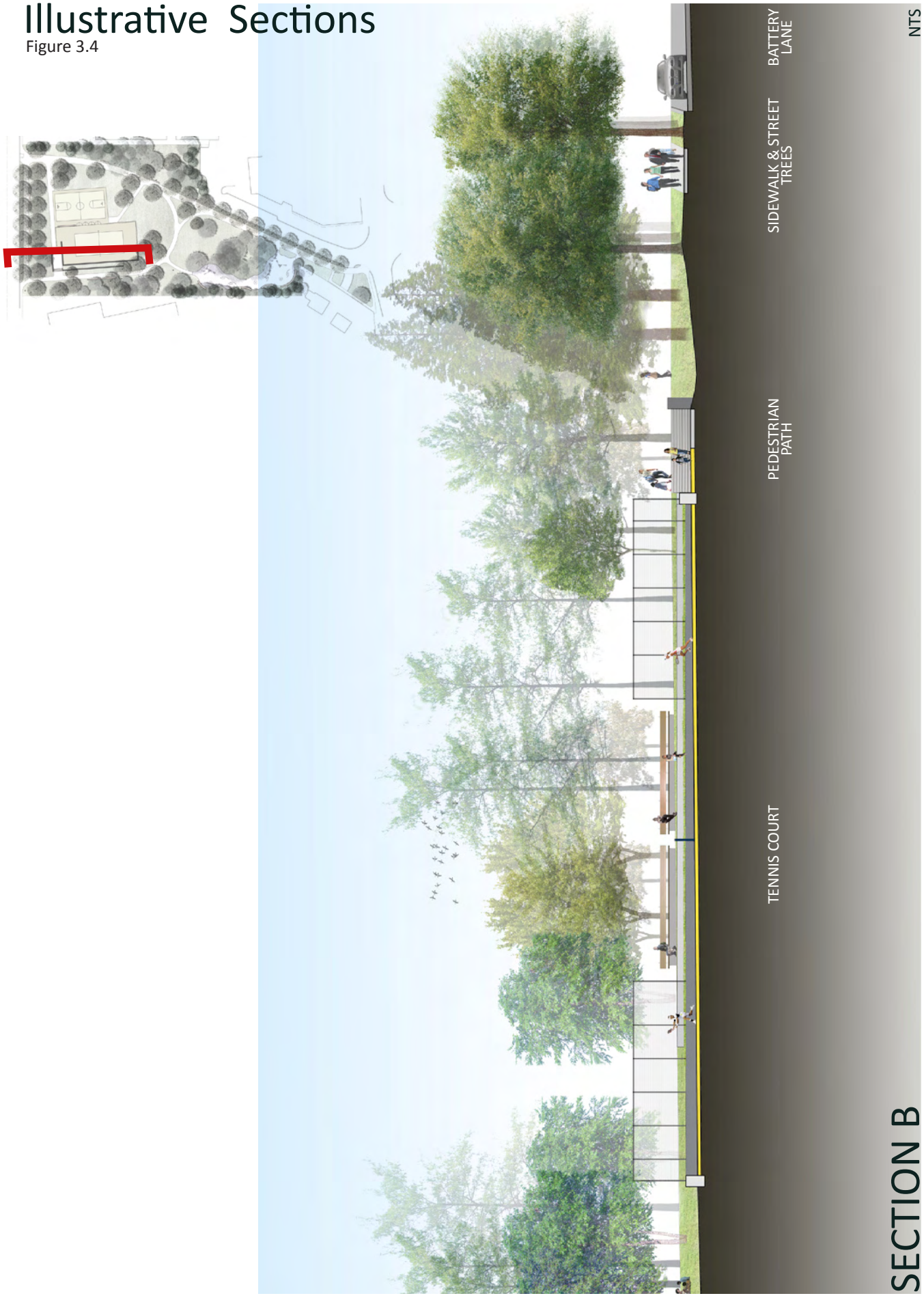


Illustrative Sections

Figure 3.3

Illustrative Sections

Figure 3.4

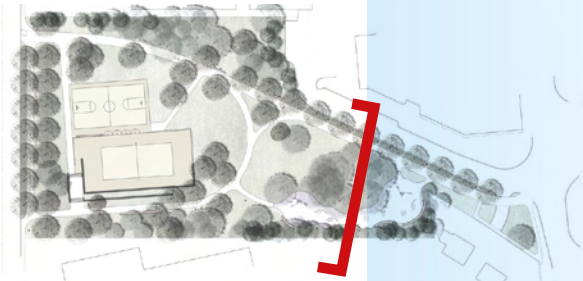


Illustrative Sections

Figure 3.5

Illustrative Sections

Figure 3.6



Illustrative Sections

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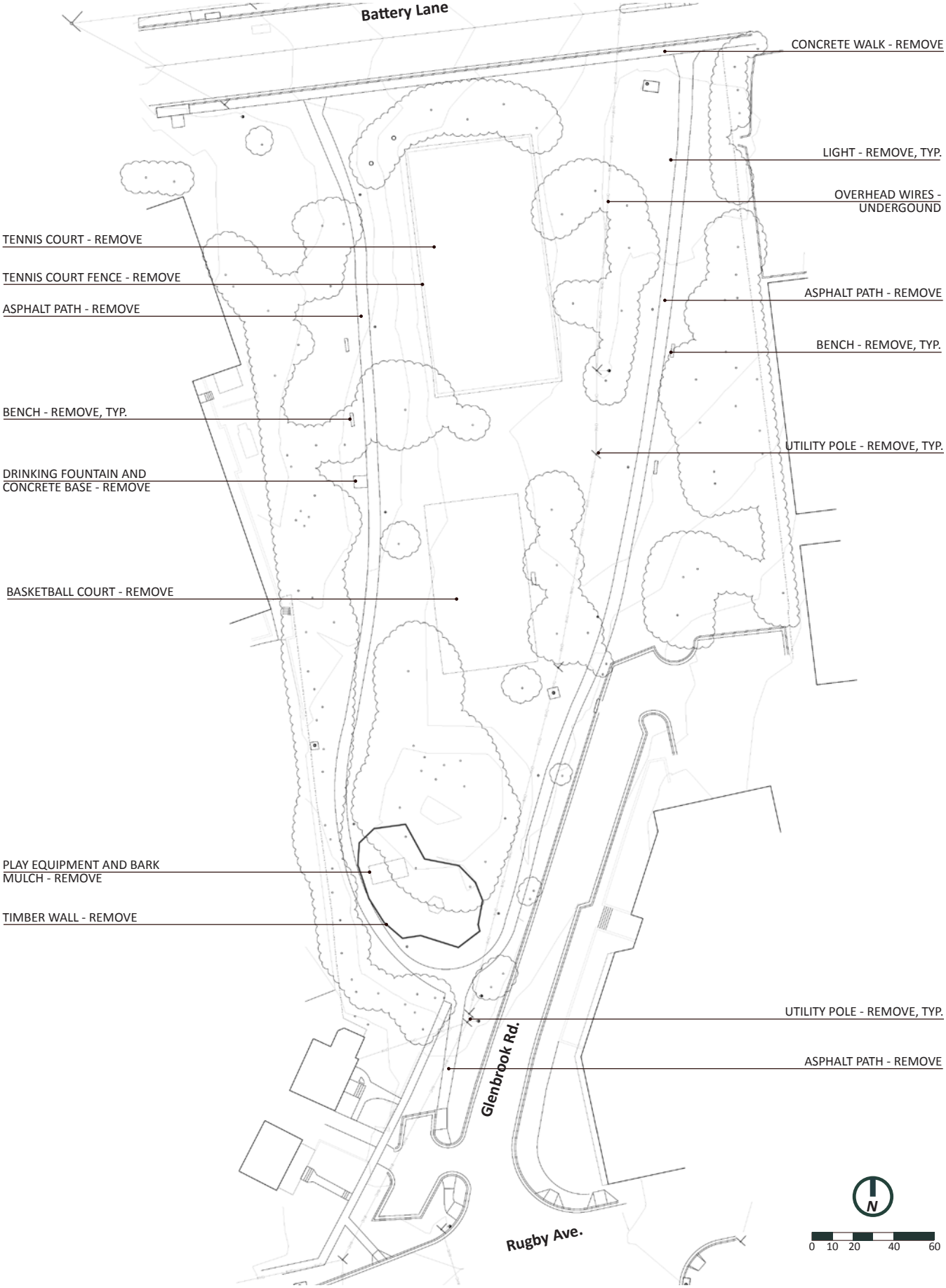
Appendix A - Facility Plan Technical Documents

Demolition Plan



Grading Plan

Appendix B - Cost Estimate

BATTERY LANE PARK

Bethesda, MD

Schematic Design Submission
Construction Cost Assessment

June 12, 2009

Prepared by

CCMA
Construction Cost Management Associates

For

OCULUS
2410 17th Street NW, Suite 201
Washington, DC 20009

Battery Lane Park
Bethesda, Maryland.

Schematic Design Submission
Construction Cost Assessment **June 12th, 2009**

Introduction:

This construction cost assessment encompasses the renovation and refurbishment of the existing park (approximately 88350 SF) located at Battery Lane in Bethesda, Maryland.

The assessment has been prepared by the measurement of approximate quantities from the schematic drawings prepared by OCULUS dated June 2nd, 2009 and on quantities provided by Oculus for specific items of work.

The estimate generally encompasses the following scope of work:

- Demolition of the existing playground.
- Demolition of the existing tennis and basketball courts.
- Demolition of the existing walkways throughout the park.
- Construction of a new playground area.
- Construction of new tennis and basketball courts.
- Construction of new walkways.
- Generally re-grading and planting new lawn areas.
- Demolition of the existing overhead power line and installation of a new underground electrical feed.

The level of pricing forming the basis of this cost assessment is representative of current day costs of construction in the Maryland and the greater Washington metropolitan area.
The level of pricing also assumes that the project will be procured in a competitive bid environment with a minimum of four bidders qualified to undertake a project of this nature.

It should be noted that the proposed start of construction and anticipated construction duration are as yet undetermined and as such no allowance has been included to cover any increases in construction costs beyond the date of preparation of this cost assessment.

In preparing these cost assessments has been assumed that the park will be closed to the general public during the course of construction and the contractor will be permitted unrestricted access to the site of the works and will not be required to work outside of working hours.

No allowance has been included in the cost estimate for the following:

- Design Fees or other consultant fees.
- Legal fees.
- Permits.
- Impact or other Government costs.
- Costs of owners on site representation during the course of construction.
- Escalation in costs of construction beyond the date of preparation of this document.

Battery Lane Park
Bethesda, Maryland
Schematic Design Submission
Construction Cost Assessment **June 12, 2009**

Summary - Phase 1

02	***Siteworks***		
	Site Preparation:		
	Demolition	93,444	
	Earth work	223,909	
	Subtotal Site Preparation:		**317,353**
	Site Improvements:		
	Paced Surfaces	84,756	
	Athletic Courts	127,370	
	Playground	279,275	
	Walls and Stairs	44,940	
	Landscaping	258,660	
	Site furnishings	59,600	
	Site Utilities	195,740	
	Subtotal Site Improvements:		**1,050,341**
	Subtotal		**1,367,694**
	Subtotal		**1,367,694**
	Add; General Conditions, Insurances and Bonds	13.5%	**184,639**
	Subtotal		**1,552,333**
	Add: Overhead and profit	7.0%	**108,663**
	Subtotal		**1,660,996**
	Total Estimated Construction Cost		**1,660,996**

Battery Lane Park
Bethesda, Maryland
Schematic Design Submission
Construction Cost Assessment **June 12, 2009**

Item Description	Quantity	Unit	Rate	Subtotal	Total
02 ***Siteworks.***					
Site Preparation:					
Demolition:					
Allowance for removal of existing play equipment including breaking up and removing foundations	1	LS	2000.00	2,000	
Remove tennis nets	1	EA	250.00	250	
Remove basketball pole and backboard	2	EA	250.00	500	
Remove fencing to tennis court	360	LF	4.80	1,728	
Remove timber wall to play area	210	LF	8.00	1,680	
Break up and remove asphalt surfacing to tennis court and basketball court	11800	SF	0.90	10,620	
Break up and remove existing asphalt footpaths	6400	SF	1.10	7,040	
Break up and remove existing concrete footpaths	1910	SF	2.20	4,202	
Break up and remove existing curb and gutter	154	LF	6.00	924	
Demolish existing overhead power line	650	LF	30.00	19,500	
Allowance for selective tree removal	1	LS	15000.00	15,000	
Allowance for tree protection	1	LS	30000.00	30,000	
Subtotal Demolition:					*93,444*
Earthworks:					
Generally clear and grub vegetation	56760	SF	0.15	8,514	
Strip and stockpile topsoil on site	1050	CY	3.50	3,675	
General cut to fill and grading levelling and compacting to subgrade levels including imported fill material as required to make up levels	88350	SF	2.20	194,370	
Excavate stockpile and spread and level topsoil on site	1050	CY	7.00	7,350	
Allowance for soil erosion protection	1	LS	10000.00	10,000	
Subtotal Earthworks:					*223,909*

Battery Lane Park
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Item Description	Quantity	Unit	Rate	Subtotal	Total
Site Improvements					
Paved Surfaces:					
Concrete paving 4" thick including 4' thick aggregate base	2040	SF	6.40	13,056	
Asphalt paving 3" thick with 6" aggregate base	10260	SF	4.20	43,092	
Brick paving on 4" thick concrete bed	1490	SF	19.20	28,608	
Subtotal Paved Surfaces:					84,756
Athletic Courts:					
Flexcourt surfacing on asphalt base 4" thick and aggregate subbase 4" thick	12950	SF	7.80	101,010	
Vinyl coated chain link fence 12' high	200	LF	48.00	9,600	
Ditto mounted on concrete wall	140	LF	52.00	7,280	
Gates to ditto, double leaf	4	EA	520.00	2,080	
Posts and net, tennis court	1	LS	1000.00	1,000	
Basketball backstop post mounted	2	EA	2850.00	5,700	
Court marking	2	EA	350.00	700	
Subtotal Athletic Courts:					127,370
Playground					
Synthetic surfacing 1.75" thick including concrete base 4" thick and 10" thick aggregate sub-base	4850	SF	21.50	104,275	
Allowance for childrens play equipment	1	LS	175000.00	175,000	
Subtotal Playground					279,275
Walls and Stairs					
Concrete seat wall	290	LF	110.00	31,900	
Concrete cheek wall at steps	32	LF	145.00	4,640	
Concrete steps	120	SF	40.00	4,800	
Handrail	20	LF	180.00	3,600	
Sutotal Walls and Stairs					44,940

Battery Lane Park
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Item Description	Quantity	Unit	Rate	Subtotal	Total
Landscaping:					
Prepare planting beds	56760	SF	3.50	198,660	
Allowance for planting	1	LS	60000.00	60,000	
Subtotal Landscaping:					258,660
Furnishings:					
Benches	134	LF	185.00	24,790	
Ditto curved	106	LF	235.00	24,910	
Trash receptacles	6	EA	850.00	5,100	
Bike rack	8	EA	600.00	4,800	
Subtotal Furnishings:					59,600
Site Utilities:					
Water Service:					
Distribution piping, 2" diameter	200	LF	32.00	6,400	
Valves	2	EA	165.00	330	
Drinking fountain	1	EA	2770.00	2,770	
Water meter and vault	1	EA	3800.00	3,800	
Subtotal Water Service:					13,300
Stormwater System:					
RCP average 18" diameter	240	LF	52.00	12,480	
Underdrain 8" diameter HDPE perforated pipe	460	LF	6.00	2,760	
Area drains	6	EA	2000.00	12,000	
Allowance for adjustment to existing manholes	3	EA	750.00	2,250	
Subtotal Stormwater System:					29,490
Electrical Installations:					
New underground ductbank and distribution wiring	650	LF	155.00	100,750	
Site light including wiring, 12' high fixture	18	EA	2900.00	52,200	
Subtotal Electrical Installations:					152,950
Subtotal Site Utilities:					195,740