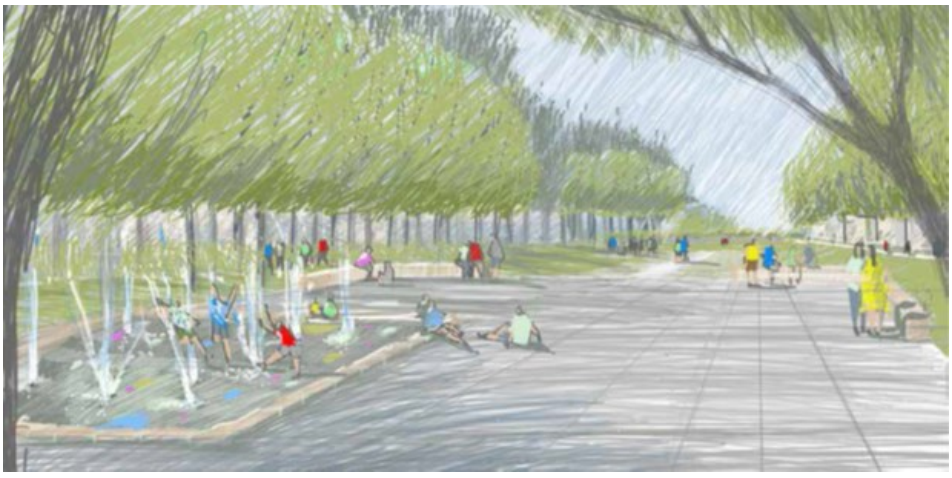
City of Perth Amboy
2nd Street Park
Concept Design



Prepared for:
City of Perth Amboy and
Middlesex County
Improvement Authority

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February 19, 2015

CITY OF PERTH AMBOY
THE HONORABLE MAYOR WILDA DIAZ

Middlesex County Improvement Authority

U.S. Environmental Protection Agency's Brownfields Program

RUTGERS
THE STATE UNIVERSITY OF NEW JERSEY

Project

Perth Amboy
Second Street Park
Concept Plan

BLOCK	LOT
10	1 THRU 12
11	1.01
16	1 THRU 15
16	15.01

Owner: City of Perth Amboy

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Dan Harning for incorporating park input into his classroom

Residents of the 2nd Street Park neighborhood for their continued interest and feedback

2nd Street Park Steering Committee (see page 14)

Front Cover Art: Various artist sketches of 2nd Street Park: top is view south towards the river along the length of the park, middle is the living shoreline, bottom is looking north from the central plaza of the park across from the Wilentz Elementary School.

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Executive Summary

In May 2014, the Middlesex County Improvement Authority (MCIA), working with the City of Perth Amboy, under funding from the U.S. Environmental Protection Agency's (EPA) Brownfields Program, contracted with a team of community planning specialists and landscape architects from Rutgers University to develop a concept design to convert a contaminated site into a community park that meets the needs and interests of the surrounding neighborhood residents. The Rutgers team was charged with conducting community outreach efforts and through those findings, develop a concept plan for the City's new 2nd Street Park.

The 6-acre property that will become the future home of the 2nd Street Park was, for many years, used to recycle scrap metals. The Harry Goldberg & Sons Scrap Metal Yard (Goldberg), conducted metals recycling on this site from 1904 to 1994. The site was contaminated with Chlorinated Volatile Organic Compounds (VOCs), Polycyclic Aromatic Hydrocarbons (PAHs), Polychlorinated Biphenyls (PCBs) and metals (including lead). Such materials were released on the site during its ninety years of operation. In addition, materials commonly used historically to fill in waterfront lands are found on the property.

In March 2003, the City of Perth Amboy acquired the Goldberg property to redevelop it for recreational uses. Several years ago, MCIA received a grant from the EPA to advise on environmental issues,

Fig. 0.1: 2nd Street Park Project Banner on security fence of the future park.

"Since we initiated the Mayor's Wellness Campaign in Perth Amboy several years ago, we're serving everyone from our active seniors to our children. Our City will see over $2 million dollars in grant funds invested in park improvements along the entire waterfront area. These new facilities and the future 2nd Street Park will not only maximize underutilized property and beautify neighborhoods, they are initiatives that keep our community healthy."

Mayor Wilda Diaz
City of Perth Amboy

perform additional site testing, if necessary, and to help develop a plan for cleaning up the former Goldberg Brownfield site. The City of Perth Amboy, MCIA, Goldberg and the New Jersey Department of Environmental Protection are working on a remediation plan to make this site safe for future use. Once site remediation has been completed, the park can be constructed and opened to the public.

The Rutgers design team developed and implemented a community planning process that utilized a range of outreach and engagement strategies to obtain public input and explore design alternatives for the proposed 2nd Street Park. The strategies targeted both adult and youth residents and included a resident survey, two public open house workshops, and a number of youth engagement activities. The Rutgers team also conducted interviews with various City and County officials and convened a steering committee of community leaders, teachers, local activists and area residents to help guide the planning process and provide feedback on draft designs for the new park.

Community outreach took the form of a website, an on-line survey and several open houses where participants could gather information about the proposed park, learn about other City parks and recreation opportunities and offer their suggestions for future park design elements. School outreach efforts reached hundreds of students at the Wilentz Elementary School, McGinnis Middle School, and the High School, where students utilized interactive displays about the park concept design project, Brownfield remediation, climate resiliency, and shared their ideas for the new park plans. Most materials developed for outreach and education purposes were prepared in both English and Spanish, and translators were available at the community open houses. Input from City residents, students, and members of the steering committee was collectively used to inform a "concept plan" for the park.

Common themes emerged from the community input received through the outreach process. These themes included:

1. A healthy park that was free from smoking and included space for growing food, exercising and plenty of fresh air and trees,

2. A safe and clean park with curfews, frequent patrols, good lighting and high visibility,

3. A park that will be safe from and/or quickly rebound after storms as well as provide native habitat while managing stormwater and shading the area,

4. An active and fun park with space for all ages including picnic and barbecue areas, table games, play fields and ball courts, a water park and skateboard park, and community gathering space for festivals, movies, and markets.

5. A connected park with easy access to and through the park by foot, bike or car and with public WiFi connections, and

6. An educational park to be used as an outdoor classroom with nature walk signs and information on plantings, shoreline functions and other aspects of the park. ***In short, residents wanted a healthy, safe, clean, resilient, active, fun, connected and educational park.***

The design of the 2nd Street Park has been a collaborative effort led by MCIA and the City of Perth Amboy. Rutgers University's Voorhees Transportation Center (VTC) and Center for Urban Environmental Sustainability (CUES) provided the professional support to establish an open, engaged and community-focused design process.

In response to sound landscape design practices and community vision, the park concept design includes multiple program areas that meet the local residents interests for this space. The areas reflect a diversity of proposed activities and ecological services that connect the park to the shoreline, neighborhood and Perth Amboy's urban center.

The waterfront edge includes a living shoreline (that utilizes native wetland plants, sand and limited use of rock to provide shoreline protection and habitat), a pier for views along the river and a concession stand and seating area.

Green space for picnics and small gatherings is provided in a grassy lawn area with low hills for ease of seating and more views of the river and park.

The central elements of the park include a plaza with a water feature, community gardens, children's park, and open play areas. This area provides passive and active park activities and educational opportunities.

A flexible space near the Paterson Street end of the park can be converted from handball or basketball courts to room for summer movie viewing, music festivals and open markets.

Along the edge of the park is a stormwater management system that is designed to create stormwater management for the mainly flat sight, collect water and direct the runoff to the Raritan Bay, but also provide an opportunity for educating visitors on best management practices.

The focus of the community outreach was to understand the local residents' desires for a neighborhood park. The goal of the design is to provide the City of Perth Amboy with a community park that is open, safe and environmentally sustainable. The park is programmed to fulfill existing community requirements for all seasons and to provide the flexibility for future reprogramming or expansion.

The next steps include developing a final site remediation strategy and phasing plan and preparing grant applications to secure funding for the site clean-up and park construction.

Fig. 0.2: Artist sketch of view looking west along the Perth Amboy promenade towards the new 2nd Street Park with the NJ Transit rail bridge in the background

1 Introduction

1.1 Partners & Location

In May 2014, the Middlesex County Improvement Authority (MCIA), working with the City of Perth Amboy, contracted with a team of community planning specialists and landscape architects from Rutgers University to develop a concept design for a new park to be constructed on 2nd Street in the City. The concept design work was funded through a grant from the U.S. Environmental Protection Agency.

The site where the proposed Perth Amboy 2nd Street Park will be located is situated across the street from the Robert N. Wilentz Elementary School between Paterson Street and the Raritan River waterfront. This currently vacant lot is at the western end of the Perth Amboy riverfront promenade that connects to many other City open space and recreation areas. (See Fig. 1.1)

A new park in this location will create open space and opportunities for programming and recreational activities for residents of the adjacent neighborhood as well as the entire community.

The park property is a short walk from Perth Amboy's downtown train station and is close to several NJ Transit bus lines running along Smith and Market Streets. The site is easily accessible by bicycle from most City neighborhoods.

Fig. 1.1: Aerial view of 2nd Street Community Park development site

1.2 History of the Site

The 6-acre property that will become the future home of the 2nd Street Park was, for many years, used to recycle scrap metals. The Harry Goldberg & Sons Scrap Metal Yard (Goldberg), conducted metals recycling on this site from 1904 to 1994. The process of recycling metals can generate or release a variety of hazardous materials that pose a threat to humans, animals and the environment. Such materials were released on this site during its ninety years of operation. In addition, materials used historically to fill in waterfront lands are found on the property.

Fig. 1.2: 2nd Street Community Park development site looking southwest from 2nd Street towards the railroad tracks.

In May 1997, the New Jersey Department of Environmental Protection (NJDEP) and Goldberg entered into an agreement to begin the lengthy process of "cleaning up the site." This process involves testing the soil and groundwater on the property to see what contaminants are there, determining where the contaminants came from and who is responsible for cleaning them up, and deciding how best to clean them up based on what the land will be used for in the future.

Testing of the property showed that this site is contaminated with Chlorinated Volatile Organic Compounds (VOCs), Polycyclic Aromatic Hydrocarbons (PAHs), Polychlorinated Biphenyls (PCBs) and metals (including lead).

The City of Perth Amboy acquired the Goldberg property in March 2003 to redevelop it for recreational uses. Since acquiring the property, the City has continued to work with the former owner and party responsible for the contamination, and his consultant, RTP Environmental Services, to complete necessary environmental investigations.

1.3 Brownfield to Park

Abandoned and underutilized properties that are contaminated with environmental pollution are known as “brownfield” sites. The process of cleaning-up a brownfield site is called “site remediation.” Given its industrial past and the fact that the former Goldberg property contains environmental contamination, it is considered a brownfield site. In order to transform the property into a park the existing contamination on the property must be cleaned-up in accordance with Federal and State environmental laws and regulations.

In 2009, MCIA received a grant from the US Environmental Protection Agency (EPA) to advise on environmental issues, perform additional site testing, if necessary, and to help develop a plan for cleaning up the former Goldberg brownfield site. The City of Perth Amboy, MCIA, Goldberg and the New Jersey Department of Environmental Protection are working on a remediation plan to make this site safe for future use. Once site remediation has been completed, the park can be constructed and opened to the public.

Fig. 1.3: Gates into site near center of property along 2nd Street

2 Community Outreach and Engagement

2.1 Overview

The Rutgers design team developed and implemented a community planning process that utilized a range of outreach and engagement strategies to obtain public input and explore a range of design alternatives for the proposed 2nd Street Park. The strategies targeted both adults and youths and included a resident survey, two community open house workshops, and a number of youth engagement activities.

In addition, the design team interviewed various City and County officials, convened a 2nd Street Park Steering Committee, created a website, conducted media outreach, and presented the final concept design for the park to community at a final open house and to the City Council at their December 8 Caucus Meeting. All outreach materials, including the project website, community-wide resident survey, outreach posters and other printed items were available in both English and Spanish.

Fig. 1.4: Brochures and cards distributed at Perth Amboy's Los Andes Festival in June

2.2 Steering Committee

At project inception, the Rutgers design team convened a steering committee of city and county representatives and other community leaders to help guide the planning process, provide feedback on planned outreach activities and give input related to various design decisions. The 2nd Street Park Steering Committee was convened in May, September, and December, 2014.

Fig. 2.1: Steering Committee Meeting at Wilentz School

2nd Street Park Steering Committee

The following individuals were invited to participate on the 2nd Street Park Steering Committee:

Mayor Wilda Diaz
City of Perth Amboy

Vivian Baker
New Jersey Transit

Jillian Barrick
City of Perth Amboy

Frank Dann
City of Perth Amboy

Annie Hindenlang
City of Perth Amboy

Rick Lear
Middlesex County Parks

Yvonne Lopez
Puerto Rican Assn for Human Development

Ken Ortiz
City of Perth Amboy

Joel Pabon, Sr.
City of Perth Amboy

Joel Polidura
Wilentz Elementary School

Bill Schultz
Raritan Riverkeeper

Nick Tufaro
Middlesex County Planning

Luis Vargas
Perth Amboy Resident

Lizzie Velez
Perth Amboy Resident

The project website can be found at: http://2ndstreetpark.blogspot.com

2.3 Resident Survey

As part of the outreach process, the Rutgers design team implemented a city-wide resident survey asking residents how they currently utilize parks and recreational opportunities in the City; what types of uses residents desire more of; and what uses they would specifically like to see included as part of the proposed 2nd Street Park. The survey also asked if residents had any concerns about how construction of the park might impact the neighborhood.

The survey was available in English and Spanish, on-line and in hard copy at four locations:

- Alexander F. Jankowski Community Center
- City Hall
- Brighton Avenue Community Center
- Puerto Rican Association for Human Development, Inc.

Resident were encouraged to take the survey through word-of-mouth, media outreach, social media and the 2nd Street Park Blogspot website. Surveys were also available at two community open house events conducted as part of the planning process. Over 120 surveys were completed.

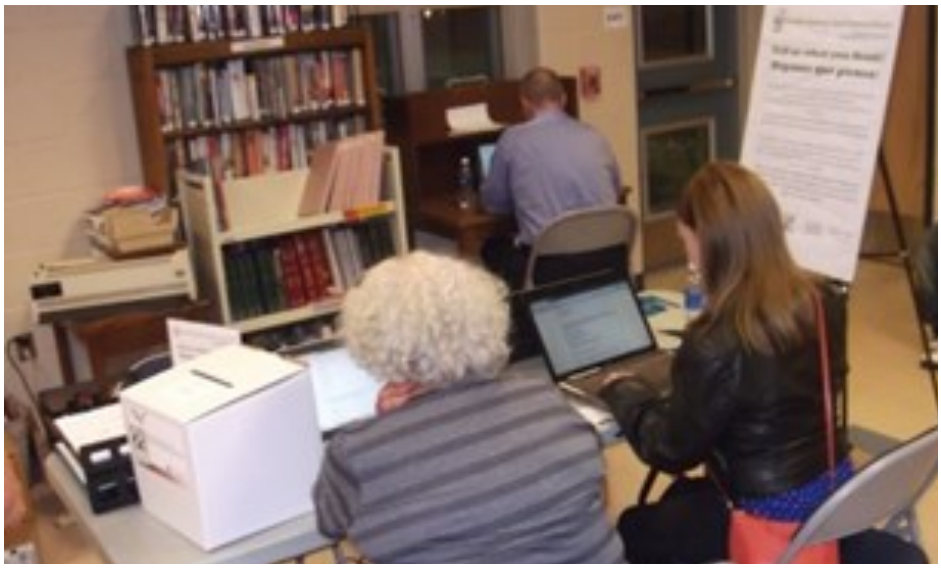


Fig. 2.2: Residents complete surveys at Open House station

Overall the survey results indicate that Perth Amboy residents are frequent park users. More than half of the survey respondents reported using Perth Amboy parks at least once per week with more than one quarter reporting that they visit or pass through one of the city's park on a daily basis. The City's most frequently used parks were Sadowski Parkway Waterfront Park, Harborside Waterfront Park, Washington Park and Bayview Park.

Popular leisure activities include: walking, running and dog walking; bird watching, picnicking, using playground equipment, attending concerts/festivals and water-related activities such as boating and kayaking. Popular sports activities include: basketball, baseball, soccer, Frisbee, "pick-up" games and volleyball.

When asked what types of parks and recreation activities people enjoy but have a hard time doing in the City, respondents frequent answers included: grilling, skateboarding, rollerblading, swimming, biking and various other sports.

About one quarter of the survey respondents were previously unaware of plans to create a new park on 2nd Street. Another 53 percent had just learned about the plans. Approximately two-thirds of survey respondents (66 percent) agreed that the former Goldberg property on 2nd Street was a good site to create a new neighborhood park. The same number, approximately 65 percent said they would visit the new park at least once per week when completed. The vast majority (81 percent) of survey respondents indicated they would most likely access the park by walking.

In terms of amenities, survey respondents indicated they would like the new park to have restrooms, benches, trees, bike racks, picnic areas and places to grill.

The most popular sports activities respondents would like included in the 2nd Street Park include: basketball, soccer, volleyball and baseball/softball.

In terms of recreational activities respondents would like to see included, the most frequently requested were playground equipment, open space for free play, walking paths, community gardens, exercise equipment, bike trails and a water park.

Popular entertainment activities respondents would like to see in the park included outdoor movie nights, nature/environmental center, murals and art space as well as additional festival space.

Respondent's greatest concerns about using or living near the new park related to safety, crime, vandalism, noise, upkeep and cleanliness.

2.4 Open Houses

Fig. 2.3: Residents participate in 2nd Street Park Open House meetings conducted in September, 2014.

Fig. 2.4: Residents at the Open House discover where the 2nd Street Park will be located

The Rutgers team conducted two community open house meetings in September, 2014. The purpose of the meetings was to invite Perth Amboy residents to come and learn more about the park planning process and share their ideas. The first open house was held at the Brighton Avenue Community Center on September 23, from 6-9 PM. The second was held on Saturday, September 27, from 12-3 pm, also at the Community Center.

The meetings were structured to allow attendees to arrive at any time and visit the following information and activity stations at their own pace:

1. A "Welcome" station with information about the project, community engagement, brownfields, and climate resiliency;

2. Other parks, recreation and open space opportunities in the area;

3. The park design process, including: concepts from an international student project in Vienna, Austria and an opportunity to provide feedback on early design concepts;

"This is an incredible opportunity for Perth Amboy. Other planned waterfront improvements, combined with this new park are and will be wonderful assets for our community and will draw more visitors."

Joel Pabon, Sr.
Perth Amboy City Council President and
member of the 2nd Street Park Steering Committee

4. A "Design Your own Park" activity table; and

5. A resident survey station.

Bilingual interpreters were available at both meetings.

More than 120 residents attended the open houses, offered feedback on early concept designs, and some completed surveys.

Residents who attended the Open Houses overwhelmingly were interested in the following activities: basketball, soccer, baseball, walking/ running and skateboarding. Residents who designed their own park included ideas such as: smoke free, community gardens, athletic fields (basketball, baseball, soccer, football, volleyball), skate park, curfews, festival space, bathrooms, bike paths/lanes, outdoor movies and art space for murals.

Fig. 2.5: Visitors to the Open House learn about plans for other City Park improvements in the area surrounding the 2nd Street Park.

2.5 Youth Engagement

A significant component of the community outreach process was engaging youth residents. Toward this end, the Rutgers design team conducted interactive lessons with students at the Robert N. Wilentz Elementary School and William C. McGinnis Middle School and sponsored an interactive table display during lunch periods at the Perth Amboy Freshman Academy.

Figs. 2.6: Students at Wilentz Elementary share their ideas for the 2nd Street Park

Wilentz Elementary School

The Robert N. Wilentz Elementary School is located on First Street directly across the street from the 2nd Street Park development site. In June 2014, members of the Rutgers design team conducted a series of interactive workshops with 3rd and 4th grade students at the school. Information and activities were presented to six classrooms, three classes each of third and fourth graders. Approximately 150 students participated. The students were very enthusiastic and engaged about the project and provided plenty of input and feedback from the discussions.

McGinnis Middle School

The William C. McGinnis School is located on State Street in Perth Amboy. Of the two middle schools in Perth Amboy, McGinnis is the closest to the 2nd Street Park development site. Members of the Rutgers design team worked with the 21st Century Learning Center to engage students in 5th through 8th grades in a series of workshop activities. The workshops were held over two consecutive afternoons in late-June. In total, approximately 100 middle school students participated.

Perth Amboy Freshman Academy

The Perth Amboy Freshman Academy is located on Mechanic Street just over a mile from the 2nd Street Park development site. In October, 2014, members of the Rutgers design team work with staff from the Freshman Academy to set up an interactive table display during lunch periods. The table included information about the park concept design project, brownfield remediation, various concept designs for the new park, copies of the resident survey and a “tell us what you think” activity. Approximately 400

Freshman Academy students visited the table and provided input.

What the students said

When asked about activities that they like to do but have a hard time doing in Perth Amboy, the students indicated that they have a hard time finding space to play soccer, baseball and basketball, to swim and to skateboard. They would also like to see more parks with sprinklers in the City.

The students suggested a variety of activities and amenities they would like to see in the new park and were asked to vote for the top ideas/ activities they would like to see included in the park. When the votes were counted, the top choices were: a waterpark, pool, soccer fields, go karts, basketball courts and baseball fields, food vendors, laser tag, parkour, a skateboard park and free Wi-Fi.

Figs. 2.7 & 2.8: Students at McGinnis Middle School and the Perth Amboy Freshman Academy provide input on the 2nd Street Park design

2.6 Common Design Themes

Throughout the community outreach process, project team members spoke with community officials, teachers, parents, students, and other residents about how they currently use parks in Perth Amboy and what they would like to see included as part of the new 2nd Street Park. Examining the results from the community outreach efforts including the youth engagement, the survey, and the open house events,

Fig 2.9: Residents draw their ideas for "Design your own park" at the Community Open Houses.

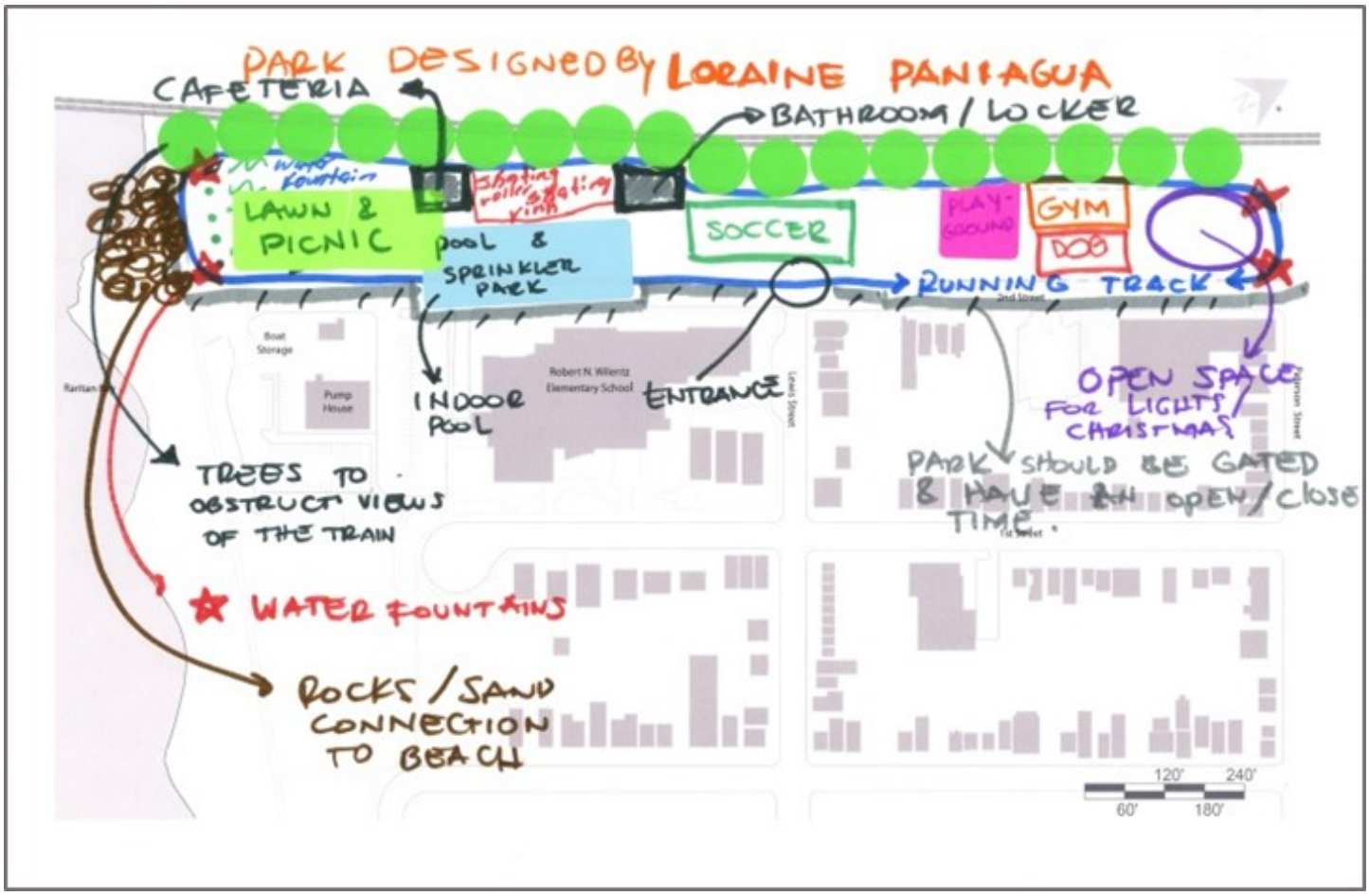
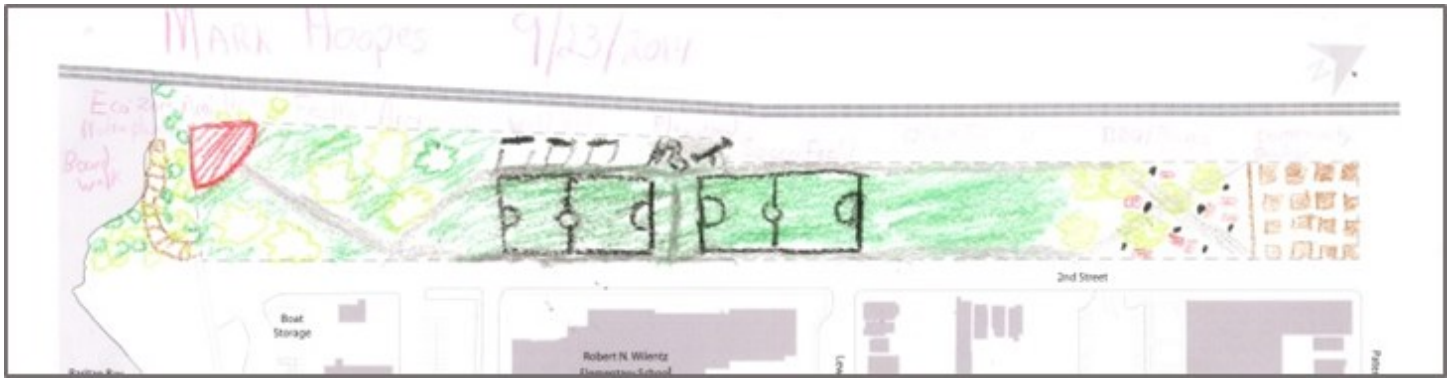
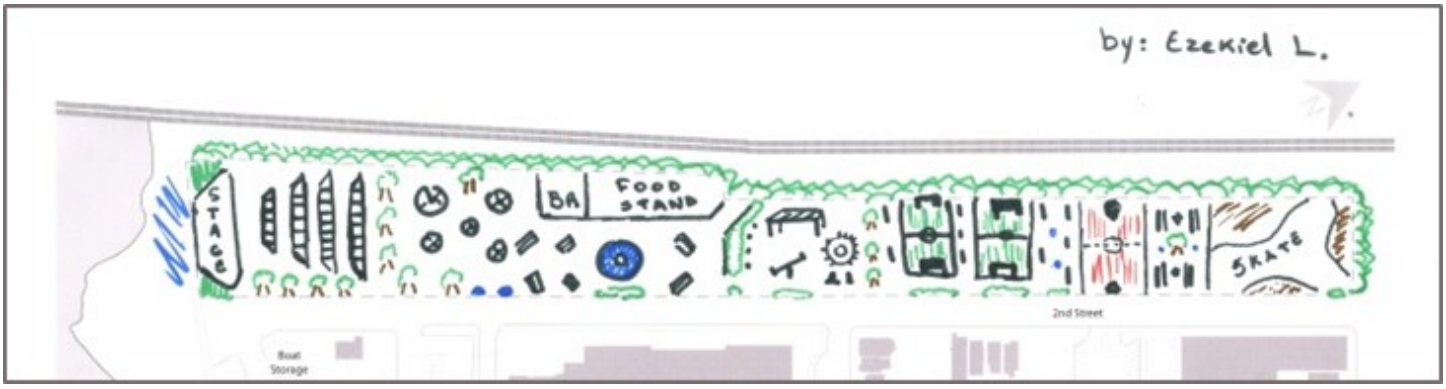


Fig. 2.10 & 2.11: Two more resident's ideas for the park





common themes emerged from the community input. These recurring themes influenced final concept design for the park. Residents in Perth Amboy desire:

***A Healthy Park*—**Residents want a public park that will contribute to the health of the people and the environment in Perth Amboy. Residents seek a smoking free park where they and their families will be able enjoy activities without seeing hundreds of cigarette butts scattered throughout the park and will be free from the harmful effects of second-hand smoke. They want community garden space that will provide gardening opportunities to all community members, but especially to those who live in apartments or have yards that are not garden friendly. Residents hope to promote the use of parks as a pathway to health by including outdoor fitness equipment which helps to assure that everyone has the ability to make important fitness and health improvements in an enjoyable outdoor environment. Residents also seek to have a park that is environmentally friendly and will include lots of trees that contribute to the community by providing oxygen, improving air quality, conserving water, preserving soil, supporting wildlife, and offering cool shade on hot summer days.

A Safe & Clean Park—Residents seek a park that will be safe for community members of all ages. Residents want to see a well-lit park that will be frequently patrolled by the Police Department and will maintain a curfew to limit vandalism as well as loud and unsafe behavior during night hours. Residents also want an opportunity to help keep their park safe and clean by asking for a park design that will encourage high visibility and allow for local residents to provide "eyes-on-the-park" monitoring. Designing a high visibility park will limit isolated areas, bringing the park into the social framework of the community which will lead to local residents self-policing the park, deterring criminal and anti-social behavior by increasing the likelihood that those engaging in negative behavior will be seen or caught by others.

Fig. 2.12: Artist sketch of the 2nd Street edge of the new park

A Resilient Park—Superstorm Sandy's assault on the City of Perth Amboy showed residents the need for planning public spaces that will limit severe and extensive damage from future storms. With the new park located directly on the waterfront, it is important to residents that the park be planned so that it is as protected as possible from future saltwater flooding. Residents wish to see a "living shoreline" using a variety of structural and organic materials, such as wetland plants, which will stabilize of the shoreline. Residents also seek to help improve water quality along the Perth Amboy waterfront by incorporating rain gardens and lots of trees and plants that will serve natural storm water management and limiting storm water runoff into the river and bay.

An Active & Fun Park—Residents desire a park that takes into account the community's diverse programming needs and provides space for users of all ages. Residents seek a design that accommodates both passive and active park activities. Residents want a park that includes space for informal basketball and soccer games; playgrounds with swings for small children; a skatepark for teenagers; as well as areas for table games for adults. Residents would like to see pathways and trails for those seeking to keep active by running or biking as well as a water park that will provide a place for children to cool down on a hot day. Residents also want space that accommodates picnic/BBQ areas as well as festival space.

A Connected Park—Keeping connected is important in Perth Amboy. Residents are seeking a park that is easily accessible and provides opportunity to travel both to and through the park easily whether walking, biking or driving a car. The Perth Amboy waterfront is already a popular destination within the community. Residents desire a park design that is well connected with and helps to enhance the existing recreational opportunities along the waterfront. Residents also want to stay "connected" while in the new park through the use of public Wi-Fi, allowing them to complete work and remain accessible to colleagues, friends, and family while enjoying time outdoors.

An Educational Park—With the park located directly across from the Wilentz Elementary School, it is important that the park is designed to encourage education. Residents are seeking a park that contains educational opportunities to connect children and other community members to the Perth Amboy environment through the use of nature walk signs with information on plantings, opportunities to better understand shoreline functions and storm water management, and opportunities to learn from each other through community gardens and other aspects of the park.

3 Design Context

3.1 Site Context

Fig. 3.1: Raritan Bay

Fig. 3.2: Site Context, CUES

The proposed site is located between the New Jersey Coastal Rail Line, 2nd Street, the Raritan River Bay shoreline, and Paterson Street in Perth Amboy, NJ. The adjacent properties to the north have car repair shops and other auto services.

The industrial area west of the site is not immediately accessible from the site. The Robert N. Wilentz Elementary School is located east of 2nd Street. Faculty and students were active participants in the outreach process and will substantially benefit from the proposed park. Public parking is available across the street between the school and the pump station, as well as within walking distance to the Perth Amboy Train Station. The NJ Transit stop along with the Market/Maple Street bus stop provide public transportation access.

The Perth Amboy waterfront greenway abuts the edge of the site.

1 Robert N. Wilentz Elementary School
2 Greenway/ Soccer Fields
3 Pump House
4 Public Parking Areas
5 Redevelopment Area
6 Perth Amboy Train Station
7 Playground
Local Bus Stops

3.2 Earlier Concepts

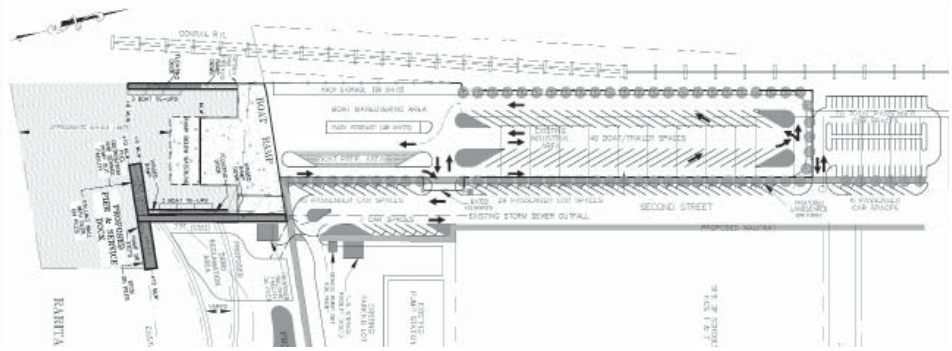


Fig. 3.3: Kilman Associates Consulting Engineers, 1999

The site, formerly the Harry Goldberg & Sons Scrap Metals Yard, has been under consideration for a variety of future uses. The three suggestions discussed here illustrate a wide range of possibilities that have been considered.

The City of Perth Amboy explored the feasibility of a marina with parking for boat trailers and cars (Fig. 3.3). The concept by Kilman Associates Consulting Engineers from 1999 proposed substantial dredging of the Raritan Bay and changes to the shoreline. While this design allowed for far lower remediation costs by paving over the property, the other environmental impacts of this intervention were severe, and the riparian improvements were costly.

Fig. 3.4: United Railroad Historical Society of New Jersey

The United Railroad Historical Society of New Jersey based in Boonton, NJ in Morris County, proposed a Railroad Park featuring historic engines and railroad cars along with a vintage trolley loop (Fig. 3.4) based on the close proximity to the New Jersey Transit rails and the Perth Amboy train station. This proposal had limited appeal to local residents as shown in the resident survey and discussed at outreach sessions.

Fig. 3.5: Beacon Planning and Consulting Services, LLC, 2013

Figure 3.5 shows ideas for the use of the site as a community park and recreational facility. The plan was developed in 2013 by Beacon Planning and Consulting Services, LLC as a quick sketch for gathering public input at a fall 2013 Open House sponsored by Together North Jersey.

The work was funded by a brownfields coalition grant to the MCIA by the U.S. Environmental Protection Agency.

The proposed ideas for festival space, overlook, playground, sports court, concession stand, and walkways provided valuable input for the design process.

3.3 Master Plan Recreation Element

Responding to a 2012 General Planning Services Request, the City of Perth Amboy, the New Jersey Department of Community Affairs, and the Local Planning Services (LPS), completed a new Master Plan Recreation Element in September 2013. “The objective of this Recreation Element is to provide an inventory of existing facilities and their condition, consider community input and make recommendations to protect and strengthen the recreation facilities and programs available to the citizens of Perth Amboy” (LPS 2013, 4).

In addition to recommendations of how to improve existing parks and other recreation facilities (LPS Goals 1-3), LPS developed three more goals with respective objectives suggesting the expansion of recreational opportunities beyond the existing inventory (goal 4), pursuing additional funding opportunities for park improvements (goal 5), and promoting the use of recreational programs and facilities through outreach (goal 6).

The proposed 2nd Street Park follows these goals and objectives. It will be an attractive terminus to the Perth Amboy water front and an expansion of the current park system. The 2nd Street Park is located within walking distance for families with small children and also easily accessible to users of other age groups.

The proposed park brings the Waterfront Park System within walking distance (a quarter mile) from the train station and the neighborhoods surrounding the Central Business District. The outreach activities documented in this report are critical to generating support and enthusiasm for the goals, objectives and recommendations highlighted in the Recreation Element.

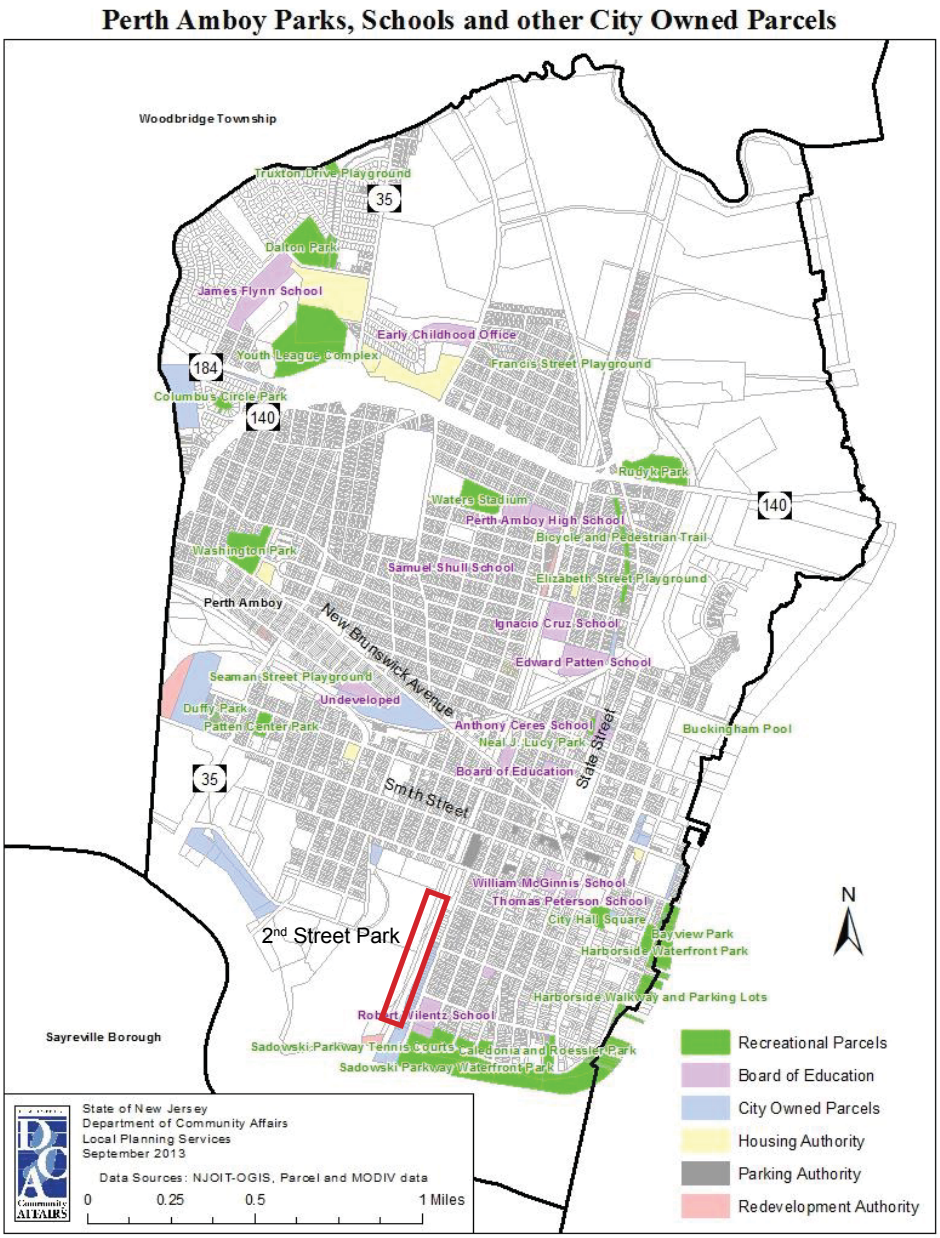


Fig. 3.6: New Jersey Department of Community Affairs & Local Planning Services: Perth Amboy Master Plan Recreation Element, 2013

3.4 Site Conditions

Fig. 3.7: Perth Amboy water front

The views towards the Raritan Bay and the connection to the existing waterfront are among the main qualities of the site (Fig. 3.7). The only visible traces of the scrap metal yard are larger areas of concrete and rubble. The vegetation on site is mostly volunteer growth (Fig. 3.8). The hydrologic cross section by TRC RAVIV Associates (Fig. 3.9) reveals that the historic water line from 1914 was extend through infill and that the site itself was leveled by adding fill. This explains the relatively steep shoreline, the relatively flat surface and high elevation of the site, providing a topographic advantage for the park even in severe flooding and storms such as Floyd and Sandy.

Fig. 3.8: Volunteer growth and concrete surface on site

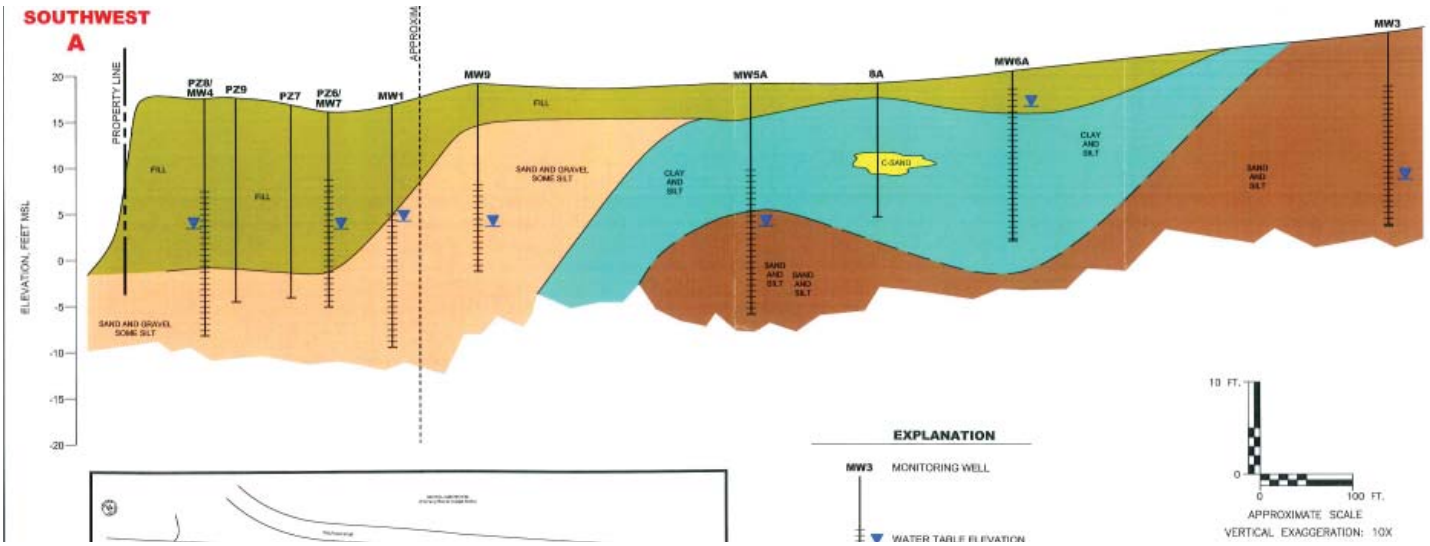


Fig. 3.9: Hydrologic cross section by TRC RAVIV Associates, 2004

Fig. 3.10: Outflow

The combined-sewer outflow or CSO (Fig. 3.10) creates a barrier along the beach and must be considered in any future design proposal.

The facade of the adjacent elementary school is well structured and offers opportunities to be considered as visual relation in the design process.

Fig. 3.11: Robert N. Wilentz Elementary School

Existing Vegetation

B Boat Launch

Fig. 3.12: Existing Vegetation, CUES

Intermezzo: Vienna Studio

Fig. 3.13, 3.14: Vienna Students

This summer, one member of the design team had the opportunity to take the project internationally and into a class room.

Dr. Hoefer was an invited guest professor at the Vienna University of Natural and Life Sciences (BOKU) where 21 Austrian Landscape Architecture students explored design solutions for the project site at Perth Amboy.

The class focused on current landscape architecture issues in the north eastern US, such as post-disaster resilience, environmental justice, community outreach and landscape design for minority groups. A major challenge for the students was developing designs for a Brownfield site with significant contamination. The selected examples (Figures 3.13-3.24) show student designs developed after a thorough deliberation of cultural, social, environmental and ecological issues. It became obvious to the students that the three-dimensional landscape design always has to include time as a fourth dimension.

Group 1- Grid

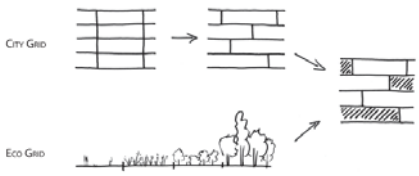


Fig. 3.15: Merging the grid, BOKU

Fig. 3.16: Playing a game of bocce, BOKU

The urban grid of Perth Amboy is merged by this group with the ‘eco grid’ to organize vegetation and a festival space.

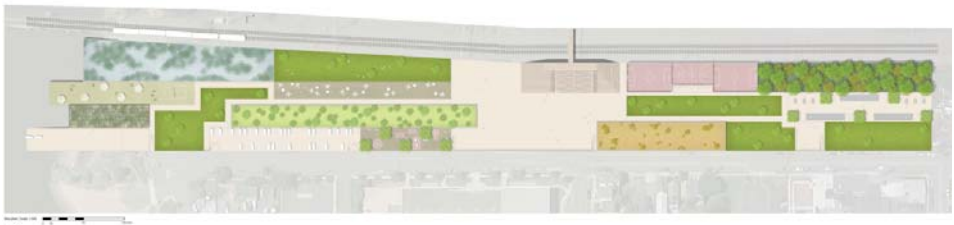


Fig. 3.17: Design Team Grid, BOKU

Group 2- Phasing

Plant contamination uptake is addressed in stages. Accessibility of the park will shift throughout this phytoremediation process.

Fig. 3.18: Pier overlook, BOKU

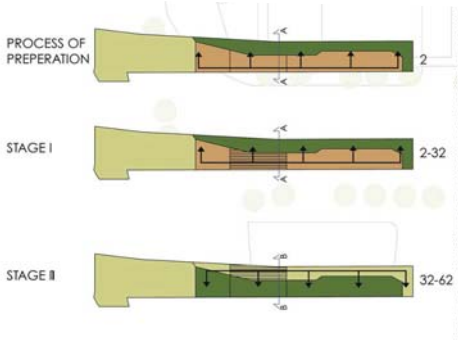


Fig. 3.19: Phasing phytoremediation, BOKU

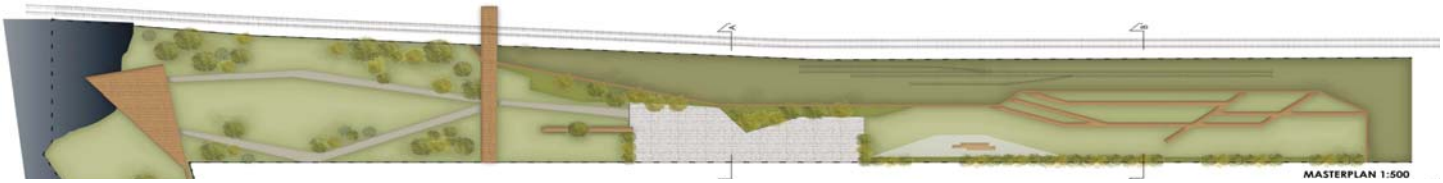


Fig. 3.20: Team Phasing, BOKU

Group 3- Elevated

Fig. 3.21: Elevated views, BOKU

Current contamination is addressed through elevating public access to a separate level. Elevated boardwalks and plazas provide vistas and connections.

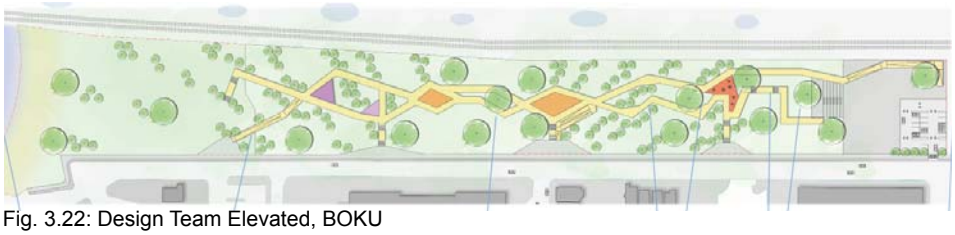


Fig. 3.22: Design Team Elevated, BOKU

Group 4- Integrated

Integrating a community garden with passive recreation and play while providing access to the water is the theme of this group.

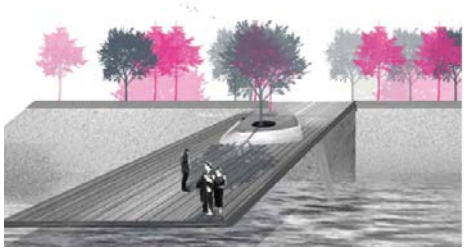


Fig. 3.23: Pier overlook, BOKU

Fig. 3.24: Design Team Integrated, BOKU

4 Design

4.1 Design Principles

Common themes

The Rutgers team developed and implemented a community planning process that utilized a range of outreach and engagement strategies to obtain public input and explore design alternatives for the proposed 2nd Street Park. The strategies targeted both adults and youths and included a resident survey, two community open house workshops, and a number of youth engagement activities. In addition, the design team conducted interviews with various City and County officials and convened a steering committee of community leaders to help guide the planning process and provide feedback on draft designs for the new park.

Common themes emerged from the community input received through the outreach process. Residents want:

A Healthy Park —No smoking, community gardens, fitness equipment, lots of trees, grass and plants to clean the air and keep things cool

A Safe & Clean Park—Curfew, lighting, frequent patrols, high visibility for “eyes-on-the-park” monitoring by neighborhood residents

A Resilient Park—Safe from storms and saltwater flooding with a “living” shoreline, natural stormwater management, rain gardens, and lots of trees

An Active & Fun Park—Space for users of all ages, including picnic/ BBQ area, table games, soccer field, playgrounds (swings), festival space, pathways/trails, skateboard park, water park, basketball, and handball

A Connected Park—Easy access to and through the park whether walking, biking or driving a car, even public WiFi

An Educational Park—Use the park as an outdoor classroom with nature walk signs and information on plantings, shoreline functions and other aspects of the park

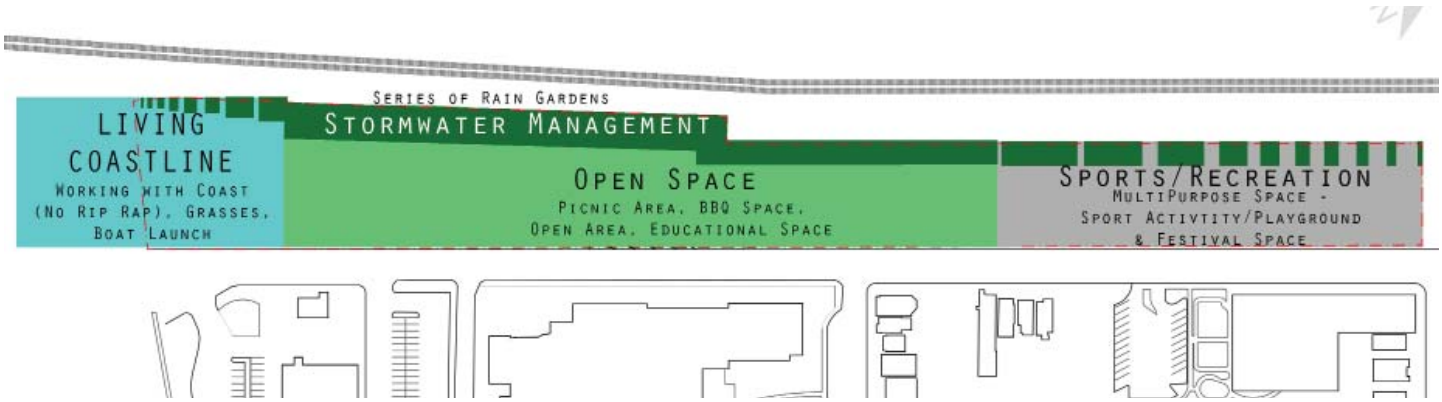


Fig. 4.1: Conceptual Programming, CUES

4.2 Design Process

Step 1: Initial Ideas

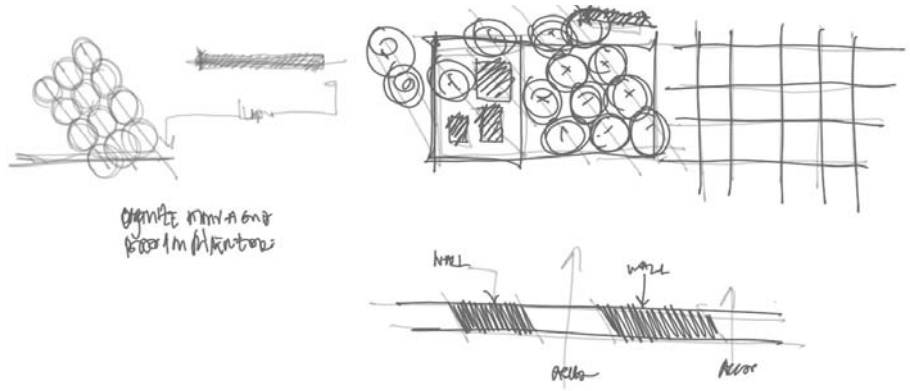


Fig. 4.2: Initial Urban Idea

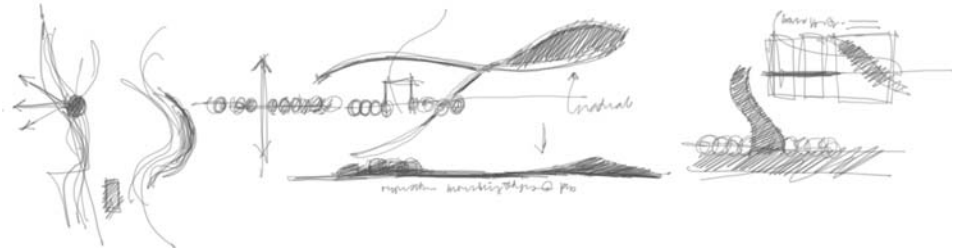


Fig. 4.3: Initial Landscape Idea

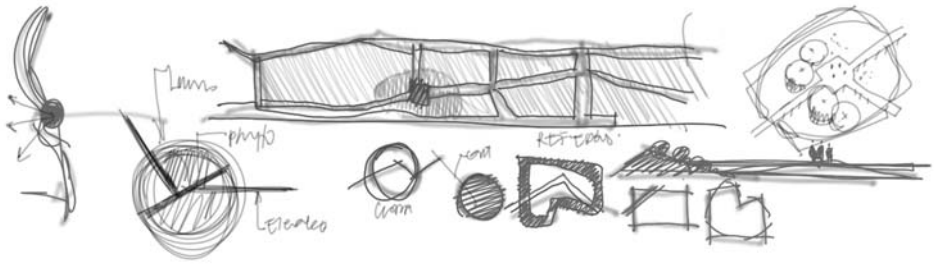


Fig. 4.4: Initial Wildlife Idea

Design does not just happen; it evolves. As discussed on the previous page, the community outreach gave a good understanding of the desired amenities for the park. A public park which enriches the cultural identity of a community is more than just a functional spacing of things; rather it is a spatial and aesthetic experience that inspires people toward more social interaction, fostering the growth of the neighborhood.

Our design approach was to explore possible forms under three different ideas:

The Urban Idea (fig. 4.2) follows the “City Grid” of Perth Amboy. The first sketch explores shapes for a park with less grass and the least amount of upkeep as well as a series of walls for the implementation of art and culture into the site. Decorative plantings, playgrounds, active recreation, a living coastline, and stormwater management are also considered.

The Landscape Idea (fig. 4.3) is inspired by the “typical everyday” landscape park which is dominated by organic shaped open space and framed by forested areas. The extensive lawns and winding paths form an independent juxtaposition to the urban grid. Playgrounds and recreational areas along with a living coastline and green stormwater management are also be part of this theme.

The Wildlife Idea (fig. 4.4) focuses on the development of habitat. Elevated walkways allow visitors to view wildlife in areas specifically designed for habitat, integrating a living coastline and green stormwater management. The multi-purpose play ground and areas for active recreation can also be used as festival space.

Step 2: Developing Themes

Altering concepts and reworking design ideas can better suit the site extents. With the furthering of design comes an understanding of the design theme.

Urban Theme

The Urban Theme takes the urban grid as inspiration for creating social spaces that allow for community interaction.

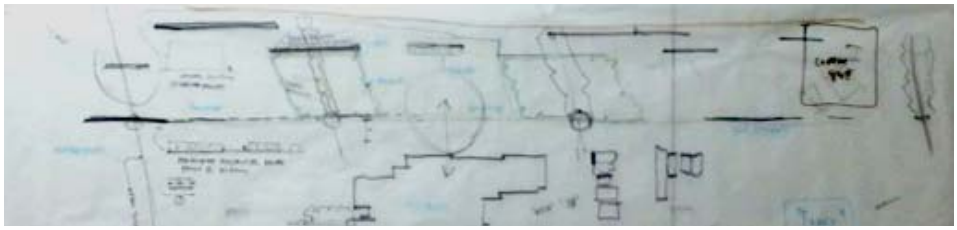


Fig. 4.5: Urban Theme

Landscape Theme

The Landscape Theme is inspired by cultural images of landscape, providing open space for recreational activities.

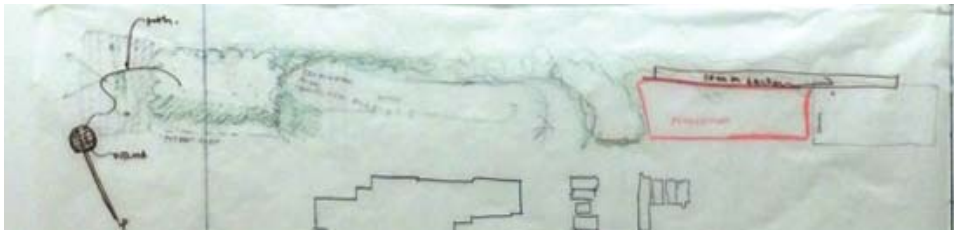


Fig. 4.6: Landscape Theme

Wildlife Theme

The Wildlife Theme focuses on the development of habitat for plants and animals, contributing to the ecological system of the Raritan Bay.

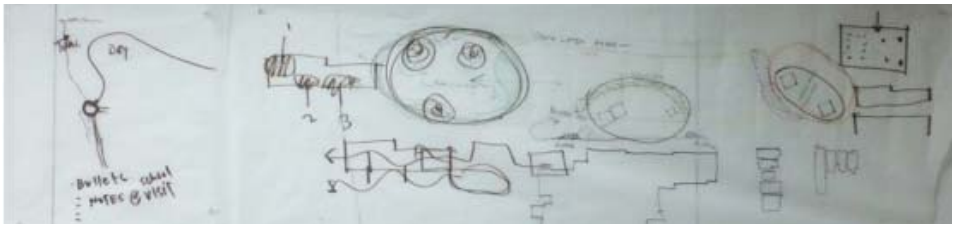


Fig. 4.7: WildlifeTheme

Step 3: Sketching Out

Sketching out concept ideas to scale allows testing of design ideas, exploring how well they fit the needs of the community and utilize the site's potential.

These sketches were discussed with the Steering Committee at the meeting on July 30, 2014

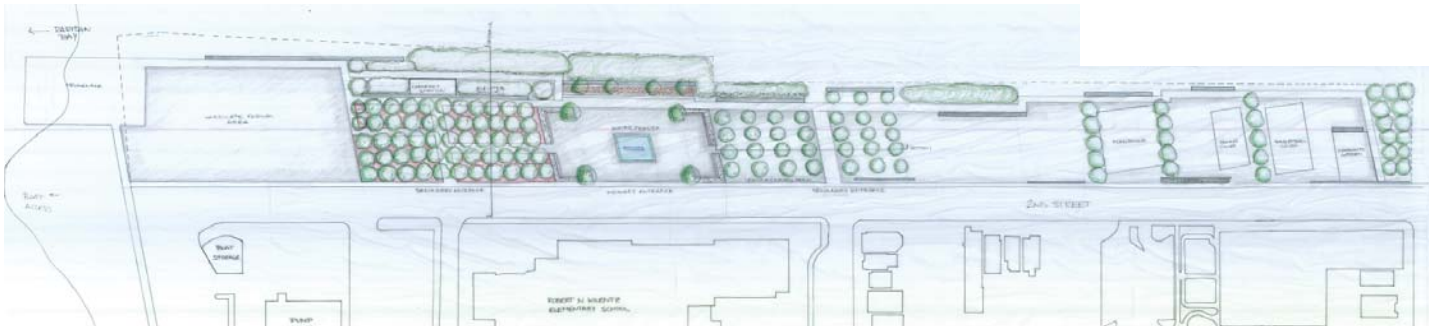


Fig. 4.8: Urban Sketch

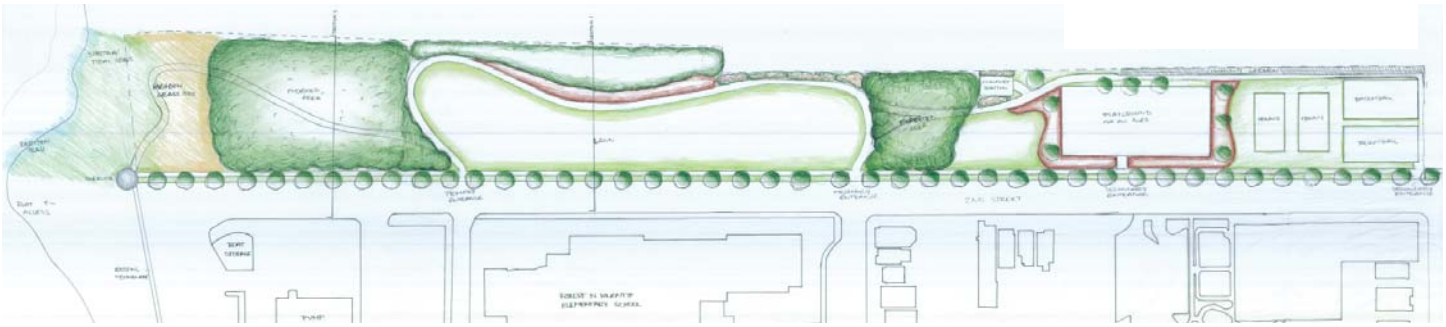


Fig. 4.9: Landsacpe Sketch

Fig. 4.10: Wildlife Sketch

Step 4: Drafting Ideas

These drawings were presented and discussed with the public at the Community Open House on September 23 and 27, 2014.

Urban Theme

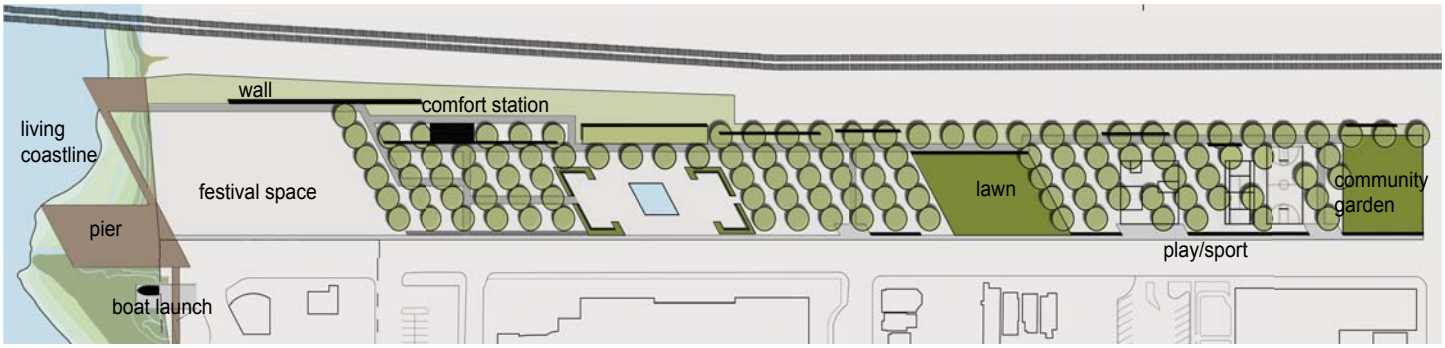


Fig. 4.11: Urban Draft

Landscape Theme

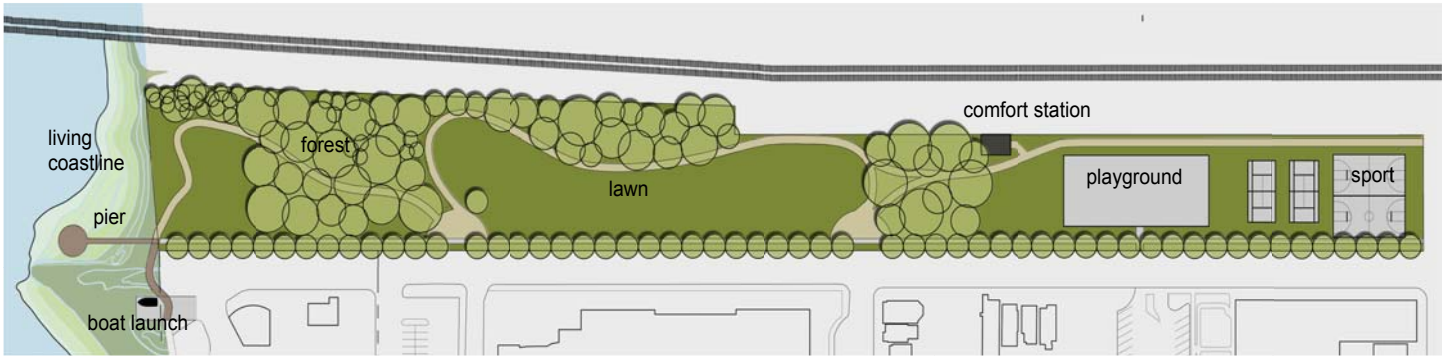


Fig. 4.12: Landscape Draft

Wildlife Theme

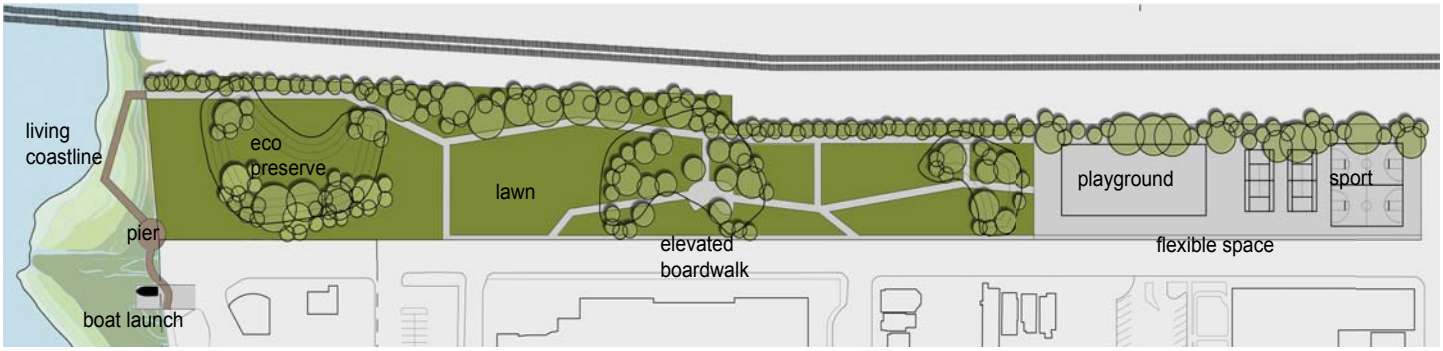


Fig. 4.13:Wildlife Draft

Step 5: First Concept

This first concept was presented and discussed at the Steering Committee Meeting on October 28, 2014.

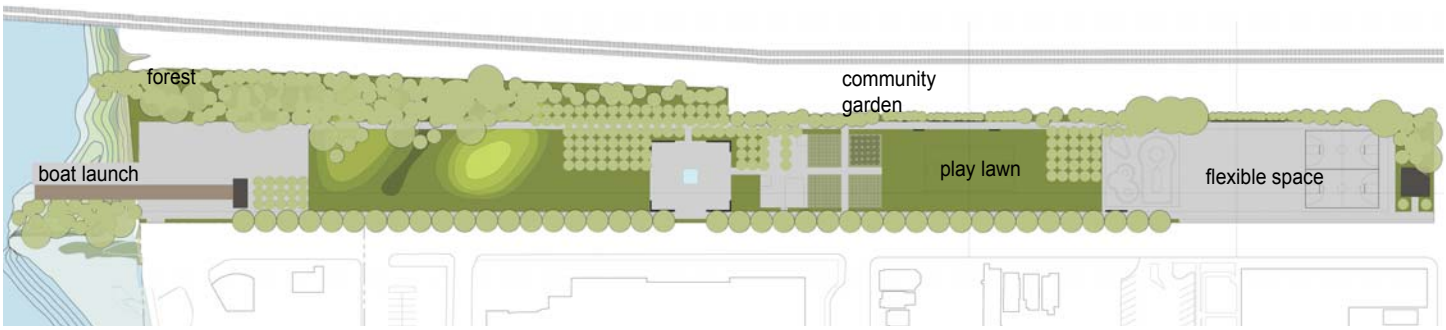


Fig. 4.14:First Combined Concept

The First Concept Plan is an attempt to combine those elements of the three themes that were most appreciated by the community. The living shoreline, a water overlook, forest, communal space with water, a community garden, and a flexible space for sports were among the favorites.

Fig. 4.15: Communal space with water with adjacent playground

Throughout the outreach process there were strong voices favoring a new boat launch. The Steering Committee pointed out that in light of the City's cleanup of the existing boat launch at the west end of the waterfront promenade a new installation was redundant. A deck over the water and celebrating the view, however, was suggested.

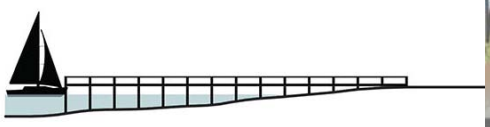


Fig. 4.16: View of pier and boat launch

Fig. 4.17: Waterfront view with pier

4.3 Conceptual Design

The goal of the design is to provide the City of Perth Amboy with a community park that is open, safe and environmentally sustainable. The park design is the result of public surveys, workshops and professional design and analysis and is envisioned as an integral part of the city, community and urban fabric. The park is programmed to fulfill existing community requirements for all seasons and provides the flexibility for future reprogramming or expansion.
In response to sound landscape design practices and community vision, the park includes six (6) program areas. The areas reflect a diversity of proposed activities and ecological services that connect the park to the waterfront, neighborhood and Perth Amboy urban center.

Fig. 4.18: View of River Watch Area

Living Shoreline and River Watch Pier

The site is visually and physically tied to the river and all the activity along the waterfront. Providing a park that connects to the existing waterfront walk, boat launch and views towards South Amboy is an essential part of the design concept. In addition, a concession area with seating would be a good way to generate revenues and create a space that is vibrant and well attended and addresses the issues related to the CSO outfall.

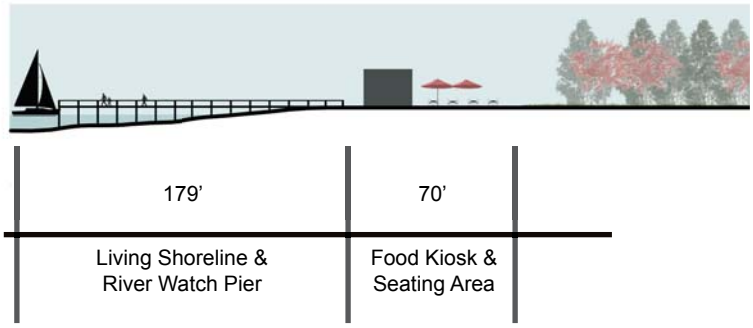


Fig. 4.19: Zoom of section A

Fig. 4.20: View of Living Shoreline and River Watch Pier

Green space for picnics, walks and small group gatherings was requested by a majority of the community members attending the design workshops. The green hills are gently mounded areas that control stormwater runoff, provide another vantage point to view the river and the surrounding neighborhood and create a space with a natural visual interest.

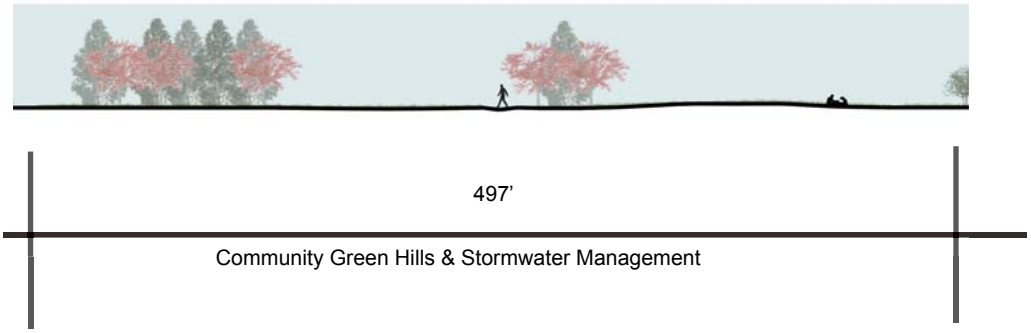


Fig. 4.21: Zoom of section A

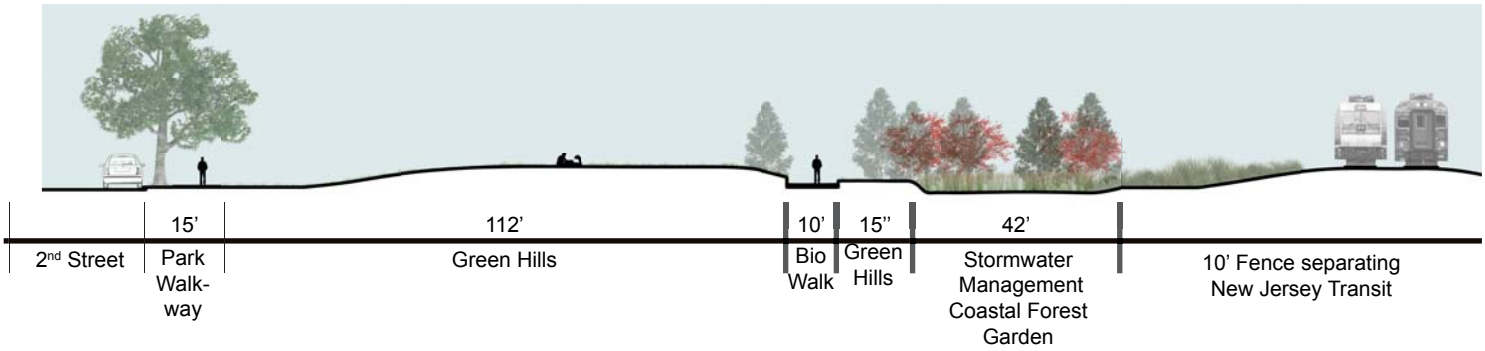


Fig. 4.22: Section B

Fig. 4.23: View of Plaza

The center of the park is a dynamic area that takes into account the community's diverse programming needs. The area contains a central plaza area across from Wilentz Elementary School and includes a children's playground, community garden and open play field. The area is designed to accommodate passive and active park activities as well as provide educational opportunities for school children and the entire community, and can specifically include a NJ Native Plant trail.

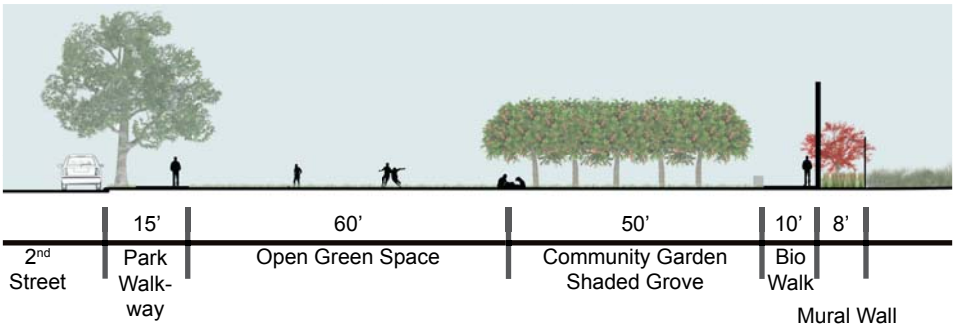


Fig. 4.24: Section C

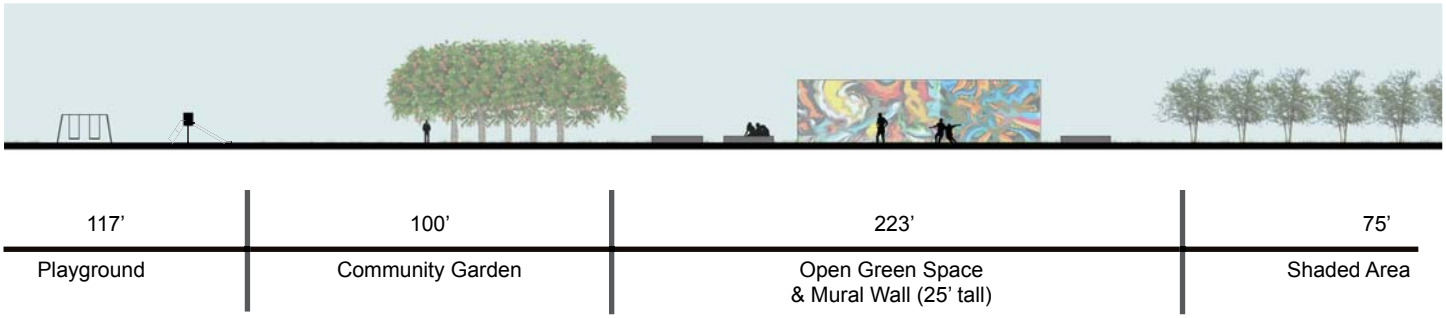


Fig. 4.25: Zoom of section A

Fig. 4.26: View of Community Garden

Flexible City

Perth Amboy is a vibrant and energetic city, where community connections are expressed through play, music, art and festivals. The Flexible City is an open program space that accommodates basketball and handball as well as movie viewing, music festivals and open markets.

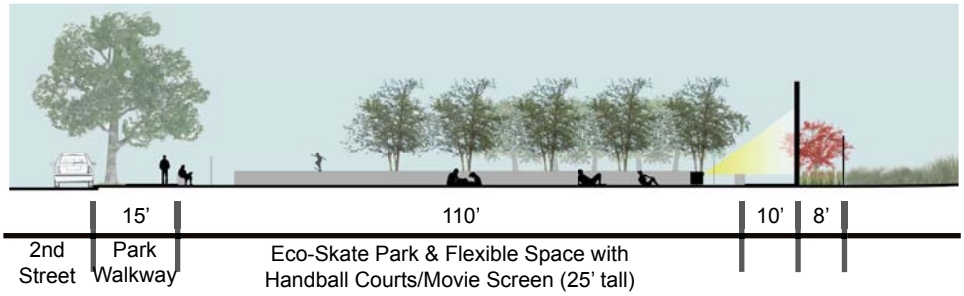


Fig. 4.27: Section D

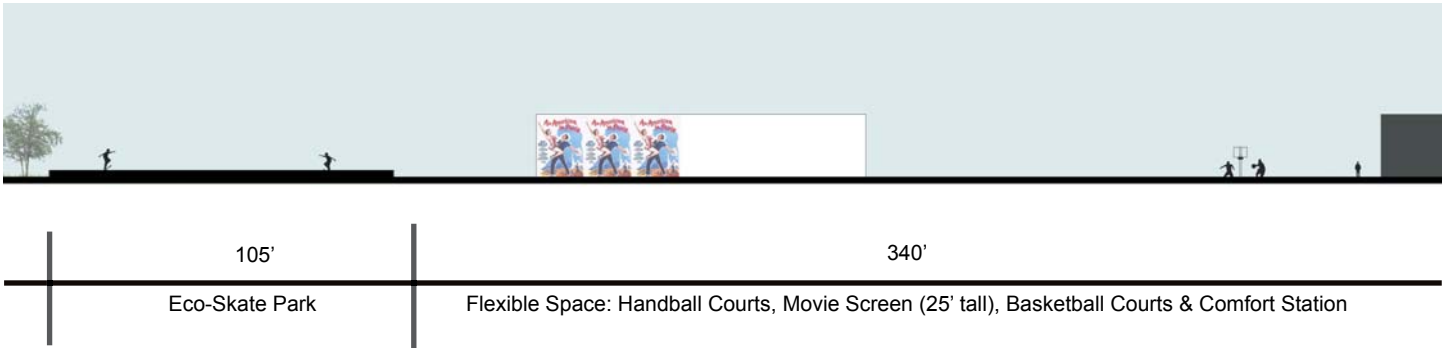
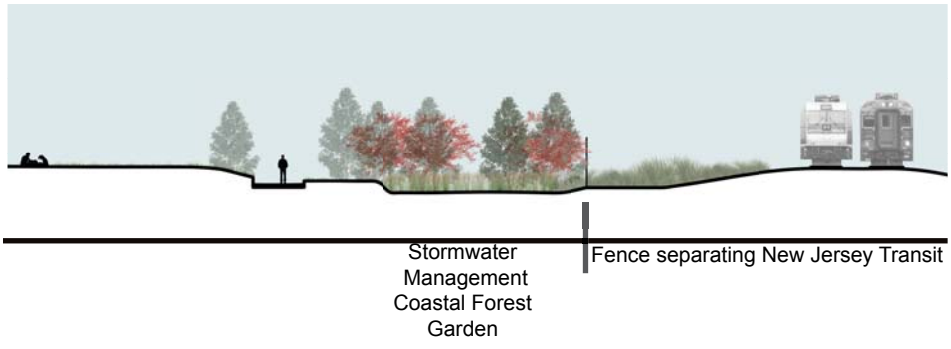


Fig. 4.28: Zoom of section A

Fig. 4.29: Section B



Stormwater Management

Along the edge of the park is a designed stormwater management system, composed of a bioretention basin, infiltration systems, native plantings and educational opportunities. The idea behind this design is to create stormwater management for the mainly flat sight, collect water and direct the runoff to the Raritan Bay, but also provide an opportunity for educating visitors on best management practices.

4.4 Planting Design Ideas

The park's planting designs, from trees to groundcover, are based on principles of best management practices for a sustainable and resilient landscape, both in the short and long term.

The trees and vegetation are divided into three general categories: Open Space and Education, Trees for Complete Streets, and Stormwater Management.

Open Space and Education: Most of the park is open with shaded areas for rest and leisure. The plant material, NJ native shade trees and grasses, will increase biodiversity and provide local schools an area to come and study New Jersey trees and plants and the their associated wildlife.

Trees for Complete Streets: The street trees along 2nd Street will provide a shaded walk along the park as well as serve to remove pollutants from the air and reduce the heat island effect for the area.

Stormwater Management: A series of layered native material (shade trees, understory, shrubs, grasses and ferns) are planted in and along swales, bioretention basins, rain gardens and low areas.

These plants, as recommended by the New Jersey Rain Garden Manual and the Native Plant Society of New Jersey, will effectively reduce stormwater outfall into the Raritan and reduce runoff pollutants and dissolved solids.

Fig. 4.28.1: Plant material selection will adapt to all site conditions.

Fig. 4.28.2: Plant material to provide educational opportunities as well as ascribe to complete streets performance criteria.

Fig. 4.28.3: Stormwater management will be based on grading and NJ native planting.

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Rain Garden Plant Lists

Plants by Rain Garden Zone

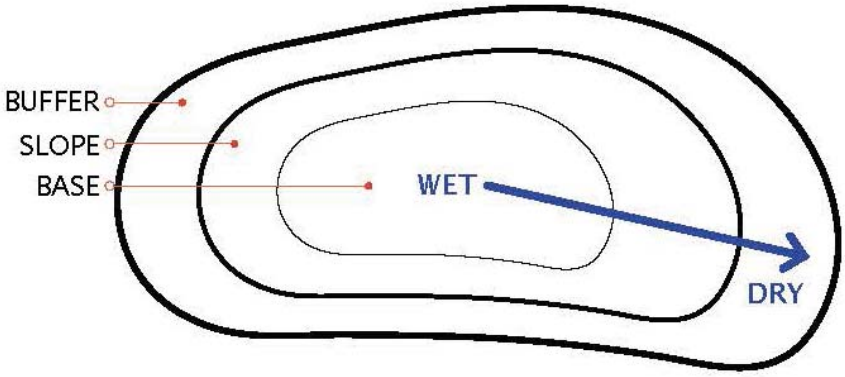

Fig. 4.30: Rain Garden Zones

Wildflowers and Ferns

Base

- Blue Lobelia (*Lobelia siphilitica*)
- Blueflag Iris (*Iris virginica shrevei*)
- Boneset (*Eupatorium maculatum*)
- Cardinal Flower (*Lobelia cardinalis*)
- Seaside Goldenrod (*Solidago sempervirens*)
- Marsh Marigold (*Calthus palustris*)
- Monkey Flower (*Mimilus ringens*)
- Rose-mallow (*Hibiscus moscheutos*)
- Royal Fern (*Osmunda regalis*)
- Swamp Milkweed (*Asclepias incarnata*)
- Turtlehead (*Chelone glabra*)

Slope

- Blazing Star (*Liatris spicata)*
- Cinnamon Fern (*Osmunda cinnamomea*)
- Columbine (*Aquilegia* spp.)
- Coreopsis (*Coreopsis*)
- Ironweed (*Vernonia noveboracensis*)
- Joe-pye Weed (*Eupatorium* spp.)
- New England Aster (*Aster novae-angliae*)
- New York Aster (*Aster novi-belgii*)
- Sensitive Fern (*Onoclea Sensibilis*)

Buffer

- Black-eyed Susan (*Rudbeckia laciniata*)
- Butterfly Weed (Milkweed) (*Asclepias tuberosa*)
- Purple Coneflower (*Echinacea purpurea*)
- Wild Indigo (*Baptista tinctoria*)
- Wild Bergamont (*Monarda didyma*)

Grasses and Groundcovers

Base

- Bluejoint Grass (*Calamagrostis canadensis*)
- Sedges (*Carex* spp.)
- Fowl Mannagrass (*Glyceria striata*)
- Soft Rush (*Juncus effusus*)

Slope

- Big Bluestem (*Andropogon gerardii*)
- Switchgrass (*Panicum virgatum*)
- Virginia Wild-rye (*Elymus virginicus*)
- Wood Grass (*Sorghastrum nutans*)

Buffer

- Bearberry (*Arctostaphylos uva-ursi*)
- Broomsedge (*Andropogon* spp.)
- Indiangrass (*Sorghastrum nutans*)
- Little Bluestem (*Schizachyrium scoparium*)
- Panic Grass (*Panicum virgatum*)
- Switchgrass (*Panicum* spp)
- Deer Tongue (*Dichanthelium clandestinum*)

Trees and Shrubs

Base

- Buttonbush (*Cephalanthus occidentalis*)
- Cranberrybush Viburnum (*Viburnum trilobum*)
- Green Ash (*Fraxinus pennsylvanica*)
- River Birch (*Betula nigra*)
- Silky Dogwood (*Cornus amomum*)
- Swamp White Oak (*Quercus bicolor*)

Slope

- Green Ash (*Fraxinus pennsylvanica*)
- Red Maple (*Acer rubrum*)
- Red-twig Dogwood (*Cornus sericea*)
- River Birch (*Betula nigra*)
- Serviceberry (*Amelanchier canadensis*)
- Sweetpepperbush (*Clethera alnifolia*)
- Sweetbay Magnolia (*Magnolia virginiana*)
- Winterberry Holly (*Ilex verticillata*)

Buffer

- American Holly (*Ilex opaca*)
- Arrowwood Viburnum (*Viburnum dentatum*)
- Bayberry (*Myrica pensylvanica*)
- Hackberry (*Celtis occidentalis*)
- Lowbush Blueberry (*Vaccinium angustifolium*)
- Red Bud (*Cercis canadensis*)

source: New Jersey Rain Garden Manuel, page 60

5 Next Steps

5.1 Remediation Strategy and Phasing

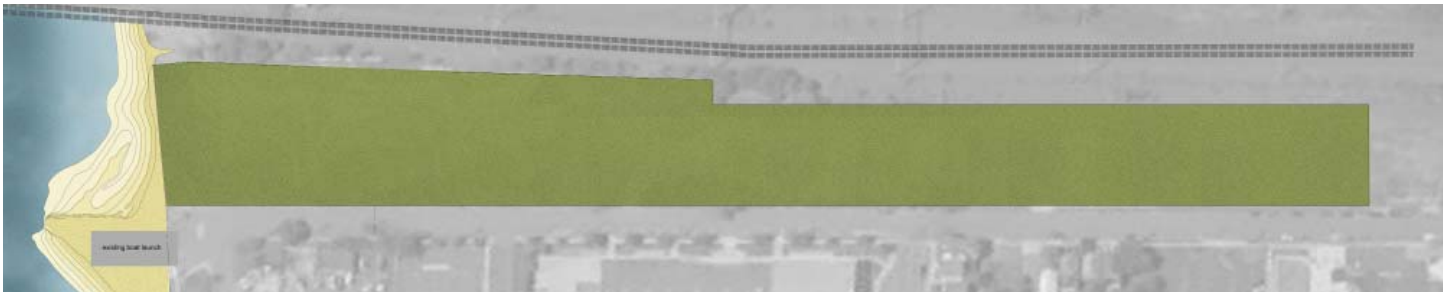

Fig. 5.1: Phase 0

Phase 0

Remediation Completed

The design development informed the deliberations regarding the appropriate approach towards remediation. The intended use as a public park and the very positive support by the local community throughout the outreach and design proposes that the City's leadership lean towards a complete cleanup of the site. The original intent of the responsible party was to cap the site with clay. However, the many limitations of clay capping for a recreational use led to the exploration of other remediation options. These are under discussion by the City and the responsible party.

The completion of the site remediation will be the starting point for the phased construction process.

It is suggested that the grading of the park take the general concept plan into consideration by using clean imported fill to an appropriate depth. This way, clean fill will have to be moved only once. Further it is recommended to seed the complete surface with leguminous groundcover like clover species and cultivars (*Trifolium* spp.) for the time period before construction of the park starts. This will prevent erosion and provide additional nutrition for future plantings. It may be feasible to include construction of the lawn for the sports field in the finished remediation process. This would ensure that throughout the construction process, portions of the site will always be available for use. The implementation of the 2nd Street Park will depend on the total cost of the park and the availability of City, County and State funding. Phasing of the project proposes the incremental construction of the park to initially establish the character of the place. Construction can be phased to build out the more active and environmentally sensitive riverside portion first then move north to Paterson Street. The following phasing scenario is proposed.

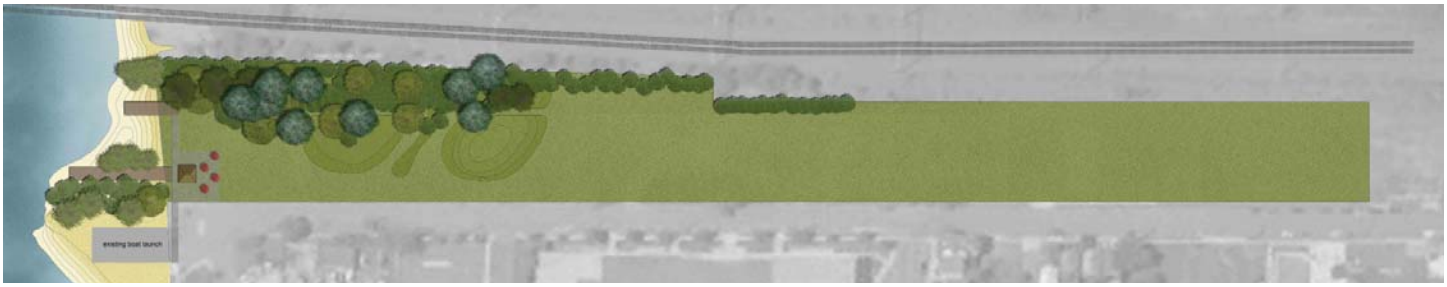

Fig. 5.2: Phase 1

Phase 1

Waterfront Terminus
(Living Coastline, River Watch Pier and Community Green Hills)

The 2nd Street Park is an integral part of the Perth Amboy Parks and Recreation Master Plan, the neighborhood and a key feature of the proposed transit district and future transit village in the City, connecting the train station to the waterfront. Phase 1 establishes the park as the the waterfront terminus, improves site resiliency and provides a concession area for revenue. The Community Green Hills establishes an open space for immediate use by the community.

Fig. 5.3: Phase 2

Phase 2

Formal Social Spaces
(Park Center and Park Sports)

The second phase of the implementation will help to further establish the park as a significant social space with the construction of the park plaza, community gardens and green and hardscape park spaces. This section will establish the park as a center for recreation and education for the immediate neighborhood.

Fig. 5.4: Phase 3

Phase 3

City Connectors
(Flexible City, Comfort Station and 2nd Street Streetscape)

The final phase of the project ties the northernmost section of the park to the rest of the city and completes the park. This final section anchors the park to the river, the neighborhood and the urban center of Perth Amboy.

5.2 Design Implementation

The Process

The design of parks and open space on remediated Brownfields is a challenging task, but there are many examples of successful projects that can guide the process for the 2nd Street Park such as, the Landschaftspark Duisburg Nord, Germany (Fig. 5.5), the Gas Works Park in Seattle, WA (Fig. 5.6), Steel Stacks Park in Bethlehem, PA (Fig. 5.7), the Branch Book Park in Newark, NJ (Fig. 5.8), and the Pier Park and Pier C in Hoboken, NJ (Fig 5.9 and 5.10, respectively). These parks have two common characteristics that we highly recommend are embraced for the next phase of development for the 2nd Street Park: the effective integration of technical, social and aesthetic aspects of design, and, most importantly, design oversight by a professional landscape architect.

Landscape Architecture

The 2nd Street Park is envisioned as an open, safe and environmentally sustainable space. The vision is the product of community desires, sound design principles and technical understanding of the remediation process and options. Much of the success of the park will rely on the

Fig. 5.5: Landschaftspark Duisburg Nord

Fig. 5.6: Gasworks Park, Seattle, WA

Fig. 5.7: Steel Stacks Park, Bethlehem, PA

Fig. 5.8: Branch Brook Park, Newark, NJ

Fig. 5.9: Pier Park, Hoboken, NJ

Fig. 5.10: Pier C, Hoboken, NJ

coordination and maintenance of the community vision through the schematic and final design process as well as the establishment of a vigorous community component in the stewardship and care of the park.

The state of New Jersey has a rich legacy of well-designed public and park spaces. From the opening of Branch Brook Park in Newark in 1896 to the contemporary waterfront development in Hoboken, that storied legacy is deeply related to and guided by landscape architecture.

A search in the National Association of Olmsted Parks shows that the work of the Olmsted office (Frederick Law Olmsted was the designer of Central Park, Prospect Park and Branch Brook Park) was involved in the design of several parks and estates in Morris County and elsewhere in NJ. The Somerset County system was a collaboration park system and an example of a landscape architect/client collaboration from the 1930's. The Leonard J. Buck Garden and the Laurelwood Arboretum are also good examples of landscape architecture led projects. For more examples of parks

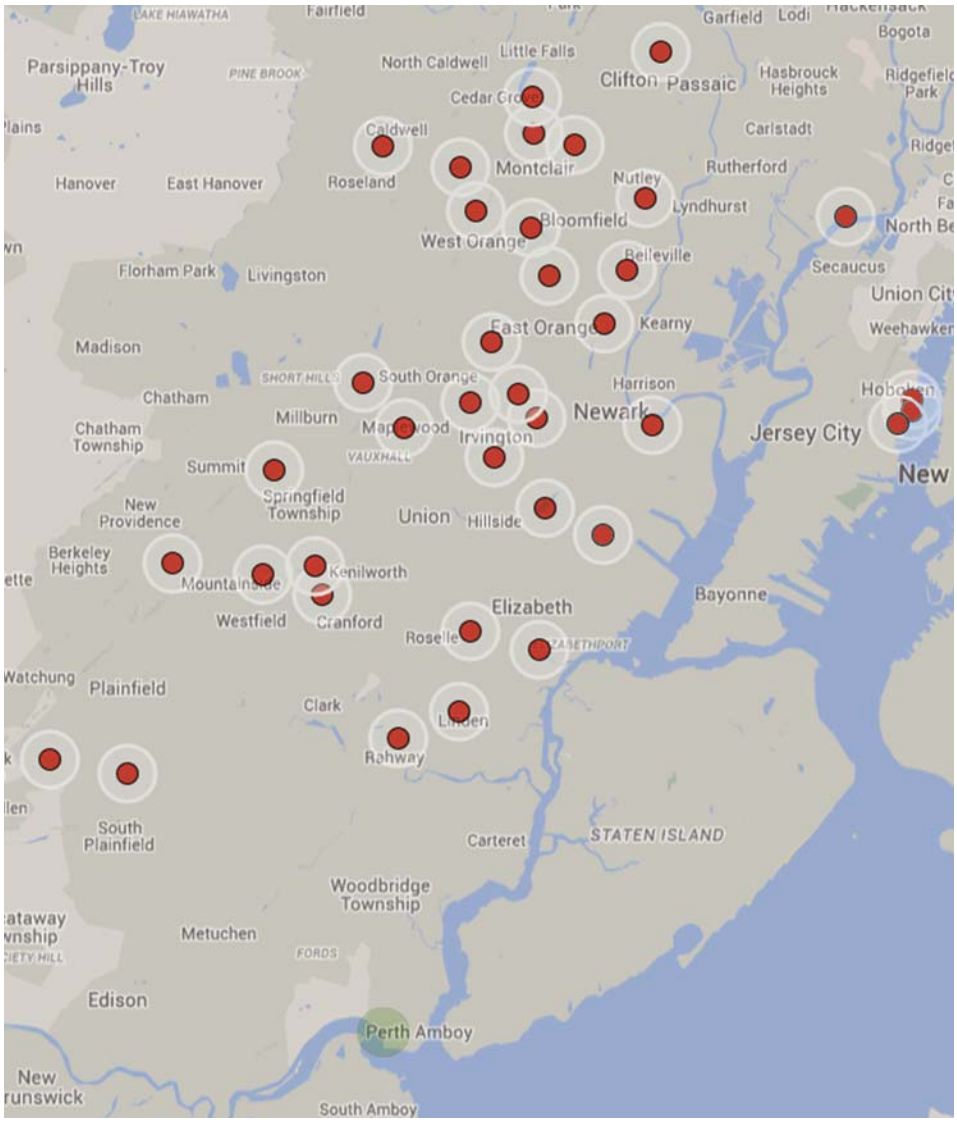

Fig. 5.11: New Jersey Parks designed by Landscape Architects

designed by Landscape Architects see the following map (Fig 5.11). The successful design and implementation of the 2nd Street Community Park will require the following:

1. Strong community vision and support for funding and political action.

2. Clear development of program spaces that engage multiple users in the immediate community.

3. Strong connection to the waterfront, waterfront activities and the urban character of Perth Amboy.

4. Sustainable plans for site remediation, stormwater management and short and long term maintenance.

5. Active engagement of professionals from a variety of disciplines.

The principal benefit of a landscape architecture led project is that social and community considerations, environmental and sustainability concerns and long term maintenance and security issues will be coordinated in a way that does not compromise the original community vision and responds to environmentally sound design principles. More specifically, the design, funding and community support for the project will be greatly facilitated with a landscape architecture lead.

5.3 Park Development Cost Estimate

The cost estimate presented here, outlines a general list of structures and materials presented in the concept plan. The purpose is to provide an order of magnitude for the construction of the park. The estimate does not include the cost of remediation. The estimate assumes a remediated site, roughly graded with 24" of topsoil, lawn and an NJ Transit security fence along the property line adjacent to the tracks. The materials and details of construction are assumed as minimal to meet health, safety and welfare standards and to be developed at the schematic design phase. Costs do not include testing, borings, surveys or any other work to determine existing conditions. Additional assumptions on the design areas can be found on the outline. Unit costs are averages based on standard pricing in the Northeast.

Area	Phase	Area (SF)	Cost(SF or Unit)	Total
Pier 1 (wooden pier, SS rail, Concrete pier/Steel pile)	1	2979	115.00	342,585.00
Pier 2 (wooden pier, SS rail, Concrete pier/Steel pile)	1	1,585	115.00	182,275.00
Pier 3 (wooden pier, SS rail, Concrete pier)	1	750	85.00	63,750.00
Kiosk (Self Assembled/Manufactured)	1	625	110.00	68,750.00
Walls(2) (12' reinforced multipurpose concrete)	1	175	12.00	2,100.00
Lawn 1 and 2 (Grading Area) (infill soil)	1	73,456	1.25	91,820.00
BioSwale (High performance plants/soils)	1	59,708	2.00	119,416.00
Pavement Phase 1 (Water's Edge - Plaza) (Bluestone gravel dust on gravel sub base)	1	13,906	1.25	17,382.50
Umbrellas (Red/Water repellant)	1	4	200.00	800.00
Phase 1 Estimate				**888,878.50**
Playground (Young Children 5-9)	2	6,467	65.00	420,355.00
Lawn 3 (Open Space/Informal Soccer) (High performance/sandy soil)	2	33,845	1.25	42,306.25
Community Garden (wood above grade planters/soil)	2	8,100	20.00	162,000.00
Pavement Phase 2(Plaza - Skate Park) (Concrete)	2	16,393	1.25	20,491.25
Benches (stone/gabion reuse material)	2	12	600.00	7,200.00
Water Feature (water jets/pump/backflow preventer)	2	400	350.00	140,000.00
Phase 2 Estimate				**792,352.50**
Comfort Station (Parks Department Specifications)	3	1,600	400.00	640,000.00
Skate Park (Concrete/Steps/Ramps/Rails)	3	10,000	40.00	400,000.00
Flex Space (Pervious Pavement)	3	54,347	1.25	67,933.75
Lawn 4 (Sidewalk Grass & Comfort Station)	3	9,722	1.00	9,722.00
Trees (2.5" caliper minimum)	3	453	175.00	79,275.00
Pavement Phase 3(Flex Zone) Pervious Pavement)	3	48,382	1.25	60,477.50
Sidewalk Phase 3 (Typical street concrete pavement)	3	17,134	1.00	17,134.00
Phase 3 Estimate				**1,274,542.25**
Grand Total Estimate				**2,955,773.25**

Fig. 5.12: Cost Estimate, CUES

2nd Street Park - Sample Planning Estimate and Funding Approach

NEEDED FUNDING - PLANNING ESTIMATE	POSSIBLE COST RANGE		FUNDING SOURCES	Maximum Award	Funder Award Trend	Match % or Amount
Remaining Investigation, Remediation, Clean Up Permits						
Contaminant Vertical Delineation, Historic Fill Documentation, RI Land Use Permit, Gross Cost Estimate	$ 25,000 to	$ 60,000	MCIA EPA Brownfields (balance)	NA	EPA max. 200,000	0
			Responsible Party (RP) share	UN	UN	
Remediation Workplan Revision (TBD) & 1 year DEP Fees	15,000	30,000	RP	NA	UN	NA
			New Jersey HDSRF	10,000	NA	0
Remediation Detailed Cost Estimate, Design & Work Scope	0	-	RP or Contractor	NA	NA	NA
Remediation - Soil Permit Application & Annual Permit Fees	1,180	1,420	RP or City	UN	UN	NA
Remediation Legal/Bid (assumed separate fr. park construct.)	5,000	15,000	RP or City In-house / Contract	NA	NA	NA
Remediation to NJDEP / USEPA 'Non-Direct Contact' Standard	UN	UN	RP	UN	600,000	UN
Remediation to NJDEP & USEPA Park Development Standards (*includes Park Soil as partial capping)	1,500,000	3,000,000	HDSRF *	3,000,000	3,000,000	25%
			EPA Cleanup Grant**	170,000	170,000	25%
Remediation Maint. Report (semi-annual, or biennial to 30 yrs.)	75,000	180,000	RP and/or City	NA	NA	0
Recommended Contingency *(not included in estimate*)	20%	30%				
Total Gross Remaining Investigation, Remediation, Clean up Estimate	$ 1,621,180	$ 3,286,420				
Park Construction Estimate #1						
Phase 1 - Living Shoreline (It may be possible to advance this element before the balance of the park development.)						
Soft Costs (Concept Design, Engineering Design, Legal, Insurance, Finance, Fees, Misc.)	$ 75,000	$ 150,000	SEBS-CUES Concept Plan or NJ 319(h) Grant or NJDEP Discretionary Fund	TBD	TBD	TBD
Permits - DEP-LU, DEP-WFD (for 1.5 ac.), DEP Flood, No WL, (not included - any USACE & any UN)	7,125	UN		TBD	TBD	TBD
			Clean Water Grant/Loan	TBD	TBD	TBD
Remaining Tidelands Conveyance (in exploration by City)	UN	UN	319(h); and/or DEP Discretionary; and/or Clean Water Grant/Loan; or City	TBD	TBD	TBD
Living Shoreline Restoration Construction	200,000	300,000	319(h); and/or Clean Water Grant/Loan; and/or DEP Discretionary	TBD	TBD	TBD
Contingencies (Not included in this Planning Estimate)	20%	35%				
Total Gross Phase 1 - Living Shoreline Estimate	$ 282,125	$ 450,000				

2nd Street Park - Sample Planning Estimate and Funding Approach

NEEDED FUNDING - PLANNING ESTIMATE	POSSIBLE COST RANGE		FUNDING SOURCES	Maximum Award	Funder Award Trend	Match % or Amount
Phase 2 - Upland Park (Combines costs in Phases 2 & 3 of this Report for the purposes of funding applications & planning)						
Permits - DEP-LU, WFD (5 acre), FSCD, Stormwater (& any UN)	$ 19,750	$ 35,000	*Green Acres Develop (GAD) &/or*	TBD	TBD	NA
			Cnty Open Space (MCOS) &/or City Bond (City)	TBD	TBD	TBD
Bio swale (part SW manage.) (from this Report, Section 5.3)	119,417	119,417	Clean Water Grants; 319(h); DEP Discretionary	TBD	TBD	TBD
Green Hills, Lawns, Pervious Flex Space, Trees (from Report Sect. 5.3)			*GAD/MCOSR/CITY*			
NJT Rail Line Boundary Safety, Security, Sound (fencing, walls similar to park walls, screening plantings, spot lighting)	150,000	400,000	NJT (rail upgrade mitigation)***	TBD	TBD	TBD
Skate Park (from this Report, Section 5.3 & national figures)	400,000	400,000	Tony Hawk Foundation ****	25,000	25,000	Balance
			Tony Hawk required community non-profit org. fundraising	TBD	TBD	NA
			GAD/MCOSR/CITY	TBD	TBD	TBD
All Areas Hardscaping, Sidewalks, Kiosk, 2 Walls, Furniture (from Sect. 5.3)	263,271	263,271	*GAD/MCOSR/CITY*			
			Middlesex County Arts & Facilities Grant (walls)		TBD	TBD
Playground Area ADA (from Section 5.3)	420,360	420,360	Kaboom Foundation	15,000	15,000	9,000
			CDBG; GAD; MCOS; City Capital	TBD	TBD	TBD
Community Gardens (from Section 5.3)	162,000	162,000	JR Fdtn; Sustainable Jersey; GAD; MCOS; City Capital	TBD	TBD	TBD
Small Water Feature (from Section 5.3)	140,000	140,000	*GAD/MCOSR/CITY*	TBD	TBD	TBD
Utilities (Wat/Sew/Elec/Cable/WiFi) & Park Lighting & Cameras (as expected add-ons)	100,000	350,000	*GAD/MCOSR/CITY*	TBD	TBD	TBD
Signage (an added-on expected improvement)	50,000	75,000	*GAD/MCOSR/CITY*	TBD	TBD	TBD
[Annual maintenance not in estimate but required for funder]	10,000	25,000	City	NA	NA	NA
Total Gross Phase 2 - Upland Park Estimate	$ 1,824,798	$ 2,365,048				

2nd Street Park - Sample Planning Estimate and Funding Approach

NEEDED FUNDING - PLANNING ESTIMATE	POSSIBLE COST RANGE		FUNDING SOURCES	Maximum Award	Funder Award Trend	Match % or Amount
Phase 3 - Riverview Pier						
Riverview Pier (from this Report, Section 5.3 = $931,148) SAY	$ 1,000,000	$ 1,000,000	*GAD/MCOSR/CITY*	TBD	TBD	TBD
Riverview Pier Permits (USACE, DEP-multiple)	UN	UN	*GAD/MCOSR/CITY*	TBD	TBD	TBD
Multiple Contingencies - Design, Engineering, CM, UN	UN	UN	*GAD/MCOSR/CITY*			
Total Gross Phase 3 - Riverview Pier Estimate	$ 1,000,000	$ 1,000,000				
Complementary Project/Phase 4- Bike/Ped Way						
Adjacent or on-site bicycle and/or pedestrian way, signage & equipment	$ 5,000	$ 150,000	Transport. Alternatives Prog and/or	TBD	200,000	TBD
Total Gross Complementary Project/Phase 4 - Bike/Ped Way Estimate	$ 5,000	$ 150,000	NJDOT Bike/Ped Program *****	TBD	200,000	TBD
PLANNING ESTIMATE TOTAL (Phases 1-3 Only)	$ 3,106,923	$ 3,815,048				

Symbol Key:

* Assumes partial park development soil used during the remediation phase.

** An EPA Cleanup Grant may not be cost effective if a full HDSRF grant can be awarded.

*** Potential NJT rail upgrade mitigation support requires research.

**** This source may not be cost effective.

***** Bike/Ped funds best secured as part of larger City bikeways program.

Sources: MCIA, Rutgers CUES, Trust for Public Land & Urban Land Institute, Center State Engineering

Park Construction Cost Estimate #2 (A simpler approach)

	For "Barebones Parks"	For "Upper-Tier City Downtown Parks"	E.g., Chicago, Atlanta
Combined Per Acre Average Cost Estimate for "Active Parks"	$ 500,000	$ 6,000,000	Acquisition & remediation costs excluded
Above Rates Applied to 6.5 Acre 2nd Street Park & Shore	$ 3,250,000	$ 39,000,000	
Possible "Talking Point" Estimate Range for 2nd Street Park	$ 3,000,000	to $ 6,000,000	

Prepared by MCIA Economic Development Department - 8/12/15

5.4 Funding

Sources of implementation funding for the 2nd Street Park are grouped here by funder source and eligible types of improvements. Where known, grant or loan criteria, restrictions, funding cycle, potential award amounts, deadlines and contact persons or websites are listed. The sources are organized in the approximate order of their use for the project. Such data can change annually or more frequently. The status of these programs should be monitored.

The development of a 2nd Street Park Funding Strategy is recommended. As the need for project decisions arise, such a strategy can be referenced for the potential cost and other impacts of various choices. A sample strategy spreadsheet follows, and links known project costs to possible funding sources. Many of the listed funding programs for environmental remediation and for park soft costs and construction are applied to estimated costs for remediation and park construction. It should be kept in mind that some of the listed costs are very course estimates. Costs are provided to illustrate how sources can be assembled to create a feasible project. Market costs should be used for an actual project funding strategy and all costs should be estimated by an experienced professional.

Sources: *This section was written by MCIA with input from CUES. All information in this section was gathered from the listed program websites, from professional knowledge of programs, or from program staff.*

REMEDIATION FUNDING

NJ Department of Environmental Protection (NJDEP) - Hazardous Discharge Site Remediation Fund (HDSRF)

This grant and loan program provides public entities with a 100 percent grant for the costs of investigation and planning the clean up, and 75 percent of the costs (for recreation and open space projects only) for the actual cleanup of contaminated sites in designated Areas in Need of Redevelopment, such as the 2nd Street Park property. Other state grants and federal grants may be used for the 25 percent match funding. These can include the MCIA's USEPA Brownfields Coalition Assessment Grant that has been used at 2nd Street Park. The investigation costs supported through this grant (and not community engagement or grant management costs) are projected to reach $155,000 by the completion of the Supplemental Remedial Investigation. Private funds, such as the responsible party escrow account also can be used as a match. Both of these resources may be needed as a match in the event that the total clean up costs reach $3 million.

As of May 1, 2015, the total available amount in the HDSRF was $33 million, with $10 million more anticipated in State Fiscal Year (SFY) 2016. If attained, the new revenue will bring the total available to $43 million. Also as of May 2015, 130 applications had been received, for a total funding request of $37 million. Thus, approximately $6 million is expected to fund new applications in SFY 2016.

Applications are funded as they are received, assuming administrative completeness. The Office of Brownfields Reuse, the entity that first reviews applications, notes that there are two priorities: 1) sites with immediate health concerns, and 2) supplemental funding applications designed to finish a work phase already in progress, and for which there are insufficient funds to complete.

All municipalities are eligible for up to $3 million per year. Sites in state designated Brownfield Development Areas (BDAs) are eligible for up to $5 million per year. While 2nd Street Park is not in a BDA, the City and County have applied for, or have HDSRF grants for, other properties that are in the BDA. A cumulative total in HDSRF grants of $5M annually statewide exists for all remedial actions involving recreation or conservation end uses or affordable housing. Balancing active grants and new applications between BDA, non-BDA and recreation, affordable housing and other types of projects and between years can assist the City to maximize its resources.

The *Application Review Process* has the following steps:

1. Application received by Bureau of Case Assignment, which assigns the application to staff.
2. Office of Brownfields Reuse conducts administrative, scope of work and cost estimate review, cost negotiation with applicant (only if needed). Currently, reviews require approximately two weeks. A Cost Guidance

document may be issued by the Department in the future and can be used to assist with applications but is unlikely to be issued in time to apply for funds for this project.

3. NJ Economic Development Authority reviews an NJDEP-approved application, and accepts the City's submitted $500 fee. Approval of a grant agreement, with attached evidence of the 25 percent match for recreation and open space projects, is made by the NJEDA Board at its monthly meetings. Per NJDEP, if the total value the remediation is in the range of approximately $2M, a 2016 application may be likely to receive full funding in a 2016 Grant Agreement. However, cleanup costs well over about $2M may be better to split over two HDSRF grant years.

Cash Flow Implications

The NJDEP funds investigation phases in advance, however, clean ups are reimbursed at 75 percent as invoices are received, thereby requiring the City to front these costs through a letter of credit or other means. Engineering control and soil clean up costs are paid after the Remedial Action Outcome is approved by the Licensed Site Remediation Professional of Record. Annual remediation fees are ineligible grant costs. Perth Amboy is well versed in the mechanics of the HDSRF program for investigations. However, it is recommended that all of the above details be confirmed and clarified further with the Office of Brownfields Reuse, as costs for the park clean up may be significant and the Office is evaluating some of its procedures. The Middlesex County contact is Rachel Orobono-Stopper, (609) 633-0736 and the statewide contact is Michael Deeley at (609) 633-1332.

It also is recommended that the City secure a remediation cost estimate to apply for a grant as soon as possible after the Supplemental Remediation Investigation is completed. Many environmental consultants prepare these applications at no cost to the client. The grant can support any needed revision to the Responsible Party's Remedial Action Work Plan, the Remedial Selection Report (both funded at 100 percent of approved costs) and the cleanup and annual reporting (both eligible for 75 percent of approved costs). See http://www.nj.gov/dep/srp/finance/hdsrf/ for more information or contact Rachel as above.

PARK DEVELOPMENT

NJDEP - Green Acres Development Fund – All Park Construction

The Development Fund in the Green Acres Program can be used for the construction of park facilities for outdoor recreation and conservation purposes, including athletic fields and courts, playgrounds, walkways, trails, boat ramps, elevated boardwalks, restrooms, maintenance and storage structures, educational facilities, kiosks, signage, landscaping, hardscaping and many other improvements. Site preparation is allowable, although the proportion of these costs to total project cost will be evaluated. Per acre permit fees are not a grant eligible cost.

The Green Acres Trust, which includes development funding as well as acquisition monies, the Blue Acres Program and the Farmland Preservation Program, was replenished in 2014. Information on the total funding for development projects is not available. Funding is supported by a formula percentage of the annual state corporate business tax and thus totals fluctuate annually. The demand for funds has far exceeded available monies since the program's inception. Applications are solicited annually and projects are ranked with a point system.

Funding awards for park developments are made with a fifty-percent grant and fifty-percent twenty-year loan. The monies must be used within two years and applications made only for the amount that can be used in the first year. Second year monies are requested by letter and may be available after both the loan and the grant funds are depleted through contract commitments. Soft costs such as design, engineering and supervision are eligible as well, for up to thirteen percent of the total construction cost. Other professional costs associated with a public project also are eligible, up to a capped amount. Green Acres funds are not included in a municipal budget cap; however a capital spending ordinance for the loan is required.

Several development tasks for the park already have been done by the City or its agents as part of the remediation investigation completed to date. These include surveys, the wetlands delineation, tidelands (partial) and title work, public involvement, and a conceptual design. The Ecological Evaluation completed by the Responsible Party could be used as the basis for environmental assessment questions on project ecological impacts as well.

The Green Acres Program will require that the park design included in this report, or any alternative future design, be translated into a detailed concept plan with floor plans and all facility locations identified. The plan must be prepared and signed by an authorized and licensed professional. Similarly, while the public engagement efforts that have been a part of the project thus far have been extensive, a formal public hearing on the project in the application is required, and letters of support attached to an application earn ranking points. Finally, the cost estimate in the application must be prepared and signed by a licensed professional.

The City is in a position to earn a substantial number of points on a park application. These include: 1) being an urban aid municipality, 2) the park's location on a brownfield site and as a redevelopment project, 3) having a service need and a service facility need, 4) for plan consistency, 5) for water access, 6) for public accessibility, 7) the park design quality, 8) adding a living shoreline and similar attributes, and 9) possibly for an imbalance in open space, if one exists. Since Green Acres Grants are very competitive, and are one of the few sources to support parks, it is recommended that the final design professional be familiar with the Green Acres Development Application opportunities to earn additional points so that, if in the best interests of the project and the City, the design can garner these points.

See http://www.nj.gov/dep/greenacres/ for more information, or contact the Urban Acquisitions and Statewide Park Development Team, Cathy Elliott–Shaw, Team Leader at (609) 984-0500.

NJDEP – Grants for Nonpoint Source (NPS) Pollution Control – Stormwater Management

Federal funds under Section 319(h) of the Clean Water Act are used for pass-through grants to the NJDEP for watershed restoration. Perth Amboy's $489,000 grant from this very competitive program is laudable. It is unclear if this grant award in any way limits the City's chances for a future award to support the 2nd Street Park's proposed living shoreline, large ecological restoration area, possible cistern, or any other storm water control elements. Given Perth Amboy's combined sewer service system, with numerous overflow pipes, (including the large one adjacent to the proposed park and Wilentz School), and a federal consent order to remedy the system, it is worth exploring if the City might receive special consideration for additional state assistance with this issue. It is recommended that the City discuss this with the Department at the earliest opportunity, since the annual requests for proposals typically have been issued in the spring.

In the SFY 2015 program, at least half of the Department's approximate $2 million in funds were to be awarded for approved watershed-based plan-related projects in non-tidal Raritan River Watersheds and the Barnegat Bay Watershed. The remainder of funding was required to be used for other NPS projects, such as green infrastructure and education. However, almost all the projects under consideration were for green infrastructure.

As remediation of the sloped transition riparian area of the 2nd Street Park leading to river may be the simplest to remediate (if remediation is needed at all), it is suggested that the living shoreline element of the park's development be advanced before the other park elements. Potentially, this could be begun in mid-2016. However, the City would first need to secure the funds to develop the project scope and estimate its costs for inclusion in any 319(h) (or similar source) application. Project planning and coordination will be required before an application submission. A proposal must assure that the project will be effective in meeting its water quality objectives, can accommodate the living shoreline along with the proposed pier, can receive the needed permits, and has a favorable cost to benefit ratio to assure a successful application. The Department guidelines state that the project also "should be coordinated with all CSO-regulated entities to ensure [that it is] consistent with permit requirements or approved plans for addressing the CSOs. If the applicant proposes a riparian buffer restoration, it should be designed (in width and vegetation selection) to

attain the maximum possible removal rates of the identified pollutant(s) while considering site conditions. Proposals also must describe how objectives will be measured or demonstrated by means appropriate to the project type and expected outcome. Examples include an improving trend in a related biological indicator or index, improving trend in water quality, or evidence of pollutant load reduction using predictive models." Further, the application requires the entity to demonstrate the specific resources and expertise to manage the federal program requirements and project maintenance and monitoring through a commitment letter. It is recommended that an experienced professional design and manage the living shoreline and water quality improvement project and have experience with federal program grant reporting. Finally, it should be noted that permit fees are an ineligible grant cost. A waterfront development permit, which will be based on project acreage, may be a sizable cost.

For more information contact, Jay Springer, Supervisor 319(h) Program (BEARS), Division of Water Monitoring and Standards, Bureau of Environmental Analysis, Restoration and Standards at (609) 341-3122 or see http://www.nj.gov/dep/grantandloanprograms/eps_nspc.htm.

NJDEP – Environmental Infrastructure Trust (EIT) Program – Stormwater Management

The City may use the EIT program if necessary and desirable. In the program's words, the park can function as a "clean water system" improving water quality/water restoration or through its storm water functions and as a brownfields project that improves or protects groundwater." These storm water functions are eligible costs for this loan program. They may be combined with other costs that the City may have at the time for measures in any CSO Long Term Water Quality Control Plan, or for other applicable projects, in one application. Generally, the program offers low cost loans and in many instances, principal forgiveness loans. The EIT has a multi-step annual schedule that can be found at http://www.njeit.org. Program rules became more flexible in fall 2015. These should be verified. For more information, contact Frank Scangarella, Assistant Executive Director and Chief Operating Officer, at (609) 219-8600

NJDEP - Flood Hazard Risk Reduction & Resiliency Grants – Stormwater and Storm Surge Management

This program may be offered again. More than $50 million had been available through pass-through funds from the U.S. Department of Housing and Urban Development's Community Development Block Grant. Applications were due in December 2014. Funding is for projects to reduce local flood risks and enhance resiliency in the following categories: coastal lakes (surge reduction, increased discharge capacity) flood risk reduction infrastructure (levees, tide gates and flood barriers), stormwater management (pump stations, capacity increase, and storage areas are cited as examples) and beneficial use of dredge material. The grant targets Middlesex and other counties most impacted by Hurricane Sandy. For update information, contact Rebecca.Jones@dep.nj.gov.

Middlesex County - Open Space, Recreation Farmland and Historic Preservation Trust Fund - All Park Improvements

This Program aims to maintain the balance between open space and development. Urban areas have received funding to increase conserved open space and to enhance existing or new spaces for recreation and at times, arts uses. Development and acquisition costs are eligible. The program has funded park projects similar to the 2nd Street Park.

There is no formal application, deadline, funding cycle, or typical award amount. Requests for funding are reviewed by the Middlesex County Open Space Advisory Committee as needed. A detailed request letter should be sent to Richard Lear, Director of Parks and Recreation, Middlesex County, 1030 River Road, Piscataway, NJ 08854.

Tony Hawk Foundation – Skate Board Facilities

This private foundation supports select skate board parks to promote skateboarding in low-income areas with large populations of "at-risk" youth. Awards require facilities to be designed with a creative mix of obstacles, to be built only

with concrete and only by qualified and experienced skate park contractors. Importantly, local skaters must be involved throughout the planning, fundraising and design process. This must be demonstrated especially with fundraising efforts by local skateboarders and other community groups. The facility cannot require liability waivers, must be open during daylight hours, 365 days a year, be free, unsupervised, and in an area without skateboarding facilities. As a skateboard park was one of the most frequently requested amenities in the community engagement portion of this project, there may be high levels of public participation for this effort.

One-time, single year grants are for amounts between $1,000 and $25,000. Technical assistance on design and construction, promotional materials, and other information and facilitation from vendors, suppliers, and community leaders may be offered as well. A recent New Jersey skate parks award was for $25,000 to support the 12,000 square foot facility in Berry Lane Park in Jersey City. Based on online rule of thumb cost estimates, such parks can be expensive. If this source will be pursued, fundraising through a committee is recommended and should begin its work soon. The next application deadline is January 20, 2016 with the application to be made available on the Foundation website after December 7, 2015. Contact: http://tonyhawkfoundation.org/grant-application/

Kaboom – Playground Equipment

As a recent Kaboom Playground equipment recipient for the Francis Street Park, the City is very familiar with this program. The Foundation has two forms of grants for needy communities – 'Build it with Kaboom' and 'Build it Yourself'. Both grant forms provide a technical project manager to assist with a project. The first model uses a community-driven planning, fundraising and construction model and provides the playground equipment. The site preparation, safety surfaces and installation costs are not included in either form of grant. "Build it Yourself" offers $15,000 towards playground equipment, $9,000 of which Kaboom pays directly to the equipment vendor. Equipment must cost between $24,000 and $40,000 to be eligible. A two-step application is accepted on a rolling basis. Submissions are reviewed weekly. Log-in to the City's existing Kaboom Account to add the 2nd Street Park, or any other site. See http://www.kaboom.org.

Federal Highway Administration - Transportation Alternatives Program (TAP) - Bikeway

The Transportation Alternatives Program provides funding for programs and projects defined as "transportation alternatives." These include on- and off-road pedestrian and bicycle facilities (such as that proposed along Second Street and adjacent to the Park); infrastructure projects to improve non-driver access to public transportation and enhanced mobility, community improvement activities, and environmental mitigation; recreational trails; safe routes to schools.

The North Jersey Transportation Planning Authority solicits local governments annually for TAP projects, typically in the fall. As a federal program, the design, bidding, accounting and reporting requirements are more onerous than for state programs. Recent awards for bicycle and pedestrian projects ranged from $150,000 for Bike Lambertville to $1 million for Phase IV of the South Orange Greenway and Bike Trail. For information, Contact Eve Chamberlain, Project Manager at (973) 639-8421 or echamberlain@njtpa.org or Sascha Frimpong, Manager, Local Programs, at (973) 639-8422, sfrimpong@njtpa.org.

NJ Department of Transportation - State Aid Program – Bikeway and Sidewalks

The Transportation Trust Fund (TTF) provides funding for local governments for roads, bridges and other transportation projects including bikeways, sidewalks and related infrastructure. State funded programs administered by the NJDOT Local Aid Division include: Bikeways, Municipal Aid, County Aid, Centers of Place, Local Aid Infrastructure Fund, Safe Streets to Transit and the Transit Village Program.

The Department has a goal to add 1,000 miles of bike paths. However, only four bikeways were funded in 2014 through the program. These ranged in cost from $185,000 to $360,000. For more information, see http://www.state.nj.us/transportation/business/localaid/bikewaysf.shtm or contact the District 3 Office which covers Middlesex County at (732) 625-4290.

SMALLER PROJECT, SERVICES AND PROGRAMMATIC GRANTS

The sponsors of these programs and projects can be contacted to expand the City's network of potential partners for community involvement, park design, water quality monitoring and similar initiatives. Awareness of such partners and their frequently changing programs may afford the City ancillary opportunities that can work in conjunction with the park design process, its development and its future programming.

Buckminster Fuller Institute (BFI) – The Fuller Challenge – Park Design

The Buckminster Fuller Institute offers the annual Fuller Challenge. While very competitive, this is an interesting opportunity for innovative park design. Interestingly, the 2014 winner was for "Living Breakwaters," a project for the southern Staten Island shore. SCAPE/LANDSCAPE ARCHITECTURE (Parsons Brinkerhoff, Stevens Institute of Technology, The Harbor School, and a host of other members) further designed and refined the project through President Obama's Hurricane Sandy Rebuilding Task Force, Rebuild by Design initiative.

BFI is an international network focusing on design innovation and leading edge educational experiences. "The Fuller Challenge attracts bold, visionary, tangible initiatives focused on a well-defined need of critical importance. Winning solutions are regionally specific yet globally applicable and present a truly comprehensive, anticipatory, integrated approach to solving the world's complex problems. Each year, BFI invites scientists, students, designers, architects, activists, [and others] to submit innovative solutions to some of humanity's most pressing problems. A $100,000 prize is awarded to support the development and implementation of one outstanding strategy."

"BFI searches for universal strategies that exemplify an understanding of big picture dynamics that influence successful interventions. The design proposals must focus mainly on key environmental, social and economic factors. This focus seeks urgent needs at all scales." Having a competent and committed project team to move the proposal forward is required. Entries must meet the following criteria: visionary, comprehensive, anticipatory, ecologically responsible, feasible, verifiable, and replicable. The entry process has been as follows: Nominations (January), Enter (February), Review (May), Interviews (August), Finals (September), Prize (November). See https://bfi.org/challenge.

Rutgers Cooperative Extension (RCE) - Water Resources Program (WRP)

The Water Resources Program is one of many specialty programs under RCE. The WRP is a statewide program for solving water resource problems. Grants support a variety of projects and take a holistic approach using sustainable and practical science-based solutions through research, project development, assessment and extension. Using a federal 319(h) grant, the WRP developed technical reports for more than 50 municipalities in the watershed. The WRP 2015 report for Perth Amboy documents the City's impervious surface problems and lists several school and religious facility sites that may be amenable to newer solutions. The program is flexible and other sites may be included if the City prefers.

The City is very familiar with staff through the WRP's partnership with the City's SWIMM team. The team is working on green infrastructure projects at several locations. Eligible projects can include rain gardens, bio-swales, cisterns and similar low cost solutions. The City could explore if the 2nd Street Park might benefit from WRP technical assistance and funding. The timing is not likely to allow use the current grant at the park for improvements construction; however technical assistance in planning the stormwater management aspects of the park improvements may be valuable.

Contact by phone is recommended over email; Dr. Christopher Obrupta at (848) 932-5711 or obropta@envsci.rutgers.edu.

Interstate Regional Water Pollution Control Commission - NY-NJ Harbor Estuary Program – New Park Partners

Stewardship and Public Access Project Grants last were offered by the NY-NJ HEP in 2013. These grants supported public access projects, such waterfront parks. This federally supported program was reorganized and is now housed in and affiliated with the Hudson River Foundation. It is unclear if the grants again will become available. The program has made efforts in the past few years to expand its work in the lower portion of the estuary, which includes the Raritan River. The program should be monitored at http://www.harborestuary.org/index.htm, or contact Kate Boicourt, Restoration Program Manager at (212) 483-7667 or at habitat@harborestuary.org.

Citizen Science Monitoring for Pathogen Indicators in NY-NJ Harbor Tributaries was a 2014 program in which four groups of citizen scientists affiliated with local community groups and measured local water quality. This program was a partnership between the HEP, the USEPA and the NJDEP and it funded the water quality monitoring.

The Habitat Restoration Standard Protocol for Assessing Habitat Quality of Ecologically Enhanced Urban Shorelines was a shoreline development evaluation project published in 2014. A grant supported research as a partnership between scientific researchers and the NY-NJ Harbor & Estuary Program's Urban Shorelines Advisory Committee. The team developed and piloted a habitat quality assessment protocol for use with ecologically enhanced shoreline stabilization techniques. The end goal is to develop shore stabilization projects to increase the shoreline and shallow habitat as identified in the Hudson-Raritan Estuary Comprehensive Restoration Plan. See http://www.harborestuary.org/grants/2013/UrbanShoreline-LiteratureReview.pdf.

Sources

Beacon Planning & Consulting Services, LLC. Conceptual Site Plan, Second Avenue Recreational Facility, Perth Amboy, New Jersey, 2013.

BOKU – University of Natural Resources and Life Sciences, Vienna

Buckminster Fuller Institute. About the Challenge. https://bfi.org/challenge/about. Web. December 15, 2014.

CUES - Center for Urban and Environmental Sustainability, Rutgers University.

Green Acres Program, State of New Jersey Department of Environmental Protection. Green Acres Development. http://www.nj.gov/dep/greenacres/local_faq_html. Web. December 15, 2014.

Kilman Associates Consulting Engineers. Boat Ramp Concept Plan, 1999.

National Fish and Wildlife Foundation. U.S. Fish and Wildlife Five Star Restoration. http://www.nfwf.org/fivestar/Pages/home.aspx#.VI7b2ocrns4. Web. December 15, 2014.

National Science Foundation. The National Science Foundation, Coastal SEES (Science, Engineering and Education Sustainability). http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=504816. Web. December 15, 2014.

New Jersey Department of Community Affairs & Local Planning Services. City of Perth Amboy, Middlesex County, New Jersey, Master Plan Recreation Element, September 2013.

New York – New Jersey Harbor & Estuary Program. Citizen Science Monitoring for Pathogen Indicators in NY-NJ Harbor Tributaries. http://www.harborestuary.org/grants.htm. Web. December 15, 2014.

New York – New Jersey Harbor & Estuary Program. Habitat Restoration Grant: A Standard Protocol for Assessing the Habitat Quality of Ecologically Enhanced – Urban Shorelines: 2013-2014. http://www.harborestuary.org/grants.htm. Web. December 15, 2014.

Office of Flood Hazard Risk Reduction Measures, State of New Jersey Department of Environmental Protection. Flood Hazard Risk Reduction & Resiliency Grant Program. http://www.nj.gov/dep/floodhazard/grants.htm, December 2, 2014. Web. December 15, 2014.

Office of Open Space, Middlesex County Improvement Authority. Middlesex County Open Space. http://www.micauth.com/open_space.htm#openspaces. Web. December 15, 2014.

Rutgers, The State University of New Jersey, Rutgers New Jersey Agricultural Experiment Station. Rutgers Cooperative Extension Water Resources Program. http://www.water.rutgers.edu/main.htm. December 9, 2014. Web. December 15, 2014.

Site Remediation Program, State of New Jersey Department of Environmental Protection. Hazardous Discharge Site Remediation Fund. http://www.state.nj.us/dep/srp/finance/hdsrf/. May 21, 2013. Web. December 15, 2014.

The Native Plant Society of New Jersey, New Jersey Rain Garden Manual, page 60. http://www.npsnj.org/pages/nativeplants_Rain_Gardens.html, 2013. Web. December 15, 2014.

TRC Raviv Associates, Inc. Hydrogeologic Cross-Section, page 44, in Self-Implementation On-site Cleanup & Disposal of PCB Remediation Waste Workplan Addendum by RTP Environmental Associates, Inc., July 2013.

U.S. Department of Transportation Federal Highway Administration. Federal Highway Administration Transportation Alternatives. http://www.fhwa.dot.gove/map21/guidance/guidetap.cfm. September 12, 2013. Web. December 15, 2014.

United Railroad Historical Society of New Jersey. Draft, March 2014.