

ABSTRACT

Title of Thesis: DESIGNING FOR THE PEOPLE: A
PARTICIPATORY DESIGN
APPROACH FOR DUANE AVENUE
PARK

Bridget Stokes, Master of Landscape
Architecture, 2022

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Health disparities in physical, psychological, and social well-being are known to exist among underserved and marginalized populations, and although it is widely accepted that public parks and greenspaces can provide these physical, mental and social benefits, underserved and minority communities are more likely to have an inequitable distribution of quality parks. Quality and maintenance of parks are important because neglect of existing parks can cause parks to be dangerous and unwelcoming spaces that diminish the value and benefits that these greenspaces can provide for residents.

Underserved communities cannot typically afford landscape architecture services and historically, residents of these communities have been left out of the decision-making process when funding for parks have been distributed. One way that these distributional and procedural environmental injustices can be solved is through the work of non-profit

community development organizations that utilize community engagement tools. Using a participatory design approach, this thesis explores how to redesign Duane Avenue Park, a neglected park located in south Baltimore, Maryland. The park design will be used by a local non-profit, the Greater Baybrook Alliance, to write proposals for grant funding for the future implementation of the Park. By researching literature related to this topic, performing site inventory and analysis, and conducting thorough stakeholder and community engagement through surveys, in-person events, and one-on-one interactions, I created a proposed site plan that addressed the following design goals:

Goal 1: Improve Perception of Safety & Discourage Negative Uses

Goal 2: Design an Adventure Park that Encourages Play and Connections with Nature

Goal 3: Create Spaces for Gathering and other Activity Generators

Goal 4: Incorporate Public Art

While this is not meant to provide evidence that one park can resolve all the issues a community faces, it can show that parks can be part of a larger community strategy that can help to address some issues such as health disparities, safety, and environmental justice.

DESIGNING FOR THE PEOPLE:
A PARTICIPATORY DESIGN APPROACH FOR DUANE AVENUE PARK

by

Bridget Allison Stokes

Thesis submitted to the Faculty of the Graduate School of the
University of Maryland, College Park, in partial fulfillment
of the requirements for the degree of
Master of Landscape
Architecture
2022

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Acknowledgements

I would first like to thank my husband Xavier, for always supporting my dreams and giving me the time to reinvent myself over the past three years.

I want to thank my thesis advisor and mentor, Dr. Byoung-Suk Kweon, for her constant warmth, guidance, and encouragement. Without her, I would not have found my passion for helping underserved communities. Thank you to my other committee members, Prof. Jack Sullivan for his incredible knowledge and feedback, and Sarah Hope for working so closely with me and giving me the opportunity to design this park.

I would like to extend my sincere gratitude to the residents of the Greater Baybrook that donated their time and valuable insight, and especially Ms. Linda Darling who has never stopped fighting for her community. I also appreciate the help and guidance of Daisy Heartberg and Wesley Collins from the Greater Baybrook Alliance, Nick Lindow from CityScape, and Anna Dennis from Design Collective.

Lastly, I would like to thank my family for their unwavering love and support.

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List of Abbreviations

(CPTED) Crime Prevention Through Environmental Design

(DOT) Department of Transportation

(EWF) Engineered Wood Fiber

(GB) The Greater Baybrook

(NEST) Natural Environment Scoring Tool

(NRPA) National Recreation and Park Association

(SES) Socioeconomic Status

(TPL) Trust for Public Land

(WAG) Watershed Assistance Grant

Chapter 1: Designing Parks in Underserved Neighborhoods

Introduction

It is widely recognized that public parks, especially for people living in urban areas, provide significant physical, psychological, and social benefits. These benefits described in the literature review section below include attention restoration, stress reduction, increased cognitive function, lower levels of obesity and chronic illness, and increased life expectancy. However, all parks are not created equal. Understanding park equity is an important issue and is now considered an environmental justice concern. Environmental justice is “the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies” (United States Environmental Protection Agency, n.d.).

Although many cities have a public park accessibility minimum, meaning the distance a person must walk to get to a public park, they do not always effectively measure the quality of the park. Baltimore, Maryland is ranked #58 in its evaluation of park access and quality in the 100 largest U.S. Cities (Trust for Public Land [TPL], 2021). Approximately 87% percent of Baltimore residents live within a 10 minute walk of a park, which is well above the national average, however, of those parks, they ranked poorly in acreage, investment, and amenities (TPL, 2021). When evaluating Baltimore city public parks, wealthier white neighborhoods of Baltimore have access to larger public parks, even though these neighborhoods have fewer residents (Boone 2009). These

public park inequities make up a small portion of overall environmental justice issues that Baltimore and many other cities face.

Within South Baltimore, is a neighborhood called Brooklyn, located on the peninsula south of the Baltimore Harbor across the Middle Branch and Patapsco River. This area has its fair share of environmental injustices. In environmental justice concerns, Brooklyn scored in the top 10% census tracts within the state of Maryland (Maryland EJ Screen, 2022). The cause of these concerns are likely due to the poor air quality caused by the highway system and industrial zoned areas that line the entire coastline, cutting off the waterfront to residents. Among many others, these industrial zones include a coal-burning power-plant, a chemical-processing plant, and a medical waste incinerator.

I learned about this community through a Partnership for Action Learning in Sustainability (PALS) project, which is a program that leverages the expertise of University of Maryland students to solve sustainability-related issues facing Maryland's diverse communities. After researching the inequities that exist in this neighborhood, I decided that I would take a different approach to my thesis and go beyond the hypothetical by donating my time & skills to this underserved community that cannot afford landscape architecture services and create a park design that will be implemented in the future.

In this thesis, I will explore how to redesign Duane Avenue Park, a neglected park located in the south Brooklyn neighborhood, using a participatory design approach. The park design will be used by a local non-profit, the Greater Baybrook Alliance, to write proposals for grant funding for the redesign and construction of Duane Avenue Park.

Through this process, I will also explore how the redesign of Duane Ave Park can create positive benefits for the community, improve environmental justice, and increase the perception of safety.

In this thesis, I will accomplish the following:

- Conduct research of existing theories and literature on the health benefits of public parks, the disparities and environmental justice issues of public parks, the history and frameworks of participatory design, and the perception of safety in public spaces.
- Understand Duane Avenue Park and the neighborhood of Brooklyn through research, site inventory and analysis, community engagement, and stakeholder feedback.
- Redesign Duane Avenue Park by prioritizing community feedback

Benefits of Public Parks

Access to local neighborhood parks is important because they benefit the health and wellbeing of residents, especially children and people with a lower socioeconomic status (SES). Theories that support this include Kaplan and Kaplan's Attention Restoration Theory, Roger Ulrich's Stress Reduction Theory, and Richard Louv's Nature Deprivation Theory. Natural environments contribute to overcoming mental fatigue and improving our ability to focus and direct our attention effectively (Kaplan, 1995). Natural environments also promote recovery from stress, while urban environments tend to hinder the same process (Ulrich, 1981). As children start to spend

less time outdoors and in nature, Louv (2005) indicated that these changes can lead to behavioral problems.

Physical Health

Many studies have been conducted that support public access to parks and natural environments lead to living a healthier life. Access to public parks encourages physical fitness, such as walking, running, cycling, and participation in sports. Physical activity in parks lead to lower levels of obesity and chronic illness and lead to higher life expectancy (Cohen et al, 2007; Wolch et al, 2010; Gascon et al, 2015). Based on studies of illness and disease, children and people with a lower socioeconomic status benefited most from having parks close to home (Maas, et al. 2009).

Psychological Well-Being

The urban environment includes many stressors that can negatively affect physical and mental health such as density, noise, smells and pollution, a dirty environment, or proximity to violence. Minorities and people in a lower socioeconomic status may experience heightened levels of these environmental stressors, but they may also be experiencing internal and social stressors such as poverty, feelings of injustice and hopelessness, prejudice, and discrimination (American Psychological Association, 2017).

Studies measuring salivary cortisol levels found that residents living in deprived urban communities had less stress if they lived near green space (Ward Thompson et al., 2012). In a study measuring brain activity, it was found that when walking in a park environment the subject had significant attention restoration compared to walking in a

busy urban environment (Neale et al., 2019). In a study measuring exposure to nature in daily life, participants that has exposure to at least 20 minutes of nature per day had reduced stress (Hunter et al, 2019).

In deprived communities, green space can be linked to enhanced sense of place belonging and reduced sense of social isolation (Ward Thompson et al., 2016). Another study of low-income children found that homes nearby a natural environment were linked to increased cognitive function (Wells, 2000).

Nature playscapes, playgrounds that use natural elements like wood, sand, rocks, or grass to immerse children in nature while they play, have been shown to help encourage different skills that traditional playground may not provide such problem-solving, cognitive flexibility, goal setting, and self regulation (Carr, et al. 2017). In a time where nature deprivation is more common in children, nature playscapes may helpful in creating more opportunities for children to experience and connect with nature.

Social Well-Being

Parks and other public spaces are associated with positive social interaction within a community. Social interaction is beneficial to people because it can provide a greater sense of community and offer opportunities for forming relationships and bonding (Cattell et al., 2007). Urban parks offer opportunities for different ethnic groups to participate in informal interactions and increase social cohesion (Peters, et al., 2010). In a study researching the impact of natural spaces in an urban housing development, areas with natural elements increased social interactions among large and small groups (Coley, et al., 1997). In a study comparing outdoor greenspaces to older adults in inner-city neighborhoods, the results suggested that green spaces played a role in the formation and

maintenance of social ties and strengthened their sense of community (Kweon, et al., 1998).

Environmental Justice

There are three types of environmental justice: distributive, procedural, and corrective justice. Distributive justice is the fairness over the distribution of social and economic benefits and burdens. Procedural Justice is a democratic decision-making process in which all affected people have the ability to express their opinions and influence decisions. Corrective justice is the right of victims to receive compensation for the damages caused by the environmental injustice (Mohai, 2016).

It is a distributive injustice that minorities or those living in lower income neighborhoods do not have the same access to well-designed or maintained public parks as higher income white neighborhoods. Majority-white municipalities have higher quality park systems with more amenities than those with low-income ethnic minority people (Vaughan et al., 2013). Predominantly Latino cities are most disadvantaged in quality parks and have the highest neighborhood-level socioeconomic inequities in walking access to parks (Rigolan, 2018). Parks located in racial/ethnic minority neighborhoods have features and amenities of poorer quality. The park characteristics of racial/ethnic minority and non-minority neighborhoods displayed significant inequality, even after considering median income and park size (Suminski et al, 2012). In comparing public open spaces, parks in lower socioeconomic neighborhoods had less amenities (e.g. picnic tables, drink fountains and toilets) and were less likely to have trees that provided shade, multi-use paths, and lighting. (Crawford et al, 2008).

One of the reasons that parks in lower income areas may not be as well maintained as those in higher income areas, is because they may not have the support from voluntarism and nongovernmental entities. Results indicate that nonprofits and “Friends of the Park” groups are unevenly distributed and more active in affluent, fiscally stronger, suburban, conservative, and white municipalities (Joassart-Marcelli et al, 2013, Holifield et al, 2014). According to the Trust for Public Land, the Parks and Recreation department in Baltimore is three times more underfunded, spending \$18,000 less on operations per acre, than other cities of similar size (TPL, 2017). When funding is scarce, funding may be prioritized to higher income areas, leaving low-income neighborhoods neglected.

Participatory Design

One of the ways that planners and architects can practice procedural justice in the design of public parks is by participating in community engagement, also called participatory design. The goal of participatory design is to “actively involve all stakeholders in the design process to help ensure the result meets their needs and is usable” (World Design Organization, n.d.). Stakeholders might include local residents, community leaders, business owners, developers, and visitors. When designers engage with these stakeholders, they can begin to understand what is important to different user groups and how those needs might be fulfilled through design.

The participatory design process uses community engagement to work with and listen to stakeholders, particularly those directly impacted by the project. Rather than a top-down approach, the community members are engaged through public events, charettes, surveys, and other tools that collect data that will be used to inform planning

and design. According to *Design as Democracy*, community engagement “has guided us in understanding communities, honoring differences, creating vibrant neighborhoods and ecosystems, challenging environmental injustice, and fostering citizenship” (La Pena et al, 2017).

Until Lawrence Halprin’s RSVP Cycles gained popularity in 1969, the landscape architecture profession found public participation threatening to their creative process. RSVP stands for Resources, Score, Valuation, and Performance. Resources are the physical resources, information, ideas, motivations, and people used in the process. Score is the process of engagement, which Halprin is most known for. His scores were meant to make participants more creative, which in turn elevated his own designs. Valuation is the analysis and results of the score and Performance is the work performed based on the results of the previous three cycles, such as the design. Participation in Halprin’s collective creativity workshops involved hand selecting specific participants that would take part in a highly experiential and artistic exploration of the landscape where they would develop a “common language of environmental awareness”. (Hester 2012).

Around the same time period, Paul Davidoff, a lawyer and urban planner, introduced the Advocacy Method of community participation. Within this method, Davidoff argued that city planners should advocate for less fortunate members of society. He acknowledges that different societal groups have different needs, thus urban planning should be adjusted based these differences and no sole agency or person should be preparing comprehensive plans. (Davidoff, 1965). Davidoff’s advocacy teachings was the catalyst of community development centers in America.

Karl Linn is acknowledged as one of the first and most influential community designers, founding the Community Design Movement. “Urban Barnraising” was a term he coined that theorized that when community members help construct a project, they are more likely to take ownership of that space and protect it (Goodman, 2020). Community empowerment and creating neighborhood spaces for communities and by communities has been his legacy that he is still remembered for to this day (Linn, 2007).

Since the period of urban renewal, there have been other community engagement theories and methods, but today, there is not one single widely used method for performing community engagement. The National Recreation and Park Association’s (NRPA) community engagement resource guide focuses on creating equitable access to high performing parks through an inclusive and meaningful engagement process (NRPA, n.d.). NRPA’s guidebook that explains the community engagement planning framework, tips, and strategies is an important and easy to use tool for designers and planners.

While the research supporting the effectiveness of community engagement is still in its infancy, it is widely believed that when the community that is being impacted is involved in the planning and design of a space, that project will be more successful and increase utilization. In a study comparing community engagement to increase park utilization after a playground renovation, results showed there was a significant increase between the baseline and the 12-month follow-up in terms of park utilization and the number of people engaged in physical activity (Slater et al, 2016). In another study, assessing the relationship between community engagement and perceived ownership in an urban park in Philadelphia, results showed significant relationships between perceived

community engagement and perceptions of the park as an important element of the neighborhood's social fabric (Mullenbach et al., 2019). The findings emphasize the importance of community engagement in park planning to enhance feelings of ownership and avoiding feelings of exclusion. In the results of another study of public park use, indirect relationships suggest that efforts to engage community residents in decision making can help diverse users to feel more welcome, and in turn, engage in more intergroup contact (Powers et al, 2021).

In a study analyzing two surveys conducted in Houston Parks, it was found that park planning was utilizing an unrepresentative sample of the population living near parks and that park priorities can sometimes differ between white upper to middle class individuals and minority and lower income individuals (Smiley et al, 2016). For example, the majority of white respondents with a high income prioritized park connectedness, like multiuse trails and greenways. When minorities and those with a more representative household income were surveyed, results showed that they prioritized increased maintenance and park amenities. This study reinforces that the inclusivity of park planning and community engagement is vital to understanding the true needs of a community.

Designing for Safety

It is widely recognized that the perception of safety impacts the utilization of public park space. By combining design principles that promote safety with park programming that encourages positive uses, parks can increase the perception of safety and increase utilization. According to the Broken Window's Theory, visible signs of crime (i.e. broken windows), anti-social behavior, and civil disorder can create an

environment that promotes further crime and disorder (Wilson & Kelling, 1982).

Conversely, an environment that is well maintained sends the message that the neighborhood is being looked after and lawlessness will not be tolerated.

Jane Jacob's Urban Design Theory is known for "eyes on the street", the phrase coined by Jacobs about the importance of a vibrant street life to neighborhood safety (Jacobs, 1961). In this theory, the more people there are on the street, the more eyes there are to protect you from danger. Jacobs (1961) talks about how not only crime, but fear of crime can decrease utilization of a space. Instead of focusing on solely on green spaces in parks, Jacobs argues that parks that are safe encourage a range of activities and users.

The Defensible Spaces Theory established by Oscar Newman is the concept that spaces can be designed with the intention that residents will take ownership of and preserve those spaces (Newman, 1976). This concept promotes the value of resident involvement in reducing crime without the need for constant government monitoring (i.e., police or cameras). The four factors that create defensible spaces include

- Territoriality – designing spaces that are well defined and for a specific person or group can create a sense of responsibility over that space
- Natural Surveillance – designing public spaces where people cannot hide can discourage negative behaviors
- Image – designing spaces that residents can feel proud of encourages residents to better care for their space
- Milieu – designing the space that makes the most of its surroundings in terms of preventing crime (Donnelly, 2010).

Out of Jacob's and Newman's theories on safety of urban neighborhoods came Crime Prevention through Environmental Design (CPTED). According to the International CPTED Association, CPTED is "a multi-disciplinary approach of crime prevention that... aim[s] to reduce victimization, deter offender decisions that precede criminal acts, and build a sense of community among inhabitants so they can gain territorial control of areas, reduce crime, and minimize fear of crime." The CPTED planning and design strategies to enhance security include:

1. Allow for clear sightlines
2. Provide adequate lighting
3. Minimize concealed and isolated routes
4. Avoid entrapment
5. Reduce isolation
6. Promote land use mix
7. Use of activity generators
8. Create a sense of ownership through maintenance and management
9. Provide signs and information
10. Improve overall design of the built environment (National Crime Prevention Council, 2003).

Studies have also been conducted on the utilization of space based on the perception of safety. In a study looking at park use and perceived threats in low-income areas, the strongest predictors of increased utilization were the presence of organized activities (Cohen et al., 2016). In another study researching why some parks are used more than others, the strongest correlations to park utilization were the presence of other

park users, the size of the park, and the amount of organized activities (Cohen et al, 2010). Other results have supported that surveillance cameras, sufficient street lighting, and maintenance decreased the fear of crime for a user when visiting a space (Lee et al., 2016).

Chapter 2: Case Studies

Cab Calloway Square

To better understand the participatory design process, I researched the project called Cab Calloway Square which is in the concept development stage and being designed by the landscape architecture firm, Design Collective. With a location in Baltimore, Design Collective is a national multidisciplinary firm that works on various types of projects and scales, including public parks.

According to Design Collective (2020), Cab Calloway Square is located in an underserved community of Baltimore called Druid Heights. With its similarities in acreage, community demographics, and community socio-economic status, this was a good case study that represented a similar site to Duane Avenue Park. In March 2019, Design Collective was contracted by the city of Baltimore Department of Planning and the Druid Heights Community Development Corporation (CDC) to create a concept design using community engagement as the main tool for the design. Design Collective determined that four engagement events would be conducted in addition to a variety of different engagement methods such as community surveys and social media. With their experience in conducting community engagement for similar projects, they determined that this number of events helped them receive the appropriate amount of feedback needed to design a space like Cab Calloway Plaza.

In the first engagement event, Design Collective provided a project overview to the community and listened to stakeholder concerns and suggestions. Some of the different activities included a map where community members can mark where they live,

work, and play, and blank boards to allow stakeholders to write down their own ideas. 30 community members were in attendance.

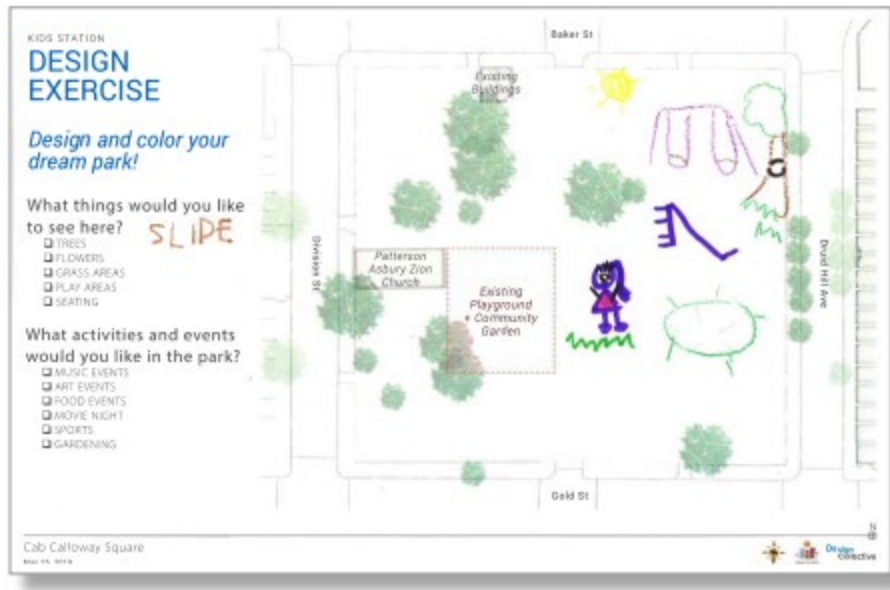
In the second engagement event, Design Collective created a larger outdoor event at the site that included a barbeque and a variety of different activities to facilitate constructive and creative feedback. Some of these activities included a board showing the history of the neighborhood, picture boards that allow stakeholders to vote for their favorite activity or amenity, and a kids station where children could design their own park by drawing or placing 3d objects on a map. The number of stakeholders in attendance increased to 100 community members because of the marketing activities they used to advertise the event, such as social media, event signs, and door-to-door promotional flyers.

Figure 1: Photo of Cab Calloway Voting Board



Source: Design Collective, 2020

Figure 2: Photo of Cab Calloway Drawing Exercise



Source: Design Collective, 2020

Design Collective also created a park survey that included the following questions:

1. What is your connection to the Druid Heights Community?
2. What do you love about Druid Heights that can be celebrated in this space?
3. What History should we honor?
4. What could be improved / what are the challenges we should consider?
5. What groups do you think could benefit from this space?
6. What events/ activities would you like to see (pick 5)?
7. Describe a park that you like and what do you like about it?
8. What elements would you most like to see (pick 10)?
9. What is your vision for Cab Calloway Square?
10. What else would you like us to know?

After gathering all the feedback from the first two events, Design Collective created 2 concepts and presented those concepts for feedback in the third community engagement event. In the fourth community engagement event, Design Collective presented their final concept design and supporting graphics and requested feedback. Starting in Spring 2019, each event was scheduled two months apart, with the last event occurring in September 2019. Keeping the events close together increased the momentum of this project and sustained community enthusiasm.

During the last community event, Design Collective received very positive feedback from residents for the final design elements. One resident, however, felt that the rendering that was created by an artist depicted a neighborhood that did not feel like his own. The rendering was created as a watercolor that included a walkway with historical signage and neighborhood flags on the light poles, which to this resident, seemed out of character and inappropriate for the neighborhood. Through this discussion, Design Collective learned about the importance of communicating the design and how one rendering can completely alter the perception of a design. They also determined that additional time and feedback may be needed to address cultural identity concerns in the park.

I first learned about this project through Dr. Byoung-Suk Kweon who worked in this neighborhood to design another smaller parklet space. Anna Dennis, a designer at Design Collective, held a lecture at the University of Maryland and described this project in detail. After attending this lecture, I discussed my Duane Ave Park project with Anna Dennis and received feedback from her on different event materials that I had created for the second community engagement event. She gave me feedback on the precedent images

I was using for the project, assured me that the bubble diagrams I was using for concept plans were appropriate, and discussed my concerns with how the residents at my upcoming event could perceive some of public art we were including on the engagement boards.

I will utilize this case study to help me determine my participatory design framework, give me ideas of different activities that I may want to conduct during my community engagement events, and to provide examples of survey questions to help me design my own community engagement survey. I will also utilize the lessons learned by Design Collective during this project and the marketing activities used to advertise events.

Sisson Street Community Park

What started as a vacant lot has become an incredible amenity to residents in the Remington neighborhood of Baltimore. This vacant lot was converted into a parklet and community garden space using grant funding organized by the Baltimore Southeast Community Development Corporation. Because Sisson Street Park is not a public park, it is not maintained by Baltimore City Recreation & Parks. Instead, a combination of the Greater Remington Improvement Association and a large group of community members work hard to keep the park maintained and organize events.

The budget was extremely low for the Sisson Street Park so creative design thinking was needed to create a beautiful and well utilized space for residents. Some of the low budget design ideas solutions include:

- Simple wood fencing and cutting garden that separates the site from the surrounding areas and creates a beautiful street and sidewalk buffer.

- A gabion seat wall and stage area that creates areas for seating and events.
- Utilized the Baltimore urban wood recycling program called Camp Small to provide low cost park amenities such as:
 - Nature play space rot resistant logs
 - Wood for community garden raised beds
 - Hardwood mulch for flower gardens
- A little free library and insect hotel
- Painted chain link fencing
- Mural Art on building wall
- Storage contained with mural art used to store community garden supplies and provide an area for projecting movies.

The success of Sisson Park is due to its engaged community and park users. There are weekly events at this park that include movie nights, flower nights where residents cut from the flower garden and create bouquets, workdays where residents work together to keep the park maintained, yoga events, and different holiday themed events. I will utilize this case study to help me determine low cost strategies for designing Duane Ave Park, keeping it maintained, and organizing different activity generating programs.

Figure 3: Photo of Sisson Street Community Garden and Painted Fencing



Soure: Original Photo

Figure 4: Photo of Sisson Street Painted Storage Container, Stage, and Building Mural



Soure: Original Photo

Figure 5: Photo of Wood Fencing and Planting Buffer



Soure: Original Photo

Chapter 3: Inventory & Analysis

Site Selection & Context

In deciding what site to choose for my thesis project, I knew that I wanted to design a park for a neighborhood that normally couldn't afford landscape architecture services. An important aspect of this project was identifying communities of need where green assets like parks are not prioritized by decision makers. At first, I tried to locate neighborhood parks within Northern Virginia, where I live, so that I could make an impact on a community that I live in. Proximity to my site was important to me in the beginning stages of this project because I knew that I would be visiting the site often, and I didn't want the location of the site to negatively impact my ability to have frequent and meaningful site visits.

Working with a non-profit called Rebuilding Together, an organization that works in Washington DC and Alexandria, Virginia to rebuild homes and revitalize communities, I was given the green light to design a site in Alexandria. The Park called South Early Street Park is a small parklet within a medium-to-low income townhouse community. My final step was to get approval from Alexandria Recreation and Parks in order to start the project. Unfortunately, they were not open to letting me do community engagement, which is the focus of my project. I determined that this site was not in agreement with my thesis goals and decided to look for a park in a higher need community.

While working within the Brooklyn neighborhood of south Baltimore on a separate project, I learned about its crumbling park system and determined that this would be the ideal community because of its high need and the poor conditions of existing parks. I connected with Sarah Hope, the Director of Revitalization Projects, at the Greater Baybrook Alliance, and was given three site choices for my thesis project.

- 1) The redesign and phased plans of the Farring-Baybrook Park walking trails
- 2) The design for the temporary use of a vacant lot in a the commercial area of Brooklyn
- 3) The redesign of a smaller park within Farring-Baybrook Park located on Duane Ave and 6th Street, also known as Duane Avenue Park.

After visiting and researching all three sites, I determined that Duane Ave Park was the best option for my thesis because of my interest in designing a park and because its size felt like a reasonable undertaking for my first time designing a space outside of my university coursework. Although this was far from my home, the impact I could make on this community outweighed the inconvenience of time needed to travel to the site.

Duane Ave Park is an approximately three acre area that although is considered Farring-Baybrook Park, it has a natural disconnect due its change in elevation, its tree lined buffer, and the roadway delineation along the northwest and northeast sides. The main park amenity features a rundown half basketball court tucked too far from visibility to feel safe. The court is composed of an unplayable, broken surface, mangled fencing,

surrounded by a sea of asphalt. Because there are no existing trash cans on this site, the park is littered with trash, empty alcohol bottles, and sometimes even drug paraphernalia, such as needles.

Additional reasons that I chose this site for my thesis project include:

- Safe Route to Schools – Duane Ave. Park is located two blocks from Baybrook Elementary/ Middle School along 6th Street. This street has been selected for the Safe Routes to School Program. The redesign of Duane Avenue Park could play a major role in making the route that children take to school safer.
- State of Neglect – The level of dilapidation of this park is heartbreaking. The basketball court looks frightening with thick climbing vines invading the fencing and the large weeds and grass that have overtaken the paving. Piles of trash are scattered throughout the park and start to gather near stormwater inlets, and even if someone wanted to throw away their trash, there are no garbage bins within the whole 3 acre site.
- Potential – Duane Ave. Park is located in a densely populated residential area of Brooklyn. Large shade trees, rolling hills, and a forested backdrop give the park beautiful views and a short walk will connect you to another park with a large stormwater wetland feature. With an attractive park design and continued maintenance, this park has the potential to be a popular local hangout for the residents of this neighborhood.
- Neighborhood Interest – Residents and community groups have expressed interest in the redesign of Duane Ave Park. The nonprofit, Greater Baybrook Alliance, marked this site as an area of high need and great future impact.

Figure 6: Photo of Duane Ave Park Basketball Court



Source: Original Photo

Figure 7: Photo of Duane Ave Park Seat Wall



Source: Original Photo

Figure 8: Photo of Duane Ave Park Hill and Open Space



Source: Original Photo

Figure 9: Map of Duane Ave Park Location



Neighborhood Site Inventory

History

Originally a rural farming community, major development began in the 1850s when two farmers created a land company and built the “long bridge” connecting Brooklyn to Baltimore City’s Federal Hill across the Patapsco River (Mapping Baybrook, n.d.). By the 1890s, there were railroad tracks and streetcars connecting the area to Baltimore. The bridge began to wear down, and in 1915 was decommissioned (Forgo, 2019).

The coastline and railroad, made this a perfect location for industry and in World War II, this was home to the largest shipyard on the east coast, constructing nearly 400 ships by the end of the war (Mapping Baybrook, n.d.). This boom in industry led to many immigrants flocking into the area including a large Polish immigrant community. Much

like the rest of Baltimore, industry declined after the war and many factories moved south, leading to unemployment of many area residents (Baltimore Heritage. n.d.).

Today, historic buildings have been repurposed for other businesses, however, much of the retail districts of the neighborhood are in need of restoration. Environmental activism has become an important part of the culture of this area. This activism has led to land preservation for wildlife, community revitalization, and is making strides in the community's battle over cleaner air. In 2016, local activists, including many students, prevented a new waste incinerator from being built, which would have burned 4,000 tons of trash per day (Fears, 2016).

Demographics

The residents in Brooklyn are primarily black or African American followed by white (non-Hispanic). There is a large community of Hispanic or Latino residents, making up 17% of the population, which is high compared to the state of Maryland at 11% and Baltimore City at 5%. Median household income is \$42,400, which ranks much lower than the state and the city at \$84,500 and \$50,400 respectively (US Census, 2019). Of this population of adults, only 40% have up to a highschool education and 23% do not have a high school diploma. Looking at this data holistically, many of the residents in this neighborhood are considered to be within a lower SES, which is the social standing of an individual or group measured as a combination of education, income and occupation (American Psychological Association, n.d.).

Table 1: Brooklyn Demographics

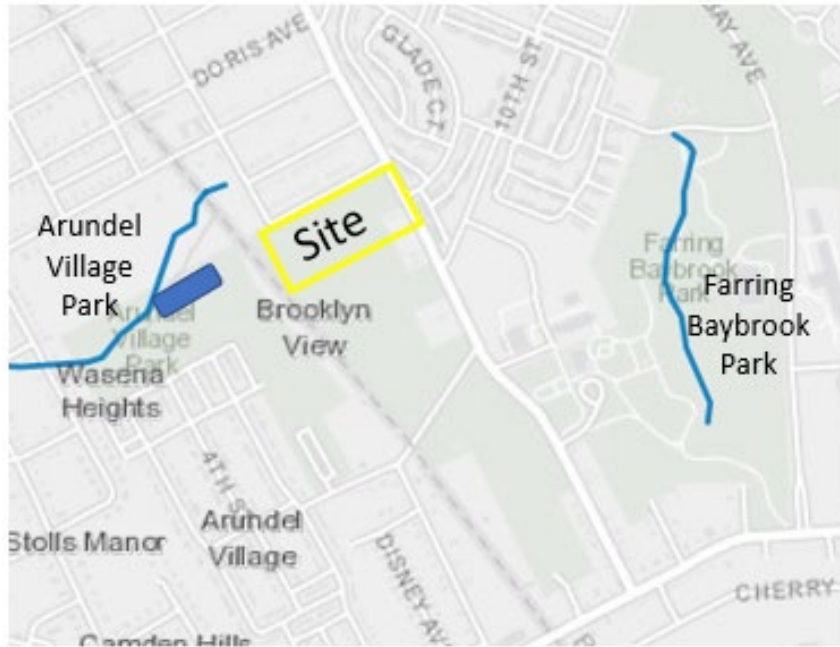
Topic	Brooklyn Census Tract 2504.01, 2504.02
Population	8,573
Child (<18)	29%
Senior (65+)	8%
Racial Composition	Black: 45% White (Non-Hispanic): 36% Hispanic: 17%
Educational Attainment (25+)	< HS Diploma: 23% HS Diploma: 41% Some College: 21% Associates: 4% Bachelors or >: 11%
Median Household Income	\$42,386
Housing Units	Total: 3,677
Housing Tenure	Owner-Occupied: 29% Renter-Occupied: 50% Vacant: 22%

Source: U.S. Census Data by Census Tract, 2019

Hydrology

There are several small creeks nearby Duane Ave Park, one located within Farring-Baybrook Park and one that flows from Brooklyn Heights Park to Arundel Village Park. The largest land locked body of open water in the area is a stormwater management project located in Arundel Village Park. This facility is an extended detention pond that includes wetland plantings and a weir that slowly releases water from the pond and eventually enters the Patapsco River.

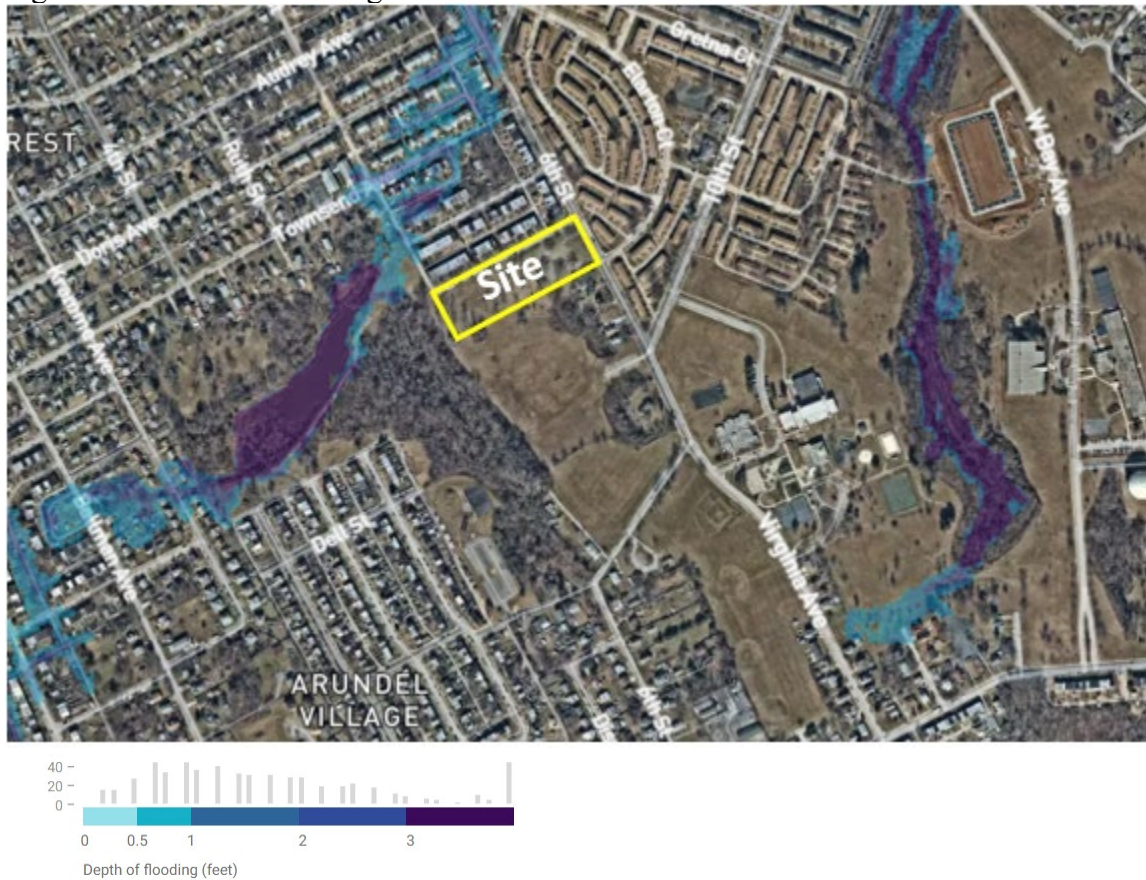
Figure 10: Map of Waterbodies Nearby Duane Ave Park



Source: Maryland Open Source Data

Based on the map showing potential flooding areas, Duane Ave Park is located upland from a flood area to the west, which includes the wetland area in Arundel Village Park. This information suggests that activities occurring within Duane Ave Park could impact flooding and downstream ecosystem. Stormwater management within the site should be taken into consideration.

Figure 11: Potential Flooding Areas

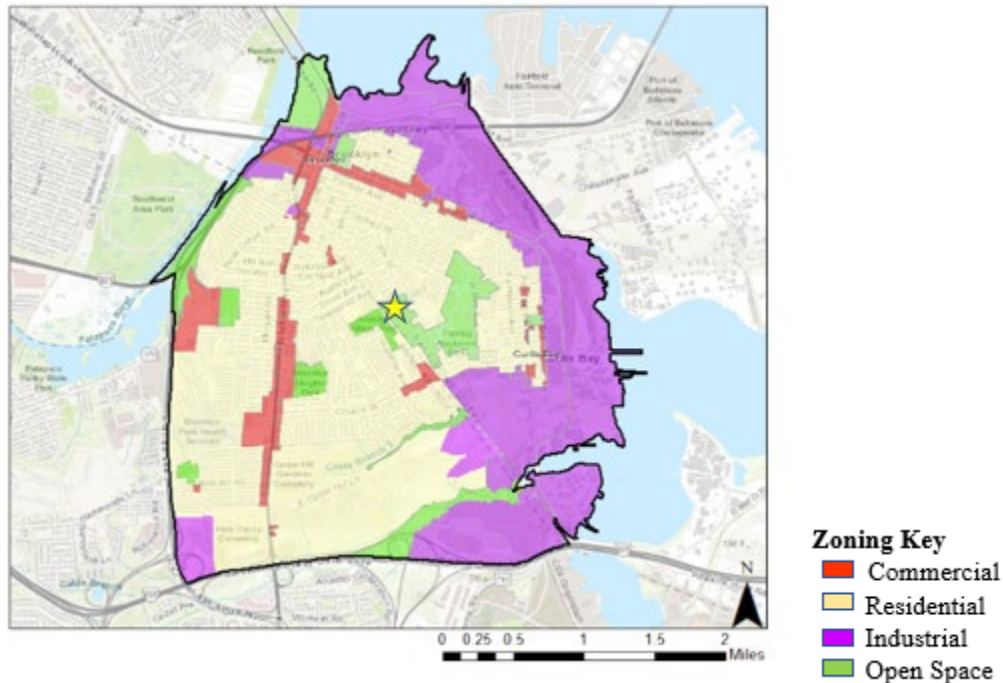


Source: Floodfactor.com

Land Use and Zoning

Land use is an important indicator in understanding the day-to-day activities of a community. Zoning around Duane Ave Park is primarily residential and open space. This means that the potential park users are residents living in the residential neighborhoods. The open space areas are the public parks, Farring-Baybrook Park and Arundel Village Park. Located less than a mile from the park are the industrial areas of the Greater Baybrook.

Figure 12: Map of Land Use & Zoning



Source: Baltimore City and Anne Arundel County open Source Data

Canopy Coverage

Canopy coverage is the part of the city shaded by trees. Trees serve incredible benefits such as cleaning the air and water, reducing flooding, air temperature and energy bills, providing habitat, and improving the overall quality of life for residents. Urban heat island is what happens when natural land and trees are replaced with pavement and impervious surfaces, increasing the natural air temperature dramatically. In order to offset urban heat island effect, 40% of tree canopy coverage is required (Landscape Performance, 2019). Using data from the Chesapeake Conservancy, the Brooklyn has the lowest tree canopy coverage in the area, at just 22%. This means that residents in Brooklyn are being impacted by higher temperatures and they are not being exposed to all the wonderful benefits that trees provide.

Figure 13: Map Tree Canopy Coverage



Source: Chesapeake Conservancy Land Cover Data, 2014

Environmental Justice

Maryland EJ Screen is a tool used for mapping environmental justice in Maryland. It is scored by combining the pollution burden of environmental effects and exposure by population characteristics, such as sensitive populations and socioeconomic factors. Based on Maryland's Environmental Justice Mapper, the census tracts within this community scored higher in environmental justice concerns than 91-100% of census tracts within the state of Maryland.

Figure 14: Map of Environmental Justice Concerns

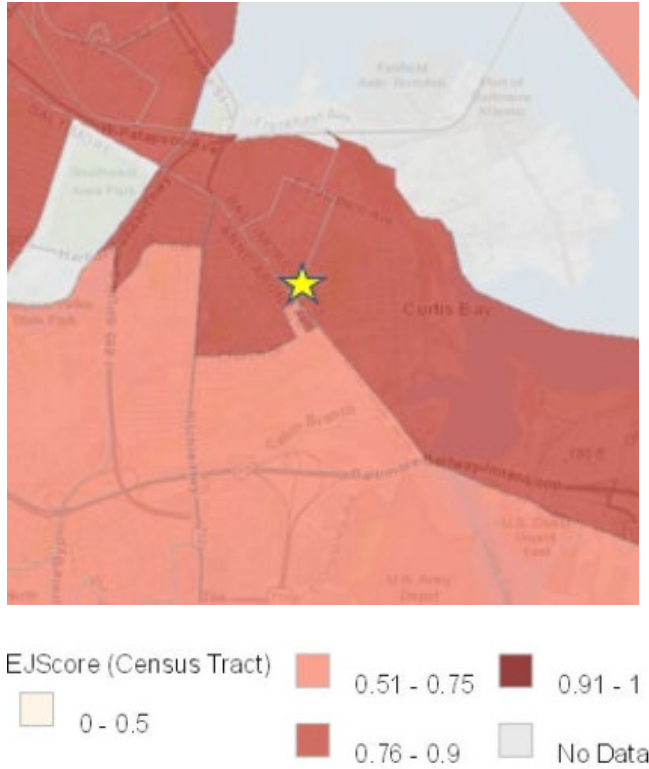
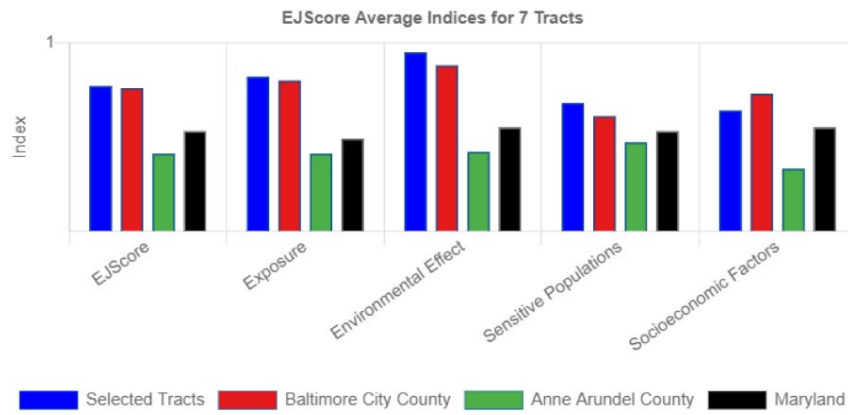


Figure 15: Environmental Justice Comparisons

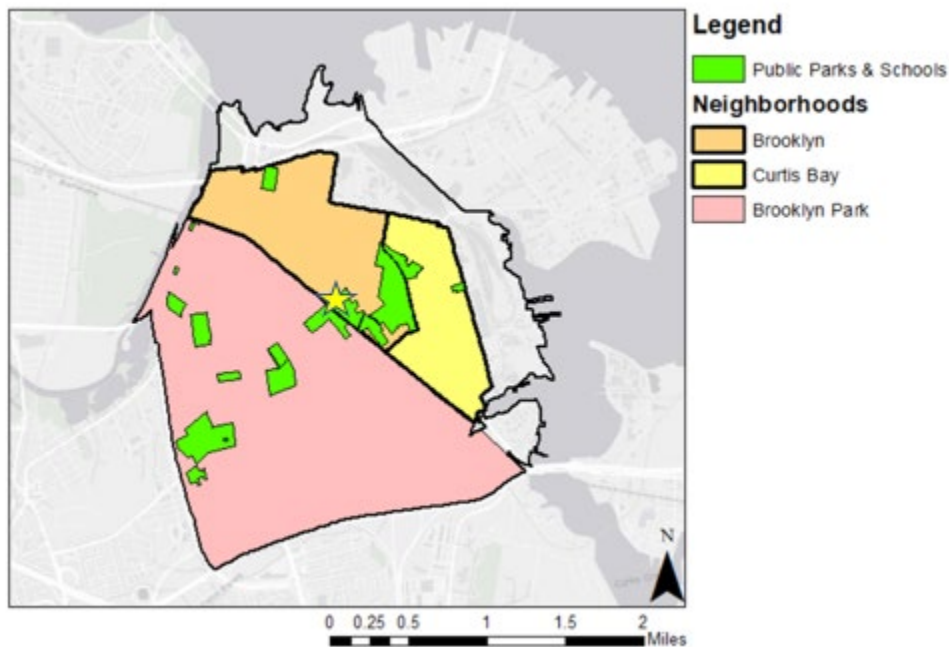


Source: MD EJ Screen

Access & Equity of Public Parks

In the neighborhood of Brooklyn, the park acreage is 19% of total land, with park acreage being significantly lower in the surrounding neighborhoods of Curtis Bay and Brooklyn Park. Based on the ParkServe analysis of accessibility, there is high accessibility to parks within the area of Duane Ave Park. This informational suggests that park access and park equity in terms of acreage are high in the area around Duane Ave Park, however, other factors should be considered when determining if there are environmental justice concerns in this community, such as the quality of existing parks.

Figure 16: Park Access by Neighborhood Map

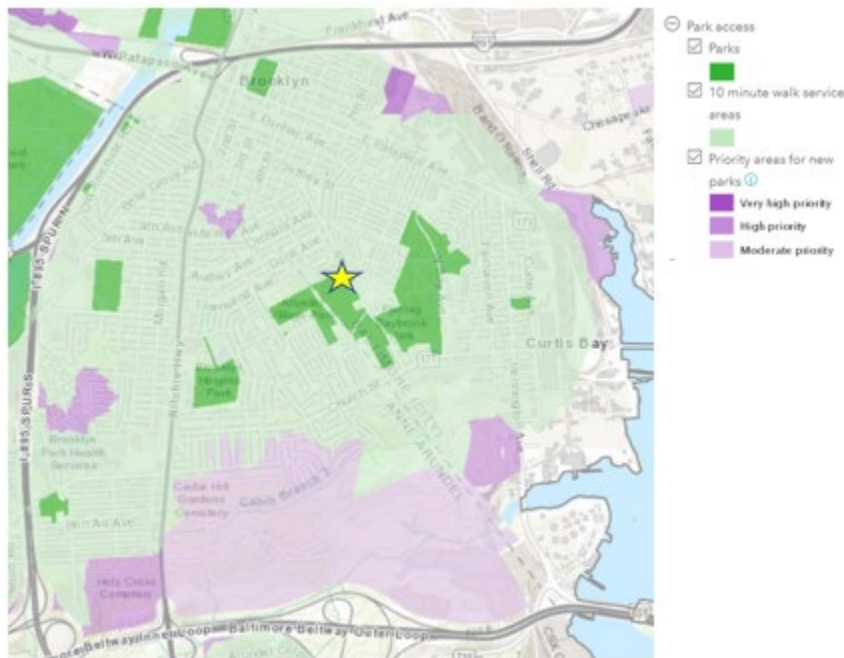


Source: Baltimore City & Anne Arundel County Open Source Data

Table 2: Park Access & Acreage by Neighborhood

	No. of Parks	Park Acreage	% Neighborhood
Brooklyn	2 Parks*	99 Acres	19%
Curtis Bay	2 Parks*	15 Acres	.05%
Brooklyn Park	8 Parks	64.5 Acres	3.5%

Figure 17: ParkServe Park Access



Source: ParkServe, Trust for Public Land

Park Quality

The Natural Environment Scoring Tool (NEST), developed by Researchers as part of the PHENOTYPE Project (Positive Health Effects of the Natural Outdoor Environment in Typical Populations in Different Regions in Europe) can be used to score parks based on seven categories: accessibility, recreation facilities, amenities, aesthetics (natural), aesthetics (non-natural), incivilities, and significant natural features. Depending on the typology of the park (i.e., urban park, formal recreation, green corridor, etc.), the weight of each category corresponds to that specific typology. For example, formal recreation parks are weighted heavily by recreation facilities and amenities, while lakes and forests are weighted heavily on natural aesthetics and significant natural features. Using the Nest Audit tool, a park score calculated:

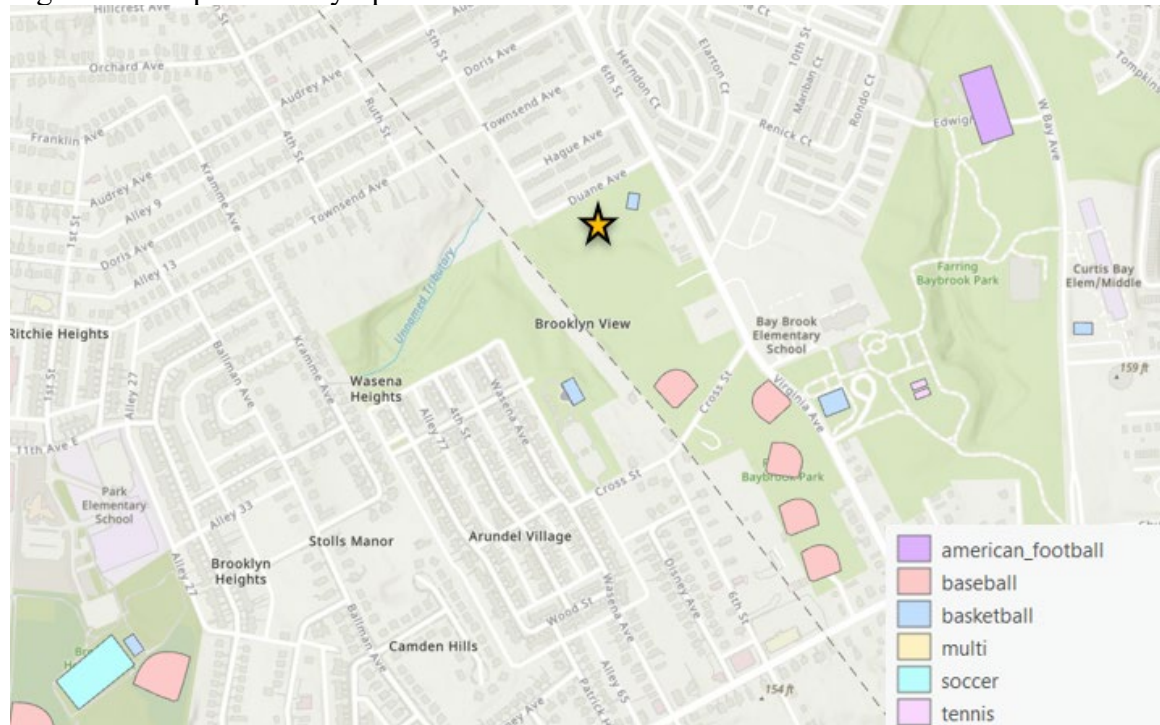
Duane Ave Park
Typology: Urban Park
NEST Score: 22/100
Accessibility: 4/12
Recreation Facilities: 2/22
Amenities: 2/13
Aesthetics (Natural): 4/12
Aesthetics (Non-Natural): 0/20
Incivilities: 4/11
Significant Natural Feature: 6/9

Based on a comparison of other park audits within the community, Duane Ave Park scored the lowest. All categories other than natural aesthetics and significant natural features scored severely poorly. In order to increase the park score, increasing accessibility through sidewalk and paving maintenance is recommended. Adding a few required amenities such as tables, trash cans and a play area for children are small steps that would make a huge impact in increasing the quality of this park. (Please see Appendix 1 for the complete NEST Park Audit).

Parks Recreation Types

There are many different sports fields, courts, and facilities nearby Duane Ave Park. Based on the map, the sports that are most supported by courts or fields include baseball followed by basketball. Soccer, tennis, and football had the least number of facilities in the community. This shows that there are opportunities to include these less supported sports in existing parks.

Figure 18: Map of Nearby Sport Facilities

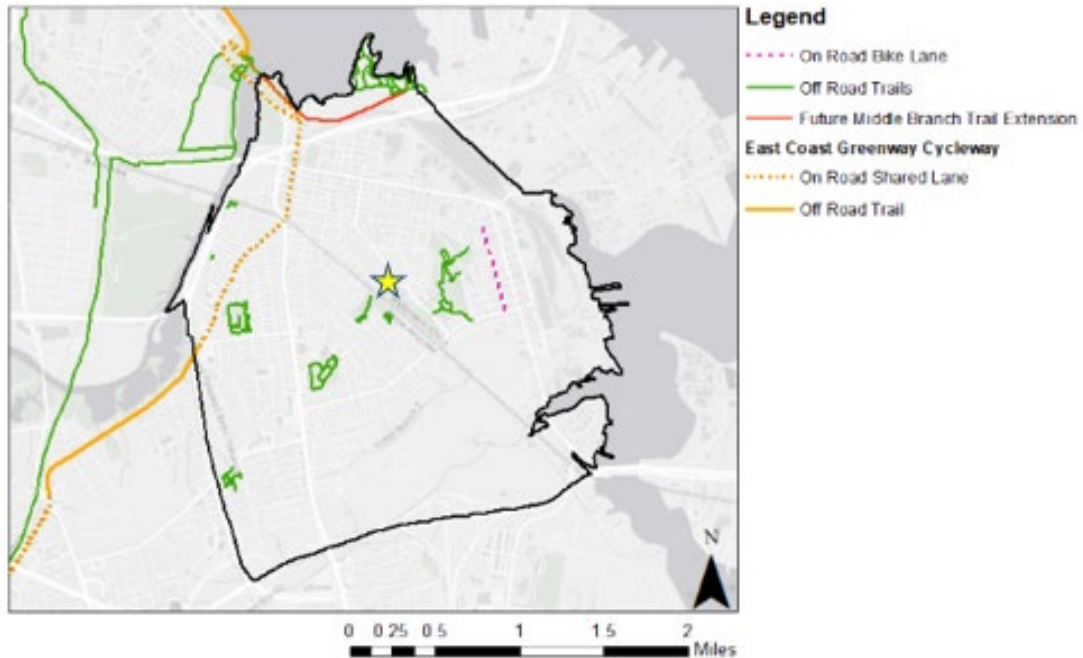


Source: OpenStreetMap

Trails

There are several off road trails located in the parks nearby Duane Ave Park. These parks include Farring-Baybrook park which has an extensive trail system throughout the park and along a shallow creek. The other nearby trail is located in Arundel Village Park which includes a gravel pathway along a stormwater wetland area. Based on this data, Duane Ave Parks is placed between these two trail systems providing an opportunity to create a trail connection.

Figure 19: Map of Greater Baybrook Trails

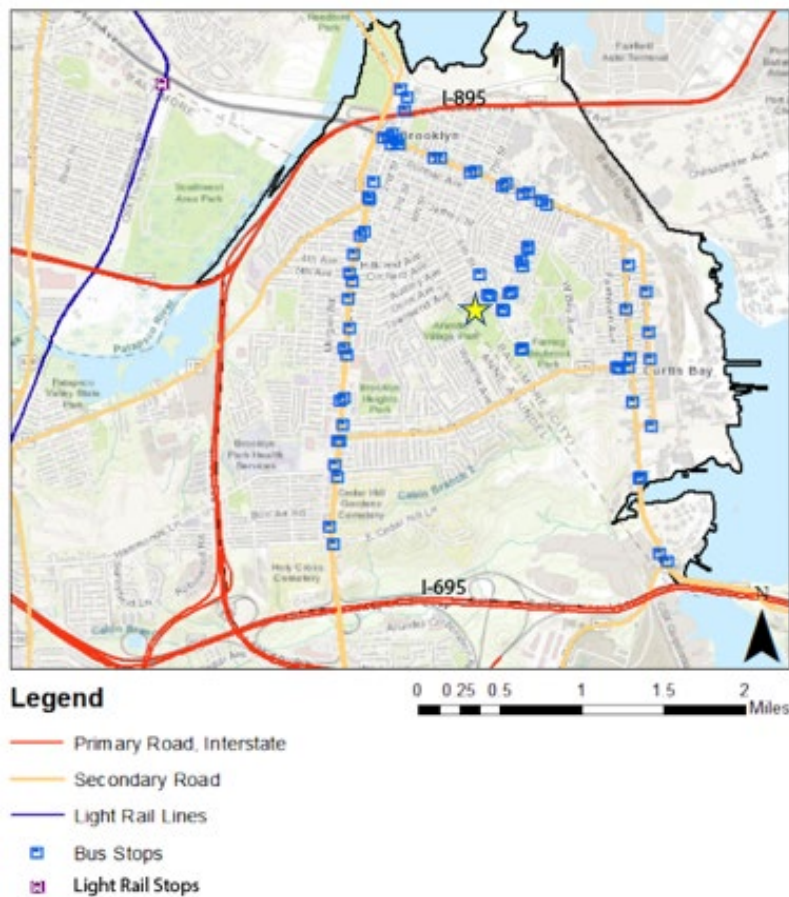


Source: Maryland, Baltimore City, and Anne Arundel County Open Source Data, Open Street Map

Transportation

Bus Stops run along most of the secondary roads in addition to 6th street where Duane Ave Park is located. 6th street is an important connection for the high density residential areas in Brooklyn. Within 300 feet of Duane Ave Park, there are three bus stops, suggesting that this is a heavily traversed area by buses and automobiles and an area with high accessibility for those without personal vehicles.

Figure 20: Map of Greater Baybrook Transportation Routes



Source: Open Street Map, Maryland Open Source Data

Crime

The area around the Duane Ave Park is considered dangerous, with an almost failing grade based on information from crimegrade.org. Using Baltimore city data in the last three year. within a half mile of Duane Ave Park, there have been many violent and nonviolent crimes. The most serious crimes reported included 450 assaults, 61 street level robberies, 13 shootings, 11 rapes, and 7 homicides. On the streets surrounding the park the most common crime is burglary and larceny. Two rapes and one aggravated assault

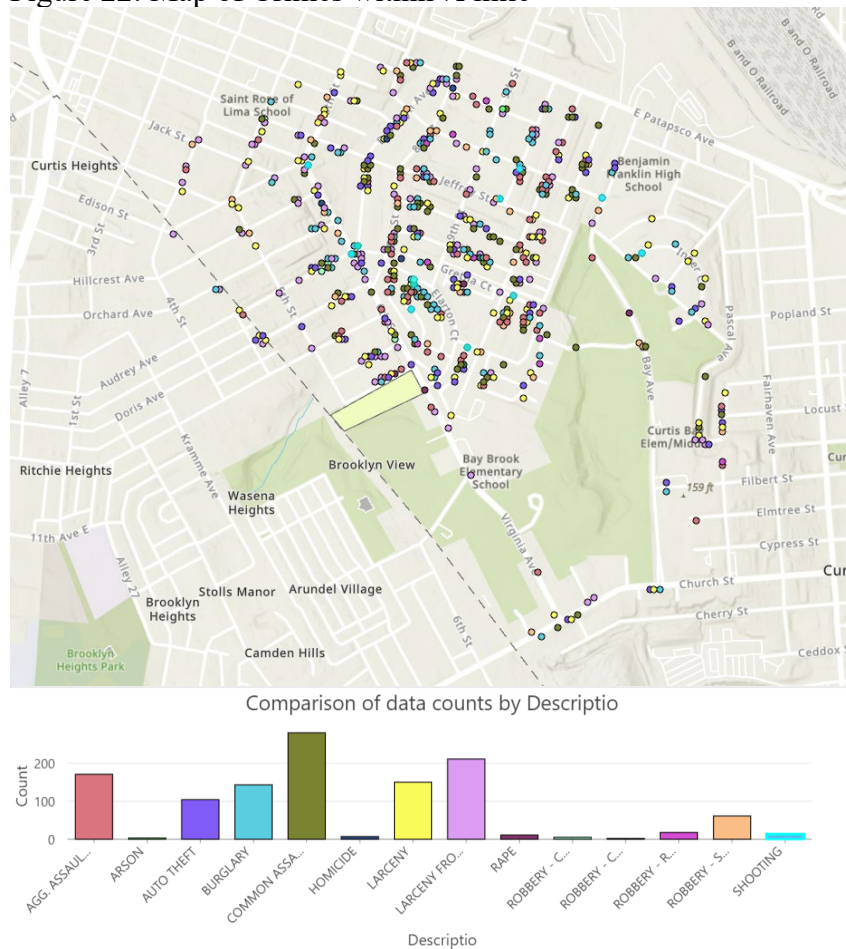
have occurred directly next to the park. This data suggests that residents may not feel safe spending a lot of time outside their homes.

Figure 21: Map of Violent Crime



Source: Crimegrade.org

Figure 22: Map of Crimes within ½ mile



Source: Baltimore City Open Source Data

Nearby Points of Interest

Within a quarter mile of Duane Avenue Park, are the following points of interest and amenities:

Farring-Baybrook Park & Recreation Center

Duane Ave Park is part of Farring-Baybrook Park, the largest public parks in the Greater Baybrook, and connects the neighborhoods of Brooklyn and Curtis Bay. The park provides stunning views of the Baltimore skyline and includes amenities like a new

football field and multiple baseball fields. Farring Baybrook Recreation Center is located within Farring-Baybrook Park. The recreation center was created for people with disabilities to participate in different classes and activities that provide therapy and other physical benefits. The recreation center also includes many other amenities for people of all ages and abilities. The facility includes a public pool, new playgrounds, bocce courts, and new basketball courts. A park trail runs along a shallow creek and connects Baybrook Elementary/Middle School, Curtis Bay Elementary school, and an indoor soccer facility. Park maintenance has declined over the years leading to illegal dumping.

Arundel Village Park

Next to Farring-Baybrook Park and across the border of Baltimore and Anne Arundel County is Arundel Village park. The park includes a quarter mile gravel trail that runs along a man-made pond used as a stormwater management facility. This park provides one of the few places within the Greater Baybrook where residents can view wildlife and connect with the water. On the southeast side, there is a playground, picnic area, paved trails, and basketball courts.

Baybrook Elementary/Middle School

Located one block away from Duane Ave Park along 6th Street is the newly constructed Baybrook Elementary/Middle School. Because of its close location to the neighborhoods in the Greater Baybrook, many of its students walk to school. The only crosswalk on 6th Street is located in front of the school.

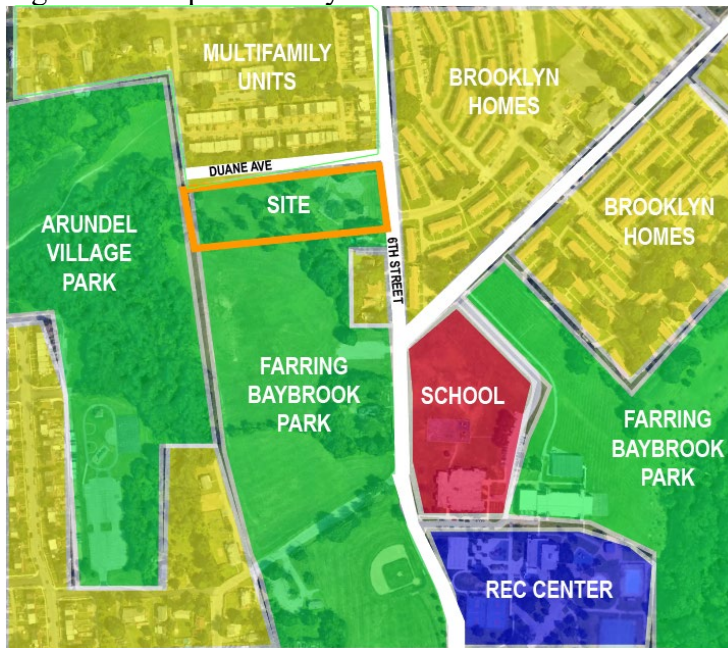
Residential Areas

Brooklyn Homes is an attainable housing community located across 6th Street. This predominantly black or African American housing community has extremely low

canopy coverage and few sightlines into Duane Ave Park. Due to the speeding traffic and lack of stop signs or crosswalk along 6th street, accessibility to Duane Ave Park is a constraint for the neighborhood.

The multifamily units north of Duane Ave Park, across Duane Avenue, make up a high density multicultural neighborhood, primarily LatinX. The houses adjacent to the park have clear sightlines and the neighbors that live here spend time in their front yards. Access to the park is high due to the one way residential road that is just a small barrier of accessibility.

Figure 23: Map of Nearby Points of Interest



Source: Google Earth

Site Specific Inventory

Site Hydrology & Topography

Within the site constraints, there is a 24 foot difference between the high point located in the paved area to the east and the low point in the open lawn at the west side.

Most of the water flows to the northwest where there are two stormwater inlets. Water flows into the street at the northeast side of the park. A stairway at the northeast provides an entrance where there is a steep hill. The majority of elevation change occurs in the middle of the park where there is high canopy coverage.

Figure 24: Map of Site Hydrology and Topography



Source: Google Earth, Baltimore City Open Source Data

Activity Mapping and Behavior Tracing

Activity mapping is a method of observing people's activities and movements in a space (citation here). On six different occasions at different times of the day and different days of the week, I visited Duane Avenue park and observed the movement and activity of people during these times. On most occasions, I did not observe any activity in the park. For the several occasions where park users were observed, their activities and movements were mapped out.

Figure 25: Map of Observed Activities



Behavior Tracing is a term used to describe how the activities of users can be determined by the evidence they leave behind (citation here). Some examples of items left behind included a soccer ball, portable children's soccer goals, beer bottles, soda cans, chip bags, toys, and fireworks. Tire tracks from ATVs and motorbikes were noted throughout the lawn areas at the bottom of the hill. There is a noticeable desire lines that runs north/south on the west edge of the park.

Figure 26 : Photos of Behavior Tracing



Existing Master Plans

Contracted by Baltimore City Recreational and Parks, The Farring-Baybrook Park Master Plan was created by Mahan Rykiel in 2008. The purpose of the plan was to provide the city and surrounding communities with a guide to create incremental improvements over a 15 year period. The key points and recommendations from the Master Plan as they relate to Duane Ave Park are as follows:

- Duane Ave is considered an important neighborhood gateway and emphasis should be placed on maintaining views into and out of the park in addition to providing pedestrian connections to other areas of the park as they become programmed.

- Duane Ave Park is a considered a subzone area of Farring-Baybrook park.
This park has a good relationship with adjacent houses that front onto the park. This location is an attractive gateway area where a mini park could be established.
- Duane Ave park is considered a park entrance a fairing baybrook park
identity signage information signage and seasonal color should be used to enhance this entrance
- ADA accessible pathways at a grade no higher than 5% should be implemented throughout the park to create better connectivity. Pathways through Duane Ave Park were recommended (See figure below).

Figure 27: Farring-Baybrook Recommended Trail Alignment



Source: Mahan Rykiel

Public Art

Incorporating public art into the neighborhood has been an important goal of the Greater Baybrook Alliance. Through an artist selection process, seven different artists were selected that will be hired to create public art in the community using available grant funding. Duane Ave Park was selected as one of these sites. The images below show examples of the work of some of the selected artists.

Figure 28: Image of Ping Pong Art



Source: <http://www.theurbanconga.com/>

Figure 29: Image of Streetscape Art



Source: <https://grahamprojects.com/>

Figure 30: Image of Mural Art

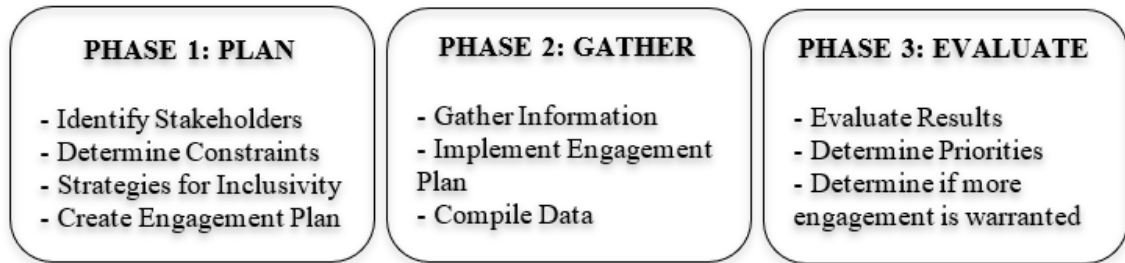


Source: <https://www.ndubisiokoye.com/>

Chapter 4: Stakeholder and Community Engagement

Participation Framework

Using the information and data collected through my literature review, case study, committee guidance and personal intuition, I created a Participatory Design Framework to guide my community engagement process.



Phase 1: Plan

A stakeholder is a person or group of people that have an interest or are impacted by a project. The main stakeholders that will have an impact or be directly impacted by the redesign of the Duane Ave Park include:

Table 3: Duane Ave Park Design Stakeholders

Stakeholder	Information	Engagement Type
Residents	Renters and Homeowners living near Park (i.e, Brooklyn Home, etc.)	Door-to-Door Flyers Online Survey In Person Engagement Event
CASA	LatinX immigrant organization that is active in the community and has expressed interest in the redesign of the park.	Email Notifications of Engagement Events and Online Survey
Action Baybrook	Group of community members that advocated for change in the neighborhood.	Zoom Meeting Email Notifications of Engagement Events and Online Survey
Safe Routes to School	Group of individuals interested in how they can improve the safety of the routes to Baybrook Elementary/Middle School.	Zoom Meeting Email Notifications of Engagement Events and Online Survey

City of Refuge Youth Group	A faith based organization that includes young adults that are interested in contributing the development of the community	Zoom Meeting Email Notifications of Engagement Events and Online Survey
Grow Home	Organization for young adults to help turn empty and ignored green spaces into centers of neighborhood activity, exercise, and everyday use.	Zoom Meeting Email Notifications of Engagement Events and Online Survey
Baybrook Elementary/Middle School	Students, parents and faculty	Email Notifications of Engagement Events and Online Survey
EnviroCollab	The landscape architecture firm contracted to implement the concept design through construction documentation	Requested help in writing survey questions.
CityScape	The Engineering firm contracted to implement the concept design through construction documentation	Requested help in understanding DPW permit requirements. Assisted in writing grant proposal.
Baltimore City Parks & Recreation (BCPR)	The department in charge of signing off on any park design plan and responsible for ongoing maintenance	Followed BCPR Park Design requirements.
Baltimore City Department of Public Works (DPW)	The department responsible for approving permits of any new construction in Baltimore.	Followed DPW stormwater management requirements.

In order to adequately plan for the community engagement activities, I had to first determine the constraints of the process.

Table 4: Community Engagement Constraints

Constraint	Overcoming Constraints
Low Budget	Prioritized Engagement Necessities: - Printing of Event Materials - Providing Drinks & Snacks during events Worked with what we already had: - Outdoor Canopy, Tables, Event Signage

Staffing Shortage	Utilized Greater Baybrook Employees: - 1 flyer distributor, 2 Event Organizer, 1 Spanish Translator Asked Friends & Family for help
Institutional Review Board (IRB)	Confirmed that I did not need to get IRB approval for surveys or speaking with residents during community engagement events.
COVID-19	To be cautious, only outdoor events would be held.
Time & Weather	Daylight hours and weather impacted the planning of events. Canopy was used to make events more comfortable , however, severe rain caused one event to be cancelled.
Outsider of the Community	In order to build trust within the community, employed the help of different community leaders and groups to advertise events and participate in engagement.
Safety	Due to high crime rates in the community, I was accompanied by a Greater Baybrook Alliance employee when passing out flyers or visiting the park at night. Door to door interactions with residents was not a recommended strategy.

In order to encourage inclusivity, I developed different strategies. To ensure that those that would be most impacted by the park were receiving information about park events, door-to-door flyers were the best option. I also employed the help of the principal from Baybrook Elementary/ Middle School, an employee from CASA, and different stakeholder groups to get the word out. In an effort to ensure we could collect feedback from those who could not make it to the in-person event, a link and QR code was included in the flyer that allowed stakeholders to fill out a survey. With a large Spanish speaking populations, I created all flyers, surveys, and event materials in both Spanish and English to ensure inclusivity with non-English speakers. Lastly, for those who work, I planned to have events in the evening and on weekends in the hopes that more stakeholders would have the availability to attend.

Based on the identified stakeholders, constraints, and strategies for inclusivity, I created a Community Engagement Plan:

Table 5: Duane Ave Park Community Engagement Plan

Engagement Type	Engagement Activities	Date	# of Attendees
Activity 1: Previous Engagement Data Collection	Safe Routes to Schools CASA	July-September	N/A
Activity 2: Communication w/ Community Groups	Attended Zoom Meetings or Communicated through Phone Calls and Email: Safe Routes to Schools Action Baybrook Grow Home Brooklyn Homes	July-January	Safe Routes to Schools: 16 Action Baybrook: 18 Grow Home: 2 Brooklyn Homes: 2
Activity 3: One-on-One Interactions	Feedback through non organized discussions with community members	Ongoing	4 neighbors
Activity 4: Engagement Meeting w/ City of Refuge Youth Group	Presentation & Feedback During Youth Group Meeting	Scheduled: 12/22/202 Rescheduled: 1/12/2022 Rescheduled: 1/31/2022 Cancelled due to COVID, Time Constraints, & Lack of Participation	N/A
Community Event 1: Listen & Gather Information at In- Person Event	Create & Distribute Flyers Develop & Present Activity Boards Create Online & In Person Survey	August 12, 2021 6pm-7pm	40 Event Attendees 20 Online Surveys
Community Event 2: Receive Concept Feedback	Create & Distribute Flyers Develop & Present Activity Boards Present Concepts	Scheduled: November 13, 2021 Cancelled due to severe rain event. Cold temperatures, staffing availability, and time constraints prevented rescheduling of Event.	N/A
Community Event 3:	Create & Distribute Flyers Present Final Concept & Request Feedback	Not Scheduled due to time constraints Will utilize	N/A

Present Final Concept		EnviroCollab to conduct final engagement.	
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Phase 2: Gather

The second phase of my participation framework is designed to gather information and data through the implementation of the Community Engagement Plan.

The following information was collected through Activity 1: Previous Engagement Data Collection:

- Safe Routes to School Engagement
 - Majority to students surveyed walk to school
 - 40% of students surveyed do not feel safe traveling their route to school
 - The majority of those surveyed thought that pedestrian walkway art would be the best intervention for traffic calming and providing a safer route for children.
 - A goal of the program is to incorporate art along 6th Street.
 - Community untrusting of police so many crimes go unreported
 - Street a block away from the park is the 3rd highest area for street robberies.
 - Community members feel unsafe at night.
- CASA
 - Large group of CASA members living near park
 - Expressed interest in using Duane Ave Park as a location for community and organization events

- Members are interested in a new park design that incorporates areas for congregating, sitting, and dining.

The following information was collected through Activity 2: Communication with Community Groups:

- Action Baybrook Zoom Meeting
 - Learned about Farring-Baybrook ongoing cleanup efforts
 - Park lighting outages all over Farring-Baybrook Park
 - Group interested in spreading word about Duane Ave Park engagement events.
- Grow Home Zoom Meeting
 - Neighborhood Youth Looking to contribute to development of community
 - Interested in opportunities to make money (selling food/drinks)
 - Want to incorporate flags from different countries where residents are from.
- Safe Routes to Schools Zoom Meeting
 - Consider creating a walking school bus to keep children safe
 - Parents complain that children are being followed by a man after school
 - Like parks that have fences around playgrounds for small children and children with intellectual disabilities.
- Brooklyn Homes email communication

- Received notice that a resident of Brooklyn Homes was interested in creating a community garden within the Brooklyn Homes community, however the housing authority did not allow for this amenity. Utilizing Duane Ave Park as a community garden space was determined to be a good potential solution.
- This resident stopped communications and does not seem to be interested in this amenity at this time.

Activity 3 includes information gathered during unorganized or random one-on-one interactions with the community. These conversations occurred at a variety of times including during flyer distribution and during different visits to the site. The following information was collected through these interactions:

- The park used to be themed “Cowboys and Indians” and included wooden teepees and a carriage for children to use to play. These play areas were removed due to vandalism.
- Trash cans were removed because they were repeatedly being lit on fire.
- There is a homeless man and possibly a female sex worker that lives in a tent in the woods behind the park.
- The park lights have been nonfunctioning for years and neighbors have submitted many maintenance requests to the city but to no avail.
- Every once and awhile neighbors will walk around the park and clean up trash.
- There seems to be a lot of racism between different ethnic groups.

- There is one grill in the nearby Arundel Village Garden Park that gets used frequently by residents.
- Dog owners enjoy using the park and are very responsible about picking up pet waste.
- One resident worried that adding a community garden would increase the amount of rats in the neighborhood.
- A small group of young men use the basketball court.

For Community Event 1, my first priority was to inform stakeholders of when the event was taking place. I created a flyer in both Spanish and English and distributed these flyers door to door with the help of a Greater Baybrook Alliance Employee. Due to printing and time constraints, flyers were distributed to homes within three blocks of the park, approximately 300 residential units.

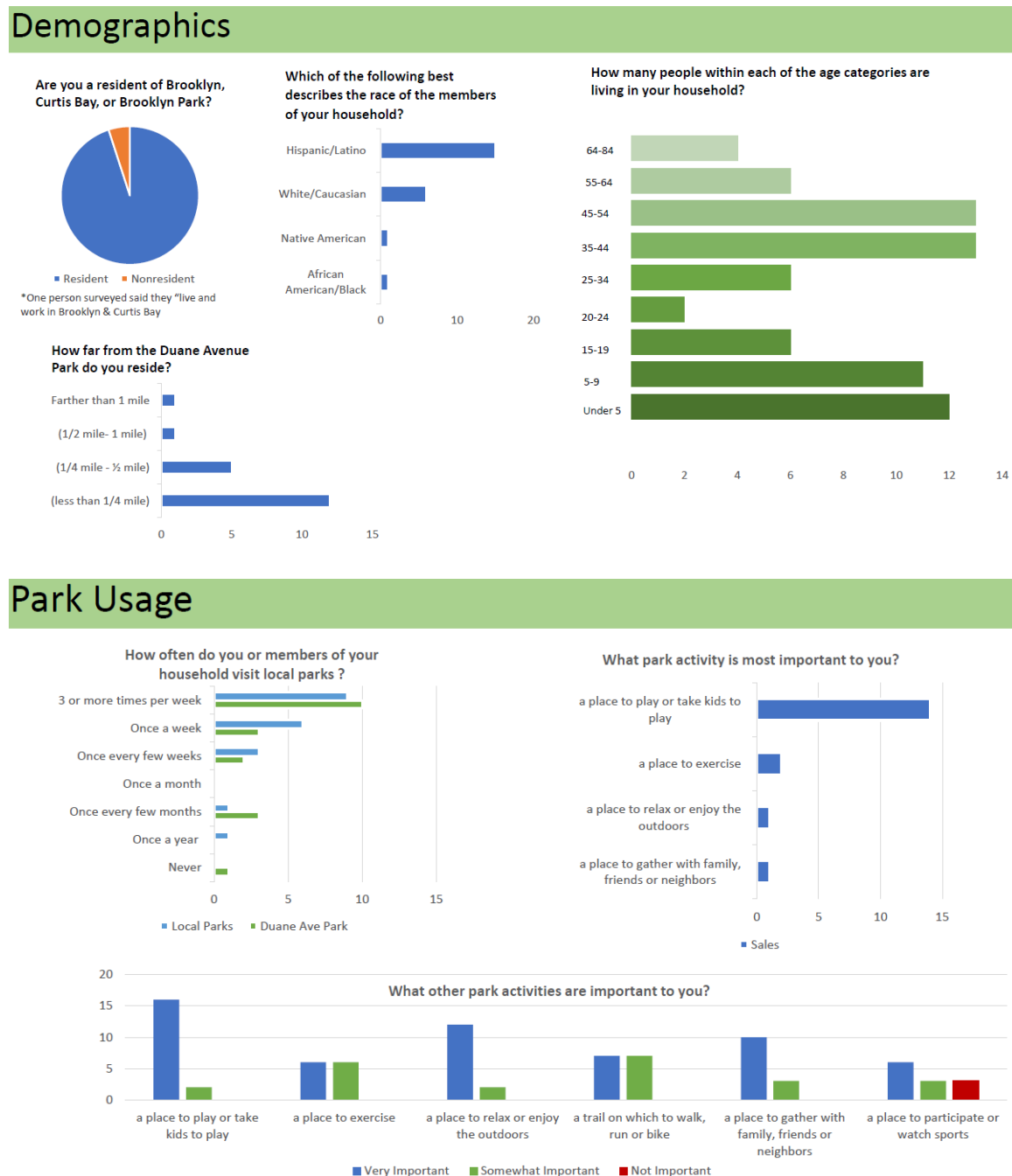
Figure 31: Community Engagement Event 1 Flyer



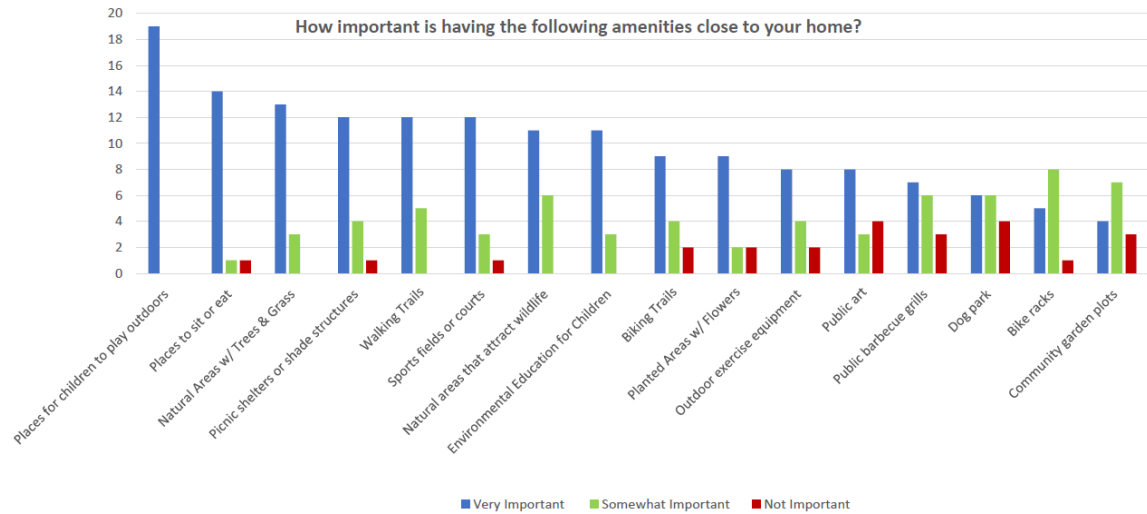
To ensure inclusivity to stakeholders who were unable to make it to the in-person event, a link and QR code was included in the flyer that allowed residents to fill out a survey. These questions were curated to aide in my understanding of who these stakeholders are, their park preferences, and their ideas of how the park can be improved. The question about residency was included to determine if people that did not live in this community were filling out the survey and possibly skewing the results. Questions about race and age can help determine which types of amenities and activities park users may be interested in as well as help determine if the feedback from the survey is representative of the community. Using a combination of selecting your favorite activity and then ranking other activities from most important to least important was used to provide insight on user preferences and ensure that I was identifying priorities. I included questions that were fill in the blank to allow respondents to come up with their own ideas.

The 17 question survey was written in both Spanish and English using Google Forms (See Appendix II). Respondents were able to complete this survey online or at the in-person event. There were twenty people who responded to the survey, nine of which were in English and eleven in Spanish. Results of the survey are as follows:

Figure 32: Results of Community Engagement Survey

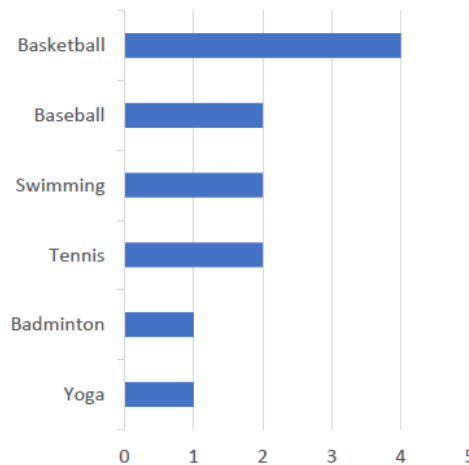


Amenities



Sports & Other Amenities

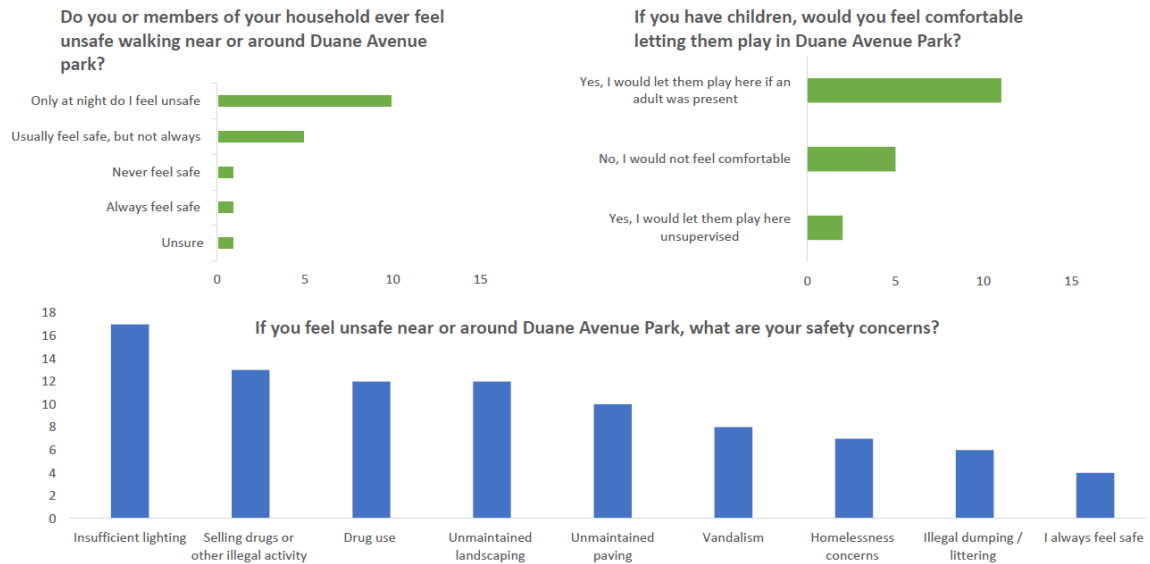
What sports would you be interested in playing close to home?



Are there any other park amenities that are important to you?

- Lighting
- Garbage Cans
- Pool
- Slides
- Water Station
- Art
- Interactive Play
- Playground
- Maintenance
- Security

Safety



The community engagement event was held on August 12, 2021 from 6-7pm.

Two Greater Baybrook Alliance employees and I set up a canopy in Duane Ave Park and we supplied water bottles and popsicles to event attendees. There were approximately 40 attendees, mostly parents and their children. A Spanish translator from the Greater Baybrook was used to encourage inclusive feedback from Spanish speakers and different activity boards were set up around the canopy to involve attendees and encourage constructive feedback. The most popular activity was the voting board that allowed attendees to vote for how they would like to experience the site. Different pictures including a variety of park activities were included on the board and using stickers, respondents were asked to place a sticker on their top three favorite activities that they would like to experience in Duane Ave Park.

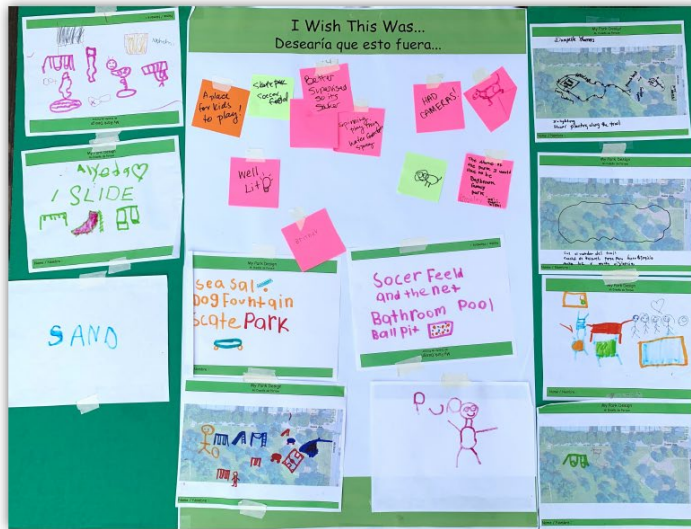
Figure 33: Event 1 Park Experience Voting Board & Results



The two other activity boards included open ended activities that allowed respondents to be creative and come up with their own suggestions for Duane Ave Park. These activities were most popular with children, but a few adults also participated.

Figure 34: Event 1 Open Ended Board & Results

Event Feedback – I Wish This Was...



Community Event Feedback

- Children created drawings that show:
 - Playground equipment
 - Soccer and skateboarding
 - Sand and Ball Pit
 - Bathrooms
 - Dogs
- Attendee created park design that included:
 - Curving pathway
 - Community garde
 - Dog park
 - Park Signage & Public Art

Phase 3: Evaluate

While there were many park suggestions, based on all the information gathered from the variety of different engagement activities and events, the following priorities were identified:

- Safety & Security
- Maintenance
- Areas for Playing
- Areas for Family Gatherings
- Opportunities for Public Art
- Natural Areas with Trees and Flowers

The majority of feedback through discussions with stakeholders was that park safety needed to be improved. They recommended that fixing the lights within the park and adding more surveillance through either security cameras or a more active police presence would make the park feel safer and discourage the negative uses occurring in the park, such as drug use and dealing as well as alcohol consumption. This might also help with some of the other community concerns, such as safe routes to school and the ongoing burglary and crime issues in the neighborhood. Stakeholders brought up the speeding traffic along 6th street that made it difficult to cross the street safely.

Park maintenance was another important topic during the engagement event. Many stakeholders mentioned that they often clean up the trash within the park themselves because they care about keeping their neighborhood clean. They often find needles left from drug users and worry about children coming into contact with drug paraphernalia. They would like the removed trash cans added back into the park, however, they do worry that they will continue to be vandalized. Some folks mentioned that they had submitted lighting and other park maintenance requests over a year ago and there still has been no improvements made.

Due to the high number of children and parents participating in community engagement and the fact that “playing outdoors” was voted as the most popular activity makes creating areas for organized and unorganized play a priority. The drawing activity was almost exclusively used by children to draw out what playground amenities they would like included in the park design. Based on their feedback, slides, swings, and a soccer field were the most popular amenities represented. Feedback during engagement activities suggests that a fenced in play area for small children may be beneficial for

safety concerns. Other survey results mentioned exercising and participating in sports are priorities for residents. Creating spaces for people of all ages to play is a priority for the redesign of the park.

Based on survey results, a place to relax and enjoy the outdoors and a place to gather were ranked pretty closely while amenities like places to sit and eat and picnic shelters were voted as very important features. Family gatherings were voted as the second most popular activity based on the community engagement activity board. According to other engagement conducted, community gathering space was determined as a priority for community organizations, like CASA. Based on all these data points, places for gathering that include tables, chairs, and benches are important in the redesign of the park. While barbecue grills were not ranked as highly as other amenities in the survey, they were a prominent part of the family gathering image that was voted highly during the in-person event.

While enjoying public art was not ranked as important to many survey respondents, it was voted as the 3rd highest experience during the in-person event. This suggests that visual cues can be an important tool during the engagement process, however it is unclear if the public art image used was an inappropriate image because a sculpture at that scale is not a realistic representation considering budget constraints. In addition to the event results, public art has been discussed in other engagement discussions about the safe route to schools program and is a community initiative for the Greater Baybrook Alliance. For these reasons, incorporating public art into Duane Ave Park should be prioritized.

Creating spaces and opportunities to enjoy nature and the outdoors is a priority based on the survey results and engagement event feedback. In the survey, a place to relax and enjoy the outdoors, natural areas with trees and grass, natural areas that attract wildlife, environmental education for children, and planted areas with flowers were ranked highly. While community garden plots were not ranked as high as other amenities they were still rated as important to some community members and has been highlighted as an important amenity that is missing in the neighborhood based on the feedback received from a resident in Brooklyn Homes.

In determining the inclusivity of engagement feedback, it appears that the majority of feedback was received from the community living across from Duane Ave Park and is a high Hispanic demographic. While it is important to create a design that caters to stakeholders that participate in engagement and therefore will be the most likely users of the park, it is still important to create additional opportunities for members of the community who did not yet participate, such as the residents living in Brooklyn Homes across 6th Street, the large African American demographic living near the park, and young adults and older teenagers that have been underrepresented in engagement activities.

Strategies to engage with these underrepresented groups included creating additional engagement events and activities. I have been in contact with the Housing coordinator for Brooklyn Homes who has offered to send out email notifications to residents. I also communicated with a youth group leader at City of Refuge who offered to conduct a survey with the teens in his youth group to determine their interests and priorities for the park. Unfortunately, due to time constraints and coordinators catching

COVID, it was determined that these additional activities and events would not be conducted.

EnviroCollab has been contracted to pick up where my thesis left off and create the construction documents for the implementation of my design. As part of this handoff, it has been suggested that a community engagement event that provides feedback for my design and helps Envirocollab answer any remaining questions would be a suitable solution to bridging any data and engagement gaps that are remaining.

Because the park is located within Farring-Baybrook Park, the name Duane Ave Park was given to determine the location of this subzone. While I had not put too much thought into the renaming of the park, during the in-person event, two children came up to me and told me that they had the thought of the perfect name, Baybrook Family Park. Based on many of the park priorities as well as the location, I agree that Baybrook Family Park this is the perfect name for this future revitalized park.

Missed Engagement Opportunities

Based on the proposed community engagement plan, there were several different community engagement events and activities that did not come to fruition for a variety of reasons.

Engagement Event 2 (Cancelled)

A second in-person engagement event was planned for November 13, 2022 from 12-2pm. Flyers were distributed door-to-door informing residents of the event and included some of the engagement event 1 results on the flyer (See Appendix II for flyer). Several different activity boards were created to help produce constructive feedback for the final concept design (See Appendix II for activity boards). These boards included:

- Concept Design Board – Based on the feedback from Engagement Event 1, two different simple bubble diagrams were created to help residents understand where different spaces (i.e., kids play area, sports area, small and large gathering spaces, etc.) would be located within the park. Questions were included on this board to help residents provide feedback.
- Voting Board – New pictures were included on the 2nd community event voting board to help me determine more park user preferences. They included a variety of different pictures and categories (i.e., types of play equipment, types of public art, planting styles, picnic table and bench styles).
- Open-Ended Board – This board included two open ended questions: “what should we name this park” and “what are we missing”? This board was aimed at allowed guests to come up with their own ideas and feedback.
- Event 1 Survey Results Board – This board included all of the survey results and engagement event 1 activity results so that attendees could better understand user preferences in their neighborhood and what information is being used to create the concept design.

Because of the large number of activity boards for engagement event 2, I decided to ask for help from family members and other landscape architecture students who would help engage event attendees and explain the different activity boards. A grill with hot dogs was set up to provide food for attendees. Thirty minutes before the event was scheduled to begin, a large rainstorm with heavy wind gusts forced us to pack up the entire event. I discussed having a rescheduled engagement event, but due to the cold

weather, COVID outbreaks, shorter days, and issues finding a suitable date, the event was not able to be rescheduled.

Activity 4: Youth Engagement Presentation & Survey (Cancelled)

In order to get feedback from older teenagers and young adults who I had not yet heard from through community engagement, I decided to reach out to the City of Refuge youth group director and he agreed to help me engage. I created a powerpoint presentation that explained what community engagement was and why it was important and then included a series of questions to help determine park preferences of this youth group. Included was a questionnaire sheet that each youth group member could fill out while watching the presentation. The leader had offered to present this powerpoint on December 22, 2021 but then rescheduled two additional times before he stopped responding to my emails. He mentioned that the holidays, himself and a lot of the members catching COVID were reasons why he kept rescheduling (See Appendix III for presentation and survey questions).

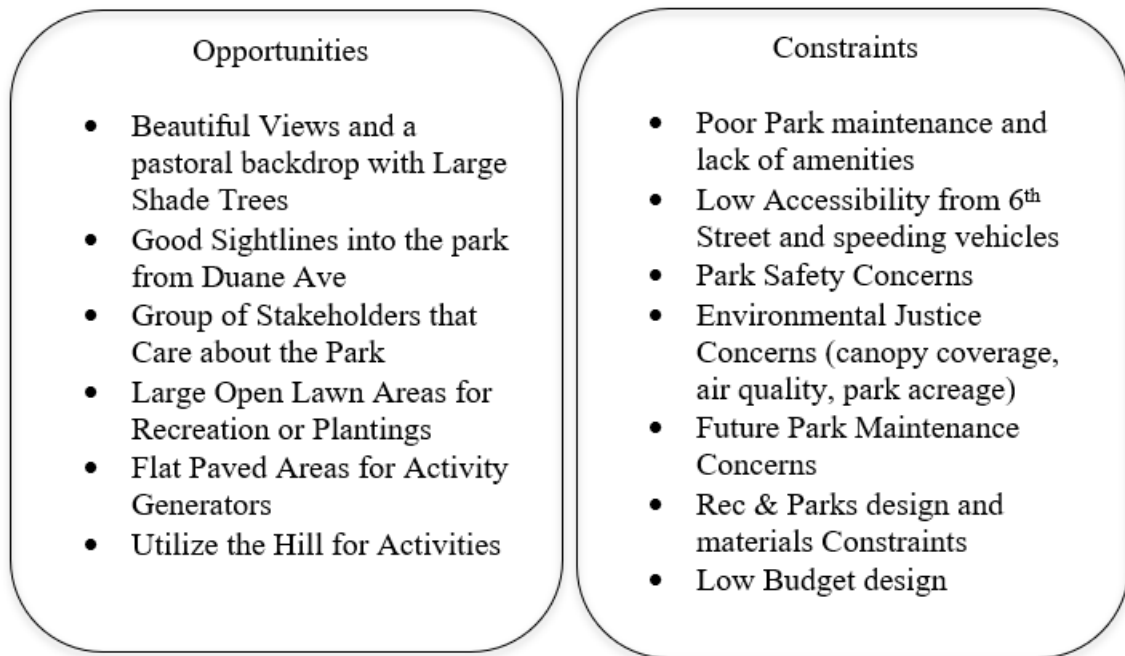
Engagement Event 3 (Cancelled)

I had hoped that there would be a third engagement event where stakeholders could give feedback on the final concept design for the park, but due to the difficulties of last few events and activities as well as time constraints for finishing my thesis, the final event was never scheduled. When speaking with EnviroCollab who will be performing the design development and construction documents for Duane Ave Park, they expressed interest in performing additional community engagement. I hope to be part of this engagement process.

Chapter 5: Analysis & Design Program

Opportunities and Constraints

Using the data collected from the inventory and stakeholder engagement, I identified the following opportunities and constraints of the site:



Design Program

Based on my literature review, case studies, inventory and analysis, and stakeholder and community feedback I created a Design Program for Duane Avenue Park that should include:

- Address safety and park accessibility concerns along 6th Street by incorporating traffic calming devices such as stop signs and crosswalks.
- Design an inviting main park entrance that can be seen from 6th Street.

- Add a fence and low maintenance plantings along 6th street that will act as a buffer between the street and park space.
- Incorporate low maintenance flower plantings that attract pollinators and add beauty to the park.
- Add signage to the park that includes Park name, park rules and park hours, and other educational information.
- Locate a sunny area that can be used as a future community garden space if interest for the amenity grows.
- Locate opportunities where local art can be included within the park.
- Include a park lighting plan.
- Make play spaces a park priority.
- Create intergenerational opportunities for play and entertainment.
- Increase canopy coverage and ensure play areas are shaded.
- Incorporate a fenced playground for small children to play safely.
- Add additional seating to the park including benches and picnic tables.
- Add trash cans to all park entrances.
- Incorporate nature play areas in addition to traditional play equipment like swings and slides.
- Create an inviting space where families can gather and entertain outdoors that includes picnic tables and grills.
- Utilize the hill in a creative way that makes use of the views and increases accessibility to the lower and upper level areas of the park.

- Determine the right size and location of a kid's soccer field in the lower open space area of the park.
- Design ADA accessible pathways that connect through the park and to other nearby park paths (i.e. Arundel Village Park and Farring-Baybrook Park).
- Increase accessibility by adding a sidewalk that runs the length of the park along Duane Ave.
- Determine ways that safety and perception of safety in and around the park could be increased.
- Determine ways to increase positive uses and deter negative activities within the park.
- Design with stormwater management permit requirements in mind.
- Design with park maintenance and Baltimore Recreation and Parks requirements in mind.

Chapter 6: Results

Design Goals

To address these opportunities and constraints I created the following design goals for the Duane Ave Park redesign:

Duane Ave Park Design Goals

Goal 1: Improve Perception of Safety & Discourage Negative Uses

Goal 2: Design an Adventure Park that Encourages Play and Connections
with Nature

Goal 3: Create Spaces for Gathering and other Activity Generators

Goal 4: Incorporate Public Art

Site Plan & Design Thinking

Based on my literature review, case studies, inventory and analysis, and stakeholder and community feedback, I created a site plan for Duane Ave Park that addresses my design goals.

Figure 35: Duane Ave Park Site Plan



Figure 36: Duane Ave Park Section



Goal 1: Improve Perception of Safety & Discourage Negative Uses

Through the inventory of crime data as well as the strong consensus from stakeholders during the community engagement process, safety is a huge concern that effects the everyday life of the residents that live around Duane Avenue Park. Based on my literature review, it is difficult to increase the utilization of a park if the perception of safety is low. Improving the perception of safety is the first goal, because without it, the design of this site will fail. Through a combination of strategies I learned during my literature review as well as the addition of new amenities, I hope to discourage negative uses while decreasing perceived threats.

Figure 37: Site Plan Through CPTED Lens



Using the following CPTED principles, I will do the following to increase the perception of safety and discourage negative uses:

1. Allow for clear sightlines

By locating main spaces near Duane Ave, there are more sightlines and eyes from the houses facing the park. Tall trees or short dwarf plantings will provide natural elements without obstructing views. Utilizing short fencing and seat walls will also ensure views are not obstructed.

2. Provide adequate lighting

Through a combination of fixing existing lighting as well as incorporating new solar lights, lighting in this park will be dramatically improved.

Because park maintenance is an ongoing issue, solar lights provide a good solution as they can be easily replaced.

Figure 38: Existing Lighting Condition Figure 39: Proposed Solar Lights



Source: Original Photo



Source: Sokoyo Solar Lights

3. Minimize concealed and isolated routes

There are currently 4 existing paved pathways into Duane Ave Park. By eliminating entrances that are less used or are in isolated areas, it will be easier to see who enters the park and discourage those entering for negative uses. Any designed pathways will be configured through non-

isolated areas and will be ADA accessible with not more than a 5% slope.

The extension of the existing sidewalk along Duane Ave all the way to the end of the site will also create less isolated routes and increase accessibility to the park.

Figure 40: Map of New, Existing, and Removed Park Entrances



4. Avoid entrapment

While entrances may be eliminated, new pathways will provide additional accessibility to the site. Main spaces will be located in areas with high accessibility to avoid entrapment.

5. Reduce isolation

By clustering all activity spaces together, this avoids areas of isolation. Main spaces like childrens play areas, seating areas, bench seating, and entertainments areas are all located in close proximity to one another and offer clear sightlines between spaces. This can deter users from hiding in isolated areas and participating in negative activities.

6. Promote land use mix

Using a variety of space types (i.e., field, children's areas, teen areas, family gathering areas, etc.) this will encourage use from a variety of users.

Figure 41: Map of Proposed Land Use by Activity Type



7. Use of activity generators

The existing park is devoid of any activity generators. The new design with feature areas for playing soccer and ping pong, places for dining and grilling, and equipment for playing. These intergenerational activities will increase positive uses within the park, which will increase the number of users in the park and decrease the number of people engaging in negative activities.

8. Create a sense of ownership through maintenance and management

By using territoriality techniques, spaces will be located close to the homes across Duane Ave that have clear sightlines. The people living in these homes take pride in this park and have already developed a sense of ownership. By incorporating other amenities that will residents will take pride in, this sense of ownership among residents will likely increase. By introducing trash cans, litter will be decrease, improving overall satisfaction and sense of ownership. Community events and park programming will also help with this CPTED principle.

9. Provide signs and information

Park signage that includes the park name, Park rules and hours, and well as environmental education will be utilized in this site.

10. Improve overall design of the built environment

Through the redesign and implementation of this park, the overall design of the built environment will be drastically improved. Although some budget friendly options will need to be utilized, care and detail will be given to creatively incorporating elements that promote placemaking such a public art.

Other strategies for improving safety that will be incorporated in this goal include adding crosswalks, and stop signs at the intersection of Duane Avenue and 6th Street. Colorful street art crosswalks will be used to attract park users while encouraging safety, especially for children. Connecting to the crosswalk along 6th Street will be the main

entrance to the park which will increase accessibility for those living across 6th Street while also creating an attractive entrance that will grab the attention of people driving by.

A low fence with low maintenance plantings will provide an attractive buffer for the park and give park users a sense of distance from nearby traffic and people walking by while still providing clear sightlines in and out of the park. In order to discourage motorbikes, tree plantings will be incorporated along the south hill to create a buffer and make it more difficult to ride into the park.

Goal 2: Design an Adventure Park that Encourages Play and Connections with Nature

Because spaces for children to play was a main priority for stakeholders, the main concept design is an adventure park that incorporates play areas for all ages. For young children, a fenced traditional playground including slides, monkey bars, and areas for climbing will be one play area of the park. Benches will be used to allow parents to watch their kids while also creating a buffer between the pathway and the steep hill at the north of the side along Duane Ave. The gate to the playground will be positioned where the benches are located to increase safety. A nature playspace with swings, large climbing logs, forts, and other natural elements will encourage connections with nature. Grass mounds will be used to create an enclosure around the play areas while also creating new opportunities for play.

For older children and adults, an area for ping pong with seat walls for climbing or sitting will provide opportunities for socializing. A soccer field will be created in the open lawn at the bottom of the hill where children are already currently playing soccer. An ADA accessible pathway will encourage physical fitness and connect the upper and

lower areas of the park. At the main entrance of the park, a pollinator garden will create a beautiful and inviting atmosphere while attracting insects and wildlife and will inform park users of the benefits of pollinator gardens through educational signage.

Figure 42: Visualization of Duane Ave Park Play Areas



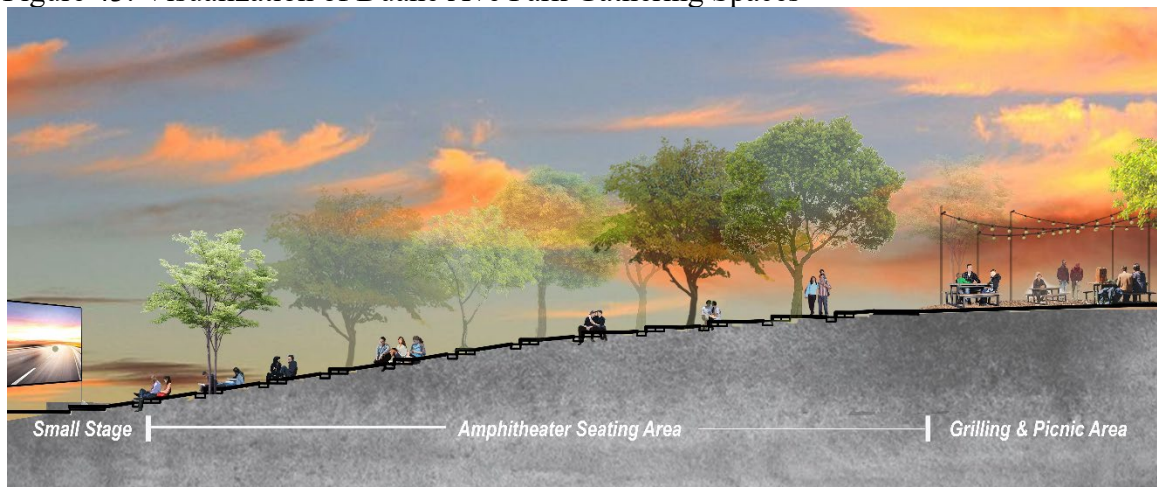
Goal 3: Create Spaces for Gathering and other Activity Generators

Based on engagement feedback, residents are interested in gathering with friends and family and having spaces where they can gather for community events. The main gathering space is a dining area with picnic tables, grills, and hanging lights that looks out to beautiful views of the park. Other than the ADA accessible tables, picnic tables will be movable to encourage social interactions and create opportunities for gatherings of different sizes. Grilling is an activity generator that will increase the amount of time people stay at the park and trash can will be positioned at every entrance of the park so that litter is kept to a minimum while still providing easy access for trash collection.

In order to utilize the hill and beautiful views, steps will provide easier access between the different areas of the park and additional seating areas under large shade trees. Residents can engage in different activities along these steps such as watching children play soccer in the field below, socializing with friends, or attending events like an outdoor movie night or musical concert. A paved area at the bottom of the steps provides a staging area for events. Seat walls in the ping pong area will also provide additional opportunities for gathering, especially among the younger generation.

The flat open lawn space along 6th Street can be utilized for a variety activities. Because some of the residents have expressed interest and because this location gets full sun, this space would work perfectly for a future community garden. Keeping this space open gives the community the opportunity to decide how they would like to utilize the space. This area could also be used for other activities like a small local farmers market, or another tented even. It will be important that there are a few residents that decide to take ownership of this space and help organize these activities.

Figure 43: Visualization of Duane Ave Park Gathering Spaces



Goal 4: Incorporate Public Art

To satisfy the community's appetite for public art, I decided to create a design that uses a variety of artistic mediums, but that still speak a cohesive language between the different pieces. If you are walking to the park, a colorful painted crosswalk guides you across 6th Street or Duane Ave. When you walk into the main entrance to the park, there is a short, curving cement wall on both sides of the entrance path that leads you in with an inviting and colorful mural, creating a gateway into the park. Shortly after entering the park, this pathway takes you to a tall colorful sculpture that acts as a beacon and wayfinding device. As you enter the first gathering area, there is a colorful ping pong table and a long seat wall with another colorful mural. These art pieces will provide creative placemaking for the park, create opportunities for socializing, and provide a welcoming space that residents will take pride in and want to protect and maintain.

Figure 44: Visualization of Duane Ave Park Entrance & Public Art



Permit Requirements

In order for the proposed site design to be implemented. Permits must be obtained from both Baltimore City Recreation and Parks (BCRP) as well as Baltimore City Department of Public Works (DPW). Baltimore City owns Duane Avenue Park and BCRP is responsible for maintaining the park. BCRP has strict standards that must be followed in order to get the approval to redesign a public parks. The following BCRP standards included in the proposed site plan:

- Benches should be backless or backed plastic planks with cedar color and black metal, and a length of 6 feet. Benches should be adjacent to a paved accessible path, anchored to a concrete pad and include room next to bench for a wheel chair at a minimum of 10% of the locations where benches are offered.

- Trash cans should be located adjacent to an accessible sidewalk, and near to the road for ease of access by a load packer. Trash cans should be anchored to a concrete pad. Recycling bins will not be collected/
- Pavement within the park should be asphalt or poured concrete only.
- Park signage should be 5' tall by approximately 5' wide, the sign should be vinyl with a dark green finish and black wood posts.
- No half courts or single basketball courts will be permitted in any new designs because data collected by Rec & Parks shows that these facilities are utilized less than parks with at least two courts.

Baltimore City requires that land disturbance activities must have stormwater management plans approved by the DPW in accordance with the 2000 Maryland Stormwater Design Manual. In order to determine the minimum design requirements for stormwater management, a developer must follow these steps:

1. Determine the Limit of Disturbance (LOD), which includes all areas of earth disturbance or demolition as well as areas for staging during construction for the proposed design.
2. Calculate the existing impervious area. If the existing impervious is more than 40% of the area, you will be re-development.
3. Determine the development type. If the existing pavement is less than 40% of the LOD, it is new development, and you must provide stormwater management to the maximum extent practicable. If more than 40% of the existing impervious is going to be removed as part of the proposed design, this is considered redevelopment and no stormwater management is required.

4. Calculate the minimum requirements for stormwater management using Environmental Site Design (ESD) calculations if the development type is considered new development.

Site Plan Calculations

Based on these instructions from DPW, the existing conditions and proposed site plan were used to determine the following calculations:

Table 6: Site Plan Calculations

Area of Disturbance	34,220 sq ft
Existing Impervious	22,110 sq ft
Proposed Impervious	10.232 sq ft
Development Type	Redevelopment
% Impervious Decrease	53%

Based on discussions with committee members and stakeholders who have experience working with BCRP, it was determined that stormwater management facilities within the site should be kept to a minimum because BCRP has had difficulties in the past keeping up with these high maintenance facilities. In addition, the cost of these facilities may be higher because all raingardens and bioretention areas include an outflow that connects to an existing storm drain.

According to DPW standards, if the project is considered “redevelopment” either 50% of impervious surfaces must be removed or the site must be designed to treat .5 inches of a rain event, or the combination of the two. Due to the constraints of BCRP, it was determined that at least 50% of impervious would be removed. By using paving substitutes like engineered wood fiber (EWF) and grasscrete, and only using paving for ADA accessible pathways, this strategy significantly reduced the use of impervious

surfaces in the proposed site plan. Based on these calculations, the proposed plan will pass permit requirements while staying relatively low maintenance.

Grant Process

The nonprofit that is implementing the Duane Ave Park design will need to receive grants in order to fund the project. A grant is the transfer of money from a federal, state, or local government for a beneficial project. In many instances, foundations or larger non-profits will supply grant funding to individuals or smaller nonprofits. In this case, one of the potential funding sources is the Chesapeake Bay Trust, watershed assistance grant (WAG). A WAG supports watershed restoration project designs and permits for watershed planning and programmatic development with a goal of improving water quality in the Chesapeake Bay (Chesapeake Bay Trust, 2022). This grant will provide the funding needed to hire a landscape architect to create construction documents. I assisted the nonprofit in writing the watershed grant by creating a preliminary concept design and working with an engineer at Cityscape to perform stormwater benefit calculations. For additional information, see the Appendix IV for the results section for the preliminary site design.

Phased Site Plan

Because all funding must come through the grant process, implementation of this

design may take several years. Based on discussions with the Greater Baybrook Alliance, a phased approach would allow them to start implementation sooner while they are waiting for complete funding of the project. In the first phase, which would be the most expensive, the main gathering area at the top of the hill and the soccer field at the bottom of the hill would be constructed. This would allow residents and stakeholders to start using the amenities of the park right away.

In a separate phase that would occur at the same time as phase 1, a Department of Transportation (DOT) request to extend the existing sidewalk along Duane Ave would be necessary in order to provide ADA accessibility to the areas at the bottom of the hill. The hope is that this would not require any grant funding and would be a part of general maintenance from DOT.

In the second phase the sloped pathway connecting the upper and lower areas of the park would be included. This ADA accessible pathway would make the park accessible within the park so residents with mobilities issues would not need to travel to the sidewalk in order experience the different areas of the park.

The third phase includes a winding pathway that provides access through the open lawn areas and nearby the soccer field and connects to Arundel Village Park. Considering Arundel Village Park is located withing Anne Arundel County, a separate permit from Arundel County Recreation and Parks would be required.

In the final phase of future pathway, which is not currently included in the proposed impervious calculation could be constructed that would connect Baybrook Family Park to other amenities and areas of Farring-Baybrook Park. There is currently a desire line that already runs along this proposed pathway.

Figure 45: Duane Ave Park Phased Site Plan



Current Accomplishments

Within eight months, this thesis project had had many successes and achievements. Based on feedback from the Greater Baybrook Alliance, it has been pivotal in providing assistance for them. In what would have taken the nonprofit years to complete, I was able to complete in months. Through grant proposals that I have helped with, we have raised over \$73,000 of grant funding toward design implementation. Through community engagement, I have connected with over 75 stakeholders through surveys, engagement events, phone & zoom calls, one-on-one interactions. Within the last few months, over 30 Trees have been planted to help prevent illegal motorbikes from entering the park. Lastly, over 15 maintenance requests have been submitted to Baltimore City have ben escalated to the Balitmore City Council. These requests include park

lighting maintenance, illegal dumping complaints, and requests to fix broken and dangerous tree limbs.

Future Impacts

In the future, this thesis project will have helped implement a park that could be a catalyst for change in this community and lead to other similar projects that benefit the community. The future benefits include:

- Increased Tree canopy
- Increased Park Acreage that can be used by community
- Improved Utilization & Perception of Safety
- Discouraging Negative Activities
- Providing a place for children to play & families to gather
- Creating a space for outdoor events and activities
- Teaching children to play soccer and participate in physical fitness
- Helping neighbors form connections, even outside their ethnic group
- Creating better accessibility to the park
- Ensuring Safer Routes to School

This project creates a design that the community asked for through listening to the experts of the community rather a top-down approach to community development.

Because the community has been part of this design process, the hope is that this park will be a reflection of the people who live there and that will lead residents to take pride in the space and protect it.

Chapter 7: Discussion

Implications

This study and site design is significant because it goes beyond a theoretical approach and will lead to implementation of a newly designed and built park for residents of the Brooklyn neighborhood. Although this is a design thesis, the research and process that I engage in can still be used by other designers and researchers as a case study and adds to the literature of participatory design tools and methods. The significance that is most important is that this new park could improve the lives of surrounding residents and make the community a better place to live by giving people more access to quality green space. I hope that this thesis can serve as a role model for other graduate thesis projects and illustrate how our projects can be used to catalyze change in communities of need.

Recommendations

Based on the successes and failures of the research process, I determined some lessons learned that can be utilized by other researchers exploring similar topics.

- The community engagement process is challenging and is likely going to take more time than anticipated due to scheduling conflicts, weather, and other unforeseen circumstances. Planning for a separate rain date for all outdoor events and avoiding outdoor events during colder months is recommended.
- An appropriate amount of funding should be set aside for engagement activities and marketing of the events.

- Asking for email addresses and contact information during engagement is important so that you can keep stakeholders informed on the progress of the project.
- Set aside enough time so that engagement events are close together because people can lose interest quickly.
- Understanding the limitations and budget prior to the community engagement process is important because the specific visuals and precedent images may give stakeholders false hope. Providing alternatives that fit the budget and are realistic to the site are the most appropriate way to gauge preferences.
- While most of the feedback received was positive, it is important to prepare yourself for negative feedback and criticism and use it as an opportunity to learn from rather than take it personally.
- Understanding the scope of your work on the project and creating boundaries for yourself on how invested you want to get with stakeholders can be a useful strategy so that you do not become the contact person for unrelated problems in the community.

Limitations

While there were many successes within this thesis project, I also noted many limitations in my research and results that need to be discussed. Budget constraints did not allow for adequate advertising of the event. Safety and crime concerns, primarily in the Brooklyn homes area made passing out flyers door-to-door hazardous. This may have been one of the causes of the low turnout of African Americans living in the Brooklyn

Homes community. If there had been additional community engagement events, I would have utilized the housing development manager to increase event awareness to this community through email notifications and event signage.

There was also a lack of feedback from teens and young people that could have been addressed through the youth group engagement event that was cancelled. This would have given me a better understanding of how young people would like to utilize the space and what activities they would be interested in taking part in.

With only one community engagement event, feedback was very limited to general design ideas and uses. Detailed feedback would have given me insight into preferences of park programming, type and style of public art, playground equipment, planting styles, and types of materials of benches and picnic tables.

Getting buy-in from the community is important because that is a large piece of community engagement process. With limited feedback from stakeholders, this is not a successful participatory design project. Feedback on concepts and the final site plan are vital elements that are missing from this thesis project. When this design moves into the Design Development phase and EnviroCollab LLC take over as the landscape architect for this project, I plan to be involved in this transition. Prior to the completion of the final site plan and construction documentation, I will recommend to EnviroCollab that they hold at least one more community engagement event where my concept site plan can be displayed, any remaining questions related to stakeholder preferences can be addressed, and user groups that were not included in the past are prioritized.

Chapter 8: Conclusion

The goal of this thesis project was to explore how to redesign Duane Avenue Park, with the new name of Brooklyn Family Park, using a participatory design approach and determine how this design can create positive benefits for the community, improve environmental justice, and increase the perception of safety.

By researching existing theories and literature, performing inventory and analysis, and conducting stakeholder and community engagement, I created a proposed design for Duane Ave Park with the goal of improving the perception of safety and discouraging negative uses, encouraging play and connections with nature, creating opportunities for gathering and other activities, and exposing residents to public art.

These design goals address my thesis question because it prioritizes stakeholder needs and provides a wide range of benefits to the community. These benefits include encouraging physical fitness with the addition of the soccer field, walking paths, and play areas. The design promoted social cohesion through the many gathering spaces that provide opportunities for social interactions. Some psychological benefits resulting from the design may include increased access to nature that promotes stress reduction, attention restoration, and increased cognitive function.

This design also improves environmental justice for the community. The design is an example of distributive environmental justice because funds are being used to improve the park conditions in an underserved, minority neighborhood that does not have access to quality public parks. This provides the community with additional resources they were lacking including an increase in trees and tree canopy that can improve air quality and reduce urban heat island effect. The design decreases impervious surfaces which can

improve water quality and decrease flash flooding. It also provides the neighborhood with more amenities such as playgrounds for children, gathering spaces for events, and basic park necessities like picnic tables and adequate park lighting.

Procedural environmental justice is a result of this design because of the community engagement used during the participatory design process of Duane Ave Park. Surveys, in-person events, one-on-one discussions, and community groups meetings were all tools that helped elevate the voices of the community. Additional community engagement events and attention to community groups that were not included in the engagement process will be an important step in providing greater procedural justice.

While this design is not financially compensating members of the community who have been impacted by environmental injustices, this design is still one small step in corrective justice because it is correcting the issue of access to quality parks.

The proposed design may also improve safety by providing safer access to the park through new sidewalks, crosswalks and stop signs that will help with traffic calming. It may increase the perception of safety by increasing park users engaging in positive activities. By utilizing CPTED principles, the park will increase visibility and provide a space that residents can be proud of and want to protect.

Appendices

Appendix I. NEST Audit Tool for Duane Avenue Park

The NEST scoring procedure is as follows:

- 1) Sum the individual items and calculate the Cumulative Score
- 2) Calculate Domain Scores
- 3) Calculate the Weighted Score based on the Park Typology.

Table 7: Park Typology Weights

	Accessibility	Recreation facilities	Amenities	Aesthetics (natural)	Aesthetics (non-natural)	Incivilities	Significant natural feature	Total
Urban park	0.12	0.22	0.13	0.12	0.20	0.11	0.09	1.00
Semi-natural/natural	0.16	0.06	0.08	0.17	0.21	0.16	0.15	1.00
Formal recreation	0.12	0.33	0.19	0.14	0.02	0.13	0.06	1.00
Civic space	0.13	0.20	0.15	0.12	0.16	0.15	0.09	1.00
Functional/amenity	0.14	0.12	0.12	0.15	0.24	0.17	0.06	1.00
Natural/green corridor	0.19	0.12	0.14	0.15	0.03	0.21	0.14	1.00
Woodlands/forest	0.15	0.07	0.10	0.18	0.14	0.16	0.21	1.00
Country park	0.10	0.13	0.13	0.14	0.20	0.11	0.18	1.00
Lake/reservoir/pond	0.15	0.00	0.25	0.24	0.00	0.17	0.20	1.00
River/stream/canal (linear)	0.21	0.03	0.11	0.17	0.18	0.14	0.16	1.00
Marine/coastal	0.13	0.19	0.17	0.05	0.13	0.12	0.20	1.00

Source: NEST

Table 8: Duane Ave Park NEST Scoring

	Accessibility	Recreation facilities	Amenities	Aesthetics (natural)	Aesthetics (non-natural)	Incivilities	Significant natural feature	Total
Total Possible Score	9	36	24	9	3	18	3	
Cumulative Score	3	3	3	3	0	6	2	
Domain Score	33.33	8.33	12.50	33.33	0.00	33.33	66.67	
Weighted Score Urban park	4.10	1.83	1.62	4.10	0.00	3.81	6.31	21.76

Source: NEST

Table 9: NEST for Duane Ave Park

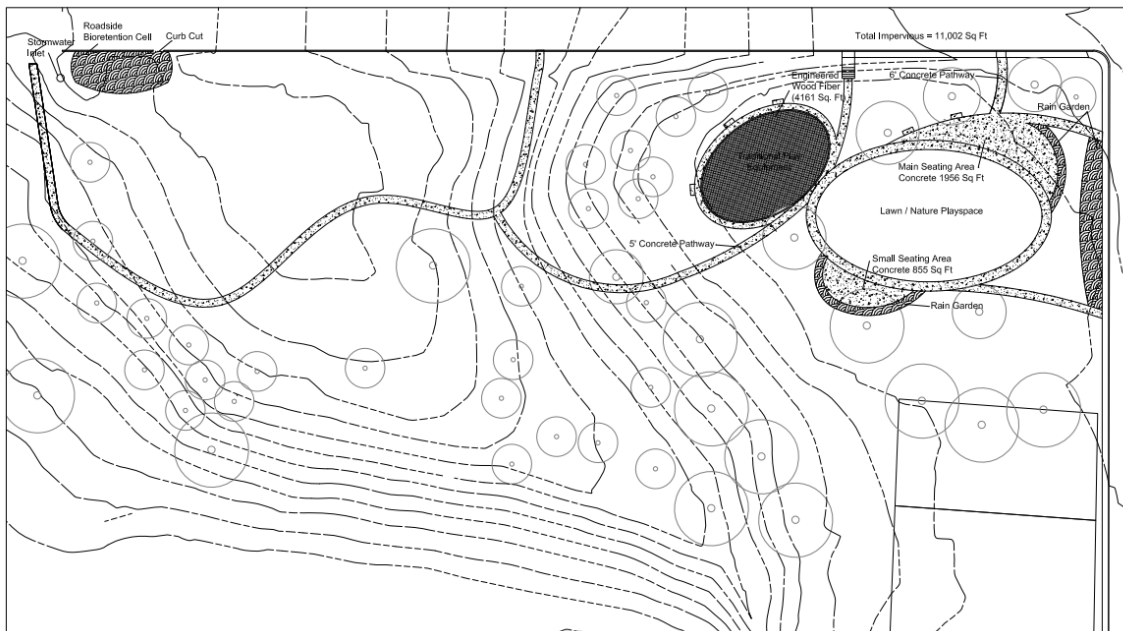
b. Environment Scoring Tool (NEST) (FINAL 27 ITEMS)								Minimum score 0-100	
WEATHER		Bad		Reasonable		Good			1
NAME/ID OF GREEN SPACE: Duane Avenue Park									
ADDRESS				DATE					
START TIME:				FINISH:					
TYP	TYPOLOGY	Urban park 1	Semi-natural/natural 2	Formal recreation 3	Civic space 4	Functional/amenity 5	Natural/green corridor 6	2	
		Woodland/forest 7	Countryside 8	Lake/reservoir/pond 9	River/stream/canal (linear) 10	Marina/coastal 11			
Comments: _____									
Access									3
			1-3	4-7	8 or more				
AC1	How many entrance points are there? (circle one)		1	2	3			4	
			None	Some	Adequate	A lot		5	
AC5	Are there any walking or cycle paths?		0	1	2	3			
								6	
			Poor	Adequate	Good	Excellent			
AC6	What is the general quality of walking or cycle paths?		0	1	2	3		7	
								8	
Recreational Facilities		Presence			Quality /provision				
		Yes	No		Poor	Adequate	Good	9	
R1	Playground equipment (e.g. swings, slide, natural play equipment)	1	0		2	4	6		
R2	Grass pitches (e.g. football, cricket, bowls)	1	0		2	4	6	10	
R3	Courts (e.g. tennis, basketball including half court, netball, multi-court area volleyball)	1	0		2	4	6		
R4	Skateboard ramp(s)	1	0		2	4	6	11	
R5	Other sports or fitness facilities (e.g., outdoor gym equipment, exercise track)	1	0		2	4	6		
								12	
			None	Some	Adequate	A lot			
R6	Amount of open space suitable for informal games, play and walking		0	1	2	3		13	
			None	Poor	Adequate	Good		14	
R7	Quality of open space suitable for informal games, play and walking		0	1	2	3			

Amenity		Rating					Σ
		None, expected	None, NOT	Poor	Adequate	Good	
AM1	Seating/benches	0	2	1	2	3	1
AM2	Litter bins	0	2	1	2	3	0
AM3	Dog mess bins (or equivalent)	0	2	1	2	3	0
AM4	Public toilets	0	2	1	2	3	0
AM5	Cafe / kiosk	0	2	1	2	3	1
AM6	Shelter/shade - man-made	0	2	1	2	3	0
AM9	Picnic tables	0	2	1	2	3	0
AM10	Drinking fountains	0	2	1	2	3	0
Aesthetics - Natural features (and Significant Natural Features)		Rating					5.25
		0	1-25%	25-50%	51-75%		0
NA3	Estimate the percentage of the area occupied by the water feature(s)? (tick one)	0	1	2	3		
		Yes	No				
NA4	Does the area have good view points, vistas, scenic views?	3	0				6
		0	1-10%	11-25%	25-50%	50%	
NA5	Estimate the percentage of the area occupied by trees (tick one)	0	0.75	1.5	2.25	3	2.25
Aesthetics - Natural features		None	Poor	Adequate	Good		8
NA6	Primary surface (e.g., grass, sand) is well maintained AND/OR aesthetically pleasing	0	1	2	3		6
NA7	Flower beds / planters / wild flowers	0	1	2	3		0
NA8	Other planted trees / shrubs / plants (well maintained AND/OR aesthetically pleasing)	0	1	2	3		0
Aesthetics - Non-natural features		Rating					0
		No	Yes				
NN1	Water fountain (decorative, not drinking water)	0	1				0
NN2	Other public art (e.g., sculptures)	0	1				0
NN3	Historic or attractive buildings or other man-made structures	0	1				0
Incivilities		Rating					6
		None	Hardly noticeable	Noticeable	Very noticeable		
IN1	General litter	2	2	1	0		0
IN2	Evidence of alcohol use? (empty bottles/cans)	2	2	1	0		0
IN3	Evidence of drug taking (e.g. needles, syringes)	2	2	1	0		0
IN4	Graffiti	2	2	1	0		0
IN5	Broken glass	2	2	1	0		0
IN6	Vandalism	2	2	1	0		0
IN7	Dog mess	2	2	1	0		1
IN8	Excessive / unpleasant noise (e.g., traffic, industry)	2	2	1	0		1
IN9	Unpleasant smells (e.g., from traffic, local industry)	2	2	1	0		1

Appendix II: Watershed Assistance Grant (WAG) Proposal Design Concept

The concept below was submitted with the Chesapeake Bay Trust WAG proposal. Most of the requested funds will pay to bring the concepts through design development by experienced consultants EnviroCollab and City Scope Engineering. A portion of their fee will pay for a site survey and geotechnical borings to further develop the design. The Greater Baybrook was informed in March, 2022 that they would be receiving \$70 thousand dollars in grant funding through the Chesapeake Bay Trust WAG for design development of Duane Ave Park.

Figure 46: Grant Proposal Initial Concept Design



Appendix III: Community Engagement Survey Questions

The 17 question survey was written in both Spanish and English using Google Forms.

Respondents were asked the following using fill in the blank and multiple choice questions:

1. Are you a resident of Brooklyn, Curtis Bay, or Brooklyn Park? (Yes or No or Other _____)
2. How far from the Duane Avenue Park do you reside?
 - a. Walking distance, very short walk (less than 1/4 mile)
 - b. Walking distance, short walk (1/4 mile - 1/2 mile)
 - c. Walking distance, long walk (1/2 mile- 1 mile)
 - d. I live farther than 1 mile
3. How many people within each of the age categories are living in your household?
____ Under age 5
____ Ages 5-9
____ Ages 15-19
____ Ages 20-24
____ Ages 25-34
____ Ages 35-44
____ Ages 45-54
____ Ages 55-64
____ Ages 65-84
____ Over 85
4. Which of the following best describes the race of the members of your household?
(Check all that apply)
 - a. African American/Black
 - b. Asian/Pacific Islander
 - c. Native American
 - d. Hispanic/Latino
 - e. White/Caucasian
 - f. Asian/Indian
 - g. Other
5. How often do you or members of your household visit local parks?
 - a. 3 or more times per week
 - b. Once a week
 - c. Once every few weeks

- d. Once a month
 - e. Once every few months
 - f. Once a year
 - g. Never
6. What park activity is most important to you? (Select One)
- a. a place to play or take kids to play
 - b. a place to exercise
 - c. a place to relax or enjoy the outdoors
 - d. a trail on which to walk, run or bike
 - e. a place to gather with family, friends or neighbors
 - f. a place to participate or watch sports
7. What other park activities are important to you?
(1=Very Important, 2=Somewhat Important, 3= Not Important)
- _____ a. a place to play or take kids to play
 - _____ b. a place to exercise
 - _____ c. a place to relax or enjoy the outdoors
 - _____ d. a trail on which to walk, run or bike
 - _____ e. a place to gather with family, friends or neighbors
 - _____ f. a place to participate or watch sports
8. Other than football or soccer, are there any other sports that you would be interested in participating in close to home? (fill in box)
- _____
9. How important is having the following amenities close to your home?
(1=Very Important, 2=Somewhat Important, 3= Not Important)
- _____ a. Walking trails
 - _____ b. Biking trails
 - _____ c. Natural areas with trees and grass
 - _____ d. Planted areas with flowers
 - _____ e. Natural areas that attract birds, butterflies, and other wildlife
 - _____ f. Opportunities for children to learn about nature and the environment
 - _____ g. Sports fields or courts
 - _____ h. Places for children to play outdoors
 - _____ i. Outdoor exercise equipment
 - _____ j. Bike racks
 - _____ k. Picnic shelters or shade structures
 - _____ l. Places to sit or eat
 - _____ m. Public barbecue grills
 - _____ n. Dog park
 - _____ o. Public art

_____p. Community garden plots

10. Are there any other park amenities that are important to you? (fill in box)
11. How often do you or members of your household visit Duane Avenue Park?
(Select one)
- a. 3 or more times per week
 - a. Once a week
 - b. Once every few weeks
 - c. Once a month
 - d. Once every few months
 - e. Once a year
 - f. Never
12. Do you or members of your household ever feel unsafe walking near or around Duane Avenue park?
- a. Always feel safe
 - b. Usually feel safe, but not always
 - c. Only at night do I feel unsafe
 - d. Never feel safe
 - e. Unsure
13. If you have children, would you feel comfortable letting them play in Duane Avenue Park?
- a. Yes, I would let them play here unsupervised
 - b. Yes, I would let them play here if an adult was present
 - c. No, I would not feel comfortable
 - d. Unsure
 - e. I don't have children
14. If you feel unsafe near or around Duane Avenue Park, what are your safety concerns?
(check all that apply)
- a. Insufficient lighting
 - b. Unmaintained landscaping
 - c. Unmaintained paving (i.e., cracks in sidewalk and court)
 - d. Vandalism
 - e. Illegal dumping / littering
 - f. Drug use
 - g. Selling drugs or other illegal activity
 - h. Homelessness concerns
 - i. Other (fill in box)
 - j. I always feel safe
 - k. Unsure

15. What do you like best about Duane Avenue Park? (fill in box)

16. What do you like least about Duane Avenue Park? (fill in box)

17. Please provide any other information that you think is important for the planning and/or design of Duane Avenue Park? (fill in box)

Appendix IV: Community Engagement Event 2

Figure 47: Community Engagement Event 2 Flyer

2nd Park Planning Community Event

6th Street & Duane Avenue
Saturday, November 13, 2021 from 12-2pm

Segundo Evento Comunitario Para la Planificación Del Parque

6th Street & Duane Avenue
Sábado 13 de noviembre de 2021. Hora: De 12 a 2pm

Vote for your Favorite Design!
Join us for a Cookout at the Park.
Free hotdogs and drinks will be provided!

¡Vote por su diseño favorito!
Únete a nosotros para una comida al aire libre en el parque.
¡Se proporcionarán perritos calientes!

Event Activities:

- Review Park Survey and Community Engagement Results
- Vote for your Favorite Park design
- Enjoy a cookout and meet your neighbors
- Provide feedback for the design of Duane Ave Park

August 12th Event Results
How Residents Would like to Experience the Duane Ave Park

Activity	Count
Playing Outside	10
Family Gatherings	8
Enjoying Public Art	7
Participating in Sports	5
Relaxing	4
Growing Your Own Food	3
Exercising	2
Taking Your Dog	1
Connecting With Nature	1

All Are Welcome

Actividades del evento:

- Revisar los resultados de la encuesta del parque
- Vote por el diseño de su parque favorito
- Disfruta de una comida al aire libre y conoce a tus vecinos
- Envíe sus comentarios sobre el diseño del parque Duane Ave

Resultados del evento del 12 de agosto
Cómo les gustaría experimentar a los residentes el parque

Activity	Count
Jugando Afuera	10
Reuniones Familiares	8
Disfrutando del Arte Publica	7
Participar en Deportes	5
Relajante	4
Cultivar tu Propia Comida	3
Ejercitarse	2
Llevar a tu Perro	1
Conectando con la Naturaleza	1

Todos son Bienvenidos

Please join the Greater Baybrook Alliance for an event to gather community input on the design plans for the park located on the corner of 6th Street & Duane Avenue (with the old basketball court).

Por favor, únase al evento de Greater Baybrook Alliance para recopilar las opiniones de la comunidad sobre los planes para el diseño del parque ubicado en la esquina de 6th Street y Duane Avenue. (antigua cancha de baloncesto).

For more information, please email
info@greaterbaybrookalliance.org

Para más información, por favor envíe un correo electrónico a info@greaterbaybrookalliance.org

Figure 48: Community Engagement Event 2 Concept Feedback Board

Duane Ave Park Concept Design Feedback Comentarios sobre el diseño conceptual	
	Concept 1 Feedback: Retroalimentación del concepto 2 What do you think about adding a low fence to 8th Street? ¿Qué opinas acerca de agregar una valla baja a 8th Street? What location do you think is the safest for kids to play? ¿Qué lugar creen que es el más seguro para que jueguen los niños? Should we replace the basketball court with another sport? ¿Deberíamos reemplazar la cancha de básquetbol por otro deporte? What other feedback do you have? ¿Qué otros comentarios tienen?
	Concept 2 Feedback: Retroalimentación del concepto 2 What do you think of adding grills to the park? ¿Qué opinas de agregar parrillas al parque? What other feedback do you have? ¿Qué otros comentarios tienen?

Figure 49: Community Engagement Event 2 Voting Board

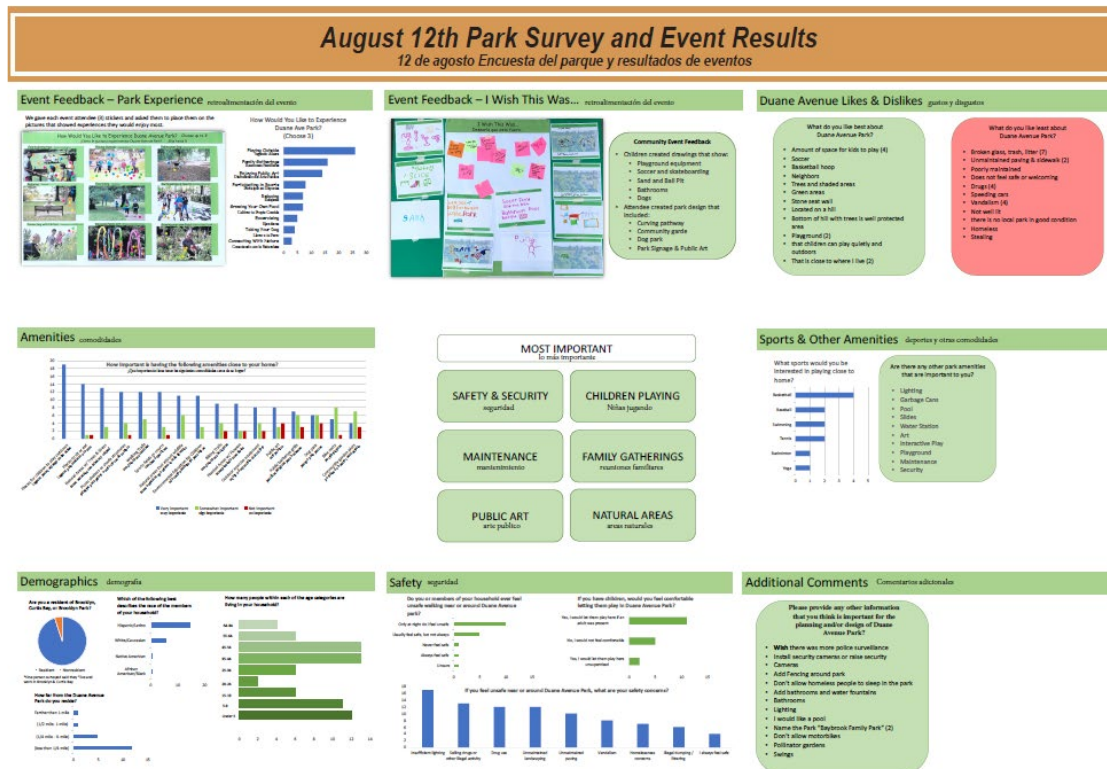
Vote for your Favorite! ¡Vota por tu favorita! (attach sticker for each category) adjuntar pegatina para cada categoría						
Play Equipment (Pick 3) Equipo de juego (elegir 3)						
						What Else? ¿Qué otra cosa?
						
Type of Public Art (Pick 2) Tipo de Arte Público (elegir 2)						
Painted Crosswalk paso de peatones pintado	Playful Art arte juguetón	Structural Art arte estructural	Signage Art arte de señalización	Fence Art arte de la cerca	Sculpture escultura	
						
Planting Style (Pick 1) Tipo de Arte Público (elegir 2)			Picnic Tables (Pick 1) mesas		Benches (Pick 1) bancos (elegir 1)	
Grasses Pastos	Rain Garden jardín de lluvia	Edible landscaping paisaje comestible				
						

Figure 50: Community Engagement Event 2 Open-Ended Board

Name this Park... <i>Nombra este parque ...</i>	
What Are We Missing? <i>¿Qué nos estamos perdiendo?</i>	

We want to hear your Ideas!
 ¡Queremos escuchar tus ideas!

Figure 51: Board with Survey Results from Engagement Event 1



Appendix V: Youth Engagement

Figure 52: Youth Engagement Powerpoint Presentation & Survey



Redesign of Duane Ave Park Using Community Engagement

Help us Redesign the park on Duane Ave & 6th St!

GOALS

1. Make this park feel safer
2. Design this park based on what the community really wants!
3. Make this park a fun place to gather with family or friends.
4. Encourage positive uses and behaviors in the park.

Park Design Questionnaire

Please write down the answers on a piece of paper.
Each number on the slide will correspond to the number on your sheet of paper.



What is community engagement?

- Citizens are 'engaged' when they play a meaningful role in the deliberations, discussions, decision-making and/or implementation of projects or programs
- Every person should have a voice and a say in what happens to their community.



How do we do this?!?!?

We need your help!

We want to know what the teens and young adults in the neighborhood like to do.

What would make this a place you would like to hang out at?

Be as creative as you want!



Park on Duane Ave & 6th Street



Question 1:

Do you live close to the Park on Duane Ave?

- a. Yes, I can walk to the park
- b. No, I don't live close enough to walk there
- c. Unsure

Question 2:

How often do you come to this park?

- a. At least once a week
- b. At least once a month
- c. Less than once a month
- d. Never

Question 3:

What do you **like** about this park that you wouldn't want us to change?

Please fill in the blank

Question 4:

What do you **dislike** about this park, that you hope we change?

Please fill in the blank

Question 5:

Is there anything about this park that feels **unsafe**?

If so, please describe this.

Question 6:

What are (5) things that would make you want to hang out in this park?

- Be as creative as you want to be!
- Think about things you would like to do with your friends
- Something that would make you want to exercise outdoors?

Question 7:

Which one of these activities would you be **interested** in doing (if any)?



Question 8:

Which one of these activities would you **NOT** be interested in doing (if any)?



Question 9:

What Programs would you participate in?

- cookouts at the park
- movie night at the park
- concert series at the park
- yoga at the park
- sports
- park maintenance (gardening, mowing, tree trimming)

Question 10: What are we missing?

Are there any other activities you didn't see, that you would like to do or participate in?

Please fill in the blank

Figure 53: Youth Engagement Questionnaire

Name: _____
Age: _____
Gender: _____

Park Design Questionnaire

Please answer each question as it pertains to the number on the slideshow

1. Do you live close to the Park on Duane Ave? (circle one)

- a. Yes, I can walk to the park c. Unsure
b. No, I don't live close enough to walk here

2. How often do you come to this park? (circle one)

- a. At least once a week c. Less than once a month
b. At least once a month d. Never

3. What do you LIKE about this park that you wouldn't want us to change? (fill in the blank)

4. What do you DISLIKE about this park that you hope we change? (fill in the blank)

5. Is there anything about this park that feels unsafe? (fill in the blank)

6. What are (5) things that would make you want to hang out in this park? (fill in the blank)

1. _____
2. _____
3. _____
4. _____
5. _____

7. Which of these activities would you be INTERESTED in doing? (circle all that apply)

- a. Learning to grow your own food d. Skateboarding
b. Playing Ping Pong Outdoors e. Rolling Blading
c. Sitting on Interesting Benches f. Playing Soccer

8. Which of these activities would you NOT be interested in doing? (circle all that apply)

- a. Learning to grow your own food d. Skateboarding
b. Playing Ping Pong Outdoors e. Rolling Blading
c. Sitting on Interesting Benches f. Playing Soccer

9. What programs would you participate in? (circle all that apply)

- a. cookouts at the park d. yoga at the park
b. movie night at the park e. sports
c. concert series at the park f. park maintenance (gardening, mowing, tree trimming)

10. Are there any other activities that you didn't see that you would like to participate in?

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