



Carter Playground Design Survey Inclusivity Report

Abstract

The following report is a formal response from a Northeastern student research organization to the Carter Playground Design Survey and community meetings. The goal is to explain and defend the importance of inclusive play elements in the design of the new Carter Playground. The Playground Project: INDIGO has investigated and addressed each portion of the design survey, highlighting elements most beneficial to collaborative growth between children of all abilities. Hopefully, this piece of advocacy from community members emotionally and physically close to Carter will serve as a reference guide for inclusive play elements.

Introduction

Public parks and playgrounds can be an invaluable part of a young person's childhood. This is especially true in cities, where most children's homes do not have yards. Parks and playgrounds provide invaluable space for exercise, outdoor play, and social growth, as children learn the dynamics of playing alongside the other members of their communities. Unfortunately, many playgrounds are not substantially inclusive of community members with disabilities. It is important that public parks and playgrounds provide equal opportunities for fun and growth to all members of their community. This is especially important at the Carter Playground due to its proximity to The William E. Carter School, a Boston Public School which serves children from the community with severe physical and mental disabilities. The Carter Playground must keep inclusion at the forefront of its design to meet the needs of the students of the Carter School, and other children within the community, both during and after school hours, when resources for families are especially sparse.

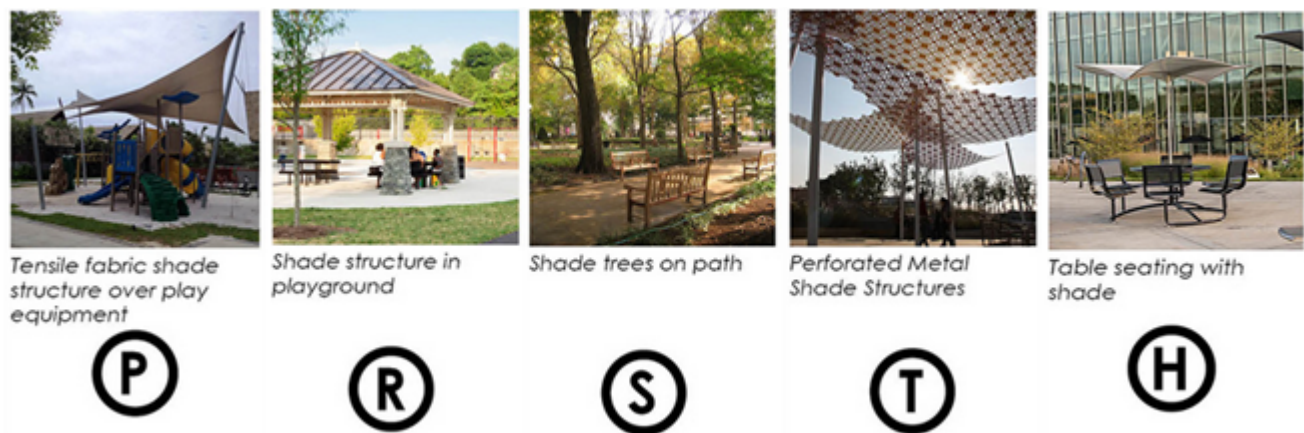
Seating and Shade Elements

Considering the extreme heat and sunshine during a typical Boston summer, shade elements will make the playground a safer space for all. Exposure to direct sunlight over extended periods of time can lead to dizziness, dehydration, and discomfort, reducing the utilization of public parks and increasing the risk of skin cancer and other medical problems associated with overexposure to sunlight. Individuals with disabilities that require medications to treat can be especially sensitive to direct sunlight, because the ingredients in many different medications cause photosensitivity. This can lead people to experience a variety of problems following exposure to amounts of light which would not negatively affect them normally. These

problems can be especially common for individuals taking medications for various conditions, including ADHD, Anxiety, or other behavioral or mood disorders.

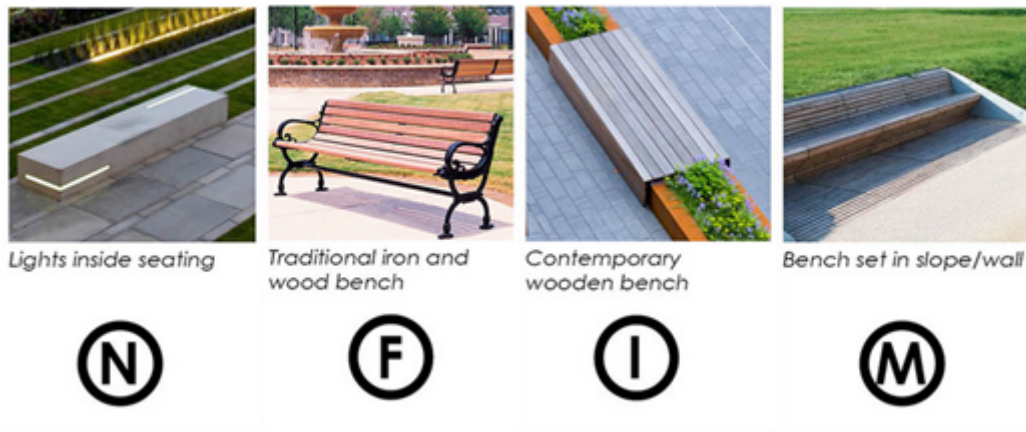
To ensure that a playground is inclusive to parents and children with disabilities that require medications, it is of utmost importance that there be sufficient shade over as much seating and equipment as possible. Although most playgrounds include elements of shade, providing shade for key areas of social interaction is necessary to ensure that children with disabilities are not relegated to the sidelines. Therefore, we recommend the use of shade structures such as Option P (Tensile fabric shade structure over play equipment) over structures like Option R (Shade structure in playground), because elements like Option P have an unrivaled ability make play structures - which are usually the nexus of activity on a playground - safer for all children. That being said, we still recommend the addition of open pavilions like Option R to create a shaded open space for free play. In addition, we recommend the use of opaque materials over natural or perforated materials. Options such as T (Perforated metal shade structures) or S (Shade trees on path) often cannot reliably provide sufficient shade to make parks welcoming for all members of a community. We also recommend seating Option H (Table seating with shade) in order to ensure that the available seating constitutes an area where families with members with disabilities can rest.

Image 1: Referenced Shade Options



When considering how to make seating inclusive, it is also important to implement seating designs that do not create a division between individuals in wheelchairs and those who are not. For example, the bench in Option N (Lights inside seating) allows for a wheelchair to be stopped adjacent to the seating with no division. The bench in Option F (Traditional iron and wood bench) also allows for a wheelchair to be in line with the seating, although there is a division. The benches in Options I and M (Contemporary wooden bench and bench set in slope/wall) both create a secluded space that does not allow individuals in wheelchairs to be seated anywhere close to everyone else. Inclusive seating should strive to avoid these divisions and to break down physical barriers that create social barriers, and we recommend the use of seating designs like Option N.

Image 2: Referenced Seating Options



Plaza Spaces and Activities

In planning the design of the plaza spaces, some elements that may not usually be seen as main points of interest can be of huge importance to some community members. We recommend that Option M (Vegetated beds) or other garden pieces be included in Carter. Gardens such as these can provide sensory stimulation to severely disabled children who cannot engage with most of the other equipment in a playground. Gardens offer a variety of different textures which can provide children with different tactile experiences and add a visually exciting and unique element to the playground. In addition, gardens provide a broad variety of educational opportunities for families or teachers seeking to teach children about plants and plant growth.

Image 3: Referenced Plaza Space



Playground Equipment

The best pieces of play equipment enable all children and parents to play together without boundaries. We highly recommend the use of Option K (Inclusive swing). Such a swing is accessible to both children who do and do not use wheelchairs, and can accommodate multiple children at one time. This is an advantage over traditional swings, and increases interaction between children. We also recommend Option M (Merry-go-round). Many merry-go-rounds can accommodate wheelchairs and include hinged railings to keep wheelchairs within the structure. This piece of equipment is especially appealing to families for which removing the child from his or her wheelchair is impractical, and it also facilitates engagement between children who are and are not in wheelchairs. When installing a merry-go-round, however, it is vital to make sure that the merry-go-round is flush to the ground so that a wheelchair could be wheeled onto it, and that one of the sections is large actually to accommodate a wheelchair. We also recommend

Option R (Nature play with tunnels). Although one of the primary functions of the playground should be facilitation of play between all children, it is important to recognize the need that children have for privacy and safe ways to exercise independence. Small enclosed spaces such as this are especially important for children who may have conditions which enable them to easily become sensorily overloaded or who are rarely given the opportunity to be alone. Finally, we recommend Option N (Embankment slide) as embankment slides allow children who may not be able to climb to the top of regular play structures to be included and utilize the equipment.

Image 4: Referenced Play Structures



Although many of the pieces of suggested play equipment would be excellent additions to Carter, there are a variety of pieces of playground equipment that have not been considered and which we recommend be looked into. Although physical activity is an important part of any playground, there are also a variety of other types of equipment which can facilitate various activities which are important for the social development of all children, and which uniquely give children with physical disabilities an opportunity to interact with their peers. Equipment which facilitates imaginative play is especially able to meet these needs. Pieces of equipment such as play houses or play cars encourage games which all children can engage in on equal footing. In addition, cognitive play elements, such as the Tic-tac-toe games found in many playgrounds, provide important opportunities for mental stimulation to all children. Audible play, such as speakers, musical instruments, or telephone structures can also enable all children to engage with each other in ways unrelated to physical activity. Finally, for children who are dealing with severe physical and cognitive disabilities, visual stimulation can be of utmost importance, so elements such as mirrors can be invaluable to families with these children.

Image 5: Possible Inclusive Playground Features to Consider



Images from: www.loneotaku.net, www.adventureplaysystems.com, www.oneletterwords.com, www.planetplaygrounds.com, li4kids.com, www.theplaygroundcompany.co.uk

Water Play

Water play elements are an excellent way to engage all children. The tactile element of water play makes it a cornerstone of inclusive playgrounds and we are excited to see that it is likely to be included in the Carter renovation. With that being said, however, some water play elements are more inclusive than others. Any sort of interactive water system has the added benefits of being able to engage children mentally (instead of purely physically), and teach children basic concepts such as cause and effect. This can also provide them a sense of control that some children are not usually able to experience. For these reasons, Option I (Interactive water gates), Option J (Interactive water play), and Option L (Interactive water source) would all be excellent additions to the Carter renovation. Other forms of water play, however, such as Option H (Arcing jets) are also popular, fun ways for all children to engage with each other, and we are excited to see which of these elements end up in the new Carter Tot Lot.

Image 6: Referenced Water Play Options



Interactive water gates

Interactive water play

Interactive water source

Arcing jets

I

J

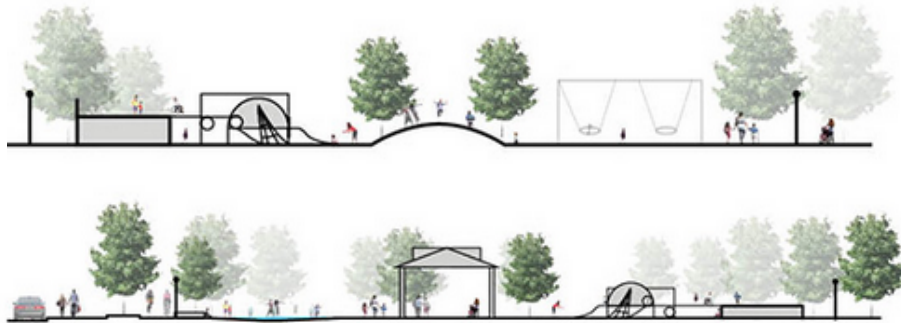
L

H

Playground Design Concepts

With regard to the three different Playground Design Concepts proposed for Carter, each design has its own drawbacks. Several guiding principles should always be used when attempting to design a playground that include all members of a community. First, the playground should be laid out in a way that is easily accessible for individuals in wheelchairs or with other physical impairments. One of the main issues with Concept 1 (Central Hill) is that this large hill could create a central divide, making the playground harder to navigate for all children. For the same reason, smaller bumps on the ground, such as textured hills, should also be avoided. In addition, ramps should be included whenever possible, enabling children to access the actual equipment within the playground, not just the general area. The ramp to the play structure in Concept 2 (Central Shade Structure) is a commendable feature that would greatly improve the inclusiveness of Carter.

Image 7: Concept 1 (Central Hill) and Concept 2 (Central Shade Structure)



Open space should also be utilized so that parents or other adults can always see the children that they are responsible for. Clear paths of vision are especially important for families where children require constant supervision but are rarely given time alone, because this enables adults to watch their children without being overwhelmingly close.

Additionally, the equipment chosen with the intention of being inclusive should be well integrated with the other equipment, rather than relegated to the sidelines. In Concept 2 (Central shade structure), the inclusive swing appears to be alone on the other side of the shade structure. It is preferable for this equipment to be near all other equipment, so that all children are able to more easily interact and grow together.

Conclusion

There are many different concerns that must be taken into consideration when designing an inclusive playground. Thankfully, several of the exciting options presented in the Carter community survey indicate that the new Carter renovation will be done with the intention of taking these considerations into account. The community that Carter will serve is extremely diverse, and we eagerly anticipate the construction of a playground which can be enjoyed by all. We sincerely hope that our feedback will be of use, and look forward to seeing what the final design for this playground will be.