INCREASING URBAN OPEN SPACE THROUGH POCKET PARKS

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Abstract

Pocket parks are the smallest type of park, generally less than one-half acre. Pocket parks provide the same economic, environmental and public health benefits that larger parks provide but are unique in that they can be woven into the urban fabric in even the most developed cities. Even though the existing literature treats pocket parks as a single type of park, they should be categorized into three different types: Active, Passive and Bonus. Pocket parks can be developed as privately-owned public spaces, on vacant parcels or in spaces created by public or private development. Municipalities have a variety of tools available to encourage the development and support of pocket parks. For example, public-private partnerships can be used to develop and maintain parks, open space provisions should be included in zoning regulations and communities can elect to impose dedicated taxes to be used for the development and maintenance of pocket parks.

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Chapter 1: Introduction

Pocket parks are small, urban oases. They are generally considered to be a park less than a half acre, but some sources determine the size of pocket parks based on the relative size of other parks in the area (Marcus and Greene, 1998; Seymour, 1969). Similar to larger parks, pocket parks provide a wealth of benefits to the community. Neighborhoods with parks have higher property values, less crime and healthier residents (Gies, 2009). Parks improve the urban environment by counteracting the urban heat island effect (Trust for Public Land, 2008). Pocket parks are no different; they contribute to improving their neighborhoods and give local residents an opportunity to escape some of the challenges of urban life. The unique benefit of pocket parks is that they can be dropped into the urban fabric in many locations where a more traditional, larger park would never be feasible (Harnik, 2009).

The primary research question I address is: how can we accurately characterize pocket parks? I focused on this question because the classification system I developed to describe each type of pocket park can facilitate further discussion and research on the topic. Many times, pocket parks are lumped into one category, as if their only distinguishing characteristic is their small size. However, this is not the case. The same way a baseball diamond and a botanic garden are different, pocket parks are very different from one another. There are Active Pocket Parks, which offer some type of recreation or activity; Passive

Pocket Parks, which generally offer a focal point like a sculpture or a fountain; and Bonus Pocket Parks, which either became parks as people stopped and sat or were designed as a park to utilize space created by a different project. These three types of parks are not always exclusive, but have distinct, defining features. The parks included in this study are located in Cambridge, MA. These parks are representative of pocket parks everywhere and though the specific examples are all drawn from the City of Cambridge, parks throughout the Boston Metro Area were examined.

The second questions this thesis sought to answer is: what methods can municipalities use to create pocket parks and/or encourage the private development of pocket parks? To answer this, I provide an introduction to the methods municipalities can use to achieve this goal. Most cities have a lot of suitable un-programmed space that could be developed into pocket parks (Harnik, 2009). Even though many local governments are not in a position to acquire urban land, private developers continue to purchase properties and complete development and redevelopment projects (Harnik, 2008). These projects often require a special permit, giving municipal governments leverage. Special permits are adjudicative, giving the municipality the decision of whether or not to grant the permit. This freedom also allows the municipality to grant the permit, with conditions (Meck and Retzlaff, 2008).

The privately-owned public space is a relatively new tool that municipal governments have been using to increase public space with little to no public cost. Additionally, the foreclosure and abandonment crisis has created a larger supply

of vacant property than most cities are used to having (US Conference of Mayors, 2008). This land stock can be redeveloped into pocket parks. Finally, every city has a large number of spaces surrounding existing development. Many of these spaces are awkwardly-shaped or too small for another development project (Harnik, 2009). These spaces can be perfect for developing a pocket park. These three examples exist in all major cities, creating the opportunity for municipalities to provide additional open space to their residents.

Sometimes, creating a pocket park is as simple as installing a park bench or two. However, the design of pocket parks can be much more involved. Many governments are struggling to maintain the parks they already have, which makes the development of new parks nearly impossible (Harnik, 2008). However, there are several tools that municipal governments can use to encourage private organizations to develop and maintain spaces for public access. These spaces are called privately-owned public spaces and are often created as a condition for awarding a special permit (Harnik and Yaffe, no date). Many communities incorporate an open space provision in their zoning ordinances, but it is often one of several options. The open space provision should be mandatory; developing and maintaining public space is expensive, so many developers do not choose to voluntarily create pubic space. Municipalities can also work with other organizations in public-private partnerships to develop, build and maintain public spaces.

In addition to public-private partnerships and privately-owned public spaces, municipal governments have several funding mechanisms that can be used

to support pocket parks. Dedicated taxes can also be levied to support municipal park projects and used to support land acquisition and/or park maintenance.

The remainder of this thesis falls into four chapters: Background and Methods, Types of Pocket Parks, Opportunities and Mechanisms for Creating New Pocket Parks and Conclusions and Suggestions for Further Research. The Background and Methods chapter summarizes the existing literature, provides a brief overview of parks through American history, discusses the benefits of urban parks and finally discusses the research methods used in developing this thesis. Chapter 3, Types of Pocket Parks, discusses the three types of pocket parks and provides examples of each type. Chapter 4, Opportunities and Mechanisms for Creating New Pocket Parks, discusses the land areas available for the development of new pocket parks and introduces several of the tools available to municipalities to either develop and maintain pocket parks themselves or encourage the private development of pocket parks. Finally, the Conclusions and Suggestions for Further Research Chapter summarizes the thesis, provides the conclusions and discusses the ways in which this thesis can be built upon with future research.

Chapter 2: Background and Methods

The public park is often a focus of urban life (Harnik, 2003). For many urban residents, parks are their only access to a yard or outdoor recreation space. Parks should be a haven, a respite from the hustle and bustle of city life. The importance of quality, accessible park and open space is widely accepted; most agree that it is important to increase park and open lands in our urban areas (Muschamp, et al., 1993). As many cities approach build-out, the land available for new parks is very limited. To further hinder the development of new parks, the parcels that are available are often very small, irregularly shaped and surrounded by densely-developed neighborhoods. These areas cannot be developed into large pleasure ground parks of the Olmsted tradition, which are upwards of fifty acres (Cranz, 1997 and 2000). Among city parks, small parks are those that are at most one city block, generally no more than five or six acres (Forsyth and Musacchio, 2005). For quite some time, the prevailing notion was that in order to be successful, a park had to be at least three acres in size (Seymour, 1969). The concept of a pocket park arose in the middle of the twentieth century. Pocket parks are smaller than most parks; many are less than half an acre in size (Seymour, 1969).

Brief History of Urban Parks in America

The provision of open space first emerged as an urban issue in the 1850s, when American cities were quickly becoming highly urbanized. First imagined as

a reprieve from the city, the first era of park design focused on large pleasure grounds located at the edge of cities. The pleasure ground parks were very large and were meant to surround people in nature and insulate them from the city. They were designed so that people could neither see nor hear the city outside of the park. These spaces were bucolic and meant for quiet contemplation or passive activities (Cranz, 1989; Cranz, 1997).

As more pleasure grounds were designed, planners and landscape architects realized that these spaces were used primarily by the city's wealthy residents. Visiting these spaces was an infrequent treat for the working class. Their location at the edge of cities made it nearly impossible for the working class to visit; the transit fare to travel the relatively long distance to the pleasure ground parks was prohibitive (Cranz, 1997). The Small Parks Movement, lasting only about ten years, tried to bring the principles behind pleasure ground parks into the urban neighborhoods. Smaller parks, close to tenement districts were designed using the same landscape design techniques that had been utilized in developing the pleasure grounds. These small parks also encouraged quiet, contemplative activities and were in direct opposition to the burgeoning Playground Movement that was advocating for safe places for children to play (Cranz, 1997).

Over time, these two movements came together to create the second stage of park development in the United States, the Reform Park Movement. These parks were larger, generally one to four city blocks, and sought to create an area for the county's new immigrants to assimilate to American society (Cranz, 1989; Cranz, 1997). The Reform Parks combined the Small Parks and Playgrounds

Movements and most often created neighborhood parks with recreational amenities: swimming pools, civic buildings and playgrounds (Cranz, 1989).

The Reform Parks Era roughly coincided with the Garden Cities Movement that believed that overcrowding was the urban area's fatal flaw (Howard, 1898). Ebenezer Howard (1898) proposed a design, accessible to the working class, which could combine the benefits of urban and rural life. His design, known as Garden Cities, offered shared open space, town centers and residential areas around a central park and a radial street pattern that connected the garden city to other garden cities and the central city (Howard, 1898). It was during this time that Frederick Law Olmsted, Jr. was promoting neighborhoodcentered development and the need for common open and recreational spaces. Like his father, Olmsted, Jr. believed that urban and suburban residents needed frequent access to parks however, he realized that these spaces needed to be easily accessible so he designed small parks into residential neighborhoods (Klaus, 2002).

The third stage of park design and theory was popular between 1930 and 1965. It focused on recreation and has been dubbed the "era of the Recreational Facility" (Cranz, 1997). During this phase, parks and recreation departments became responsible for stadiums and other recreational facilities (Cranz, 1997). Following the Recreational Facility Era, people realized that recreation and open space can be found throughout the city – it does not need to be located only in one type of place. This thinking led to the creation Open Space Systems (Cranz, 1989; Cranz, 1997). The Open Space Systems model is beginning to give way to

what has been characterized as a sustainability movement. Parks are being seen as a resource that people can use to live more sustainably, to create resources, to allow children to learn about composting and food production (Cranz, 1997).

Through the early twentieth century, open space was a valued aspect of city life. However, when Americans began moving to the suburbs, the country's urban parks were lost in the shuffle. Everyone expected that the backyard would replace the need for public open space and local governments shifted their funding and attention from providing and maintaining public parks. Many of the country's parks fell into disrepair (Little, 1995; Sherer, 2003). Then, in the 1980s, a combination of forces began to change that dynamic. Suburbanites, especially those in the inner-ring, older suburbs, realized that the open space was quickly being developed and that their backyards were getting smaller and smaller. Neighbors, abutters of urban parks, and community leaders began to form "Friends of (name of park)" groups, often taking park maintenance into their own hands and contracting work with their city's park department (Hollister, et al., 1987; Sherer, 2003).

Simultaneously, cities began to compete with the suburbs and began pouring money into their infrastructures to attract residents (Little, 1995; Sherer, 2003). Cities began to realize that one of the best ways for them to attract residents and tourists is to create a park system worth visiting. Since most cities were not able to secure enough land for the mega-parks that were developed in the 1800s and early 1900s, they turned again to small parks scattered throughout the

city (Houstoun, 2009; Seymour, 1969). This transition in urban park and open space planning is what has rekindled the interest in pocket parks.

Pocket Parks

The idea of developing small, pocket parks in communities is not new. The neighborhood park was first conceived as a way for urban residents to remove themselves from their daily stressors (Loukaitou-Sideris, 1995; Cranz, 1989). In fact, one of New York City's first urban parks was a half acre lot that residents leased (Seymour, 1969, p. 1). Overtime, interest in pocket parks has ebbed and flowed. Much of the existing literature about pocket parks was written as cities began to turn back to pocket parks in the 1960s.

Due to their small size, it is important that pocket parks be properly designed and cared for. It is not the size of a park that allows it to succeed: the park's quality is a far more important determinant of success than its size (Seymour, 1969). Careful attention must be paid to the design and management of pocket parks. It is very easy to develop an unwelcoming park, but much harder to design a space that is convivial, lively and welcoming (Low, Taplin and Scheld, 2005).

It is not only the design of a park that contributes to its success: park maintenance is also very important. Whyte (1980), along with many of his colleagues, found that parks in disrepair are a drain on the community and scare potential users away, providing a haven for undesirable individuals and activities.

Pocket parks can increase a community's stock of parkland without requiring large tracts of land that many cities simply do not have (Harnik, 2009).

The pocket park has been a successful tool for parks and recreation departments for many years and will only become more important as more cities approach build-out. Most small parks are only known to their immediate neighborhood but are invaluable to the local community (Forsyth and Musacchio, 2005). Pocket parks are too small for many recreational uses such as ball fields or swimming pools, but can often support a children's playground or interactive water fixture and various types of seating or picnic benches. When well-designed and maintained, these parks become a haven for the community (Forsyth and Musacchio, 2005; Seymour, 1969; and Marcus and Greene, 1998). They provide respite from city life and give people the opportunity to spend time outdoors. For pocket parks, the research indicates that it is imperative that each park offer a focal point. Whether that focus is a playground, monument or water feature, pocket parks need to have some element that draws people in (Seymour, 1969).

Pocket parks can also afford people the opportunity to engage with their neighbors and other community members. Parks are gathering places; people use them to socialize as well as to spend time relaxing. Parks ought to be designed in a manner that encourages people of all ethnicities, cultures and backgrounds to use the space. The United States' first public park-makers, men such as Frederick Law Olmstead and Calvert Vaux, believed that by "increasing contact between the classes, parks would foster democratic inclusiveness" (Byrne and Wolch 2009, 8). These beliefs underlie *contact theory*, which posit that interaction between members of different groups reduces intergroup prejudice, under the right conditions (Dixon 2005; Talen 2008).The design should also be welcoming

to both genders and various age groups. Designing fully-inclusive spaces is difficult, as various groups require different amenities in their public spaces (Low, Taplin and Scheld, 2005). However difficult it is, designers and planners need to consider these various needs when planning public spaces.

Benefits of Parks

There are a wide variety of public and private benefits that we derive from parks. These benefits can be categorized as public health benefits, economic benefits, environmental benefits and social benefits. The environmental benefits are perhaps the most obvious. Parks help to reduce air pollution, offset the urban heat island and control stormwater runoff (Bowler, Buyung-Ali, Knight and Pullin, 2010; Groth, et al., 2008). The public health benefits of parks are also easy to see. Parks encourage recreation and physical activity. Studies have shown that simply having access to a park increases physical activity (Gies, 2006). Playing is an important aspect of child development, children learn through play. People who are exposed to greenery and nature are healthier than those trapped in the built environment (Gies, 2006).

Economically, investing in a vibrant and expansive park system can have a tremendous impact on a city's public and private economy. The value of adjacent and surrounding properties increases when a park is built and well-maintained (Gies, 2009; Kaufman and Cloutier, 2006). The "proximate principle" of park development explains why real estate values of properties located near parks are worth more than properties further away from parks and that real estate values closer to parks increase faster than values further away (Gies, 2009, p. 3).

Further, parks can serve as the impetus for economic revitalization. A strong parks system can attract businesses to the city and spur development (Gies, 2009). The social and economic benefits of parks are the most important benefits of pocket parks as their small size does not tend to create an environmental benefit. Well-used parks reduce crime, support recreation and help create stable neighborhoods and strong communities (Sherer, 2003; Rogers, no date).

Methodology

This thesis began with the premise that pocket parks benefit communities, neighborhoods and cities; that pocket parks are one of the tools that can be used to address a myriad of urban problems. There is not much debate about whether or not cities and their residents benefit from parks, the problem begins when cities try to acquire land and develop parks. Cities have never had enough money to accomplish all that they hope to and the current economic crisis has made this predicament worse. Cities are now trying to do more with less and are forced to make even more difficult decisions than before. Expenditure on parks and open space acquisition is often one of the first line items that is cut. At the same time, cities are dealing with unprecedented levels of vacant property. Pocket parks can begin to address these issues. However, there is not much literature about pocket parks.

Parks have been a focus of urban planners, landscape architects and people in many other professions and are a very popular research subject; a simple search in an academic database provides more than 1,000 citations. These articles, books and reviews cover a wide variety of topics from park design, the history of parks,

park management, park policies, health, recreation, community uses and many others. However, a search for pocket parks yields between ten and twenty-five results, depending on the particular database.

Pocket parks are discussed as a particular type of park, one that only differs from other parks in size. The existing literature does not often discuss pocket parks in detail and does not offer specific design advice or land acquisition techniques that could be utilized to encourage and support the increased development of pocket parks.

During the early stages of conceptualizing this thesis, I sought to identify specific design guidelines for pocket parks. As my thinking and research proceeded, however, it became clear that even though the literature treats all pocket parks the same, they are not. Pocket parks come in many varieties, with distinct characteristics and uses. Before reliable design guidelines can be defined, the different types of pocket parks must be developed, analyzed and discussed.

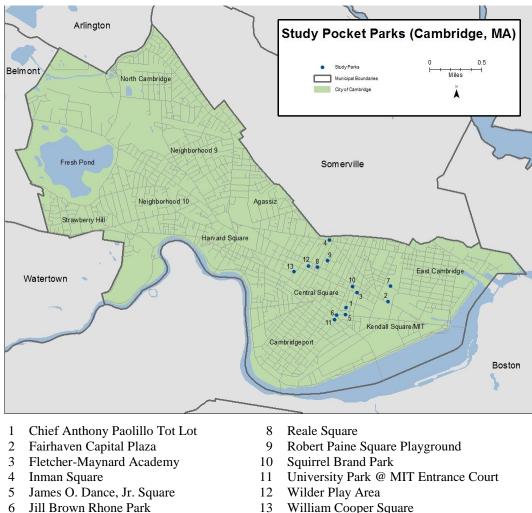
Realizing this, my thesis became something different. It is the start of what I hope to be a growing discussion of pocket parks, their characteristics, design and benefits. As I continued to research and visit pocket parks and worked to create categories that would accurately represent the different characteristics each pocket park had, the main question I sought to answer was: how can we accurately characterize pocket parks? My secondary research question was: what methods can municipalities use to create pocket parks and/or encourage the private development of pocket parks? Chapter 3 presents the three different types of pocket parks and Chapter 4 discusses techniques that municipalities can use to

increase public land holdings, incentivize private land owners to offer public access to private property and/or require that public open space be provided with new development.

I used several methods to complete the research for this thesis. The information used to develop the three types of pocket parks, presented in Chapter 3, was accumulated through frequent observation of pocket parks occurring between April and October 2011. The examples I have included are all in Cambridge, but during my research I visited far more than these thirteen parks in several municipalities, at different times and during different seasons. At each park, I noted the different characteristics and uses. This information was used to develop three categories into which pocket parks could be divided. I took all of the images included in the thesis (with the exception of the satellite photo of One Kendall Square Plaza) in September and October, 2011. Though the photographs were all taken in September and October, I spent much of the spring semester and summer visiting all different kinds of pocket parks and small plazas to get a feel for the variety of characteristics, design features and uses that occur in these public spaces.

Even though parks throughout the Boston area were visited as part of the research for this thesis, the examples included here are all drawn from the City of Cambridge. Cambridge was chosen because it had such a wide variety of pocket parks and there was geographic data available to enhance the research. Though they are all in Cambridge, the parks included in the study were representative of other pocket parks seen throughout the area. Before determining the specific

parks to analyze and include in the analysis, I categorized the many parks I visited and created typologies for each. I worked through many different descriptions and categories before settling on the Active, Passive and Bonus designations. Once I had determined that this was the best way to represent the different types of pocket parks, I went back into the community to find parks that would best highlight the different characteristics of each type of park.



- William Cooper Square 13
- 7 One Kendall Square Plaza
 - **Figure 1: Pocket Park Case Studies**

The parks I finally chose as the cases to include here are located between

Central Square and Kendall Square in Cambridge. This area is the most

urbanized section of the city. Pocket parks tend to be found in more densely populated areas as more suburban areas have more space available for open space development. The City of Cambridge has an Open Space and Recreation GIS layer available, which I used to locate some of the more obscure parks in the city. This layer has more than 100 parcels that are less than a half acre, but many of these spaces are street medians, sections of larger parks and highway right-ofways. I went through the data and whittled it down to spaces that could possibly be called pocket parks. This map (Figure 2), has more than 75 distinct locations, but only a handful are truly independent pocket parks and have the characteristics of the different pocket parks I observed throughout my research. The thirteen parks included in the study are shown in Figure 1 and a table summarizing the characteristics of each can be found in Appendix A.

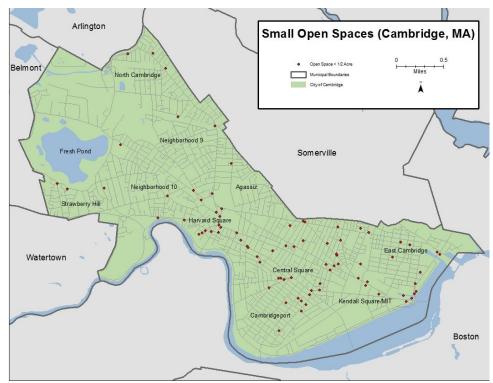


Figure 2: Small Open Spaces

The second part of the thesis, Chapter 4, was drawn primarily from a study of existing literature and land use techniques. The information included in these resources was then analyzed with a focus on increasing the number of pocket parks in communities. In deciding which techniques to include in the chapter, I focused on ways that municipalities could encourage the development of Bonus Parks.

Chapter 3: Types of Pocket Parks

The existing literature groups all pocket parks together into one broad category. The reality is that pocket parks are truly different from one another. This thesis began with the intent of developing design guidelines for successful pocket parks, but as the research continued, it became apparent that it would be impossible to define a single set of characteristics that could define all pocket parks.

The size of a park is the only characteristic that universally defines pocket parks. Pocket parks can range in size, but are generally smaller than a half acre or are one to four parcels in size (Marcus and Greene, 1998; Seymour, 1969). Beyond their small size, pocket parks vary in design, usage and intended audience (Marcus and Greene, 1998). It would be impossible to create a single set of design recommendations for pocket parks, as pocket parks play a variety of roles within neighborhoods. Some of their services are universal, all provide a respite from the city and enable people to spend time outside, but other services vary based on the type of pocket park (Marcus and Greene, 1998). Each park is its own entity; no two parks are the same.

While there are still differences between parks, pocket parks can be broken into three separate categories: Active Parks, Passive Parks and Bonus Parks. Active parks offer users the opportunity to participate in a specialized activity. These parks may serve as a playground, small basketball court or other destination activity that attracts people interested in the activity. While not discussed in this thesis, small community gardens would be an example of an active park. Passive parks are not designed for a specific use, but are instead designed as a place for people to come and sit. They do not include playgrounds or exercise equipment, but may have a fountain or other focal point. These parks differ from the final category, Bonus Parks, in that they have been designed and pre-planned as a park. Bonus parks occur at intersections or within a development of other uses, and were not initially planned as a park: a few benches or a ledge attracted people to sit there and, over time, the space became a de-facto park. These spaces tend to be very small in size, sometimes less than a tenth of an acre, but often attract people who need a place to sit. Bonus parks do not begin as destinations; people tend to happen upon them. Eventually, the most successful Bonus Parks may become a destination unto themselves, but becoming a destination does not determine the space's success. Bonus Parks also occur as a byproduct of private development, to comply with a statutory open space provision or as part of a negotiated development agreement or special permit or simply as a voluntary public contribution. This second type of Bonus Park results in a public space on private property.

These categories are not intended to be a catch-all or to discourage people from designing other types of spaces. Instead, it is hoped that these categories will enable people to think differently about the spaces they encounter in everyday life, enabling them to think more broadly and creatively about ways to improve the public sphere. A park does not need to be multiple acres or offer a

wide variety of recreational opportunities; quite the opposite, a space with a nice tree and a bench can serve some of the same purposes as the larger spaces. Oftentimes, a smaller park is more efficient than its larger counterparts. In general, people will only walk four blocks to visit a park (Marcus and Greene, 1998). Spreading small parks throughout the city offers municipalities the ability to ensure adequate park access throughout the city (Seymour, 1969).

As people begin to think differently about parks and their characteristics, it is my hope that cities will truly begin to embrace pocket parks and use them to improve their open space holdings and increase opportunities for residents to enjoy the outdoors.

General Observations

While there were distinct differences, the pocket parks observed as part of this thesis did have many similar characteristics. The parks' sizes were the most consistent characteristic. For the purposes of this thesis, the park size was limited to a half acre or less. Each of the parks had at least one bench and trees, some had small half-basketball courts, some had playgrounds, some had a sculpture or water feature and still others simply had benches and some shade. Every park had trees and some had other landscaping features. These features range from bushes to manicured gardens with perennials. Many parks had grass, but some were paved and without any grassy areas.

Functional simplicity is another characteristic of pocket parks. Each park had at most two specific uses. Due to their small size, pocket parks cannot support the number of separate activities or uses that larger parks can. The first

decision that must be made in the development of a new pocket park is what type of pocket park it is going to be: the design process will be different if the park is intended to be an active park or passive park.

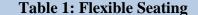
Even though a pocket park may not necessarily serve a wide population, it must still be considered in the larger context. Generally, pocket and smaller parks serve people in a four-block radius. Providing a specialized service may attract users from a broader area, but it is often the larger parks that attract these additional users as they are most capable of absorbing the additional users and have the infrastructure necessary to cater to a population who will probably be arriving in cars as opposed to walking, biking or taking transit. Dog parks are a notable exception to this generalization. Off-leash dog parks are few and far between, so dog owners will often travel further than other park users to even a small off-leash park.

Some design principles that apply to larger parks also apply to pocket parks. People need to feel safe, people need to feel comfortable and welcome to use a space and they need to find the amenities or services they expect (Marcus and Greene, 1998).

Seating

Seating is an important feature of all pocket parks, whether they be planned pocket parks such as active or passive parks or improvised parks such as the Bonus Park. In 1980, William Whyte found that seating is one of the most important features in a successful small space. Pocket parks are no different, whether it is an Active, Passive or Bonus Park, people will be looking for seating.

Beyond simply having seating available, certain types of seating will attract more users than other types. Flexible, moveable seating has been shown to be one of the best indicators of park use. However, it is not always practical as chaining chairs and tables down is often uninviting and creates the perception of crime. Even with stationary seating, choice is incredibly important. Users must be able to decide where to sit; the seating should be strewn throughout the park, no matter how small. People like variety and like to choose where within a space they want to sit. Seating does not always need to come in the form of a park bench, in fact, ledges and other features integrated into the space's physical design often are perfect for seating. Table 1 (below), shows a very flexible seating arrangement. The cubes themselves are not moveable, but people can choose to sit facing the sidewalk, each other or the tree and whether they would like to sit on a low seat or perch themselves higher. Children and adults can sit comfortably together, individuals can sit separately or a large group can sit and talk together.





(University Park at MIT Entry Court)

This sculpture combines visual interest with flexible seating. People can sit in a group or alone, can choose which direction to face and if they want to be sit up high or on a lower perch.

People tend to be non-discriminatory when they choose where to sit. They will sit on ledges, stairs, planters and benches. William Whyte, in his 1980 book The Social Life of Small Urban Spaces, discusses the fact that bad seating design is more difficult to design and build than good seating design. This remains true, the edges of planters and other ledges being de facto great seating spaces, unless someone works hard to design them otherwise. Installing railings or other features along a ledge restricts one's ability to sit and repels many potential users. Many of these design decisions are made to discourage "undesirable" park users. The people "mainstream" society is interested in avoiding are frequently designed out of spaces (Whyte, 1980; Low, Taplin and Scheld, 2005). We, as a society, do not want people to sleep in parks, for example, so spaces are designed to discourage people from lying down. These design decisions that are meant to discourage undesirable uses and unfortunately, people, often discourage the very people they are intended to protect (Whyte, 1980; Low, Taplin and Scheld; 2005). Seating is an example of this. Spaces that are designed to prevent someone from lying down can also discourage others from using the space (Whyte, 1980).

Flexibility in seating is imperative. People need to be able to sit in different positions as much as they need to be able to sit in different locations (Whyte, 1980). People congregate in different size groups in different locations, a park bench or ledge designed to prevent sleeping also limits the different arrangements that people can sit in (Low, Taplin and Scheld, 2005).

Table 2: Inflexible Seating



(Green Rose Heritage Park)

While this bench provides a large number of seats, it is not a flexible design and it severely limits the ways in which someone can use the bench since they can only sit facing one direction. This is a prime example of how design is not always functional.

Table 3: Additional Examples of Flexible Seating



(Fairhaven Capital Plaza)

Similar to the bench shown above (Table 2), this bench offers seating for a large number of people, but while not structurally flexible, allows people to choose to sit facing either way. Additionally, the shorter radius makes it easier for a group of people to sit and talk together.



(Robert Paine Square Playground)

These benches allow a large group of people to sit and talk together.

Natural Environment

Another common feature of all pocket parks is the influence of the environment. Flora can make a space more inviting and lack of natural features often makes a park less appealing. Depending on the weather and the season, the presence of either sun or shade either encourages or discourages people from being in certain spaces at certain times. Sun and trees go together, for "the best time to sit beneath a tree is when there is sunlight to be shaded from" (Whyte, 1980, p. 42). Access to the sun is an important feature in pocket parks, a space that is in tall buildings' shadows all the time, is cold and uninviting. Southern exposure is the ideal, as it allows for the greatest sun versus shade variable throughout the day, providing park users with the most choice. As with seating, choice is important. People like to be able to choose shade, sun or in-between (Whyte, 1980).

The wind is another natural and man-influenced characteristic that affects the use of small spaces (Whyte, 1980; Seymour, 1969). The built environment frequently influences the wind speeds in surrounding outdoor spaces. Pocket parks are no different; they are subject to the physical impacts of their surroundings. Strong wind gusts created by large buildings will have an adverse affect on anyone attempting to enjoy the park, creating an unwelcoming atmosphere. Anyone who has spent time in cities with large buildings has unpleasantly experienced the notorious wind tunnels created by tall buildings lined up next to one another. Pocket parks must avoid the impact of wind tunnels. This can be done by enclosing the park, planting trees or installing other wind barriers (Whyte, 1980; Seymour, 1969; Marcus and Greene, 1998).

Table 4: Enclose Parks to Reduce Wind Impact







Parks that are enclosed on three sides eliminate, or at least reduce, the impact of wind tunnels. In addition to being enclosed on three sides, the trees add another wind barrier.



(One Kendall Square Plaza) Satellite Image: Google Maps

While not always feasible, enclosing three sides of a pocket park or plaza can reduce drafts and wind tunnels (See Table 4). Planting trees or other wind barriers can also cut down on the adverse affects of wind gusts. In addition to providing protection from the wind, trees offer shade and aesthetic appeal. Other wind barriers can be designed or installed to reduce wind gusts. These can come in the form of large sculptures, fountains or even simple walls (Whyte, 1980; Marcus and Greene, 1998).

Table 5: Trees Improve a Park's Environment and Contribute to a Feeling of Seclusion







Trees are a benefit to the environment, reduce wind impacts and help park visitors to distance themselves from the city.

Choice

Choice is one of the underlying themes of pocket park use and design. Each characteristic discussed above can be reduced to different options. The most successful public spaces offer people the opportunity to decide whether they want to be in the shade or the sun, sit with others or alone, or be close to the street or far away. People like flexibility in their public spaces. Seating and wind barriers are the only true design elements discussed thus far. The natural environment cannot be changed, the climate will not vary within a city and design can only have a limited impact on a space's sun exposure. When pocket parks are being designed as part of a larger planning and development effort, the design has more ability to influence the natural environment (Whyte, 1980; Marcus and Greene, 1998). When parks are intentionally incorporated into larger (re)development efforts, the parks are often larger. Even the most deliberate of pocket parks is frequently not the initial plan for a space and is generally not designed in conjunction with the development of adjacent spaces. Thus, the natural environment affecting the pocket park is determined long before the pocket park is designed and the pocket park design must work with the external features that exist.

Active Parks

These parks are designed with a particular use in mind. A playground, dog park or small basketball court often serves as the focal point of the space, drawing people with a particular interest into the park. In Active Parks, a

predefined activity serves as the park's focal point. The activities featured in pocket parks are as diverse as the residents they serve.



Fletcher-Maynard Academy

Different activities will suit different neighborhoods. Community participation in the design and development process is especially important with Active Pocket Parks. These parks cater to specific groups of people. A tot lot is not an important feature for someone until they are the parent of a young child; similarly, an area friendly to dogs is not important unless you happen to have a dog. These spaces, which are designed for a particular activity, are the type of pocket park that must be catered to the community in which they are located. In communities where school yards are open to the public on weekends, after school and during the summer, these yards are frequently Active Pocket Parks. As they are developed with the school population in mind, they service the younger population and often do not have the activities that adults or seniors would enjoy (See Image 1). Even though the space's main function is not seating, it is important to have seating available for people watching, supervising or taking a break from the activity. Parents often cite the availability of seating as a reason to visit, or not visit, a playground (Whyte, 1980). Additional amenities such as trash cans and water fountains also influence people's decision to use a space. These amenities are more important in an active park as people will be planning a visit and would spend more time than in a park they simply happen upon or sit for a short time or bring their lunch (Marcus and Greene, 1998).



William Cooper Square

These parks often cater to children, as playgrounds, spray fountains and jungle gyms are easily squeezed into small areas, but dog parks, small basketball courts, bocce courts and community gardens could also fall into the category of Active Park.

Active parks are perhaps the most difficult type of pocket park to develop and build as they require more community input than other types of pocket parks. They also require the most integration into the larger parks, open space and recreation network. In the same manner as active parks must serve the local community, the proposed activity must still be needed within the larger open space network. It is important that each active park play a role in the larger open space context: it cannot duplicate activities supported at a nearby park such that neither park will have the necessary patronage. Park use attracts use: when people see a park being used, they tend to visit it themselves. A deserted space is an unfriendly space, which drives potential users away. Over saturating an area with a particular type of activity can lead to decreased patronage at all parks.

An Active Park can take many different forms: it can be a playground for older children, a tot lot, a basketball court or even a community garden. Much of the existing literature treats pocket parks as miniaturized traditional parks: the active park is the closest to this definition of all pocket parks. Active parks can support some level of physical or sporting activity, a playground or a small field, all elements of the more traditional larger park.

Passive Parks

Passive Parks become a destination because they offer respite from city living, a nice place to be outside and perhaps include something to look at, like a sculpture or fountain. These spaces are not designed for, and cannot support, active play or exercising. This is not to say that people couldn't exercise in these spaces or play a small game, it is just not their primary function. Spaces with a focal point and seating can provide people an escape from daily routine, a place to share a cup of coffee or a quiet space for lunch.

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Many municipalities overlook the benefit of having spaces like these, perhaps as a result of the drive to use land to its "highest and best use," where many believe that all spaces must be programmed. While some Passive Parks are designed on spaces too small or otherwise not conducive to other uses, others are on parcels that could reasonably be developed into another use. Developing a park on an undevelopable parcel is generally considered using the space to its highest and best use. However, the development of parks on developable parcels can result in a debate over a parcel's highest and best use (Gies, 2009)



Reale Square

These spaces can be well designed without too much capital investment. When designing a new Passive Park, deciding what would best serve as a focal point for the space is the first step. These spaces should have an anchor that can tie the space together; however this does not need to be a design feature within the park itself. A location surrounded by restaurants and cafés may not need anything other than benches and tables to show the intended use for the space. However, installing or designing a focal point into the space can help attract passersbys. If someone on the sidewalk can see a statue or fountain, it may draw them into the space.

Bonus Parks

Unlike Active or Passive Parks, Bonus Parks were not planned to be a park. They are spaces that evolved into parks. People began congregating on the benches or even perching on ledges before the space became a park. The space may have eventually become a 'real' park, or may remain outside of the realm of the Parks and Recreation Department. These spaces are frequently privately owned, but there are also many municipal examples. Fairhaven Capital Plaza is a Bonus Park that was created in conjunction with a private development project.



Fairhaven Capital Plaza

Jill Brown Rhone Park near Central Square in Cambridge is an example of a publically-owned Bonus Park (See Image 5). When the City undertook a street and traffic redesign project, there was extra space left over that had never existed before. The City of Cambridge took that opportunity to create what is now a popular park. If Bonus Parks were ever conceived as a park, it was as a result of unexpected and welcome small open spaces newly created by other projects.



Jill Brown Rhone Park

The second type of Bonus Park is public spaces created on private property. These spaces are publically available, but remain privately owned. Land owners are frequently protected by recreational immunity statutes (discussed in Chapter 4). The design, construction and/or maintenance of these spaces can be a voluntary donation of a public benefit, required by the zoning regulations or as a condition of a special permit.

Due to their spontaneity, Bonus Parks do not provide recreational opportunities. In form, they are generally similar to Passive Parks. Bonus Parks provide opportunity for people to sit and relax. When properly designed, they are a respite from the city. In a well-designed Bonus Park, people can sit right along the street and still feel sheltered or away from the city's hustle and bustle.

Cambridge Parks - Some Examples

The City of Cambridge has a wide variety of pocket parks and a large amount of GIS data available, which is why it was chosen as the case for this thesis. The parks discussed below are only a sampling of pocket parks in the area. Before selecting these particular parks, many more were observed informally as the different categories were considered and developed. The three categories that were developed were based on a year of informal observations throughout the Boston Area and beyond. The following section discusses each of the parks included in the study and categorizes them based on their typology. See Figure 1 on Page 15 for a list of the thirteen parks and a map of their location.

Active Parks:

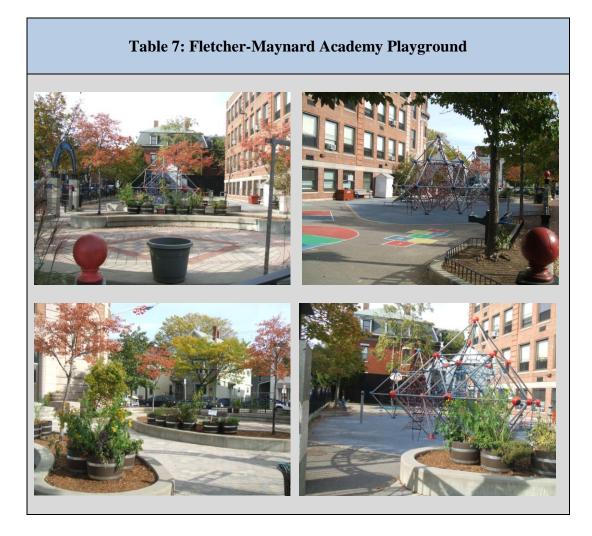
Chief Anthony Paolillo Tot Lot

This small playground features a small playground. The park is located across the street from the much larger Clement G. Morgan Park, both completed in 2010. The entire area of the Paolillo Tot Lot is fenced off. It is approximately 0.01 acres and appears to be a single lot as it is about the same size as the lots adjacent homes are built on. The playground is tucked away in a residential neighborhood. The space has several benches and trash receptacles. Evident in the name, the playground is geared to pre-school aged children. The Clement G. Morgan Park, with a larger playground, is designed for older children.



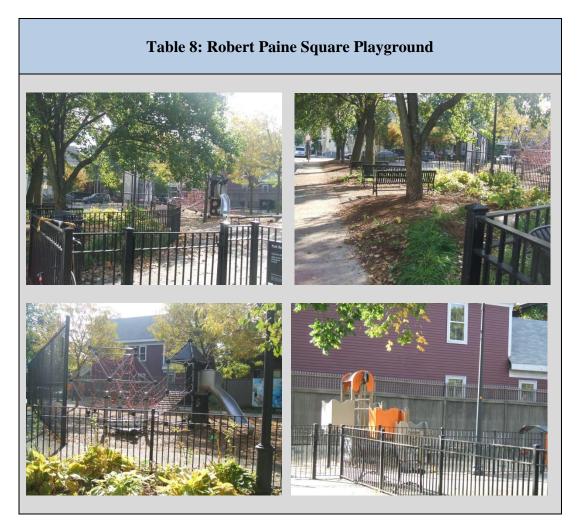
Fletcher-Maynard Academy Playground

The playground at Cambridge Public School's Fletcher-Maynard Academy is approximately one-tenth of an acre and has several different sections. Serving both as a playground and entryway to the building, the playground has an open area in the middle, play equipment and a basketball key to one side and a plaza-type area with a school garden at the other. The space is very welcoming, yet secluding as it welcomes visitors to the school and into the play yard while protecting students and other park users from the street. There is a decorative fence surrounding the park. The fence line is parallel to a line of trees that futher insulates the park from the busy sidewalk. The passive-recreation area is paved with decorative pavers and has several raised planters that provide seating.



Robert Paine Square Playground

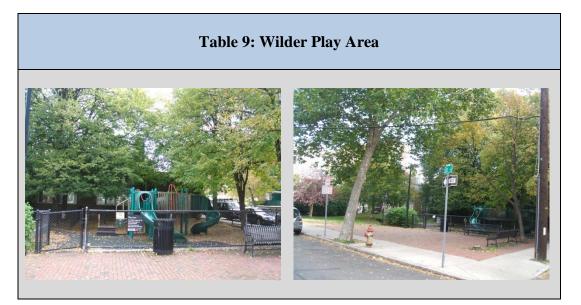
This is one of the largest of the parks in the study. It is about three residential lots in size, about 0.4 acres. It is divided into four separate sections: a picnic/seating area, an under-five playground, a larger playground with a climbing toy for older children and a small half-basketball court. There are a large number of benches throughout the park. These benches are arranged in creative layouts. There are the typical park benches that seat three to four adults and longer benches as well as curved backless benches that allow larger groups of people to sit together. Some of the benches are arranged face-to-face so that people can have a conversation. In addition to the benches, there are a number of picnic tables with seats and umbrellas. This park integrates the largest number of activities into a single pocket park.





Wilder Play Area

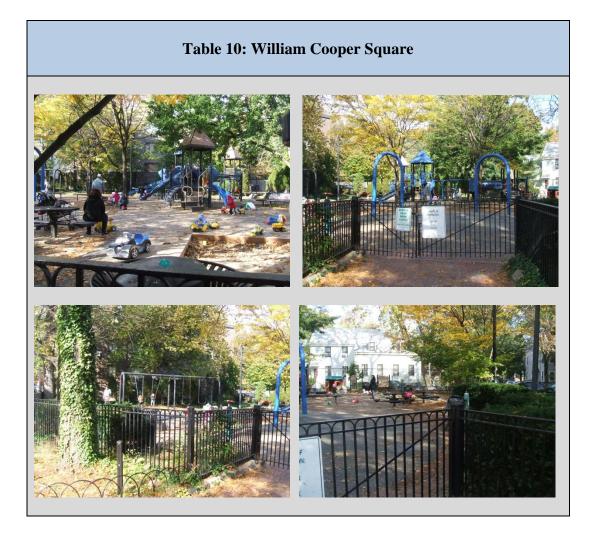
The Wilder Play Area is about a quarter-acre and is the least programmed of the parks. There is a small playground about a quarter of the site, a bricked area with a few benches on another quarter, and about half the space is an open, grassy field. There is great potential for increased capacity at Wilder Play Area, but the grassy area is a nice "natural" oasis in the middle of the city. There are quite a few trees which serve as the focal point of the meadow-like area, which makes up about half of the park's space.





William Cooper Square

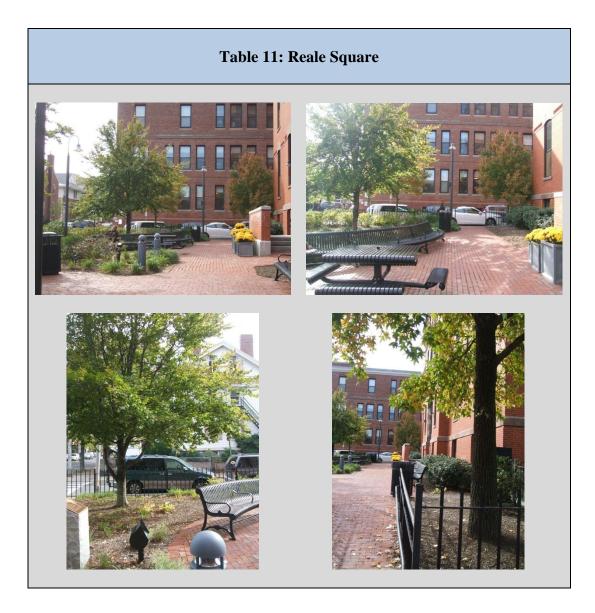
William Cooper Square is a relatively large playground and water play area. The park's area is approximately 0.23 acres. For such a small park, the area is very well designed and offers several different areas. There is a variety of playground equipment and the open space surrounding the playground has picnic tables and benches. The park is entirely fenced. The park is set in a residential neighborhood and appears to be rather busy. Each time the park was visited, there were numerous children on the playground. This park serves almost entirely as a playground; the park's design does not include space for other activities, though anyone could sit on the benches or at one of the tables. The water play feature is similar to other water play areas in the city.



Passive Parks

Reale Square

Reale Square is a 0.07 acre park that sits adjacent to Cambridge City Hall Annex. The space is very pleasant, with several different areas. The different vegetation in the park contributes to its aesthetic appeal and serves to create the separate sections. There are both traditional benches and long, back-less benches as well as a few picnic tables. The brick pavers contribute to the park's overall feel and there are always people sitting in the park.



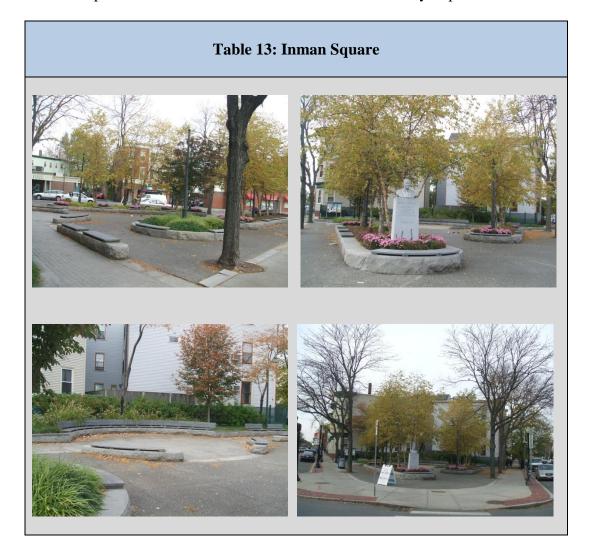
Squirrel Brand Park

Squirrel Brand Park sits adjacent to the Squirrel Brand Company facilities and is next to a community garden, which is part of the City Sprouts Program and tended to by Cambridge children. The Squirrel Brand Park is slightly more than a quarter of an acre. The park itself is relatively open and feels expansive. There are benches situated along the park's edge and throughout the park. The space also has two sculptures that create visual interest. In addition to benches, the park has several picnic tables.



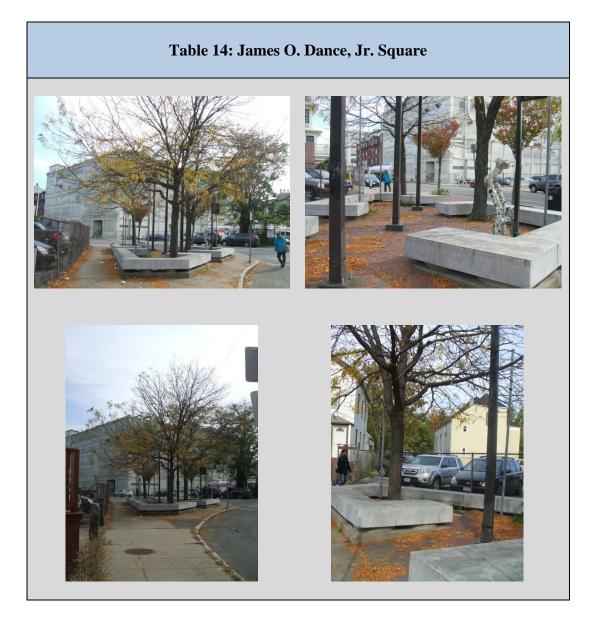
Inman Square

Inman square is a popular meeting place located near many restaurants and bars. The Square itself is about 0.01 acres. The design includes a large number of benches distributed throughout the space. These benches create different sections of the square, so people can arrange themselves in different areas without crowding other people. The square has a relatively small statue that can serve as a focal point for people if they are entering or exiting the park in a certain direction. In addition to the benches and the statue, the square has many trees that provide shade and several raised beds with a variety of plants.



James O. Dance, Jr. Square

James O. Dance, Jr. Square is a very small space (approx. 0.06 acres) tucked away at the intersection of a commercial area and a residential area, at Main Street and Bishop Allen Drive. The square has large, concrete benches, a small sculpture and several trees. The area juts out into an intersection where there is a lot of foot traffic, but there is never anybody in the park. It is a nice little space that feels secluded from the hustle and bustle of the neighboring streets.

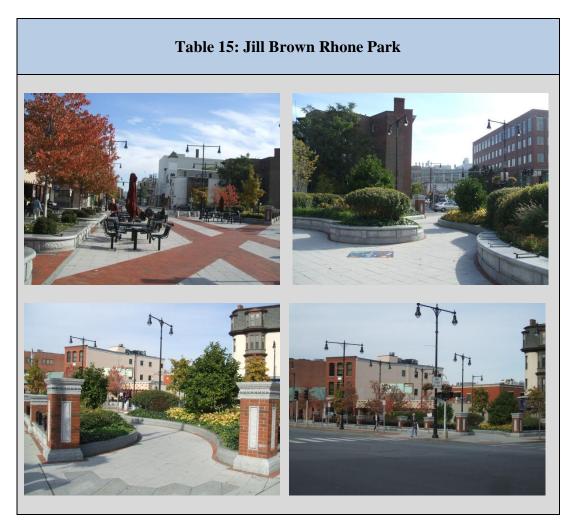


Bonus Parks

Jill Brown Rhone Park

Jill Brown Rhone Park was developed when a street redesign created a new space near the intersection of Main and Massachusetts Ave. The space

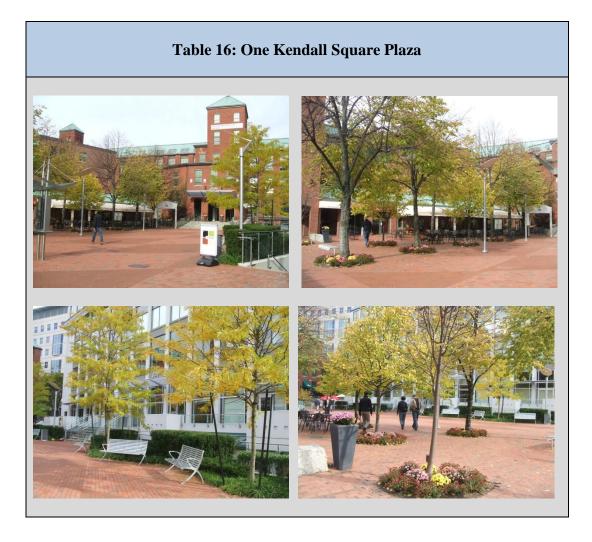
boasts raised planters and multiple benches with tables. Some of the tables have checkerboards on their tops so people can play checkers or chess in the park. The park is always busy with customers from the Central Square restaurants and cafes. The space is a perfect example of a Bonus Pocket park. A very popular park was developed as an offshoot of a transportation project. The park is well-designed, the seating and vegetation provide a barrier between busy Massachusetts Avenue and the park. The raised beds provide a very large amount of seating and though the picnic benches are not in tree shade, there are umbrellas that provide shade for people eating.





One Kendall Square Plaza

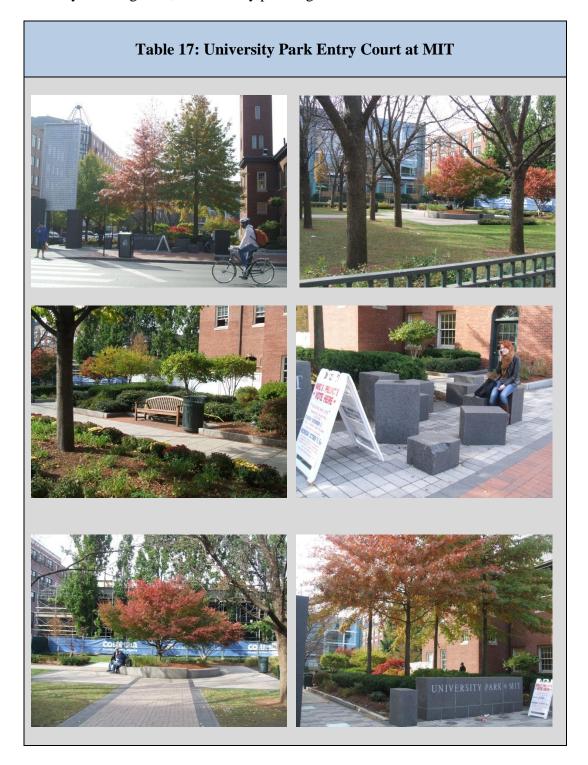
This quarter-acre plaza serves as a gateway into several multi-use buildings and provides an example of a Bonus Park as it is public space on private property. The brick paver blends well with the industrial architecture surrounding the square. The plaza is surrounded by buildings on three sides and has about 85 feet of frontage. Similar to other plazas, there are benches, tables, chairs, umbrellas and trees along the three sides. The benches are arranged in a fashion to allow for either conversations or solitude. The majority of the plaza is open and everything is arranged along the plaza's three sides. One side has a double row of trees that creates a boulevard to some of the adjacent businesses. The restaurant located in the plaza has tables for outdoor service.



University Park at MIT Entry Court

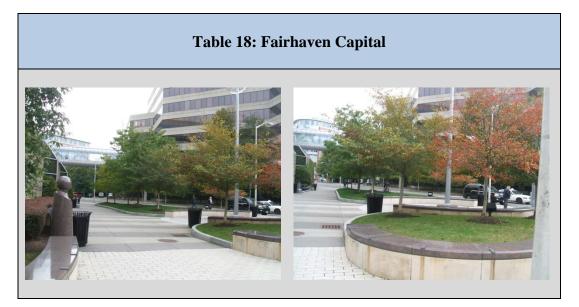
University Park Entry Court is a relatively large pocket park (approx. 0.34 acres) that separates people from busy Massachusetts Avenue and serves as a gateway to into the adjacent bio-technology and residential buildings. The park's vegetation, including large trees, secludes people from the busy streets. The park has a small open area where people can stretch out, but most of the park has a number of different sections with benches and other ledges for people to sit on. One of the most interesting features of University Park is a sculpture that sits at the entrance to the park on Massachusetts Avenue. This sculpture is seating in

disguise, people are always sitting on the different blocks. However, when nobody is sitting on it, it is visually pleasing.



Fairhaven Capital Plaza

Fairhaven Capital Plaza is a pocket park (approximately one-third acre, including the wide, adjacent sidewalks) on Hampshire Street near Kendall Square. The space is created using a wide sidewalk and raised planter. There are benches along the side of an office building and people sit on the ledges surrounding the raised bed. The sidewalk is paved with paver blocks, making it feel much more like a park than a sidewalk. The spot of green grass in the middle of several tall office buildings provides a nice touch of nature in an otherwise concrete jungle. People come out and have lunch in the space, but mostly it is just people walking through and sitting for a few minutes.





Spontaneous Parks

While my research in the Metro Boston Area did not provide any examples of spontaneous parks, there are current examples in several areas of the country. Over time, spaces that were initially spontaneous parks become more traditional pocket parks and overtime become indistinguishable from traditional pocket parks. Even if they remain owned and/or operated by community groups and volunteers, spontaneous parks will eventually become increasingly programmed, planned and designed.

Community groups and neighbors are often responsible for the development of spontaneous pocket parks. As such, most of these parks are buried in neighborhoods and park users tend to live less than two blocks away (Marcus and Greene, 1998, p. 151). Spontaneous parks can be a community effort or begin with one person thinking that a particular spot should be redesigned into a park. Parks in Indianapolis, Indiana are developed by a coalition of community groups, non-profit agencies and the Keep Indianapolis Beautiful Campaign (Keep Indianapolis Beautiful, 2009). Portland, Oregon has several examples of vacant lots being turned into parks through community effort. One such example is Two Plum Park, a formerly abandoned residential lot. A neighbor tired of looking at the unkempt lot that was quickly becoming an eyesore and began mowing the lot. Eventually, concerned residents came together and worked with the City to design a small park on the lot. With the city's assistance and financial support from a grant award, the house was demolished and the parcel is now a community park (Portland Parks and Recreation, 2012).

Chapter 4: Opportunities and Mechanisms for Creating New Pocket Parks

Pocket parks are more flexible than any other type of park. They can be woven into the urban fabric in a wide variety of ways. They can take up full parcels or be located along an extra-wide sidewalk. Pocket parks offer an incredible opportunity for cities to provide open space in an often-crowded environment. The three most promising locations for additional pocket park development are: as privately-owned public spaces, in spaces left over or created by public improvements or private development, and on vacant parcels. Financial and programmatic support for these new parks can come with a variety of tools. The tools discussed in the second section of this chapter are dedicated taxes and public-private partnerships.

Another benefit of pocket parks is the fact that they can be developed without significant public investment. Zoning ordinances and bylaws can include open space provisions and impact fees to have the private sector support the addition of pocket parks. Cities can levy dedicated taxes to be used to increase the amount of parkland available to the community or to pay for the maintenance and upkeep of new, and existing, parks. Other activities, such as developing public-private partnerships, can work to increase the amount of parkland a city offers without adding responsibility to municipal employees or requiring the expenditure of public money. How the public-private partnership functions depends on the specific agreement between the two entities.

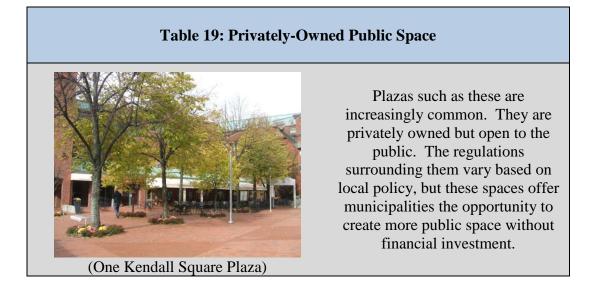
These land regulation and financing techniques are tools that municipal governments can use to increase the number of pocket parks in the community. Some of these tools require financial investment by the community and others can be leveraged without the municipal government spending money they simply do not have. These tools can be combined and used in different ways to encourage the development of pocket parks. The flexibility municipal governments have in determining who is responsible for developing a pocket park continues as the park matures and needs maintenance and upkeep. This responsibility can fall to the municipal parks and recreation department, taken over by a community group or conducted by a private landowner. The different maintenance plans can be discussed and negotiated by the municipalities and interested parties.

Finding Space for New Pocket Parks

Undedicated open space is hard to find in cities. The biggest attraction of pocket parks is their small size; they can be squeezed into a space as small as a tenth of an acre. In every city, there are spaces that could, with relatively little effort, become a park (Harnik, 2009). People just do not see these spaces as parks; before pocket parks can be dropped in throughout the city, people need to begin to think differently. The tiny spaces along a wide sidewalk or the corner of a new development both have the potential to be a brand new park. The spaces used for pocket parks are often private spaces with public access, new spaces created as new buildings are developed (or redeveloped) or vacant lots.

Privately-Owned Public Spaces

Privately-owned public spaces are a relatively new addition to the open space conservation tool box. Championed in New York City, beginning with the 1961 re-drafting of the city's zoning ordinance, privately-owned public spaces, have become increasingly common in today's cities. Privately-owned public spaces are those spaces that are owned and managed by a private landowner but are open to the public. The existence of these spaces had gone relatively unnoticed by the general public until the Occupy Wall Street protesters selected one of these parks as their campsite in September 2011. Zuccotti Park, the site of their protest, is a privately-owned public space. City residents use these spaces on a regular basis, but are often unaware of the different rules and regulations that apply to privately-owned public spaces and do not understand how they are developed (Kayden, 2011).



Privately-owned public spaces are developed as part of larger development and re-development efforts in cities. Most large buildings require special permits. These permits are conditional and can require the developer to provide something in return for varying from the zoning code. These extractions can be in the form of a monetary contribution to public funds (impact fees) or providing an amenity within the development (privately-owned public spaces).

Special permits allow the municipality the ability to offer a "middle ground" for uses that are not considered egregious enough to be banned outright or innocuous enough to be permitted as of right. The special permit is defined in MGL c.40A §9 and very well detailed by the MA Appeals Court in *SCIT v*. *Planning Board of Braintree*, 19 Mass. App. Ct. 101 (1984) where a special permit was characterized as: "Special permit procedures have long been used to bring flexibility to the fairly rigid use classifications of Euclidean zoning schemes... by providing for specific uses which are deemed necessary or desirable but which are not allowed as of right."

The most notable case law supporting the use of extractions, also called exactions, as a condition of awarding a special permit comes from *Nollan v*. *California Coastal Commission* (483 US 825 (1987)) and *Dolan v*. *City of Tigard* (512 US 374 (1994)). These cases reaffirmed the municipality's ability to require extractions by placing limits on what is a legitimate extraction and what constitutes a taking, for which the municipality would have to provide compensation. The two thresholds created by *Nollan* and *Dolan* are referred to

nexus and proportionality, respectively. The Court held in *Nollan* that an extraction is legitimate if the extraction is related to the impact it is intended to offset. In 1994, the Court added the additional test of "proportionality" to the standards a legitimate extraction must meet. Proportionality means that the public benefit provided by the exaction must be about as bothersome as the burden it is offsetting.

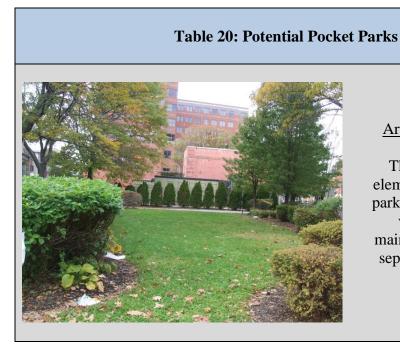
Zoning ordinances can also require developments of a certain size to provide open spaces. In Massachusetts, this authority is found in MGL Chapter 40A, the State's Zoning Act. Privately-owned public space has been used primarily for the development of plazas, or "passive pocket parks," and open space provisions have been used to create parks of all sizes. In both privatelyowned public spaces and open space provisions, the private land owner is responsible for both funding the park's construction and maintaining the space. Open space provisions will be discussed in greater detail later in this chapter.

Depending on how the community has chosen to incorporate these spaces into their zoning and larger policy context, the parks on privately-owned property may be developed by a private entity who then transfers its management and maintenance to the municipal government, or the space may be privately owned and managed.

Spaces Created from Planning

The spaces created from the planning and permitting of a new development or redevelopment are prime opportunities of how a private land owner could provide additional pocket parks for the community. Every development has them: the spaces that surround the buildings but are adjacent to parcel lines and/or sidewalks and streets. Even very small spaces can serve as a place for people to sit or enjoy a meal. Some spaces will never be suitable for benches or tables, but simply seeing green space, or even a tree, improves life for residents. These edge spaces can be seen throughout any community and create a perfect opportunity to capitalize on the benefits of urban open space.

The areas discussed below (Table 20) are all prime examples of how a pocket park can be created using very little effort. These spaces are already parks, but are unused because there is no place to sit. Adding benches to any of these spaces would instantly create new park space.



Arthur Reardon Square

This space has all the elements of a great pocket park, except benches. The vegetation is wellmaintained, attractive and separates the space from adjacent streets.



Idenix Building

This space is adjacent to an office building, but has a very nice entrance with two beautiful trees. The space is relaxing and beautiful. A bench could make this space a great pocket park.



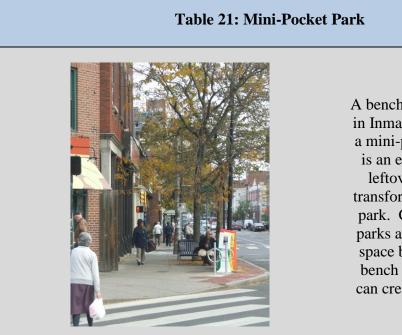
Jutta Elsa Georgi "OMA" Callinan Square

This space has great vegetation and a path into a residential housing development. Installing a bench would create a small pocket park.



Linwood Court

Similar to the other spaces in this table, the trees and brick pavers make the space attractive. Adding benches would make it a great pocket park. Similar to the spaces discussed in Table 20 (above), the City of Cambridge has installed benches and maintained street trees along many streets throughout the city. The example in Table 21 (below) shows how the installation of benches along extra-wide sidewalks can improve the pedestrian experience and serve as mini-pocket parks. Improvements such as these can, and should, be required by cities for both public works projects and private development.



A bench located near trees in Inman Square provides a mini-pocket park. This is an example of how a leftover space can be transformed into a pocket park. Generally, pocket parks are larger than this space but even adding a bench along a sidewalk can create a pocket park.

Liability

In our litigious American society, many people are concerned about liability when they open their private property up to the public for recreational or other uses. Landowners granting public access to private land are protected by recreational immunity statutes. These statutes are created with the express intention of protecting those who provide public access to their property and place the burden of proof on the plaintiff bringing the suit to prove that the land owner has acted in a willful, wanton or reckless manner. As with any legislation, there are restrictions to this. If the landowner is charging an entrance fee or other charge to use the space, the responsibility of the owner is higher. For the purposes of privately-owned pocket parks, it is assumed that they will be freely available to the public and owners will not be charging an entrance fee. In this case, the duty of care standard remains low. Unless the landowner or their designee responsible for maintenance acts negligently, the landowner is generally immune from liability. In Massachusetts, the recreational immunity statute is found in Massachusetts General Laws Chapter 21 Section 17C (See Appendix B).

Anderson v. Springfield (406 Mass. 632 (1990)), Catanzarite v Springfield (32 Mass. App. Ct. 967 (1992)) and other cases have all affirmed the Court's interpretation of the Recreational Immunity Statute and found in the favor of landowners when the land owners were not found to have acted in a willful, wanton or reckless manner.

Vacant Parcels

As devastating as the recent foreclosure and abandonment crisis has been for the economy, cities and the country as a whole, it has created an opportunity for open space preservation (The US Conference of Mayors, 2008). There are a number of ways that a municipal government can provide open space on formerly vacant property. Receivership legislation allows municipal governments to seize property that is in violation of the health code and provides a danger (Edell and Lee, 2010). Another tool available to municipal governments is foreclosing on tax delinquent properties (Massachusetts Collectors and Treasurers Association, 2003). As these properties become increasingly derelict and common, more individuals and groups are working to ensure that these properties provide something to the community. This community effort is evident in the creation of groups such as Take Back Vacant Land (www.takebackvacantland.org), Take Back the Land (www.takebacktheland.org) and similar organizations throughout the country. Many of these spaces have been developed into community gardens, but pocket parks are another viable alternative for using these lands.

Organizations such as Cleveland's Neighborhood Progress (www.npi-cle.org) work with the municipal government to turn vacant property into community gardens. Often, the development of vacant property will occur through a publicprivate partnership (discussed in more detail below) but municipal governments that hold the property's title have the ability to maintain the land as a public park without working with a private organization or company.

Financing and Supporting Pocket Parks

Creating a pocket park is more than requiring a private entity to create one or the municipality acquiring the land and going through the development process itself. Parks require ongoing maintenance and upkeep. Zoning tools can be used to create open space requirements, the municipal government can work with a non-profit or other private organization to support the land, the government can collect fees to offset the negative impact of development or levy a dedicated tax to support the development and maintenance of pocket parks.

Open Space Provisions

Many zoning bylaws and ordinances call for the provision of open space as part of commercial and other large development projects. The amount of open space required by the zoning code varies with the size of the development. Any municipality that does not already have an open space provision written into their zoning should consider incorporating one. These provisions can easily be used to develop pocket parks. Many of the largest cities, especially New York City, have incorporated open space provisions into their zoning.

Many of these open spaces remain part of the private parcel, becoming privately-owned public spaces (discussed above). These spaces have different regulations than publicly-owned public spaces, which are owned and managed by the municipality. Many open space provisions allow flexibility in their application; some even allow the developer to make a financial contribution to the municipality instead of providing the open space (National Association of Homebuilders, 2012). Developing and maintaining public space is far more of an investment than simply making a financial commitment to the municipality, so when there is a choice, developers choose not to create the open space (Center for Watershed Protection, 1998). For this reason, the zoning should require that public open space be created as part of the project as opposed to providing developers with choices.

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The provision of open space should not be an option. It is my opinion that providing open space should be required for all large-scale projects, especially those requiring a special permit. By requiring the provision of open space as part of development and redevelopment projects, the number of pocket parks in the community will be increased without using municipal resources. Open space requirements are similar to impact fees as they require developers to provide a public service or amenity in exchange for undertaking development projects that often tax the surrounding neighborhood and stress the city's infrastructure.

A mandatory open space provision requires a set amount of public open space be provided for a set amount of new development (National Association of Homebuilders, 2012). Land acquisition costs are very high in many urbanized areas. Requiring private developers to provide public open space removes the cost burden from municipal governments, but serves a public benefit. New York City is the prime example of a zoning ordinance that requires private development to provide public open space. First added to the city's zoning regulations in 1961, the City has exchanged the development of privately-owned public spaces (known as POPS in New York) for additional floor area. The city's zoning allows POPS to be either indoors or outdoors and the most recent updates require the development of functional and visual amenities. Outdoor spaces must include seating, tables, landscaping and kiosks or other artwork. The spaces most commonly provided as a result of this provision are outdoor plazas. The full requirements can be found in Section 37-70 of the City's Zoning Resolution¹.

As the Center for Watershed Protection (1998) found, when given a choice, developers prefer to pay impact fees than provide public spaces. This is why open space provision should not be a voluntary or optional regulation.

Public-Private Partnerships

As public budgets have tightened, the public-private partnership has increasingly become a common tool that municipal governments use to provide services they otherwise could not afford. These partnerships can take many different forms, but give governments another way to do the business of governing. In a public-private partnership, a public entity will work with a private one, whether it be a non-profit organization or private company, to provide and maintain park space.

Public-private partnerships allow government organizations to work with non-profit and other private entities to develop, support and maintain parks. Frequently, these arrangements are between a government and a land trust to purchase and preserve open spaces. When a land trust is working with a municipal government, it is generally for the purpose of acquiring properties. However, partnerships between governments and private or non-profit organizations can be used to maintain the land (Project for Public Spaces, 2000).

¹ Section 37-70 of the NYC Zoning Resolution is available here:

< http://www.nyc.gov/html/dcp/pdf/zone/art03c07.pdf>

Dedicated Taxes

Creating a dedicated tax stream to support pocket parks is another option for municipalities attempting to increase the amount of money available for pocket park projects. Creating a dedicated tax stream is perhaps the oldest technique that communities have used to acquire and develop additional parkland. Residents in cities across the country have approved additional taxes to support public spaces (Harnik, 2008). However, whether or not an electorate is willing to increase taxes to increase the number of parks is questionable.

Dedicated taxes have been used at both the state and local levels, sometimes in partnership with one another. The Massachusetts Community Preservation Act (CPA) is an example of this partnership. First passed in 2000, the legislation gives Massachusetts municipalities the option of charging a surcharge of up to three percent on property taxes to raise funds for open space conservation, affordable housing or historic preservation efforts (Chapter 257 of the Acts of 2000). Additionally, the Community Preservation Act makes matching state funds available to communities who adopt the measures.

The Community Preservation Act is a practical example of the conventional wisdom that "money makes money," local funds are often used to leverage additional funds in the form of matching grants or to simply show that the community values open space preservation and has made open space a financial priority. Many grant programs, such as Massachusetts' Community Preservation Act, use the availability of matching funds as a metric when making grant awards.

Chapter 5: Conclusion and Suggestions for Further Research

Pocket parks are a very powerful opportunity that municipalities have to increase the amount of public space and parkland. Pocket parks can be developed on land that would otherwise remain unused. Pocket parks can be squeezed into very small spaces or expand to fill as much land as is available. Active Pocket Parks are, on average, larger than other pocket parks because they include some type of activity for users. Generally, these parks include a playground or a small half-court, but more innovative pocket parks have been developed using play equipment designed for elderly users, as community gardens, as dog parks or other non-traditional uses. These parks must be designed with the community in mind, but must not duplicate the activities provided by other nearby parks.

The second type of pocket parks is Passive Parks. These parks are developed as parks, but without an active use in mind. These parks generally offer some type of visual stimulation, such as a fountain or sculpture. They are also typified by decorative plantings, benches and tables. Similar to Passive Parks, Bonus Pocket parks offer users a place to sit and rest without offering a specific activity. Bonus Parks were never pre-planned as parks, but became parks as people began to sit, perch and spend time. Overtime, spaces created by the planning of other uses, spaces along sidewalks, or in front, between and at the edges of buildings, that were not initially intended to be parks can turn into parks. Unlike for larger parks, there is still a significant amount of land available in cities to develop pocket parks. New pocket parks can be developed on vacant parcels, inside existing developments or as part of a new development or project. Privately-owned public spaces are an important tool that municipalities have that enable them to increase the amount of public space in the city without expending any financial resources. As part of a special permit, the community can get extractions from projects to offset the negative impacts of new development. These extractions must be related to the project and proportional in impact. Private developers can also be required to provide a public benefit proportional to the burden new development places on the city and its infrastructure.

I believe that pocket parks are an incredible tool that more municipalities should be capitalizing on to increase the amount of parkland available and improve residents' quality of life. Pocket parks are very flexible and can be used to address recreational deficiencies, provide a refuge from the city or simply revamp an unsightly space left over after development.

Municipalities should be working to provide more pocket parks and fortunately, there are a number of tools that allow local governments to increase the number of pocket parks without committing financial resources. Zoning ordinances and bylaws should include non-discretionary open space provisions. Pocket park development and maintenance should be attached to special permits and municipal governments can work with private organizations to develop, build and manage pocket parks. Each of these tools can be leveraged in different ways to address the unique needs of each community.

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It is my belief that municipalities need to employ every technique possible to provide additional open space for residents and that the most promising source of pocket park development is on privately-owned property. Pocket parks should be provided as a public benefit on all large development and redevelopment projects. While projects requiring a special permit give the municipality the flexibility to require certain conditions for approval, I believe that the provision of public open space should also be required of developers completing as-of-right projects. Whether or not the electorate will be willing to levy additional taxes to increase park development or even increase park maintenance budgets or the availability of other municipal funds varies and changes with the political atmosphere. Even when private development slows, there are always development and redevelopment projects, allowing municipalities with policies requiring the provision of public open space to continue increasing the amount of parkland.

At different times in history, the planning and landscape architecture community has turned to pocket parks to address the need for open space in cities. However, this work has always stagnated. Communities tend to focus their attention on larger parks, the parks that will draw more visitors and create a destination for visitors. Pocket parks tend to be hyper local, they tend to only attract residents from the closest neighborhoods and are often grouped together as one type of park. By delving into the study of pocket parks and creating a system by which pocket parks can be further categorized, I have created a new research space where people can continue to expand the research on pocket parks.

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Compared to the larger field of parks and recreation research, pocket parks are woefully under-researched. By expanding the knowledge and thinking on pocket parks, I hope that more people will realize the importance of pocket parks. Pocket parks are important not only to their immediate neighborhood, but as a piece of the larger open space network.

This thesis is only the beginning of a conversation about pocket parks and the various ways they can be incorporated into the urban fabric. It is hoped that it will spring a growing discussion of the role that pocket parks play in the urban world. More work remains on the specific design recommendations that work to make each type of pocket park successful. The recommended tools need to be shaped and applied in different communities. Perhaps standard language could be developed to make implementing the ordinance recommendations easier.

Each city has innumerous spaces that are potential parks, but the spaces are overlooked because they are too small, of irregular shape or just so ubiquitous that nobody sees their potential. By starting the conversation about pocket parks, hopefully, the general perception can change and more people will be aware of the great opportunity that pocket parks offer cities.

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Appendix A Summary Chart: Study Park Characteristics

	Name	Location	Approximate Area (Acres)	Category	Ownership	Trees	Other Landscaping	Seating	Other Furniture	Focal Point	Play Equipment
1	Chief Anthony Paolillo Tot Lot (Pine Street Park)	Pine St and Eaton St	0.01	Active	City	✓	✓	V			\checkmark
2	Fairhaven Capital Plaza	1 Hampshire Street	0.34	Bonus	Private	✓		~			
3	Fletcher Maynard Academy	225 Windsor St	0.10	Active	City	✓	\checkmark	~	\checkmark		\checkmark
4	Inman Square	Cambridge St. and Hampshire St.	0.01	Bonus	City	\checkmark	✓	~		\checkmark	
5	James O. Dance, Jr. Square (Bishop Allen Plaza)	Bishop Allen Dr. and Main St.	0.06	Bonus	City	✓		√		✓	
6	Jill Brown Rhone Park (Lafayette Square)	Mass Ave and Main St.	0.44	Bonus	City	✓	✓	~	V		

	Name	Location	Approximate Area (Acres)	Category	Ownership	Trees	Other Landscaping	Seating	Other Furniture	Focal Point	Play Equipment
7	, One Kendall Square Plaza		0.50	Passive	Private	√		\checkmark	\checkmark		
8	Reale Square (at City Hall Annex)	344 Broadway	0.07	Passive	City	✓	✓	~	✓	✓	
ç	Robert Paine Square Playground	St. Mary Rd and Armory St.	0.40	Active	City	~	~	✓	\checkmark		\checkmark
1	O Squirrel Brand Park	Boardman St. and Broadway	0.27	Passive	City	\checkmark	✓	\checkmark	\checkmark	\checkmark	
1	University Park Entry Court at MIT	Mass Ave and Sidney St.	0.34	Passive	Non-Profit	\checkmark	\checkmark	✓		\checkmark	~
1	Area	West Street and Lee Street	0.24	Active	City	✓	✓	~			\checkmark
1	William 3 Cooper Square	Lee St. and Harvard St.	0.23	Active	City	✓		~	\checkmark		\checkmark

Appendix B: Massachusetts Recreational Immunity Statute MGL c.21 §17C

Chapter 21.

Section 17C. (a) Any person having an interest in land including the structures, buildings, and equipment attached to the land, including without limitation, railroad and utility corridors, easements and rights of way, wetlands, rivers, streams, ponds, lakes, and other bodies of water, who lawfully permits the public to use such land for recreational, conservation, scientific, educational, environmental, ecological, research, religious, or charitable purposes without imposing a charge or fee therefor, or who leases such land for said purposes to the commonwealth or any political subdivision thereof or to any nonprofit corporation, trust or association, shall not be liable for personal injuries or property damage sustained by such members of the public, including without limitation a minor, while on said land in the absence of willful, wanton, or reckless conduct by such person. Such permission shall not confer upon any member of the public using said land, including without limitation a minor, the status of an invitee or licensee to whom any duty would be owed by said person.

(b) The liability of any person who imposes a charge or fee for the use of his land by the public for the purposes described in subsection (a) shall not be limited by any provision of this section. For the purposes of this section, "person" shall include the person having any interest in the land, his agent, manager or licensee and shall include, without limitation, any governmental body, agency or instrumentality, a nonprofit corporation, trust, association, corporation, company or other business organization and any director, officer, trustee, member, employee, authorized volunteer or agent thereof. For the purposes of this section, "structures, buildings and equipment" shall include any structure, building or equipment used by an electric company, transmission company, distribution company, gas company or railroad in the operation of its business. A contribution or other voluntary payment not required to be made to use such land shall not be considered a charge or fee within the meaning of this section.

Appendix C: Example Public Open Space Provision City of Cambridge, MA Zoning Ordinance

Select sections of the zoning ordinance that represent municipal tools discussed in this thesis are included here. Subsections that are not related to public open space have been excluded, see

<http://www2.cambridgema.gov/cdd/cp/zng/zord/index.html> for complete zoning ordinance.

Open Space, Public. An area owned or controlled by the City of Cambridge or other public entity that is intended for public use, that is open to the sky and that is designed for either environmental, scenic, or recreation purposes. Public Open Space may include but is not limited to lawns, decorative plantings, interior walkways, abutting sidewalks, active and passive recreation areas, playgrounds, fountains, and public performance areas. Public Open Space shall not include rooftop areas, patios, balconies, parking lots, or driveways. Limited paved surfaces may be designed to accommodate occasional use by motor vehicles servicing the park facility. If the facility is not held in fee simple by the City of Cambridge or other public entity, the Public Open Space may be land remaining in private ownership but protected for public use by means of a permanent easement, conservation restriction, or other similar legal device acceptable to the City.

Open Space, Publicly Beneficial. A portion of a structure, a lot or other area of land associated with and adjacent to a building or group of buildings in relation to which it serves to provide light and air, or scenic, recreation, pedestrian amenity or similar purposes. Such space shall be customarily available or shall be readily visible to such occupants and visitors, though physically inaccessible, by being located and treated to enhance the amenity of the development through a general appearance of openness. Publicly beneficial open space shall include parks, plazas, lawns, landscaped areas, decorative plantings, and active and passive recreational areas. Publicly beneficial open space shall also include loggias, atriums, arcades and pedestrian ways listed and defined in Section 14.45. Streets, parking lots, driveways, service roads, loading areas, and areas normally inaccessible to pedestrian circulation beneath pedestrian bridges, decks, or shopping bridges shall not be counted in determining required publicly beneficial open space.

13.14 *Open Space*. The following Open Space requirements shall be met on each Development Parcel.

(1) For that portion of a Development Parcel consisting of lots described in Section 13.13.11, Paragraph (1) above, any combination of Public Open Space, Green Area Open Space or Permeable Open Space, as defined in this Ordinance, shall be provided on the Development Parcel and shall in the aggregate equal at least twenty (20) percent of the area of that portion of the Development Parcel.

(2) For that portion of a Development Parcel consisting of lots described in Section 13.13.11, Paragraph (2) above, any combination of Public Open Space, Green Area Open Space or Permeable Open Space, as defined in this Ordinance, shall be provided on the Development Parcel and shall in the aggregate equal at least Forty-two (42) percent of the area of that portion of the Development Parcel, subject to the further limitations set forth in Section 13.14.1 below.

Owners of adjacent Development Parcels may collectively provide the required open space by easement, deed restriction, covenant, or comparable legal instrument enforceable by the City of Cambridge or other public entity. In that event each Development Parcel shall, for purposes of this Section 13.10 to be deemed to include that portion of such open space as the owners shall allocate to it in chosen legal instrument.

All required open space shall be generally accessible to the public for reasonable periods throughout the day for the purposes for which the open space is designed and approved by the Planning Board, which may include but not be limited to walking, bicycling, active and passive recreation. The Planning Board must approve any proposal to significantly limit public access to the required open space.

13.14.1 Required Public Open Space. For that open space required in Section 13.14, Paragraph (2) above, the required open space shall consist in part of a contiguous 7.5 acre Public Open Space to be located in the northwest quadrant of the PUD-KS district as further described and located in the Eastern Cambridge Plan. The Public Open Space shall be under the control of the City of Cambridge through fee simple conveyance, easement, or other legal mechanism acceptable to the City. In the event that the City of Cambridge does not accept the facility, the PUD permittee shall maintain the park for the use of the general public as originally designed and approved by the Planning Board in the Special Permit. The Public Open Space shall be designed and constructed by the permittee according to the onditions of the PUD special Permit and when conveyed to the City shall be environmentally and otherwise suitable for the recreational uses for which it is designed.

However, where circumstances related to the transfer of property from the federal government to other governmental or private entities (for the purpose of private development on a portion or all of the land in the control of the federal government) limit the feasibility of creation of a 7.5 acre park, the Planning Board may at its discretion approve a Final Development Plan providing a contiguous Public Open Space of less than 7.5 acres. In approving such a Final Development Plan the Planning Board shall find that a smaller facility continues to meet the objectives of the Eastern Cambridge Plan and the Eastern Cambridge Design Guidelines,

- 13.14.2 The Planning Board shall encourage development that is located adjacent to a Public Open Space to by physically and functionally integrated with the open space by means of building orientation, location of the building entrances, pedestrian linkages between major activity centers, and similar techniques.
- 13.75.1 Required Public Open Space. Any approved Planned Unit Development whose Development Parcel consists in part or entirely of a lot or combination of lots (a) in existence as of June 1, 2001, (b) held in common ownership, and (c) is at least 13-39 250,000 square feet in size shall be obligated to allocate a portion of its open space requirement as set forth in Section 13.75 above as Public Open Space meeting the requirements set forth in Section 13.75.11 below. This obligation shall remain with such lot or combination of lots in its entirety, notwithstanding any subdivision or change of ownership that may occur after June 1, 2001. In each instance where such a lot or combination of lots, or a portion thereof, is included within a development parcel, the PUD special permit shall only be granted if it is established to the satisfaction of the Planning Board that the Public Open Space required in this Section 13.75.1 can be provided even if its location is on a portion of the lot or combination of lots not included within the Development Parcel under review.
- 13.75.11 Requirements of the Public Open Space. The required Public Open Space shall consist of a contiguous parcel of land of at least two and one half (2.5) acres in size at a location and designed in a manner consistent with the Eastern Cambridge Plan. As defined, the Public Open Space shall be within the control of the City of Cambridge through fee simple conveyance, easement, or other legal mechanism acceptable to the City. The Planning Board in its conditions shall

establish the time by which the facility shall be completed. In the event that the City of Cambridge does not accept the facility, the PUD permittee shall maintain the park for the use of the general public as originally designed and approved by the Planning Board in the Special Permit. The Public Open Space shall be designed and constructed by the permittee according to the conditions of the PUD Special Permit and when conveyed to the city shall be environmentally and otherwise suitable for the recreational uses for which it is designed.

- Only one facility of 2.5 acres or greater shall be required within the North Point PUD District. Once the Public Open Space obligation has be met, any remaining open space required for any PUD need only be consistent with the requirements of Section 13.75 and the applicable guidelines of the Eastern Cambridge Plan. The required facility shall be created according to the following rules.
- (1) Where the Development Parcel includes a lot or combination of lots defined in 13.75.1 above where that lot or combination of lots is at least 250,000 square feet in area but less than ten acres, and where the development parcel encompasses a portion of the site of the required Public Open Space as illustrated in the Eastern Cambridge Plan, the open space required in the PUD shall be allocated in the approved Final Development Plan in part or in full at the proposed location of the Public Open Space.
- (2) Where the PUD Development Parcel includes all or a portion of a lot or combination of lots with an area greater than 10 acres, the PUD Final Development Plan shall be required to create in its entirety a 2.5-acre Public Open Space consistent with the Eastern Cambridge Plan; if development of a 2.5-acre Public Open Space has previously occurred in whole or in part, that portion of the Public Open Space not designated in any previously approved PUD shall be provided.

14.40 OPEN SPACE REQUIREMENTS

14.41 *Definition of Open Space.* For purposes of this Section 14.40, open space shall mean a portion of a lot or other area of land associated with and adjacent to a building or group of buildings in relation to which it serves to provide light and air, or scenic, recreational or similar purposes. Such space shall, in general, be available for entry and use by the occupants of the building(s) with which it is associated, and at times to the general public, but may include a limited proportion of space so located and treated as to enhance the amenity of development by providing landscaping features, screening or buffering for the occupants or neighbors or a general appearance of openness. Open space shall include parks, plazas, lawns, landscaped areas, decorative plantings, pedestrian ways listed in Section 14.45, active and passive recreational areas, including playgrounds and swimming pools. Streets, parking lots, driveways, service roads, loading areas, and areas normally inaccessible to pedestrian circulation beneath pedestrian bridges, decks or shopping bridges shall not be counted in determining required open space.

- 14.42 *District Public Open Space Requirement.* A minimum of one hundred thousand (100,000) square feet within the District shall be reserved or designated as public open space. No development shall be allowed which would reduce public open space in the District below one hundred thousand (100,000) square feet. Public open space shall be open space reserved for public use and enjoyment as guaranteed through one or more of the following:
- 14.42.1 Retention by the Cambridge Redevelopment Authority;
- 14.42.2 Dedication to and acceptance by the City of Cambridge or other public entity;
- 14.42.3 Easements or deed restrictions over such land sufficient to ensure its perpetual reservation for public open space purposes.
- 14.42.4 Dedication, by covenant or comparable legal instrument, to the community use of the residents, lessees and visitors to the District for reasonable amounts of time on a regular basis;
- 14.42.5 Lease agreements of ninety-nine (99) years or longer from the private developer or owner to the City or other public entity.
- 14.44.1 Eligibility for Reduction. The minimum amount of open space required for a lot by Section 14.43 may be reduced if at least twenty (20%) percent of the total perimeter boundary of the lot abuts public open space reserved under Section 14.42, and if at least one major pedestrian entrance to the principal building will abut and provide direct access to said open space.
- 14.44.2 Amount of reduction. The allowed percentage reduction of required open space shall be determined by dividing the length of the lot's common boundary on the public open space by length of the total boundary of the public open space.

14.44.3 Public Open Space in Common Ownership Located Directly Across a Private Way. Public Open Space held in common ownership with the lot for which open space is required, located within the District and directly across a private way from said lot, shall be counted toward satisfaction of the lot minimum open space requirements of Section 14.43. The perimeter of such public open space, less the boundary that abuts the private way, shall count toward the "total perimeter boundary of the lot" under Section 14.44.1 and "the length of the lots' common boundary on the public open space, including the boundary that abuts the private way, shall count toward the "total boundary that abuts the private way, shall count toward the "total of the lots' common boundary on the public open space, including the boundary that abuts the private way, shall count toward the "total boundary of the public open space" under Section 14.44.2.

15.40 PUBLICLY BENEFICIAL OPEN SPACE REQUIREMENT

- 15.41 *Public Open Space Requirement.* As an incentive for the maximum allowable density as provided in Subsection 15.32.1 there is a requirement that a minimum amount of one hundred thousand (100,000) square feet within the District be permanently reserved or designated (without reference to location) as publicly beneficial open space accessible at ground level as set forth in Section 15.32.5. No development shall be allowed which would permanently reduce publicly beneficial open space in the District below one hundred thousand (100,000) square feet. A minimum of fifty thousand (50,000) square feet of contiguous publicly beneficial open space shall be located west of Sidney Street. The initial location of the required publicly beneficial open space shall be guaranteed through one or more of the following:
- 15.41.1 Dedication to and acceptance by the City of Cambridge or other public entity;
- 15.41.2 Easements or deed restrictions over such land sufficient or ensure that reservation for public open space purposes for at least seventyfive (75) years or longer to the City or other public entity;
- 15.41.3 Lease agreements of seventy-five (75) years or longer to the City or other public entity;
- 15.41.4 Dedication, by covenant or comparable legal instrument, enforceable by the City and building on the owner for seventy-five (75) years or longer.

Appendix D: Excerpt from City of Cambridge Open Space and Recreation Plan 2009-2016

Though the City's zoning ordinance requires public open space or privately-

owned public spaces to be at least 2.5 acres, the Open Space and Recreation Plan

makes specific mention of Pocket Parks and other Public Spaces. Some of the

parks included in this study are mentioned specifically. The full plan is available

electronically at <

http://www2.cambridgema.gov/cdd/cp/parks/osplan/osplan_2010_complete.pdf>.

31. Pocket Parks, Street Trees and other Streetscape Features

While open space planning in Cambridge focuses primarily on parks, reservations and other outdoor recreation areas, there is also a larger outdoor public realm, including roadways, sidewalks and public squares, which provides open space benefits to the Cambridge community. Community members interact with the streetscape as much if not more than with parks, so the quality of these environments may have a similar impact in terms of environmental, aesthetic, community- building and even recreational benefits (primarily with regard to walking and biking). Also, since community members must use public streets and sidewalks to access parks and other open spaces, the quality of the streetscape has an impact on the success and enjoyment of the entire open space system.

Two aspects of the streetscape that are especially important to future open space planning are street trees and plazas or "pocket parks" that may be found along the edges of sidewalks and in public squares. These features are illustrated on Map 5- 3. There are also a variety of streetscape features throughout the city that are meant to help beautify the environment, including planted areas, smaller scale street furniture, decorative pavers and more attractive lighting fixtures.

Some more general aspects of the streetscape that relate to the quality of the open space environment include the quality and design of sidewalks and roads, the availability of bicycle lanes, and "traffic calming" features such as raised crossings and curb bump- outs, intended to improve safety and accessibility for pedestrian travel. Cambridge is also beginning to explore innovative ideas that begin to blur the distinction between transportation infrastructure and open space. One such idea is the "shared

street," on which landscape features are included to make entire roadways pedestrian- friendly while still allowing vehicles to pass at very limited speeds or at limited times. Thus far the City has installed these features on two streets, Palmer Street and Winthrop Street, both in the Harvard Square district. ...

Pocket Parks

The City pursues opportunities to identify small public spaces along the edges of sidewalks and improve them to be used as small landscaped areas, often with benches and tables, plantings, public art and other beautifying elements. The Open Space Committee refers to these as "pocket parks," they may range from about 3,000 to 6,000 square feet in size, and they may be found along major roads, at the edges of parks, or near other public facilities. They may also be called "plazas" where they are found in major public squares. In many cases they have been created as part of the redesign of intersections in an effort to reduce the area devoted to vehicular use and enlarge the pedestrian- oriented realm. Where they are appropriately designed and maintained, these spaces tend to be very well used and enjoyed by members of the community. Some, including the space at Bishop Allen Drive and Main Street and the MBTA- owned Porter Square Plaza, have had little attention in recent years and tend not to be as well used. These spaces are an important complement to the city's system of larger parks and open spaces.

32. Other Public Lands

Other public facilities and lands are shown on Map 5- 4 and inventoried in Table 5- 4. On the whole, these facilities have little open space benefit, however there are notable open space features associated with some of these facilities. The front lawn of City Hall is a popular passive- use open space, and occasionally the section of Massachusetts Avenue in front of City Hall is closed to create a large open space for community gatherings and celebrations. Several spaces have adjacent "pocket parks," such as the City Hall Annex at 344 Broadway and the Valente Branch Library "Reading Garden." Some public facilities feature very small open areas in front of them with benches or plant beds. Some facilities, such as the municipal parking garage on First Street, have small spaces that could potentially be beautified or turned into sitting areas. In addition, one of the municipal parking lots in Central Square is used as the site of a seasonal farmers' market.

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