Alexandria
Virginia

PLAYSPACE
Assessment

February 2012

Preface

This report is intended to improve the well-being of children ages 2-5 in Alexandria through better opportunities for healthy play. It was made possible by a grant from:

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This report prepared by:

Robby Layton
Lafayette, CO
303/664-5301
www.dcla.net

Anne Miller
Lafayette, CO
303/439-8369
www.greenplayllc.com

Child Development and Health Consultant

Helle Burlingame, Psychologist
Olympia, WA
360/888-2467
helleburlingame@comcast.net

Project Manager

Carrie Fesperman Redden
Alexandria Childhood Obesity Action Network/
Partnership for a Healthier Alexandria
703/746-4914
carrie.fesperman@vdh.virginia.gov

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Studying Play in Alexandria

Executive Summary: Studying Play in Alexandria

In December of 2010 the Alexandria Childhood Obesity Action Network, in collaboration with Alexandria Arlington Smart Beginnings, the Partnership for a Healthier Alexandria, the City of Alexandria, and others, issued a call for proposals from consultants to help them "better understand the playspace needs of the City of Alexandria for younger children," particularly ages 2-5, and to raise awareness about playspace opportunities and needs in Alexandria. This was part of a larger early-childhood obesity prevention initiative underway lead by the Alexandria Childhood Obesity Action Network (A-COAN). A-COAN is committed to making **the healthy choice the easy choice** by encouraging active lifestyles and healthy eating through policy, systems, and changes in the environment.

Specific goals of the study were stated as:

1. Better understand the condition of existing indoor/outdoor playspaces in public/private spaces
2. Increase the understanding of residents' access to playspaces and socio-cultural influences impacting playspace use
3. Be useful in a long-term master planning process
4. Prioritize future playspace locations and funding needs

*According to Inova Health System's assessment of overweight and obesity prevalence across Northern Virginia, **43.5%** of children in Alexandria, ages 2-5, are overweight or obese.*

Process for the Study

The study consists of these main parts:

- An **inventory of playspaces** that included an evaluation of the functionality of each playground or playspace toward serving the needs of 2-5-year-old children.
- An **analysis** of the physical distribution of and access to playspaces across Alexandria and how this is meeting the needs of children.
- A series of **focus group sessions** with family day care providers, participants in Alexandria playgroups, service providers, providers of play facilities, and others to determine the needs, values, and priorities for play relative to 2-5-year-olds in Alexandria.
- An overall **evaluation** of the gaps, opportunities, and constraints that affect access to play in Alexandria.
- A set of **recommendations and strategies** for improving access to playspaces for 2-5-year-olds in Alexandria and the value of the available playspaces.

A Photovoice Project, which reinforced many of the findings from the focus groups, was also conducted in tandem by Project Play.

Alexandria Photovoice Project

While this play assessment was going on, Project Play launched a Photovoice Project to engage community members in identifying ways to improve Alexandria playgrounds. In a Photovoice Project, participants are asked to share their opinion by taking photographs, sharing them with others, and developing narratives to go with their photos. Parents and caregivers participating in the Center for Alexandria's Child playgroups were asked to take pictures of the best and the worst features of playgrounds. Over 30 parents and caregivers volunteered and photographed 20 playgrounds. The majority of participants did not speak English as their first language.

As participants primarily photographed the playgrounds that they took their children to, the majority of their photos helped to better understand what playground features were most important to playground users. The 10 themes that emerged were:

- **Safety**
- **Easy and safe access**
- **Shade**
- **Surfacing**
- **Fun and engaging playspaces**
- **Age-appropriate equipment for children**
- **Seating for adults**
- **Amenities (water fountains and bathrooms)**
- **Importance of indoor and playgroup space**

"We always watch our kids, and if something happens, we can go quickly. I think [that] the park also has many entrances/exits isn't always good, because people pass the park as a shortcut. Sometimes they throw garbage or trash. I think only one entrance/exit is good if the park isn't so big. The location of the park is also important. If the park is near a very busy street, it's hard for us to go, and when the kids run from the playground, it causes accidents." —Mie

"Los colompios no estan calientes porque el parque esta cubierto."
[The children are not hot because the park is covered.]
—Eliana (Lee Center)

"The floor is no good for strollers." —Adriana (William Ramsay Playground)

The Importance of Play

The growing absence of active outdoor play from children's lives is a nationwide concern. Many factors contribute to this, but a primary one is the lack of places to play that are easy to get to and that offer the variety of experiences needed for a child's healthy development. One consequence of this is an increasing disconnect between children and their environment. An even more alarming one is the effect on mental and physical health. Rates of obesity among children have grown to the point where in 2007, over 40 percent of children between the ages of 2-5 in Alexandria were overweight or obese. Getting children engaged in active play is one way to reverse this trend.

Play in Alexandria

This study looked at two main areas of focus regarding play in Alexandria:

1. **Physical infrastructure of play**
2. **Overall perception and understanding of play among residents**

All of the public and semi-public playgrounds throughout the city were identified and located on a map. Each of them was visited by experts on child development and playground design. Because play is more than just using prefabricated equipment, the area around each playground was evaluated as well. The playground and its surrounding area was collectively called a ***playspace.***

In addition, each playspace was evaluated on a set of characteristics and amenities that affect its play value. These included things such as ease of access, perceived safety, and pleasant surroundings. They also included physical attributes like the availability of restrooms, shade, drinking water, and seating for caregivers.

Each ***playspace*** was evaluated on how well it serves five components of healthy play:

- Physical activity
- Intellectual activity
- Social interaction
- Contact with nature
- Unstructured free play

The characteristics recorded for each playspace were plugged into a formula that yielded a numeric score for the playspace. The numeric scores were used to compare playspaces to one another in terms of their relative value. They were also used to establish norms and standards against which all playspaces could be evaluated.

After review and consideration, **a total of 86 playspaces** in Alexandria were found to be relevant to the scope of this study. These were further broken out into playspaces that are appropriate for children between the ages of 2-5 and those that are not. Of the 86 playspaces, **67 were identified as appropriate for ages 2-5.** Of those, 15 are located at schools and are not available to the public during school hours, which means that a **total of 54 playspaces** available throughout the day and suitable for 2-5 year olds were identified.

An "ideal" playspace for 2-5 year olds would have all of the elements and meet all of the conditions assessed during the evaluation. While no such ideal playspace was found, one playspace was identified as providing all of the components of play at full value. This was **John Adams Elementary School.** However, because it is located at a school, it is not available full time. It also does not provide restrooms, drinking water, and some of the other physical attributes necessary to form an ideal playspace. A more detailed discussion of the evaluation results for all playspaces can be found in this report.

The playspaces were also used collectively to evaluate how and where play is made available throughout the city. In particular, access to playspaces within a walkable distance was evaluated. Two parameters were evaluated. The first was to identify which parts of the city lie within a walkable distance of a playspace and which do not. The second parameter was to determine

the total value (according to the assessed value of each playspace) of all playspaces that are within walking distance of any given location. These results were compared with demographic mapping to show where playspaces exist relative to where children live, and the relative value of those playspaces. Through this process, areas with gaps in service were mapped. The results show significant gaps in the western part of Alexandria. These gaps tend to occur in areas with high and/or dense populations of children, particularly children under 5-years-old.

The perceptions and overall understanding of play among residents came primarily from a series of focus groups and the Photovoice Project. The input from these indicates that, in general, people feel that playspaces are not adequately distributed throughout Alexandria and that the available playspaces do not adequately meet the needs of children ages 2-5. Particular concerns included the lack of playspaces within walking distance of home and the overall safety and security of playspaces. People felt that maintenance of playspaces could be better. They also wanted to see surfacing in playspaces that is better suited to younger children. Overall, there was a feeling that playspaces needed more equipment and amenities suited to the needs of 2-5-year-olds.

There was also a concern among the focus group participants that information about where playspaces are located and what they offer is difficult to find, especially for people who are new to the area and those who do not speak English. At the same time, it was expressed that people in these categories gain a lot of social and emotional value through the connections they make through the play of their children. Joining play groups and meeting people at playspaces does a great deal to help people connect with one another and their community.

Recommendations

Three primary actions were identified as ways to expand and enhance access to play in Alexandria. These include:
Specific playspaces to improve were identified, and areas needing new or improved playspaces were discussed. The importance of providing a full range of play experiences within a

- **Improve the quality of playspaces**
- **Increase the quantity of playspaces and assure that they are well distributed**
- **Improve awareness of the importance of play and the general understanding of where to take children to play and how they can gain the most benefit from playing**

reasonable proximity of where children live was highlighted. While improvements are needed throughout the city, the westernmost part of Alexandria was identified as a priority due to its high density of children ages 2-5 and the overall lack of access to appropriate playspaces. Recommendations for this area include expanding access to school playgrounds, working with private owners to improve playspaces at residential developments, and providing temporary and mobile play opportunities.

The area in northern Alexandria known as Arlandria was also identified as an area of priority due to its high number of children and lack of playspaces. Recommendations for this area

include adding and improving playspaces within it and making sure that people living there know how to safely get to playspaces in adjacent neighborhoods. Those adjacent playspaces should be improved to assure that they can accommodate the spillover from this neighborhood and meet the full needs of all children.

The concept of Destination Playgrounds was also discussed. These are places that motivate people to make an effort to bring their children to a place where their full range of play needs can be met and that encourage them to stay longer. In the process, parents may also meet fellow citizens, get to know one another, and build a better community for themselves as well as their children.

The Story of Play

The Story of Play

It's not all fun and games…

At the end of the 1800s, children were living in squalor in the industrialized cities of America. Poor health, crime, and juvenile delinquency were prevalent, and places to play were woefully missing. A movement was started to improve the lives of urban children, and creating places to play was a significant part of that effort.

Now, over 100 years later, there is a new movement to again improve children's lives and rescue them from their environment. This time it is obesity, isolation, and the complexities of modern lifestyles that threaten children's lives, but play is once again seen as an important antidote.

In the latter part of the 20th century, play began to disappear from children's lives. Concerns about the safety of children and risks of abduction, traffic accidents, and injury or abuse prompted parents to stop allowing children to leave the house on their own, let alone play unsupervised. And today only one in five children live within walking distance (a half-mile) of a park or playground, according to a 2010 report by the federal Centers for Disease Control, making children even less inclined to play outdoors.

The busy lives of two-income families leave little time for parents to take their children to a playground or other place to play. As a result, the presence of traditional, free outdoor play has rapidly declined in the United States. It is being replaced with cyber-play and organized sports. Children spend ever-larger portions of their time in front of televisions and computers and relatively little time outdoors.

Over the past three decades, the childhood obesity rate has more than doubled for preschool children ages 2-5 years and adolescents ages 12-19 years, and it has more than tripled for children ages 6-11 years. At present, approximately nine million children over 6 years of age are considered obese. The prevalence is even greater among low-income preschoolers, with nearly a third of low-income children ages 2-5 being obese or overweight. Nationally, one out of every seven low-income, preschool-age children is obese.

Severe Health Consequences

Being overweight or obese puts children at the risk of many serious health problems, now and throughout their lives. Cardiovascular disease, type 2 diabetes, and mental health conditions such as anxiety and depression are typical threats. Preschoolers who are overweight/obese face an increased risk of obesity and its related health risks in young adulthood. Obese children and adolescents have a greater risk of social and psychological problems, such as discrimination and poor self-esteem, which can continue into adulthood.

In Alexandria, the obesity epidemic is particularly disturbing. A 2007 study on obesity in Northern Virginia found that 43.5 percent of Alexandria's children between the ages of 2-5 were overweight or obese!

Now, according to a 2007 Stanford University study, inactivity among children may result in this generation being the first in American history to have a shorter life span than their parents. Physical education, recess at school, and outdoor play at home are essential to healthy child development.

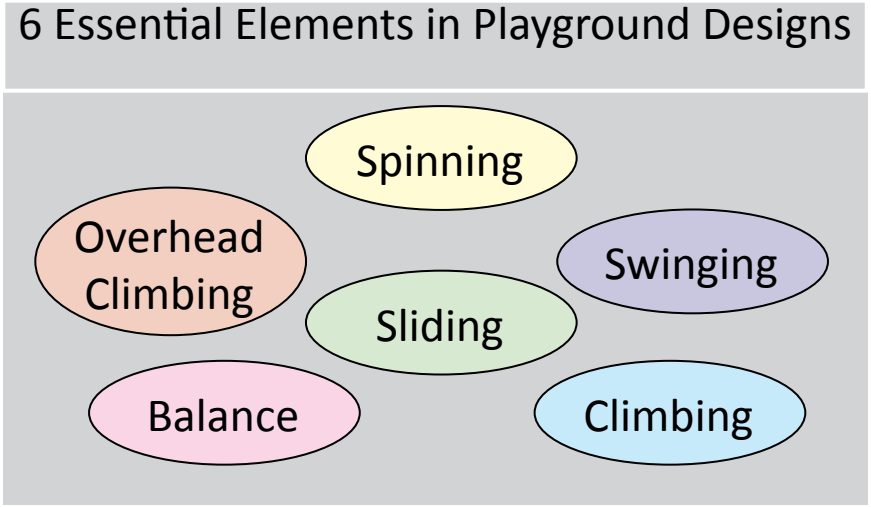
Play and Developmental Benefits

We are born to move. It's one of the first things a child discovers and learns to do. It's not just a human trait but is found in many species. It has a purpose.

Quality movement experiences are an essential part of a child's development and are just as important for newborns as for older children. Moving and physical activity assist with the healthy growth of a child's brain and body—and have an impact on a child's social, emotional, physiological, cognitive, and physical abilities and behavior.

For small children, playing is learning. Play has proven to be a critical element in a child's future success. Play helps kids develop muscle strength and coordination, language, cognitive thinking, reasoning, and social abilities.

Play also teaches children how to interact and cooperate with others, laying foundations for social skills that are carried into adulthood. The problem solving that occurs in play may promote executive functioning—a higher-level skill that integrates attention and other cognitive functions such as planning, organizing, sequencing, and decision making. Executive functioning is required not only for later academic success but also for success in those tasks of daily living that all children must master to gain full independence, such as managing their belongings and traveling to unfamiliar places.



Play encourages autonomous thinking, provides opportunities to practice new skills and functions, promotes flexibility in problem solving, and develops creative and aesthetic appreciation—all in a context of minimum risks and penalties for mistakes.

The Importance of Being Outdoors

Children's declining access to nature, and the resulting impacts on their development and well-being, point to a critical need to restore nature to the fabric of children's everyday lives. Research has discovered that physical and mental health benefits occur when young children are connected to nature.

Playing in environments that incorporate natural elements is important because nature is essential to both children's and adults' psychological and social health. It has been found to have an apparent beneficial effect on blood pressure, heart rate, mood, day-to-day effectiveness, social behavior, cognitive functioning, and work performance.

Research conducted at child care centers in Sweden where children were outdoors in all weather conditions found that children were sick less of the time, motor development was more advanced, power of concentration was heightened, and play activities were more diverse, especially in the affective, imaginative, and social domains.

An added benefit of connecting children to nature is that it instills an affinity and appreciation of the value of nature and builds future stewards, so that the children of today's kids will have the opportunity to enjoy valuable connections to nature.

So what is the importance of play?

PLAY promotes:

- cognitive, social, and language development
- physical fitness and health
- learning and coping skills
- general health and well-being
- creativity
- working in groups
- dealing with challenge
- exploration
- engaging in childhood passion, imagination, and brain development

The Need for Playspaces

Play has the potential to improve all aspects of children's well-being: physical, emotional, social, and cognitive. Lack of access to appropriate places to play is therefore a serious concern.

Preschool children seem to have highest physical activity levels while engaged in play outdoors. The outdoors is where free play and gross motor activity in young children are most likely to occur. For this reason, a primary focus is placed in this study on the availability and quality of suitable outdoor playspaces for children between the ages of 2-5.

What Is Play?

To understand play in Alexandria, we need to define what we mean by ***PLAY***. The word has a wide range of meanings and can be used as either a noun or verb. The Oxford English Dictionary devotes more than a page and a half to defining play. For the purposes of this study, some useful definitions include:

Play */noun*

Active bodily exercise; brisk and vigorous action of the body or limbs…
exercise or action by way of recreation or amusement... especially as a spontaneous activity of children or young animals…
(a source of) enjoyment or pleasure; a joy, a delight.

Our Definition of Play

For our purposes, let us consider play as used in this report to refer to the:

Free and spontaneous activity of children associated with motion of the body and action of the mind for the purposes of pleasure, delight, growth, health, and development.

Components of Play

Researchers agree that when evaluating children's environments the best approach is to look at the environment's ability to support the development of the whole child. Physically active play is the direct link to healthy growth, but play has the innate potential to improve all aspects of children's well-being: physical, emotional, social, and cognitive. It is important for each of these "domains" to be addressed in the places where children play. This requires a play environment with a good mix of activities and features that support children's intellectual, social, and physical development, as well as exposure to nature. These components provide a great platform for enhancing children's health and learning, along with their connectedness to nature and to other children and adults.

Individual play activities on a playground can support one or more developmental domains, depending on the quality of the play structure or the natural features found in the environment. For the purposes of this study, a focus was placed on the play environment specifically aimed at

2-5-year-olds. An environment for 2-5-year-olds has to be able to accommodate both toddlers and sophisticated older preschoolers. Five critical components of play for 2-5-year-olds were defined and evaluated at each individual playspace in Alexandria. The five components are as follows:

Physical Domain

The playspace should offer opportunities for physical activity appropriate for young children. Active physical play has a positive effect on children's physical development and coordination and helps prevent obesity. Examples include climbing, crawling, walking, running, sliding, climbing through, throwing, skipping, hopping, jumping on/off, lifting, and balancing. Vestibular stimulation that trains the sense of balance is experienced in activities like rolling, swinging, rocking, sliding, twisting, turning, and swaying. Pathways and wheeled toys offer opportunities to move at different speeds. Play structures offer the opportunity to climb up, down, through, and over and to experiment with large motor skills.

Intellectual Domain

The playspace should offer appropriate opportunities for intellectual development, including language skills, problem solving, perspective taking, memory, and creativity. Loose materials, moveable objects, and props stimulate imagination, discovery, and imaginative play. A sand play area is great for constructive play. Navigating a climbing structure or exploring the topography of a multipurpose, open grassy area develops spatial understanding. Age-appropriate risk and challenge are important elements in an intellectually stimulating environment for young children.

Social Domain

Play has shown to contribute to the development of social skills such as taking turns, collaborating, and following rules, as well as empathy, self-regulation, impulse control, and motivation. Outdoor environments designed with social activities in mind for child-child interactions and adult-child interactions include quiet spaces for both solitary and parallel play. Small-group play and larger-group play can occur on decks, stages, and sitting and gathering places. Pretend play features include playhouses and other imaginative props or natural objects.

Natural Domain

Including elements from the Natural Domain provides opportunities for children to be in physical contact with the natural environment. Nontoxic garden plants, hedges, bushes, enclosures, raised-bed gardens and planters, ground covers, multipurpose lawns, hills, and natural objects like logs, leaves, sticks, water, and sand all contribute to this domain.

Free Play

A Free Play area consists of an open space that offer opportunities for lots of movements and social interaction in unstructured play activities, i.e., open areas with appropriate surfacing for larger group play, running, games, and dramatic play.

Existing Playspaces in Alexandria

Existing Playspaces in Alexandria

Definition of *Playspace*

For the purposes of this study, a playspace is considered to be a ***playground, facility, or location where elements specifically intended for children's play are located.*** The goal of the inventory was to identify all of the playspaces in Alexandria that were public or semi-public, indoor or outdoor. By this, it is meant places that are open to the general public at least some of the time, even if they are located on private property. This included playspaces at public parks and schools and some private schools, churches, and other facilities that were open to the public on at least a partial basis. Playspaces at apartment complexes, housing developments, or other locations run by homeowners' associations or other entities were included if they were generally open to residents on a drop-in basis. None of the playspaces in the inventory charge a fee for use, except two indoor playspaces located in recreation centers. Facilities such as private day care operations, church yards closed to general use, and other areas that were open only to members or a select group were not included.

Evaluating Playspaces

The field inventory and evaluation of playspaces were conducted by playground experts in April of 2011. An attempt was made to identify and locate all of the public and semi-public playspaces within the city limits. Any playspace that met the above criteria was evaluated, whether or not it was intended to serve children ages 2-5. However, since the focus of this study is on playspaces for ages 2-5, some determination of the fitness of the playspace for that age group was needed. This determination was based primarily on the types and configuration of the play equipment and other features found at a playspace. Prior studies in Alexandria had determined the viability of some playspaces for 2-5-year-olds based on the manufacturer's specifications for the equipment found there. Where available, this was incorporated into the data set. For playspaces where this information had not been compiled, a determination was made on the appropriateness of each component for serving ages 2-5, and this effected a score that was given for each component. The scores reflect whether a playspace is considered to serve ages 2-5 in this study.

Existing playspaces in Alexandria were identified through the use of:

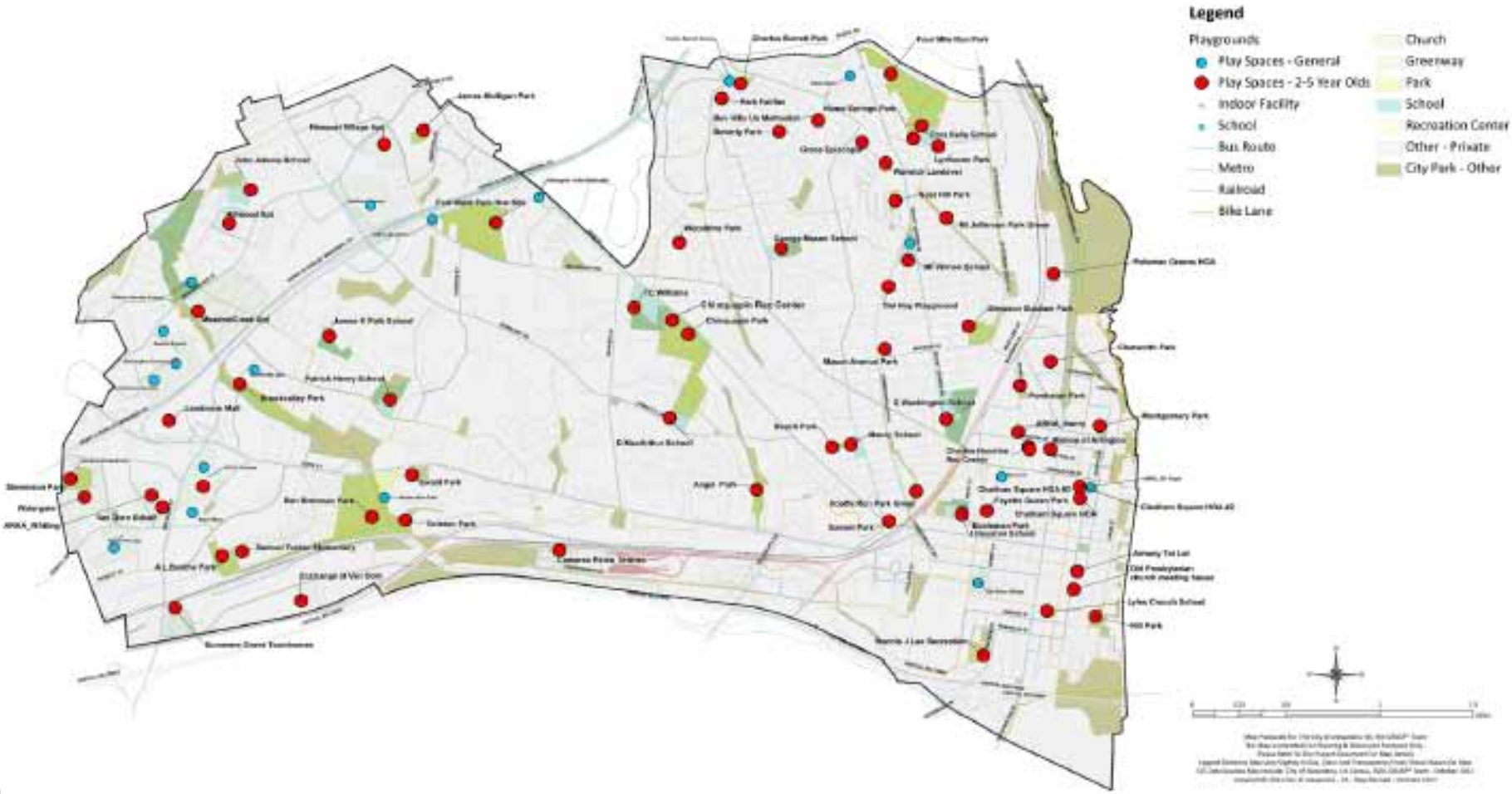
- Aerial photographs of the city taken in 2009
- Existing lists provided by the project partners
- The general knowledge and expertise of the Alexandria Planning Department and the Alexandria Department of Recreation, Parks and Cultural Activities

A total of 89 public and semi-public playspaces that fit the criteria for inclusion in the data set were identified. Three of those were eliminated after closer examination. This left 86 playspaces that were ultimately found to be appropriate for inclusion in the study. This number includes all playspaces, whether or not they are appropriate for ages 2-5. The playspaces were further sorted into those appropriate for this age group and those that are not. Of the 86, a total of 67 were determined to be appropriate for ages 2-5.

It is possible that there are playspaces in Alexandria that fit the criteria for inclusion in this data set but that were not found during the process for this study. The methods used to assure a complete count included using:

- Existing inventories provided by the City of Alexandria
- Aerial images of the city
- A review of Internet sources such as the Kaboom Map of Play
- The collective input and review by people familiar with the community
- The knowledge and expertise of the Alexandria Planning Department and the Alexandria Department of Recreation, Parks and Cultural Activities

Based on this, it is estimated that there are no more than four to five playspaces in Alexandria that were not identified and evaluated.



Map 1: Playspaces in Alexandria Inventoried for the Study

Components of Play

The process for evaluating play opportunities in Alexandria began with identifying the critical components of play, as described earlier, and creating an assessment tool to use in evaluating individual playspaces on their provision of them. Five components of play were identified:

- **Physical Domain**—the playspace offers opportunities for physical activity appropriate for 2-5-year-olds.
- **Intellectual Domain**—the playspace provides appropriate opportunities for creativity, such as movable parts and/or elements that stimulate imagination and make-believe or mental and emotional challenges to the child, such as puzzles, games, and discovery.
- **Social Domain**—the playspace offers appropriate opportunities for children to engage with each other and adults in positive ways.
- **Natural Domain**—the playspace provides opportunities for children to be in physical contact with the natural environment.
- **Free Play**—the playspace offers opportunities for unstructured play, i.e., open areas with appropriate surfacing for running, crawling, and rolling.

Modifiers

In addition to the five components, a set of elements that contribute to making a playspace more inviting and comfortable were identified, with the idea that the presence of these would bring more parents and children to the playspace and that they would stay longer. In that way, the value of the playspace is enhanced, and the benefits it provides are increased. Conversely, the lack of these elements reduces the value provided by the playspace. Because these elements modify the way a playspace is used, they were called *modifiers* for the purposes of the study.

Ten modifiers were ultimately identified and evaluated at each playspace:

- **Open Access**—Can anyone use it or is access limited or restricted in some way?
- **Invitation**—Is it easy to find and welcoming?
- **Ease of Access**—Can people get to it by normal means of transportation, including walking? Is there adequate parking available or a transit stop nearby?
- **Safe Location**—How safe is the location perceived to be?
- **Pleasant Conditions and Surroundings** —How clean, attractive, and appealing are the playspace and its surroundings?
- **Monitoring**—Are there "friendly eyes" on the playspace during normal times of use?
- **Weather Protection**—Is there protection from wind, rain, and sun?
- **Seating**—Is there an adequate amount of comfortable seating for caregivers?
- **Restrooms**—Is the need for restrooms met, either at the playspace or conveniently nearby?
- **Drinking Water**—Is drinking water available either at the playspace or conveniently nearby?

Calculating the Value of a Playspace

For each of the attributes (components and modifiers), a score of 1, 2, or 3 was given based on how the playspace met the conditions of that attribute. A higher score indicates that the playspace provides more value for that attribute. A sample of the field sheet used to evaluate each playspace is shown in Appendix A.

A **formula** was developed to calculate the **value of each playspace**. The formula is a simple calculation that involves adding up the total score for all of the modifiers and multiplying it by the total score for all of the components at the playspace. This yields a value that is the Playspace Score (also referred to as the GRASP® Value in this report) for that playspace:

(Sum of the Modifiers) X (Sum of the Components) = Playspace Score

Because there were 10 modifiers and five components that could each have a maximum value of 3 points, the maximum score a playspace could receive is 450 points. The 450-point maximum would only be achieved by an *ideal* play space. Such playspaces are rare anywhere, and none were found in Alexandria.

Scoring Results for Components

The scores for all playspaces in the inventory can be found in Appendix C.

The highest-scoring playspace in the inventory was found at Charles Houston Recreation Center, which scored 336 points. This is an outdoor playspace, but it is accessed through the indoor center. The center offers good access to restrooms, drinking water, and other amenities that gave it a high value for modifiers.

Next highest was John Adams Elementary School at 297 points. It was the only playspace to score 3s for all five components. However, it scored 1s for several modifiers.

Playspaces that score high for components are most likely to address the full range of needs (or "domains" as explained earlier) for children in the 2-5 age group. Ideally, every playspace would offer the full range of components, but if this is not possible, then it is important that children have access to multiple playspaces that collectively offer the full range of components among them.

Some playspaces may have scored well in one or two domains but not all domains. In general terms, playspaces in the inventory perform well in the Physical and Social Domains. This is because the manufactured play equipment used in most playgrounds is focused on providing opportunities for physical play, including physical play among groups of children. The playspaces also perform generally well in the Free Play Domain because outdoor playspaces are typically located in parks or other places with some room for free play.

The overall performance of playspaces in the Natural and Intellectual Domains was somewhat lower. This suggests that a focus on improving the natural qualities and the intellectual stimulation characteristics of existing play spaces would be beneficial in increasing the overall value of playspaces in Alexandria.

The six highest-scoring playspaces for components alone were:

- John Adams Elementary School (15)
- Jefferson Houston Elementary School (14)
- Beverley Park – "The Pit" (13)
- Beverly Hills United Methodist (13)
- Douglas Macarthur Elementary School (13)
- Goat Hill Park (13)

NOTE: Of these six, three are located at schools and are not available to the public during school hours.

Scoring Results for Modifiers

Playspaces that score high for modifiers are most likely to draw children and parents to them more frequently and for longer periods of time, because they are comfortable to use. The presence of shade, drinking water, restrooms, and other amenities encourages people to come back again and stay longer when they do. This suggests that children using playspaces with high modifier scores are getting the benefit of more frequent and extended opportunities to play. However, modifiers alone do not guarantee that children are getting the full range of potential benefits of play unless all of the domains are represented within the components present at that location. It is important to have a full range of components as well as a full set of modifiers for children to receive the most benefit from play.

The information provided below can be used to get a sense of how well Alexandria's current playspaces stack up against the criteria used to define a good playspace. Recommendations for improving Alexandria's playspaces are presented at the end of this report.

The five highest-scoring playspaces for modifiers (i.e., amenities that support the use of play components) alone were:

- Charles Houston Recreation Center (28)
- Chinquapin Recreation Center (27)
- Charles Barrett Park (27)
- Mount Vernon Elementary School (26)
- Ben Brenman Park (26)

Some notable statistics for the modifiers as rated by the playground experts during field visits are shown here (percentages based on 86 playspaces):

- 61 playspaces were rated as feeling **safe** at normal hours of play in the perception of the evaluators at the time of their visit (71%).
- 34 playspaces have adequate **seating** for caregivers (39%).
- 15 playspaces have adequate access to **drinking water** (17%).
- 12 playspaces have adequate access to **restrooms** (14%).
- 12 playspaces have adequate **protection from weather** (14%).

Demographics

Demographics

Overview

The demographics of Alexandria—general population, race and ethnicity, and income—provide a context for understanding the community and the role of playgrounds. This information, coupled with an understanding of locations of existing playgrounds, provides insights into current geographic gaps in service. For example, areas with higher poverty rates, higher percentages of children, and less access to playgrounds are an area of concern for future playground improvements. The following demographic overview provides additional context for this analysis.

According to the 2010 U.S. Census, Alexandria City, Virginia has grown about 9.1 percent in total population to 139,966 since 2000, consistent with the city's long-term growth trend of about 1 percent per year since 1960. In addition, the city's average household size has remained approximately constant since 2000. This suggests that the number of children in Alexandria has grown and will continue to do so if current trends continue.

The 2010 race and ethnicity data does not show dramatic changes in the city's racial and ethnic makeup since 2000. The Hispanic population has grown about twice as fast as the citywide total, reaching 16.1 percent of the total in 2010. The Black and African American population has grown a little more than half as fast as the total, declining to 21.8 percent of the total in 2010. The Asian population has grown faster than the overall average, reaching 6 percent of the total in 2010.

The population in Alexandria continues to diversify. The number of foreign-born persons increased 23.9 percent between 2005 and 2009. Additionally, the number of families who spoke a language other than English at home increased 29.9 percent between 2005 and 2009. This should be taken into account when communicating with families on matters related to play.

Alexandria's median household income in 2009 was $76,293, higher than the Commonwealth of Virginia's ($59,372). However, 9.1 percent of the city's population is below the poverty level (2009). Available 2010 U.S. Census data shows the following census tracts with the highest poverty rate:

- Tract 2005 (18.9%) in west Alexandria
- Tract 2016 (15.9%) in east Alexandria
- Tract 2018.01 (14.2%) in east Alexandria

Note: Census tracts are small, relatively permanent statistical subdivisions used by the U.S. Census Bureau. Census tracts usually have between 2,500 and 8,000 residents.

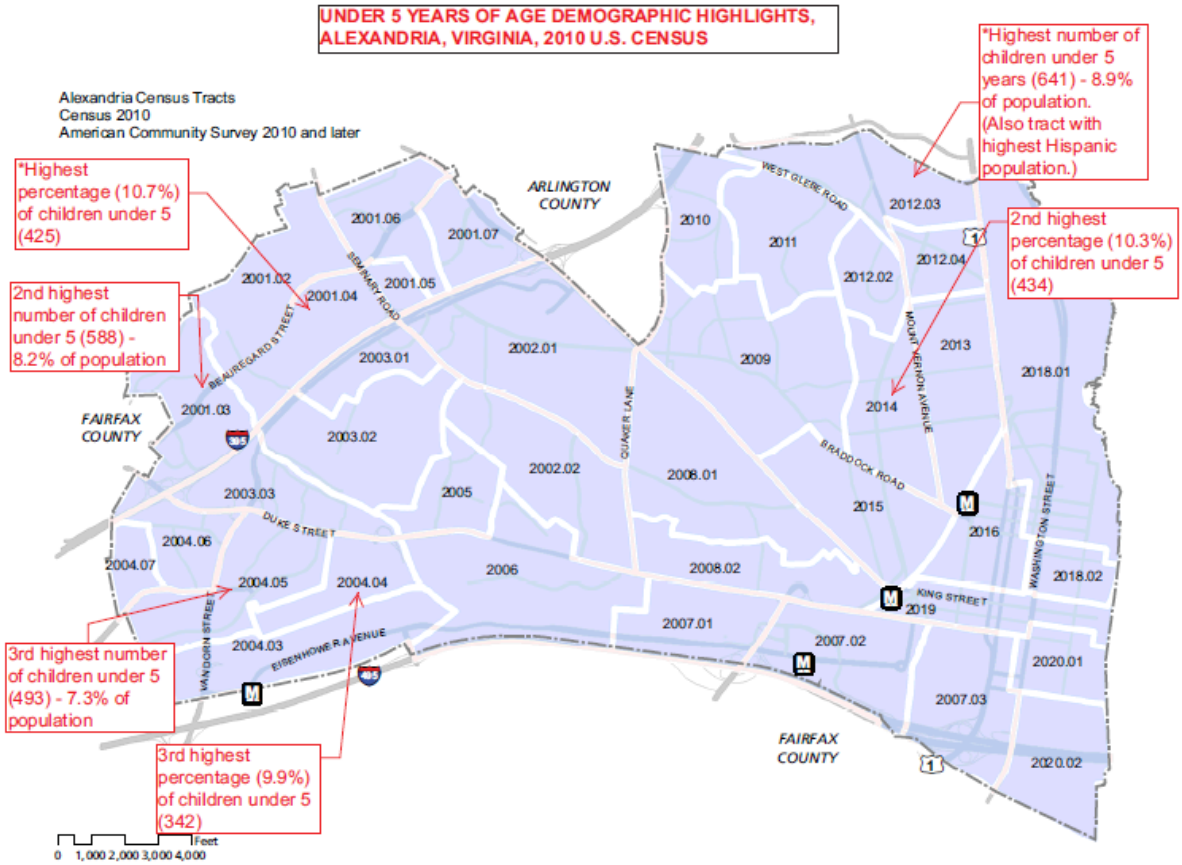
There is a higher percentage of children under the age of 5 in Alexandria than in Virginia as a whole and in the U.S. overall.

According to the Virginia Department of Education, in April 2011, 53.2 percent of Alexandria public school students in grades K-12, a total of 6,506 children, were approved for free or reduced-price school lunches according to federal guidelines. These statistics indicate that some of Alexandria's children may have financial conditions that limit their access to transportation and other resources that expand opportunities for play.

Age Demographics

The under-18 population in Alexandria has grown by 2,433 to 17.1 percent of the total in 2010. Children under 5 years of age are 7.1 percent of the total population (totaling 9,964). This is a higher percentage when compared to the United States (6.5 percent) as well as areas in the region including Arlington County (5.7 percent) and the D.C. metro area (6.7 percent). Children under the age of 5 represent the largest percentage of children under 18 years in Alexandria, unlike the United States and the Commonwealth of Virginia, where the populations are more evenly distributed between the age categories.

The map below shows highlights of the highest number and highest percentage of children under the age of 5 by census tract. The number inside each tract is the official "name" of that census tract. This analysis, combined with the Level of Service analysis for playgrounds presented later in this report, will help identify current geographic service gaps for playgrounds.



Map 2: Demographic Highlights for Alexandria

Playspaces and Density

The maps that follow are designed to show how the locations and calculated play value of the playspaces in the inventory are distributed across the city and how that relates to population densities for children under 5. (The density for all children under 5 was used because census data specifically for ages 2-5 is not available.)

Map 3 shows the densities of children under 5 years old for each census tract overlaid with the locations of playspaces rated as appropriate for ages 2-5 and not restricted during the day (i.e., playspaces at schools are not shown). The purpose of this map is to provide a sense of where playspaces are located in relation to where children live in Alexandria. For example, noticeable gaps occur in the far western and very northernmost parts of Alexandria, where high densities of children under 5 live without playspaces near them. One of those locations is census tract 2001.03, which, as noted on Map 2 (above) has the second-highest number of children under 5 among all census tracts.

Map 4 shows the densities of children under 5 years old, overlaid with the locations of all playspaces in the inventory rated as serving ages 2-5, including schools.

Map 5 shows the location of all playspaces in the inventory, whether or not they were rated appropriate for ages 2-5.

GRASP® Value

The symbols on the maps show the relative playspace score for each location, as described on page 14. This is also referred to as a GRASP® score. (See Appendix D for more information on the GRASP® methodology.)

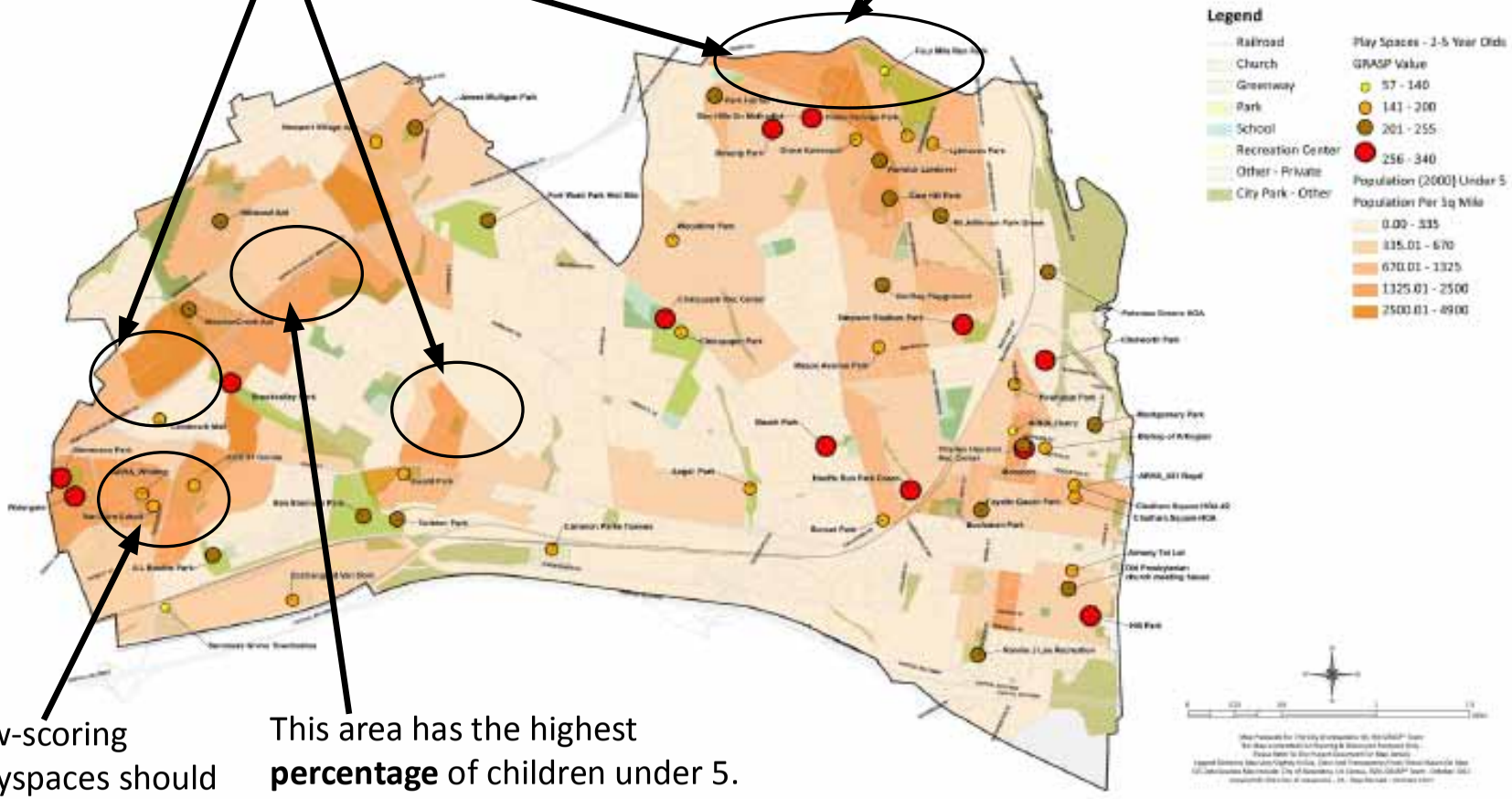
The GRASP® Value is a reflection of how much benefit the playspace offers according to the criteria used to evaluate playspaces when the inventory was conducted for this project.

Density

Density is the number of people per a given unit of area. In this case, people per square mile is the ratio used. Note that on Maps 3 and 4, the ratio is based on the number of children under 5-years-old per square mile, and on Map 5, it is the number of all children ages 17 and under per square mile.

Potential gaps (areas where large numbers of children live without playgrounds)

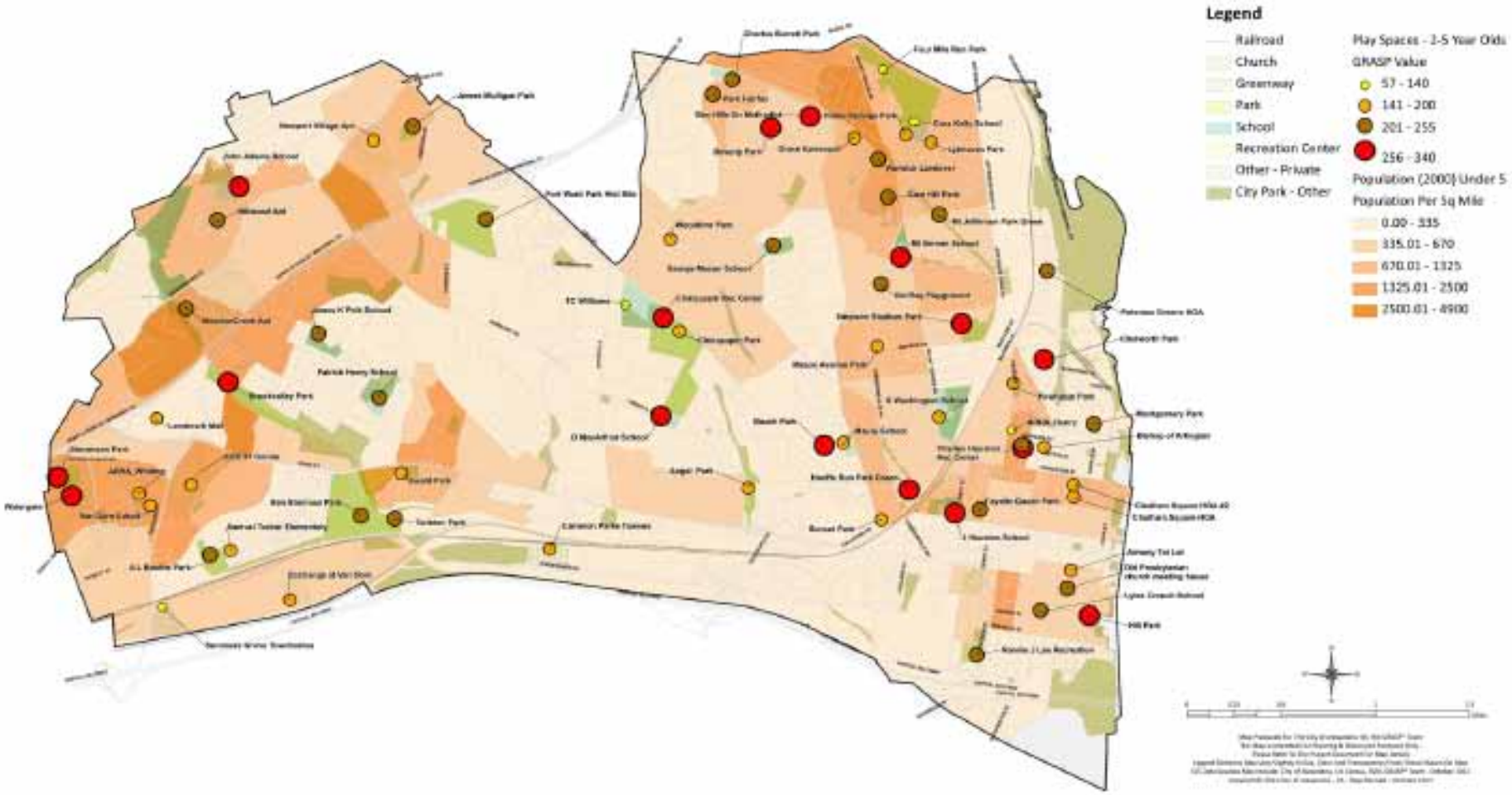
This area has the highest **number** of children under 5 of all census tracts in the city.



Low-scoring playspaces should be enhanced here.

This area has the highest **percentage** of children under 5.

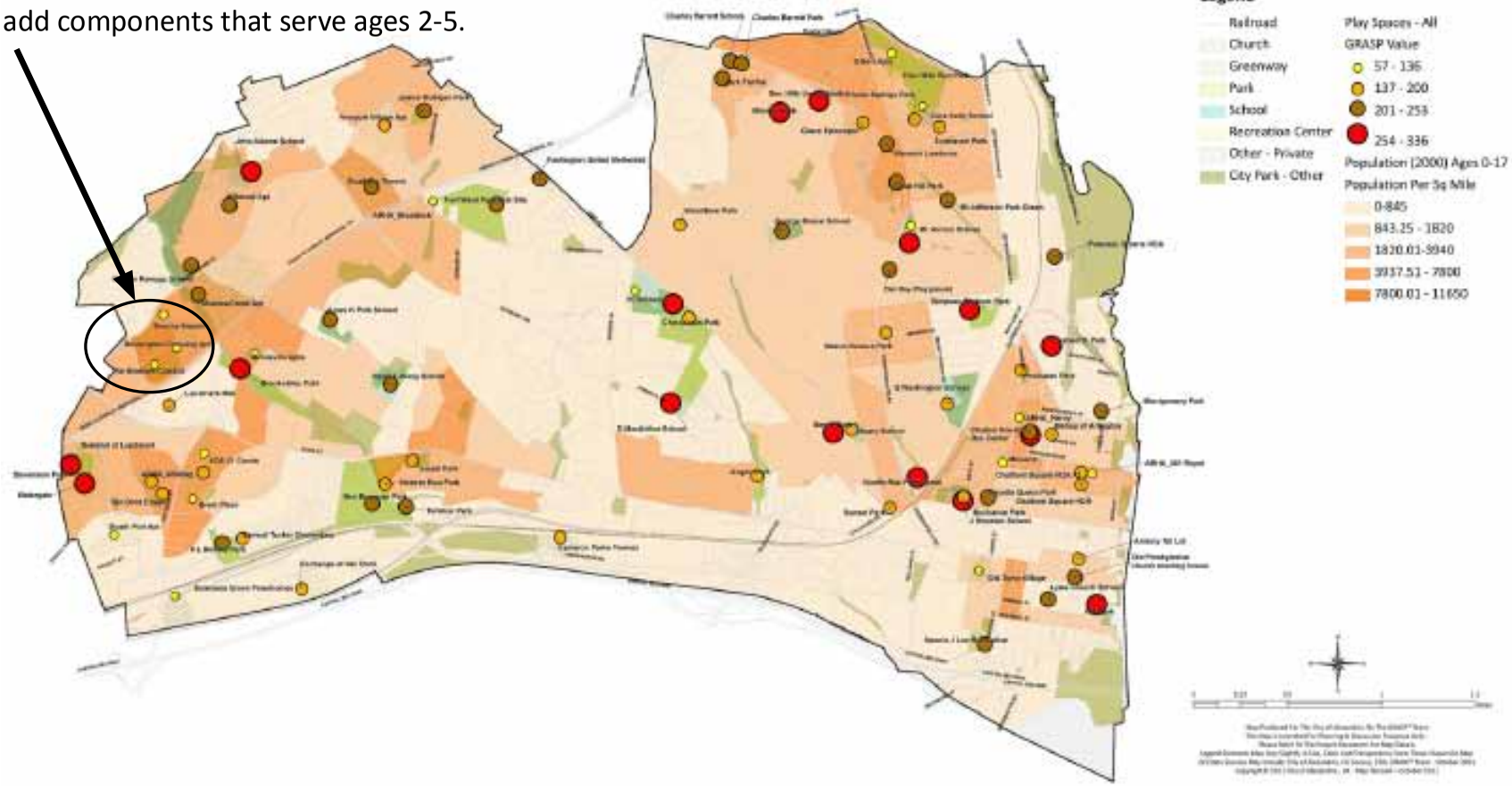
Map 3: Locations and values of inventoried playspaces for 2-5 year olds, <u>excluding</u> those located at schools, vs. densities for children under 5.



Map 4: Locations and Values of All Inventoried Playspaces Serving Ages 2-5 vs. Densities for Children under Five

Source:
http://datacenter.kidscount.org/databook/2011/U.S. Census

Playspaces located where there is a gap in service for ages 2-5. These could be enhanced or renovated to add components that serve ages 2-5.



Map 5: Shows a different comparison. It shows the population densities for <u>all</u> children (not just under 5) and <u>all</u> playspaces, whether or not they serve 2-5 year olds.

The information on the previous pages shows the importance of providing quality playspaces near where children actually live. A priority should be placed on creating new playspaces in areas where there is a high population of children but no playspace. Priority should also be given to increasing the scores for existing playspaces with low scores in areas where the density of children is high.

Map 5 can be used in conjunction with Maps 3 and 4 to identify playspaces that do not currently serve ages 2-5 but that might be remodeled to serve that age group. An example of one such area is noted on Map 5.

Level of Service Analysis

Level of Service Analysis

What Is Level of Service?

In this study, playspaces were analyzed both individually and collectively to examine their effectiveness in serving the children of Alexandria. Various Level of Service (LOS) calculations were performed as part of the analysis. For the purposes of this study, LOS was defined as follows:

Level of Service (LOS)

A multi-variable analysis that measures the extent to which the attributes of playspaces are available in proximity to Alexandria residents who might need them. LOS may be computed for the city as a whole, as well as for individual aspects of the playspaces within the city that make up a system. Therefore, LOS is not a single value, but rather a series of values that, taken together, describe the service that is provided.

Mapping Levels of Service

A series of analytical maps were produced to portray the relative LOS for playspaces across the geography of Alexandria. The city was broken into subareas for the purpose of making comparisons among different parts of Alexandria.

Catchment Areas

For each playspace, a boundary was defined that encompassed an area from which most users of the playspace can be expected to come. This is known as the catchment area for that particular playspace. Catchment areas vary in size and configuration depending on who owns the playspace and who it is intended to serve.

For playspaces that serve a particular subdivision, apartment complex, or other defined area, the catchment area was defined as the boundary of the parcel or development within which the playspace is located.

Parks and schools were each given two catchment areas. The first one is a circle around the playspace that has a radius of 1 mile. This was considered to be a typical distance from which a majority of the playspace users might be expected to come by a variety of means including vehicle or transit. The second one is a circle with a radius of 1/3 mile. This is a distance within which a person can typically walk from one location to another in 10 minutes or less, even if the route is not a direct one. These catchment areas were plotted on the map of Alexandria.

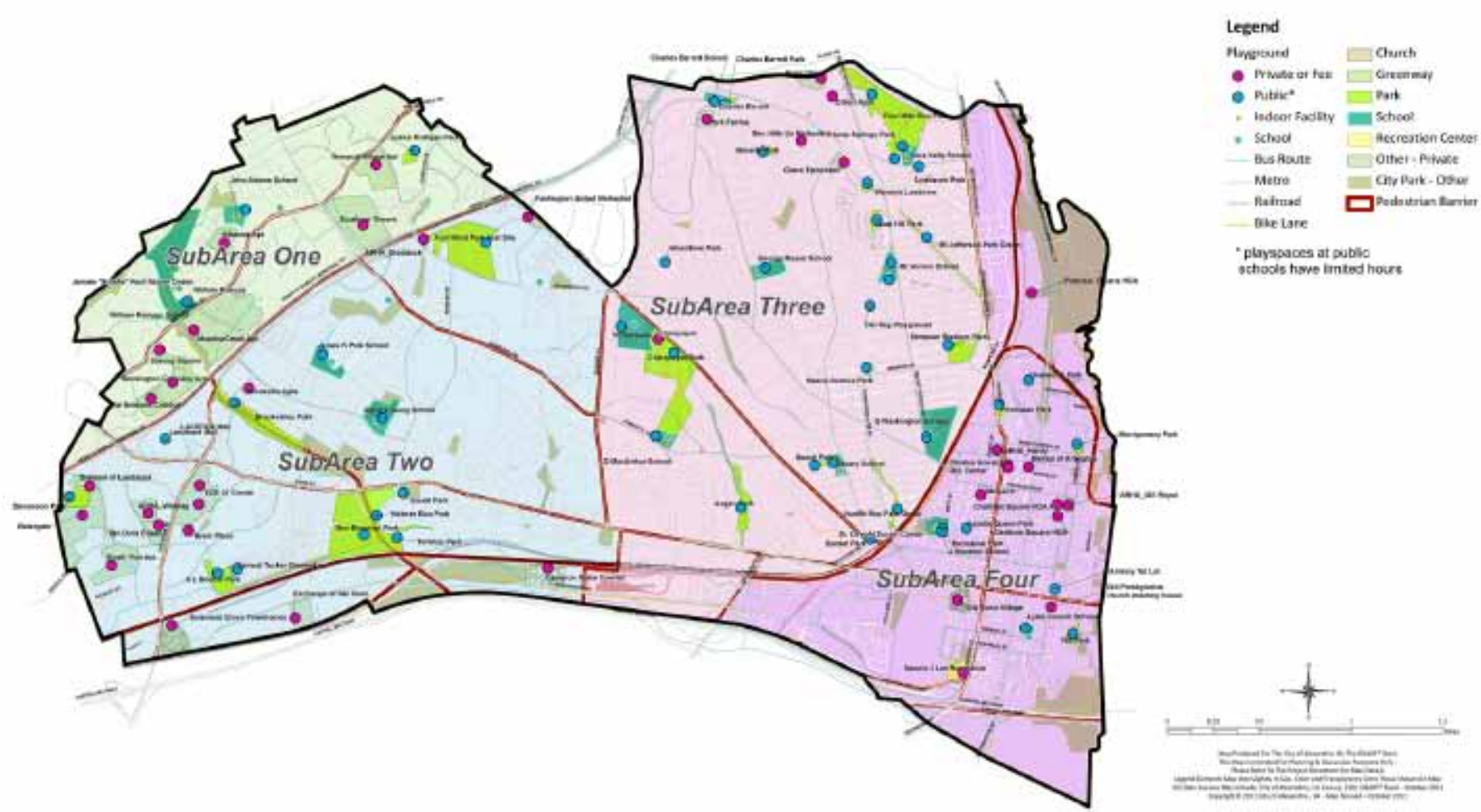
Some of the playspaces in homeowners' associations (HOAs) and other semi-private facilities were given the same catchment areas as parks rather than the more restrictive one described

earlier. This was done whenever, in the opinion of the advisory committee, the playspace serves a larger area than its immediate subdivision or development.

The score for each playspace was assigned to both of its catchment areas. Because the smaller 1/3-mile catchment area overlays a portion of the 1-mile catchment, the net effect is a doubling of the playspace's value within a 1/3-mile radius of the playspace. This is done to give a premium to the area within a walkable proximity of the playspace.

Subareas

Alexandria was divided into four subareas for the purposes of comparing one part of the city with another and for presenting more detailed information on a smaller scale. The areas were intended to correspond closely with subareas used by planners in Alexandria for other purposes. This will allow information from a variety of other sources and studies to be incorporated and compared with the results of this study. The areas, shown on Map 6 below, are identified numerically from west to east as SubArea One through SubArea Four.



Map 6: SubAreas and Pedestrian Barriers

Table 1 below shows statistical information for the subareas, including relative size and the estimated population of children under 5 years of age. The total estimate for all of Alexandria is nearly 10,000 children under the age of 5. Notice that SubArea Three is the largest and has the highest population of children under 5.

Zone	Percent of City	Population (under 5)
SubArea One	12%	2128
SubArea Two	32%	3106
SubArea Three	34%	3317
SubArea Four	22%	1403
Entire Area	100%	9954

Table 1: Subarea Statistics

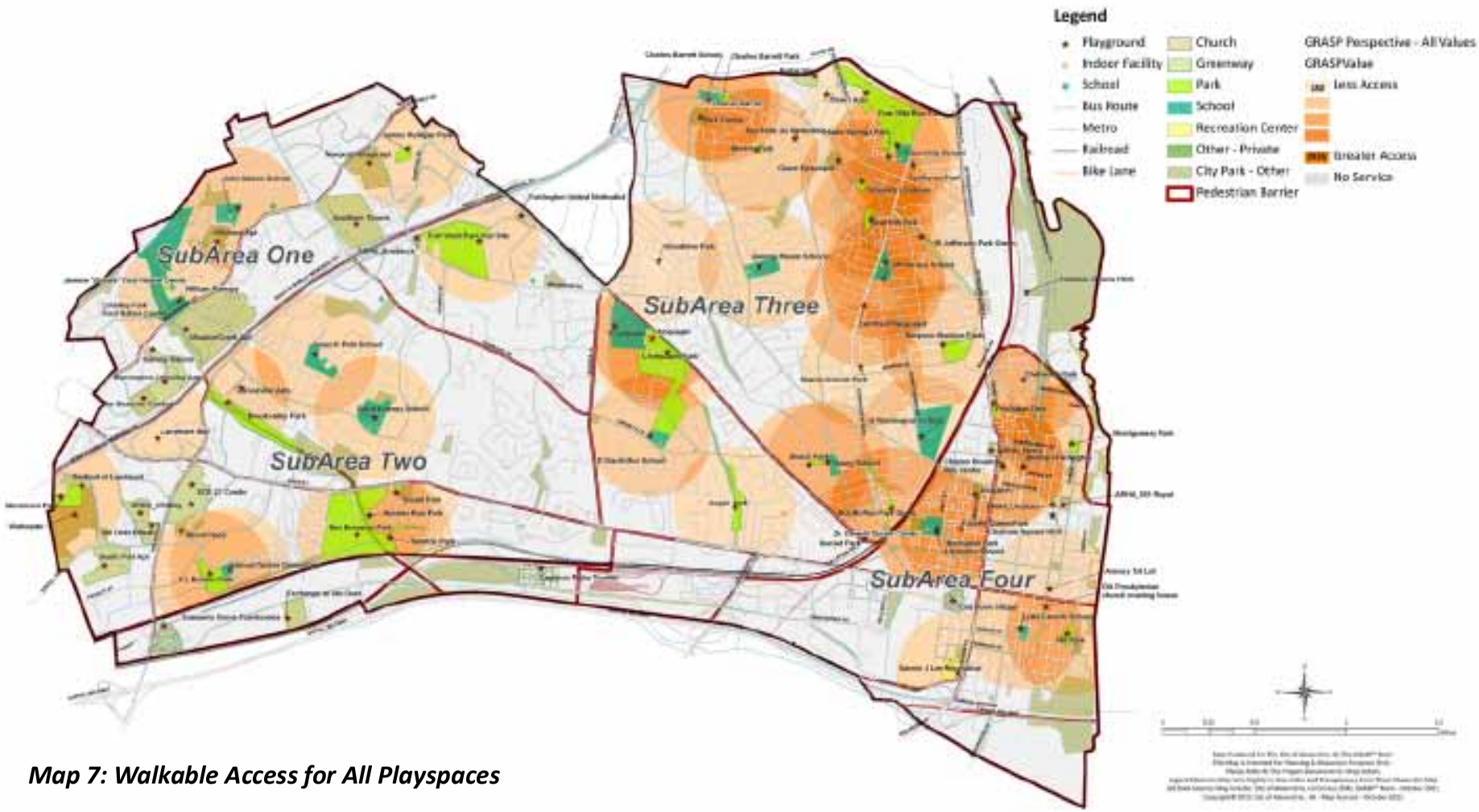
Barriers
Significant barriers that might restrict or impede pedestrians in Alexandria were identified. These primarily consist of major streets. The barriers were plotted and are shown on Map 6. The 1/3-mile catchment areas were clipped wherever these barriers were encountered to make the 1/3-mile catchment areas a more accurate representation of the walkable proximity of their associated playspaces.

Summary of Level of Service

A variety of ways were used to analyze the system of playspaces in Alexandria. The information collected in the playspace inventory was processed using computer technology to generate a series of "smart maps" that help understand how Alexandria is served by its playspaces. These maps are called Perspectives, because each one provides a certain perspective on the way service is being provided. The various types of Perspectives include heat maps, threshold maps, and other types of maps that provide analytical information. For a detailed discussion of these, see Appendix D. A summary of the analytical findings and conclusions is presented here.

Heat Maps
A heat map is generated by plotting all of the catchment areas for all of the playspaces onto a single map. Where catchment areas overlap one another, scores accumulate. On heat maps, the Level of Service (LOS) available to a person at any given location is represented by an orange tone. Where the tone is darker, the available LOS is higher, which means that there are more opportunities for play in that area. Locations on the map with no orange tone (i.e., a grey tone) have no service.

Map 7 is a heat map showing walkable access to all of the playspaces in the inventory. Catchment areas and barriers, as described above, were used to generate this map. The darker orange tones are areas where one or more playspaces with Playspace Scores (also called GRASP® Values) that add up to a high number are found within walking distance. Lighter orange areas have playspaces with scores that add up to lower numbers, and grey areas have no playspaces within walking distance. The range of values represented from the lightest orange to the darkest is 170 to 2708. This means that areas with the darkest orange are served at a level that is many times greater than those with the lightest.



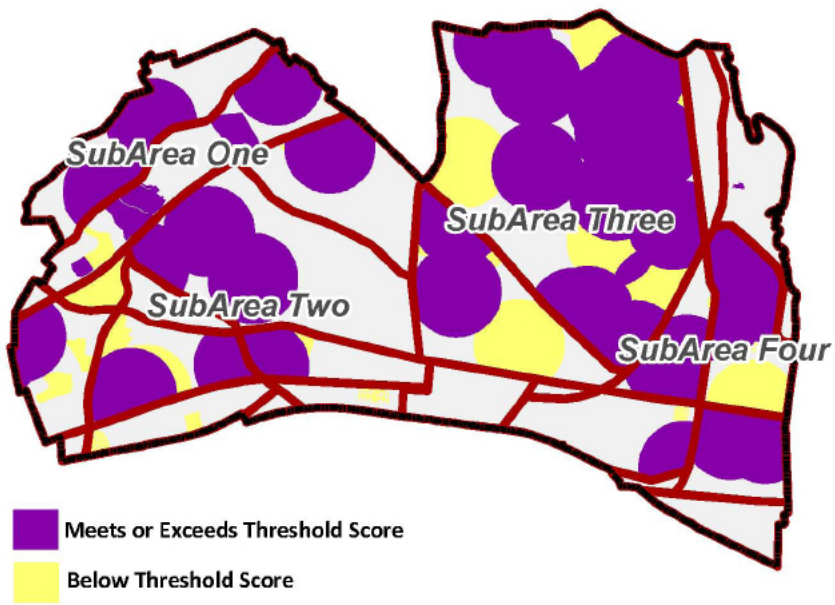
Map 7: Walkable Access for All Playspaces

Threshold Maps

Heat maps can be further analyzed to find out where the values represented by the orange tones are above or below a given threshold. For the walkable access map, a threshold was determined based on the score that a playspace would have if all of the attributes evaluated in the inventory were scored at the mid-range of possible values.

Applying this threshold to the heat map results in Map 8. Any point on the map where the heat map value is at or above the threshold is shown in purple. Any point where the heat map value is below the threshold but greater than zero is shown in yellow. All other areas have a score of zero and are shown in grey.

Map 8: Threshold Map



Where grey areas coincide with higher densities of children, new playspaces are needed. Yellow areas may be considered areas of opportunity. The yellow color indicates that there is at least one playspace serving that location. By adding components or otherwise upgrading those playspaces, yellow areas can be improved, which would increase their threshold score and turn the area to purple on the map.

Heat maps, threshold maps, and other analytical maps for a variety of LOS perspectives are found in Appendix D.

GRASP® Index

Another tool used to evaluate the availability of play facilities in Alexandria is the GRASP® Index. This index is a number calculated by adding up all of the Playspace Scores (as explained on page 17) within a defined area and dividing the total by the number of people living there (in thousands). It is, in effect, a per-capita value for all of the playspaces in the inventory that are located within a given area. To most accurately reflect the situation, the population figure used to calculate the indices is the number of children, not the total population.

In the table below, the GRASP® Indices shown correspond just to those playspaces determined appropriate for 2-5-year-olds, and the population number used is the number of children under the age of 5. (Population figures for the 2-5-year-old bracket were not available.) The yellow shade in the tables indicates the highest value in each category.

SubArea One has a relatively low GRASP® Index, indicating a low level of service and suggesting that the subarea is lacking in the number and quality of playspaces found there.

Zone	Total GRASP® Value	Population (under 5)	GRASP® Index (population 1,000s)
SubArea One	1151	2128	541
SubArea Two	3469	3106	1175
SubArea Three	5999	3317	1809
SubArea Four	3773	1403	2689
Entire Area	14572	9954	1464

GRASP® Index for Playspaces Serving 2-5-Year-Olds

Implications

From the input collected during the focus groups and other meetings, as well as on-site observations, a perception emerged that indicated that the western part of Alexandria does not offer opportunities for play commensurate with those found in the eastern part of the city. The Perspectives and other analyses in Appendix D seem to support this perception and allow the differences to be quantified in various ways. The results are described below.

SubArea One (the westernmost part of Alexandria) does indeed appear to have lower LOS than the eastern parts of the city. It ranks **lowest** in many categories of service, including:

- *Average LOS per acre served for walkable access to all playspaces and those playspaces serving 2-5-year-olds.* This indicator means that even where walkable service is available, the playspaces that contribute to that service scored lower in the evaluation than those in other parts of Alexandria.
- *Average LOS in relation to average density of children under 5, for all of the analyses performed (see Appendix D).* This indicates that, compared with other parts of Alexandria, the value of the playspaces provided is low compared to the density of children living here.
- *GRASP® Index, a computed value that relates the value of playspaces to population (see Appendix D).*

These indicate that having a good playspace within walking distance is less common in SubArea One than elsewhere in Alexandria and that the number and quality of playspaces is low compared to the number of children found there.

The low GRASP® Index is particularly revealing, in that it indicates a low per-capita value for the playspaces located within the subarea. On the other hand, SubArea One fared better in terms of the percentage of its area covered by service. This combination of moderate service coverage but low GRASP® Index suggests that the high density of children in SubArea One places a

greater demand on the need for both more playspaces and better ones. *So while additional playspaces may be needed in SubArea One, a focus on improving the quality of existing ones should also be a priority. It should also be noted that SubArea One has a high proportion of playspaces that are located in private developments.*

SubArea Two ranked lowest (actually, tied for lowest with SubArea Four) in only one category: percent of its area with walkable access to all playspaces. Large portions of SubArea Two have low densities of children, so providing walkable access throughout the subarea may not be as critical here as it is in the other subareas. The focus should be on assuring that neighborhoods where there are higher densities of children have access to good playspaces.

SubArea Two does have some localized areas of higher density that lack a playspace, particularly the area to the southeast of Patrick Henry School, in between Raleigh Avenue and North Gordon Street. This area should be looked at more closely to determine if there is a need to create a playspace within it. Another area to take a look at within SubArea Two is the complex just south of the intersection of Van Dorn Street and Seminary Road.

SubArea Three ranked highest in several categories and lowest in none, so it might be considered to have the lowest priority overall among the subareas. However, this does not mean that there could not be specific locations where improvements are needed. Playspaces within the subarea that received a score of 1 for any components or modifiers can be found in Appendix C. They should be targeted for improvement. In particular, TC Williams and Cora Kelly School should be targeted. These playspaces were among the lowest-scoring in terms of components, modifiers, and overall score.

SubArea Four (easternmost Alexandria, including Old Town) rated highest in many, but not all categories of analysis. In particular, SubArea Four fell short in providing walkable access to playspaces. This could be due to the large portion of this subarea that lies within freeway rights-of-way and in newly developing and redeveloping areas. The density map (Map 3) shows relatively low density for children under five in that part of the subarea. Therefore, the problem may not be urgent and might be resolved as new development occurs in the southern and western parts of SubArea Four.

Focus Group Input

Focus Group Input

Focus Group Summary

Background
From May 17 to May 20, 2011, focus groups were conducted with community stakeholders who cater to young children ages 2-5 in the City of Alexandria. The aim was to gain insight into thoughts about spaces for play and come up with recommendations for good playspaces in Alexandria.

Audiences
Focus group interviews were conducted with:

- three playgroups that included both parents and child care providers
- one family child care provider group
- two partner groups that included service providers, parks and transportation planners, public housing representatives, public schools, and the police

The playgroups and family child care provider group provided information about the perceptions and experiences with playgrounds in the City of Alexandria along with ideas for new playgrounds. The playgroups and the family child care provider group represented a diverse set of ethnicities and included a number of first-generation immigration families. The partner groups provided information from a wide range of community perspectives.

Methodology
Focus groups were used to generate concepts and ideas for playgrounds and get a better understanding of the current community perception of playgrounds in the City of Alexandria. Focus group moderators asked questions designed to stimulate in-depth discussions. The questions were:

- Where do your children play? Why do they play there? How often?
- Do you know of places to play that families use a lot? Why are these places used a lot?
- What are reasons you and your family avoid using a playspace?
- Do you know families with young children that do not use playspaces? Why don't they?
- Do you worry about safety where your children play? If yes, in what ways?
- How can we improve safety at playspaces?
- Can you give examples of play activities and other things you find important in a good playspace for young children?
- How could playspaces for young children 2-5 be improved in Alexandria?
- How can we help you learn more about playspaces in Alexandria?

The partner groups were also asked to identify funding opportunities.

Focus Group Input

Benefits from playgrounds

The importance of playgrounds was acknowledged in all focus groups. According to participants, playgrounds are valued because they are a place for both kids and adults to make friends. They offer a great opportunity for kids to be active and to explore environments in self-directed play. A high-quality playground should offer contact with nature and age-appropriate play equipment and be an engaging, creative space. One respondent summed it up in the following way: "A playground is a space to have fun and learn about the world."

Perceptions of playgrounds in the City of Alexandria

The focus groups identified specific positive and negative perceptions of the playgrounds in the City of Alexandria. The following is a summary of the comments.

Accessibility and Safety

Focus group respondents felt that playgrounds are too far away from where people live in the City of Alexandria. "*Young children can only walk so far.*" Participants said that when they walk to playgrounds with small children they have to cross busy streets, highways, and freeways. Playgrounds are often located in areas with lots of traffic and may be too hard to find. The walk to the playground is a great way to be physically active, but when it is considered unsafe it becomes stressful, and people may choose not to go. School playgrounds cannot be accessed during school hours, which limits places to take young children during the day. Lastly, some playgrounds are located in isolated areas where people may feel unsafe.

Maintenance

Participants said that well-maintained playgrounds are more inviting. Concern was expressed that some playgrounds are not being cleaned adequately. They felt that many playgrounds lack maintenance. For instance the lack of fresh woodchips makes the ground too hard for young children. At the same time, because toddlers put loose items in their mouth, a preference was expressed for other types of surfacing. The desire is for more areas with specialized artificial surfacing materials that are appropriate for young children when they are practicing their emerging walking and running skills. Concern about illegal activities like drugs at some places was reported. A respondent expressed her concern for the condition of playspaces the following way: *"People from the city should go on a tour and look for themselves. They should go and judge themselves what the surfacing and play equipment look like. They should then make it better and institute some safety rules."*

Play equipment

Participants felt that there are not enough playspaces for small children. Many existing playgrounds do not have age-appropriate equipment for young children. The playground equipment was described as either too high or too difficult. The play equipment available for the younger age group is often one-dimensional. Instead, it needs to be more imaginative to support more types of play, such as pretend play and exploratory play, which are both favorites among young children. Also, participants said that most playgrounds lack relevant activities for older kids, who then intrude on the younger kids' areas.

Amenities: fences, restrooms, covers

Many participants were concerned about the lack of playground fences. They felt that fences are needed in order for young children to explore the environment of the playground more freely. They said that fences can be designed and built in inventive ways. The lack of restrooms at some playspaces decreases their use. Most playgrounds lack covers for sun or rain, which also decreases their use on really warm and sunny days, as well as when it rains.

Natural elements and more varied play activities needed

Natural elements were identified as lacking on many playgrounds. Participants suggested a number of ideas that would benefit children: age-appropriate play equipment, climbing elements for physical activity, play houses for pretend and social play, a variety of things to encourage activity, natural features, planter and bucket gardens, sand boxes, rubberized surfacing to run around on, play and literacy symbols on surfacing, tracks on surfacing, water play spray features, shade, storage options, and a box with toys and other loose materials.

"I came here a few months ago…with no family or not knowing anyone. This playgroup was heaven sent…this one helped me and connected me and my daughter with others."

Many respondents stated that the schools have some of the better playgrounds. John Adams School was singled out as having a very nice playground with surfacing, spinning things, a garden, and a bear that inspires children to play pretend bear. Playgrounds with natural features were mentioned positively as well, as long as they are perceived to be safe.

Playgroup meetings spaces

The participants really like the organized playgroup meetings and feel that the staff for these is fantastic. Parents in families of new immigrants were grateful for the social and emotional benefits of the playgroups. They often have difficulty knowing where to take their children to play, and playgroups are an important source of such information. The participants would like more playgroup meetings. It is obvious that the playgroups serve a very important social function for immigrant families in particular, as well as for nannies and mothers and their children. However, some of the respondents explained that the community centers lack adequate accommodations for the playgroups. Because of space constraints, a common complaint expressed was: *"Children should not be eating and doing their activities on the floor."*

Limited playspaces for young children in apartment complexes

The partner groups pointed to similar issues that the play and provider groups did. They said that many potential users with young children live in apartment complexes with limited playspaces. They also commented that they do not know how much the playgrounds are actually used. It was acknowledged that these environments, where many children live, are not supportive of play and physical activity for young children.

Playgrounds need to be part of all new development projects

The partner groups also pointed out that the City of Alexandria needs to be creative in its approach to providing playspaces in locations for redevelopment. For instance, places like small parks, existing rooftops of parking lots, and fitness centers could be converted into

play opportunities. The West End was discussed as such an area where playgrounds could be designed with innovative approaches. Making playgrounds part of the plan from the beginning when new areas develop was felt to be important.

Special Playground Concerns for the City of Alexandria

All focus groups brought up several critical concerns that they would like to see addressed and resolved. In nonprioritized order they were:

Playgroups Requests
Need more space for some of the playgroups and more meeting times.

Apartment-Owned Playgrounds
Respondents living in some apartment complexes pointed out the lack of maintenance of playgrounds. The following statement sums up the state-of-affairs: *"They say they will fix broken equipment, but they never do. We need regulations so that playgrounds at apartments are safer —kids are on the streets, cars are all over, and it is not safe."*

Brent's Place—An Apartment High-Rise Building Needs Help
This apartment high-rise building was identified as needing special attention. It has no playspaces except in hallways and stairs; it was stated that 60-80 kids live there without a playspace. It has a natural area in the back that, with funding, could be made into a playspace. The whole outside area needs to be improved and made safer for kids.

Economic Status and Play Options in the City of Alexandria
This included concerns about the equity of access to play between wealthy and poor children. Perceptions about political and economic divisions were expressed. The general consensus in the partner groups was that the City of Alexandria needs to improve playspaces for all kids. One respondent stated: *"We have a lot of kids in low-income areas. A lot of single family homes have big yards—**but community playgrounds for all kids are important."***

Focus Group Conclusions

Several themes can be identified from the focus group input. These themes suggest ways in which opportunities for play can be expanded and enhanced. This information was incorporated into the Recommendations section of this report.

Access
The distance required to travel to a playspace that suits the needs of younger children was a concern for many of the focus group participants. There are many playgrounds that do not serve the needs of ages 2-5, and many others, such as school playgrounds, that are not available to the public during the daytime. This limits the number of locations available and forces people to travel farther to get to a place where the children can play. While travel by car is possible throughout most of Alexandria, it may not be a viable option for many people. Traveling by

public transportation is not always a good option either, particularly for caregivers with groups of children. Walking is a preferred option if it is safe and convenient.

Amenities

The need for shade, seating, restrooms, and other conveniences was expressed. The presence of such things encourages people to visit a playspace more often and stay longer, resulting in more playtime and beneficial activity for the children. Providing more features that serve the full range of needs for younger children was expressed repeatedly.

An interesting finding from the focus groups was the importance of the surfacing for playspaces serving children ages 2-5. Toddlers in this age group are learning to walk and are particularly prone to falling down, so the surface must be suited to this. Also, because children in this age group spend much of their time on the ground, they tend to come in contact with the surface and interact with it a great deal. They will pick up loose matter, such as sand or wood chips, and play with it or put it in their mouth. While this may be good from an intellectual development standpoint, it causes some concerns about safety and sanitation. For this reason, a rubberized mat-type surface was preferred. Unfortunately, surfacing was not inventoried as a separate item, so statistics on which playspaces have this type of surfacing were not collected, but this could be a focus item for future studies.

Related to the surfacing issue is the need for playspaces to be accessible for people with disabilities, including both the children who play there and the caretakers who accompany them. This study did not include an assessment of the compliance of each playspace with the Americans with Disabilities Act; however, this was factored into the evaluation for Ease of Access in the modifiers. Making playspaces universally accessible will not only allow more people to use them, it will also make them more stroller-friendly, thereby encouraging people to walk to them and visit more frequently.

Maintenance and Safety

Perceptions of poor maintenance and unsafe conditions were prevalent among focus groups, although in general the inventory showed playspaces throughout the city to be relatively clean and safe. Older or outdated equipment is not uncommon, but in general it is well maintained and safe, including in the HOA-maintained and private facilities. Further investigation may be needed to get at the root causes of these perceptions, but it should be noted that one bad experience can override many good ones. The evaluation team spent a very short time at each playspace, but the people in the focus groups spend a lot of time there and may see things that affect their perceptions. One or two negative experiences with trash, graffiti, or other such elements leave a lasting impression, even if these are cleaned up and addressed promptly. (Note that in the inventory, only 46 percent of the playspaces were rated as “easy to find and inviting,” but 60 percent were rated as “clean, attractive, and appealing.” Only four playspaces were rated as run down, poorly maintained, or unappealing.)

Concerns about the presence of older children and teenagers at playspaces were voiced. While this is understandable, in some cases the presence of more people can also be an asset that improves safety and security simply through the presence of more “eyes” and the concept of safety in numbers. In some cases this might be addressed through proper design and layout that avoids placing facilities for different groups too close together, yet keeps them in proximity with

clear sightlines and attention to the concepts of defensible space. A concept adopted by many public safety agencies referred to as Crime Prevention Through Environmental Design (CEPTED), which is aimed at reducing the occurrence of criminal acts, can also be applied to the design of playspaces. Extensive literature is available on this from a variety of sources, including the Internet.

Social Benefits

It is apparent from the focus groups that a portion of Alexandria's population is highly mobile, and there are many residents who are new to the area and for whom English is not their primary language. For these people, finding a place for their children to play can be challenging. They often depend on word-of-mouth recommendations from others to learn about play places and opportunities for play. At the same time, play for their children can be an important means of developing relationships, a network of friends, and a support group within the community. The role of play in creating a sense of community and belonging should not be ignored and in fact can be leveraged to build stronger connections among all residents of Alexandria. With this in mind, the City of Alexandria would benefit from having one or two "destination playgrounds" that can bring children and their families together across cultural and economic divides and raise awareness of the importance of healthy living and physical activity and provide an opportunity to bond. This concept is discussed in more detail elsewhere in this report.

Play Trends

Play Trends

Introduction

Play is intimately connected to people's lives. As our lives evolve with the changing world, play evolves, too. Shown here are some current trends in play. You may not see all of these happening right now in Alexandria, but they may be coming soon. Not all of them apply directly to 2-5-year-olds, but the play of that age group happens in the context of all play, so these trends may help to inform steps to take to improve play for the target group of this study.

Trends in Play

- Multigenerational Play
- Destination Playgrounds
- Play Assistants
- Skate Parks
- Splash Parks
- Natural Play
- Climbing Features
- Electronic Play Equipment
- Theming
- Movable Things and Parts
- Learning Landscapes—School Yard Initiatives

Multigenerational Play

Children, even 6-12-year-olds, rarely play without adults present these days. In order to make playspaces more available to children, they must be made more engaging to adults, so that they will take their children to play.

In addition, play has benefits for people of all ages. It gives parents a way to connect with their children and each other. It gives active older adults a way to strengthen their bodies. It gives everyone the chance to improve their health and, therefore, their quality of life. And best of all, play provides an opportunity for people of all ages to interact, spend time together, and learn from each other.

Recognizing this, opportunities are being created for people of all ages to play together. For example, gardening, nature study, and art are activities that children and adults can engage in together. Incorporating opportunities for these activities in playspaces allows everyone to participate. This suggests the development of multigenerational parks where a central goal is increasing health and wellness for everyone. Society needs more opportunities for families and individuals to be physically active, across the spectrum of age.

Along this line, fitness for older adults is now being incorporated into "play" features that can be placed adjacent to children's play areas so that adults can be active while their children play nearby.

Destination Playgrounds

While offering playspaces near homes is important in getting people to play, the creation of places where families can have an outing, spend more time, and enjoy a variety of activities will entice them to get out of the house for longer periods of time. Destination playgrounds are ones that attract people through interesting themes, special features, and compelling locations, and by providing comfort and convenience features that allow people to stay longer, such as restrooms and perhaps even food and drink. These playspaces can be located near cultural centers, shopping districts, and other destinations that bring people from a wider area to stay longer.

Play Assistants

Staffed facilitators have been a part of European playspaces for a long time. Until the 1960s New York City playgrounds were all staffed by "parkies." Playground leaders and day camp programs were once a mainstay of American parks and playgrounds but have largely disappeared in the past few decades. However, monitored playgrounds could make a comeback as a way to address the need for play in a world of fear, insecurity, and a lack of time to spend at the playground with children. Programs are already occurring at recreation centers and other indoor facilities where monitoring and controlled access is easily accommodated. This concept could be extended to outdoor playspaces with relatively little infrastructure improvements, especially at schools and other locations where monitored play already occurs during the day.

This type of activity is present in Alexandria now in the form of playgroups, which are proving to be popular ways for newcomers to find places to build community while their children play.

Playgrounds with Moveable Parts

It has been found that outdoor playspaces that contain materials that children can manipulate —sand, water, mud, plants, pathways, and other loose parts—offer more developmental and play opportunities than spaces without these elements.

Imagination Playgrounds

David Rockwell, an architect in New York City, has promoted a playground concept called Imagination Playgrounds that is designed to encourage child-directed, unstructured free play. It includes three core concepts that foster a dynamic, child-centered environment:

- Loose parts—consisting of large foam blocks that can be manipulated and arranged by children in a variety of ways
- Sand and water
- Play associates—trained adults who monitor the playspace and provide a safe and secure environment while ensuring a diverse, creative playspace

Cities like New York are using the Imagination Play concept to create mobile playspaces that can be set up where they are needed, whether indoors or out.

Alexandria has its own version of a playspace with moveable parts, thanks to contributions from local residents. At Beverly Park, also known as "The Pit," neighbors leave loose play parts scattered about for all kids to use.

Source: www.imaginationplayground.com

Splash Parks

Splash parks provide safe ways to allow children to interact with water. Children find ways to manipulate the water to make it behave in different ways, including squirting, flowing, or streaming, allowing for creative play as well as physical play. Splash parks can be quite elaborate, with a huge variety of water play activities, or as simple as a few jets of water that cycle on and off, or even basic mist nozzles that spray very little water but offer a chance to interact with water and cool off without getting wet.

Natural Play

Richard Louv's book Last Child in the Woods has become a call to arms for proponents of connecting children to nature. In his book, Louv coined the term "Nature Deficit Syndrome," which describes a phenomenon in which children are so removed from nature that they are afraid of it and retreat from it. This causes a variety of social and emotional effects that can last through adulthood.

Playspaces that combat this syndrome offer children the opportunity to experience nature through direct contact and in the process come to understand the natural world and their connection to it. This does not have to take place in "the wilderness." Simply being outdoors and in contact with grass, bugs, and bushes is a good way to expose young children to the natural world.

Pop-Up Playgrounds

During a two-month period, seven civic coalitions in New York neighborhoods like East Harlem and the South Bronx got permits from the city to close certain local streets to traffic for designated periods of time—say between 10 a.m. and 3 p.m. on a summer weekday. Working with the police and other city agencies, they redesignated the areas as temporary "play streets," encouraging neighborhood children to use them for exercise and offering a range of free games, athletic activities, and coaching. Data collected indicated that families visited the local play streets for one to two-and-a-half hours on average according to the Department of Health and Mental Hygiene. This is time that might otherwise have been spent being sedentary.

Javier Lopez, the director of the NYC Strategic Alliance for Health, notes that many play streets are located close to underused parks or school playgrounds. He says he hopes that this will have a double effect: First local residents will be inspired after the pop-up playgrounds disappear to make use of these nearby facilities; second, as demand increases, the city's parks department will be spurred to perform more and better parks maintenance in those areas.

Observations and Recommendations

Observations and Recommendations

Improving the availability and quality of beneficial play for the children of Alexandria is the ultimate goal of this study. The information provided in previous sections is intended to support that goal. This section prescribes actions to take.

Priorities

Improvements to playspaces can and should be made throughout Alexandria, but two areas emerged from the study as being most in need of improvement. These are described below, and the remainder of this chapter describes ways to improve access to healthy play throughout Alexandria.

Priority Action

Northwest Alexandria (SubArea One) and Northeast Alexandria (SubArea Three) should be prioritized for improvement.

SubArea One

Playspaces in SubArea One should be a priority for improvements in quality, since this subarea ranked lowest in overall LOS in the analyses. One of the main problems in SubArea One is that most of the playspaces that exist there are located on private lands or at schools. This limits access to play during the day and makes it difficult to control the quality of playspaces. Making school playgrounds available to people with younger children would be a good start. Working with HOAs and apartment complexes to assure that they provide high-quality playspaces will also help. The area around Saxony Square, Bennington Crossing, and the Seasons Condos is a good example of an area with no public playspaces but three private ones. They currently do not serve ages 2-5. If they can be improved to meet the needs of this age group, an important gap would be closed, and a large number of children would benefit.

In addition, the Alexandria Department of Recreation, Parks and Cultural Activities should identify potential locations within SubArea One where new playspaces that are open to the general public can be created. In the meantime, organizations such as churches, HOAs, and others can be encouraged and offered assistance in providing moveable playspaces, pop-up playgrounds, special play events, and other types of experimental play opportunities throughout the community.

Arlandria

The area in northeast Alexandria, also called Arlandria, has both a deficit of places to play and a high concentration of children. Adding playspaces here should be a priority. There are several apartment complexes that could provide new playspaces or enhance ones they currently have. This area is also relatively close to Four Mile Run Park and Charles Barrett Elementary School,

where high-value playspaces could be provided. However, access to those locations requires crossing major streets. Assuring that there are safe places to cross these streets is important.

Because this area has many immigrants and others for whom English is a second language, letting these residents know where existing nearby playspaces are and how to get to them safely should be a priority. But having good playspaces *within* this neighborhood is also needed. Until such permanent improvements can be made, temporary playspaces should be provided through events, activities, and pop-up playspaces.

General Ways to Improve Access to Play

Actions for improving access to the full range of beneficial play can be categorized into three main strategies:

- **Quality and Configuration of Playspaces**
- **Location and Distribution of Playspaces**
- **Outreach and Facilitation**

These actions sometimes overlap and intertwine. For example, if an area has playspaces, but they do not serve 2-5-year-olds, improving the quality of those playspaces to make them useful for 2-5-year-olds is the same as adding new playspaces. Thus an improvement in quality can improve the distribution of playspaces.

General ways to improve the *QUALITY* of playspaces include:

- Make sure each playspace offers a full set of the five components of play whenever possible. Add these components to existing playspaces where they are lacking. In particular, improve the natural and intellectual components of playspaces where they are lacking.
- Encourage playspace owners to give playspaces a makeover: Provide age-appropriate equipment, natural features, more varied physical activity options, elements for pretend play, sand and water play, safety features (like a fence and soft surfacing), restrooms, and supervision.
- Make ALL playspaces appropriate for ages 2-5 unless circumstances dictate otherwise.
- Add modifiers (for example, shade or seating) to existing playspaces. Particularly address concerns about safety, security, and cleanliness.
- Provide at least some areas with rubberized surfacing for the use of ages 2-5 in all playspaces.
- Improve access for people with mobility and other disabilities (this will also make the spaces stroller-friendly).
- There are different viewpoints on whether older and younger children should be in the same play area. However, most of the people involved in this study support offering playgrounds for both ages at the same time. Playgrounds should be designed skillfully so that older kids do not interfere with the play of the younger children.

General improvements to the *LOCATION AND DISTRIBUTION* of playspaces include:

- Create a focus on improving walkable access. One way to do this is to make sure that all existing playspaces are appropriate for use by 2-5-year-olds.
- Find ways to add new playspaces in areas where there is a high density of children but a lack of playspaces. Some of these are identified on Map 3, such as the area southeast of Patrick Henry School, in between Raleigh Avenue and North Gordon Street. Specifically, contact agencies, organizations, and landowners in such areas and form partnerships to address the goals of this project. Offer incentives or assistance to HOAs, churches, private schools, and others to encourage them to add or improve playspaces and open them up to the public. This could include things like matching grants, sponsorships, and recruiting volunteer groups to do work days.
- Provide pop-up playgrounds and mobile play areas, as described in the Trends section, in locations where 2-5-year-olds are underserved by play.
- Because it may not be feasible to have all of the components of play provided at each and every playspace, consider looking at groups of playspaces that are located within a local area, and try to make all of the components available somewhere within the group.

Ways to improve *OUTREACH AND FACILITATION* include:

- Create partnerships to improve playgrounds in Alexandria. Examples include schools, the City of Alexandria, Head Start, and others. Consider the possibility of a coalition of agencies that own or manage lands along with organizations interested in play.
- Find ways to reach newcomers to Alexandria, especially those who do not speak English. This could be done through a campaign to improve awareness of where playspaces are located in the city and what amenities are available at each one. The inventory that was compiled for this project can be used to create maps and brochures to accomplish this.
- Create opportunities for physical activities during playgroup meetings. Ideas include playful gym classes, outdoor walks, and playground visits. Utilize the Head Start Body Start physical activity program for young children or a program called Active Play!, which is a physical activity program being used by a number of preschools and family child care providers in Alexandria. Include parents and caregivers in physical activity for the whole family.
- Explore linkages to play spaces—walking, play vans for transportation, bike caravans, special events, and providing moveable pieces.
- Create playgrounds that attract everybody's attention across economic and cultural barriers. Make playspaces unique through theming, art, and customized features so that people will want to expand their play experiences beyond the playspace near home.
- Make going to play something special! Involve the community in designing and building playgrounds that they feel a sense of ownership in.
- Encourage caregivers and parents to take children to different playspaces regularly so that they can experience a variety of play components and get full benefit from their play activity.
- Have information on play available at recreation centers. This includes brochures, flyers, and knowledgeable staff.
- Have organizations that support play start blogs and make them bilingual.

- Create a website on playgrounds. Include a map with a guide showing what is at each playspace and what amenities, like restrooms, are available. Provide a photo of the playspace. This could also be done by linking to KaBoom's Playspace Finder and making sure that all of Alexandria's playspaces are accurately portrayed there.
- Share information with playgroups, doctors' offices, schools, libraries, children's clothing stores, parents' magazines, and churches. Provide "prescription for play" forms to doctors so that they can prescribe play to their young patients.
- TV and radio are good ways to spread information, particularly for Spanish speakers. Radio also works well for people who lack reading skills.
- The Alexandria Department of Recreation, Parks and Cultural Activities puts out a brochure every fall with events. Incorporate information on playgroups and playgrounds in this publication.
- Direct mail can be used to communicate about play and special events. Send letters about who to contact about making playgrounds more updated and safe.
- Provide education about the importance of outdoor active play and buy-in from parents to advocate for better playspaces.

Specific Places where Access to Play in Alexandria Should Be Improved

This section describes actions to take at selected locations to enhance the access to beneficial playspaces for ages 2-5 in Alexandria.

Improving Play at Public Spaces

Because they are open to everyone, and because they are all owned and managed by a single entity, parks make a good place to start in improving play for younger children in Alexandria. Alexandria Redevelopment and Housing Authority Sites (ARHA) sites also fit this description. By getting both the Parks Department and ARHA to adopt a policy to make all of their sites appropriate for ages 2-5, many people can be served at all times of the day.

The following parks and ARHA sites were rated as not serving ages 2-5:

- Buchanan Park
- William Ramsay Elementary School
- Charles Barrett Park
- Holmes Run Park
- ARHA Royal
- ARHA Oronoco
- ARHA Braddock

A policy should be adopted by both agencies, and these sites should be made appropriate for ages 2-5 as soon as possible.

Parks and ARHA sites that are currently rated as appropriate for ages 2-5 should also be upgraded to enhance the service they provide so that all domains of play are available. All of the playspaces at parks that were listed as serving ages 2-5 in the data set are adequate in the physical domain. This is to be expected since that was the primary criteria for the 2-5 designation. However, the other domains should be addressed as follows:

Enhancements for the **Social Domain** include adding things that kids in this age group can do together, such as sand play, play tables, see-saws, and other equipment suited to multiple children. Parks to improve in this domain include:

- Ewald Park in SubArea Two
- Four Mile, Angel, Warwick Landover, and Woodbine in SubArea Three
- ARHA Henry in SubArea Four

Four Mile has plenty of room where components can be added that serve this domain. Angel Park has play panels that serve this function somewhat, so it can be a lower priority than others. Warwick Landover has social elements like talk tubes, but these are not well-suited for younger kids. This is also true for ARHA Henry.

Enhancements for the **Intellectual Domain** include adding creative play elements. Moveable parts are particularly good for this, such as sand and water play or loose toys. Other loose items like twigs and bark chips are inspiring to creative young minds. Surfaces for writing with chalk are also good. Parks to improve in this domain include:

- James Mulligan Park in SubArea One (lacks any kind of themed play or moveable parts)
- Ewald and Tarleton in SubArea Two
- Four Mile, Warwick Landover, Chinquapin, and Mason Avenue in SubArea Three
- ARHA Henry in SubArea Four

Natural Domain enhancements include landscaping, planting beds, and planter boxes. Flowers, herbs, vegetables, and other plants can be used. Consider adding rocks, logs, and other nonliving natural elements. Parks to improve in this domain include:

- Ben Brenman Park in SubArea Two
- Lynhaven and Chinquapin Recreation Center in SubArea Three
- ARHA Henry, Charles Houston Recreation Center, and Montgomery Park in SubArea Four

Free Play Domain features can be addressed by having an area with a relatively smooth and level surface of grass, mulch, or artificial surface that is adjacent to or readily accessible within the playspace. Ideally, this area should be fenced or otherwise configured to allow children to roam freely while being monitored by parents without fear for safety. Parks to improve in this domain include:

- ARHA Whiting in SubArea Two
- Angel Park, Lynhaven Park, Goat Hill Park, and Mason Avenue Park in SubArea Three

Lynhaven has areas of pea gravel that may serve this purpose, but these are not well defined and are in the path of travel between other elements, where larger kids may interfere with the free play of younger ones. Goat Hill is restricted by size and topography, so this domain may be difficult to address there. Mason Avenue is also limited by size.

An alternative would be to make sure that adequate space for free play is available at other playspaces nearby. For example, Warwick Landover Park is not too far from Goat Hill Park. It is

a very attractive park that offers adequate free play space but is lacking in the Intellectual and Social Domains. Between both parks all domains are covered, but there may not be enough age-appropriate amenities at Warwick Landover to draw parents with younger children there. Making Warwick Landover more appealing for children ages 2-5 would encourage parents that frequently visit Goat Hill to also take their kids to Warwick Landover and provide them with the full range of play experiences.

The nearest park to Mason Avenue Park is Simpson Stadium Park, which offers an appealing destination, but, like Warwick Landover, may not be as appealing for ages 2-5 as Mason Avenue. Enhancing the appeal of Simpson Stadium for ages 2-5 could draw parents who now take their children only to Mason Avenue to visit both parks and expand the play experiences for their children.

Public Schools

Public school yards in Alexandria tend to be well-designed, well-maintained, and offer a good balance of play domain opportunities. The primary drawback is that they are not available during the school day for use by the general public. Discussions with the school district are needed to determine if there are ways to address this. One possibility would be to open up the playgrounds to playgroups and other organized users through a permit system. Such a system would allow 2-5-year-olds on to the site during the day under controlled conditions. Another idea might be a "registry," where parents and caregivers could register and obtain permission to use school playgrounds in a controlled way.

Improving Play at Private Spaces

Because there are multiple owners and other factors affecting control over playspaces at private locations such as apartments, HOAs, churches, and other semi-public providers, the best way to improve play at these locations may be through a campaign to increase awareness of the importance of play. The goal would be to get residents, church members, and others who use these facilities to advocate for improvements. Recognition and positive reinforcement can help —create an awards program to recognize good playspaces on private lands. Backing this up with money will help immensely. This can be done through grant programs, matching funds, and working with volunteer organizations that give time to build good playspaces.

Playspaces that are "almost" meeting the needs are good targets for upgrading if the owners of these are made aware of what needs to be upgraded. As explained for parks, such spaces and their deficiencies can be identified in the inventory. Examples of such locations include:

- Bishop of Arlington—needs natural play elements to enhance the Natural Domain
- Chatham Square—needs physical elements appropriate to the 2-5 age group
- Exchange at Van Dorn—has good balance of play domains, but needs improved access and invitation
- EOS 21 Condo—needs improvement in the Natural Domain and improved seating

Destination Playgrounds—A Combined Approach to Enhancing Play in Alexandria

A combined approach to the three strategies listed above would create synergies to greatly advance and enhance play in Alexandria. A good way to do this is through the creation of destination playgrounds. Destination playgrounds address the concerns of this study in many ways. They are places where high-value play that addresses all of the domains can be provided, along with all of the modifiers that enhances their value. This includes such things as restrooms, drinking water, and easy access by multiple modes of transportation. By creating a desirable playspace that everyone talks about, more people will be enticed and motivated to take their children to a place where play with all of its benefits is showcased.

A destination playground is one that draws people from a wide area together for extended periods of play. Destination playgrounds encourage people to set play dates with one another and to set aside special times for play. They are also places where events can be held that bring people together from across the entire community to meet and interact. They bring children and their families together across cultural and economic divides and raise awareness of the importance of healthy living and physical activity and provide a necessary opportunity to bond.

Destination playgrounds are special places that have unique elements, such as being located in a special place or having special features that cannot be found elsewhere. They offer a full range of comfort and convenience features, such as restrooms, shade, seating, and nearby picnic shelters for birthday parties and other gatherings. They typically are located in places where everyone in the family can find things to do, such as playing sports, observing wildlife, or enjoying a snack from a concession stand or vending cart. A wi-fi hotspot would be a good way to get parents to linger while their children play. Play monitors and play facilitators would further enhance such places.

Destination playgrounds are places that become part of the image and identity of the community, and their design reflects the history and culture of the region. Creating such a playspace in Alexandria would bring people together and enhance the sense of community, as well as the city's image within the region. It could be located in a large park like Four Mile Run or perhaps on a site along the river near Old Town. Another possibility could be next to the Nannie J. Lee Recreation Center, which would provide access to indoor space for activities associated with the playspace and the possibility for some monitoring and staffing.

Another type of destination playspace would be one that is intended as the focus of a smaller area, such as each of the subareas identified in the analysis for this study. Creating a destination playspace within each of the subareas would yield four special playspaces that would call attention to the importance of play, build a sense of community within the subarea, and might even encourage people from one subarea to visit another and get to know people there. These would be similar to the citywide playspace described above, but less elaborate. They should still be associated with other amenities, such as community gardens, local marketplaces, or other areas where people like to congregate and linger.

Potential locations for these smaller destination playspaces include:

- William Ramsay Recreation Center in SubArea One
- Ben Brenman Park in SubArea Two

In SubArea Three, possibilities include:

- Chinquapin Park
- Simpson Stadium Park
- Four Mile Run

In SubArea Four, possibilities include:

- Montgomery Park
- Hill Park

Appendices

APPENDICES

APPENDIX A: Sample Inventory Form

Alexandria Play Assessment

MapBook Label _____ **Date** _____ **Auditor** _____

Open Access

3	Open to the General Public on walk-in basis
2	Open to General Public but requires registration, enrollment, or other action first
1	Open only to a limited group on basis of residence, membership, etc.

Comments:

Invitation

3	Easy to find and welcoming
2	Somewhat hidden or discreet
1	Hard to find unless you know it is there

Comments:

Ease of Access

3	Easy to reach by both automobile and public transportation (also assumes easy to walk to)
2	Easily reached by either auto or public transportation, but not by both
1	Difficult to reach by all means except walking (i.e. no parking and far from transit)

Comments:

Safe Location

3	Surrounding area feels safe at normal hours for play
2	Surrounding area may cause unsafe feelings for some people
1	Surrounding area is generally thought of as unsafe

Comments:

Pleasant Conditions and Surroundings

3	Play area and surroundings are clean, attractive, and appealing
2	Play area and surroundings function but could be more appealing in some way
1	Play area and surroundings are run-down, poorly maintained, or unappealing

Comments:

Monitoring

3	Play location has monitors and/or staff during normal hours for play
2	Play location has "friendly eyes" during most of the hours of play
1	Play location has few or no people other than users present during normal hours of play

Comments:

Programming

3	Play location has people who facilitate play during normal hours for play
2	Play location ocasionally has people who facilitate play
1	Play location has no programmed play

Comments:

Weather Protection

3	Play location has good protection from rain, wind, sun, etc. during normal hours for play
2	Play location has some protection from the elements during normal hours of play
1	Play location lacks reasonable protection from the elements

Comments:

Seating

3	Play location has adequate amount of comfortable seating for caregivers during play
2	Play location has some seating for caregivers, but it is inadaquate in some way
1	Play location lacks reasonable seating for caregivers

Restrooms

3	Need for restrooms is adequately met at this play location
2	Restrooms are available but inadequate in some way
1	Restrooms are not available at this location

Comments:

Drinking Water

3	Drinking water is readily available
2	Drinking water is available on a limited basis or may be too far away, or otherwise inadequate
1	Drinking water is not available at this location

Comments:

Physical Domain

3	Play space offers a full range of activities that engage all types of motions and vestibular stimulation
2	Play space offers a range of activities but is limited in some way
1	Play space offers little or no opportunity for motion and vestibular stimulation

Comments:

Social Domain

3	Play space stimulates a full range of interactions among children and between children and adults
2	Play space stimulates some interactions but is lacking in some fashion
1	Play space provides little or no stimulation for social interaction

Comments:

Intellectual Domain

3	Play space encourages creativity through manpulation of materials or configuration of the space
2	Play space allows for some creativity
1	Play space provides little or no stimulus for creative or intellectual activity

Comments:

Natural Environment

3	Play space offers opportunities for nature play or interaction with the natural environment
2	Play space offers some opportunity for interaction with the natural environment (i.e. outdoors, etc.)
1	Play space offers little or no interaction with the natural environment (indoors, for example)

Comments:

Free/unstructured play

3	Play space has ample provision for free-play (open grassy area, for example)
2	Play space has some provision for free-play
1	Play space inhibits free-play

Comments:

Comments: *(General description, unique aspects, observations, particular needs, constraints or opportunities, etc.)*

*Note: the "Monitoring" attribute was not used in the final scoring as the data was considered inadequate and not relevant for the purposes of the study.

APPENDIX B: Lowest-Scoring Playspaces Serving Ages 2-5

Appendix B – Lowest-Scoring Playspaces Serving Ages 2-5

10 Lowest-Scoring Playspaces for Components (2-5 Playspaces)

LOCATION	Component Score	SUBAREA
Summers Grove Townhomes	7	SubArea Two
ARHA_Henry	7	SubArea Four
TC Williams	8	SubArea Three
Cora Kelly School	8	SubArea Three
Ewald Park	8	SubArea Two
Woodbine Park	8	SubArea Three
Angel Park	8	SubArea Three
Maury School	8	SubArea Three
Lanihaven Park	8	SubArea Three
Samuel Tucker Elementary	8	SubArea Two

The tables to the left show the lowest-scoring playspaces serving 2-5 year olds for different indicators.
Note that only one of these is in Subarea One, even though that subarea has the lowest overall level of service and has several notable gaps in service coverage.

10 Lowest-Scoring Playspaces for Modifiers (2-5 Playspaces)

LOCATION	Modifier Score	SUBAREA
Summers Grove Townhomes	15	SubArea Two
TC Williams	15	SubArea Three
Four Mile Run Park	15	SubArea Three
Newport Village Apt	15	SubArea One
Van Dorn Edsall	16	SubArea Two
Grace Episcopal	16	SubArea Three
Cora Kelly School	17	SubArea Three
Tarleton Park	17	SubArea Two
ARHA_Henry	18	SubArea Four
ARHA_Whiting	18	SubArea Two

10 Lowest-Scoring Playspaces for Overall Score (2-5 Playspaces)

LOCATION	GRASP_Value	SUBAREA
Summers Grove Townhomes	98	SubArea Two
TC Williams	128	SubArea Three
ARHA_Henry	135	SubArea Four
Four Mile Run Park	135	SubArea Three
Cora Kelly School	136	SubArea Three
Ewald Park	152	SubArea Two
Van Dorn Edsall	155	SubArea Two
Grace Episcopal	160	SubArea Three
Woodbine Park	160	SubArea Three
Angel Park	168	SubArea Three

APPENDIX C: Scores for All Playspaces

Appendix C – Scores for All Playspaces

		Modifiers										Components								
LOCATION	?Ages 2-5	OPEN_ACCES	INVITATION	ACCESS	SAFE_LOCAT	CONDITIONS	MONITORING	WEATHER	SEATING	RESTROOMS	DRINKING_W	PHYSICAL_D	SOCIAL_DOM	INTELLECTU	NATURAL_EN	FREE_UNSTR	Comp_Sum	Mod_Sum	GRASP_Value	SUBAREA
Elbert Apts	N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Subarea Three
Portal West	Unknown	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Subarea Three
Sentinel of Landmark	Unknown	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Subarea Two
Monarch	N	3	1	2	3	3	2	1	2	1	1	0	0	0	1	2	3	18	57	Subarea Four
Brent Place	N	1	1	2	1	1	2	1	1	1	1	2	1	1	1	1	6	11	72	Subarea Two
Sunny Square	N	1	2	2	2	2	2	2	3	1	1	1	1	1	1	1	5	17	90	Subarea One
Bennington Crossing Apt	N	1	2	2	2	2	2	1	2	1	1	1	1	1	1	2	6	15	96	Subarea One
EOS 21 Condo	N	1	1	2	3	2	2	1	2	1	1	1	1	1	1	2	6	15	96	Subarea Two
Summers Grove Townhomes	Y	1	1	1	3	2	2	1	1	1	1	2	1	1	1	2	7	13	98	Subarea Two
Old Town Village	N	1	1	2	3	2	1	1	2	1	1	1	1	1	2	2	7	15	105	Subarea Four
Mayflower Square Condos	N	1	1	2	3	3	2	2	2	1	1	1	1	1	1	2	6	17	108	Subarea One
South Port Apt	N	1	2	2	3	2	2	1	2	1	1	2	1	1	1	2	7	16	119	Subarea Two
Brookville Apts	N	3	1	2	2	2	2	1	2	1	1	1	1	1	1	3	7	16	119	Subarea Two
AHA_551 Royal	N	3	3	2	3	2	2	2	1	1	1	1	1	1	1	2	6	19	120	Subarea Four
AHA_Braddock	N	3	3	3	2	1	2	1	1	1	1	1	2	2	1	1	7	17	126	Subarea Two
TC Williams	Y	3	1	1	2	2	2	2	1	1	1	2	2	2	1	1	8	15	128	Subarea Three
Mt Vernon School	N	3	3	3	3	2	2	1	1	3	1	1	1	1	1	2	6	21	132	Subarea Three
AHA_Henry	Y	3	3	2	3	2	2	1	1	1	1	2	1	1	1	2	7	18	133	Subarea Four
Four Mile Run Park	Y	3	1	1	2	2	1	2	1	1	1	2	1	1	2	3	9	15	135	Subarea Three
Cora Kelly School	Y	3	2	1	2	1	1	1	2	2	2	2	1	1	1	3	8	17	136	Subarea Three
Ewald Park	Y	3	2	2	3	2	1	1	2	2	1	2	1	1	2	2	8	19	152	Subarea Two
Buchanan Park	N	3	2	3	3	2	1	1	2	1	1	2	1	1	1	3	8	19	152	Subarea Four

		Modifiers										Components								
LOCATION	?Ages 2-5	OPEN_ACCES	INVITATION	ACCESS	SAFE_LOCAT	CONDITIONS	MONITORING	WEATHER	SEATING	RESTROOMS	DRINKING_W	PHYSICAL_D	SOCIAL_DOM	INTELLECTU	NATURAL_EN	FREE_UNSTR	Comp_Sum	Mod_Sum	GRASP_Value	SUBAREA
Van Dorn Edsall	Y	1	2	2	2	2	2	2	2	1	1	2	2	2	2	1	9	16	153	Subarea Two
Grace Episcopal	Y	1	1	2	3	3	1	2	1	1	1	2	3	3	1	1	10	16	160	Subarea Three
Woodbine Park	Y	3	3	2	3	3	1	1	2	1	1	2	1	1	2	2	8	20	160	Subarea Three
Angel Park	Y	3	3	2	2	3	2	2	2	1	1	2	1	2	2	1	8	20	168	Subarea Three
Holmes Run Park-S. Jordan St.	N	3	3	2	3	2	2	2	3	2	2	2	1	1	2	1	7	23	168	Subarea Two
AHA_Whiting	Y	1	2	2	3	3	2	2	2	1	1	2	2	2	2	1	9	18	171	Subarea Two
Cameron Parke Townes	Y	1	1	2	3	3	2	2	3	1	1	2	2	2	2	1	9	18	171	Subarea Two
Chinquapin Park	Y	3	2	2	2	2	1	3	2	1	1	2	2	1	2	2	9	19	171	Subarea Three
Newport Village Apt	Y	0	1	2	3	2	2	1	3	1	1	2	2	2	2	3	11	15	176	Subarea One
Maury School	Y	3	3	2	3	3	2	2	2	1	1	1	1	1	2	3	8	21	176	Subarea Three
Lynhaven Park	Y	3	3	2	2	1	2	2	3	2	2	2	2	2	1	1	8	21	176	Subarea Three
Sunset Park	Y	3	3	1	2	3	1	1	2	1	1	2	2	2	2	2	10	18	180	Subarea Three
Powhatan Park	Y	3	3	2	2	2	1	1	2	1	1	2	2	2	2	2	10	18	180	Subarea Four
EOS 21 Condo	Y	1	1	2	3	3	2	1	1	2	2	3	2	2	1	2	10	19	180	Subarea Two
Samuel Tucker Elementary	Y	3	2	2	3	3	2	3	3	1	1	2	2	2	1	1	8	22	184	Subarea Two
Mason Avenue Park	Y	3	3	2	2	2	2	2	3	1	1	3	2	1	2	1	9	20	189	Subarea Three
G Washington School	Y	3	3	3	3	3	1	2	1	1	1	2	2	2	2	1	9	21	189	Subarea Three
Exchange at Van Dorn	Y	1	1	2	3	3	2	2	3	1	1	2	2	2	2	2	10	18	190	Subarea Two
Hume Springs Park	Y	3	3	2	2	2	2	2	1	1	1	2	2	2	2	2	10	18	190	Subarea Three
Chatham Square HOA	Y	3	2	2	3	3	2	2	3	1	1	1	2	2	2	2	9	21	198	Subarea Four
Armory Tot Lot	Y	3	3	2	3	3	1	2	3	1	1	2	2	1	2	2	9	22	198	Subarea Four
AHA_Orenoco	N	3	2	2	3	3	2	2	3	1	1	1	2	2	2	2	9	21	198	Subarea Four
Bishop of Arlington	Y	1	3	2	3	3	2	1	1	3	3	2	2	2	1	2	9	23	198	Subarea Four
Landmark Mall	Y	3	3	2	2	3	2	3	3	3	1	2	2	1	1	2	8	24	200	Subarea Two

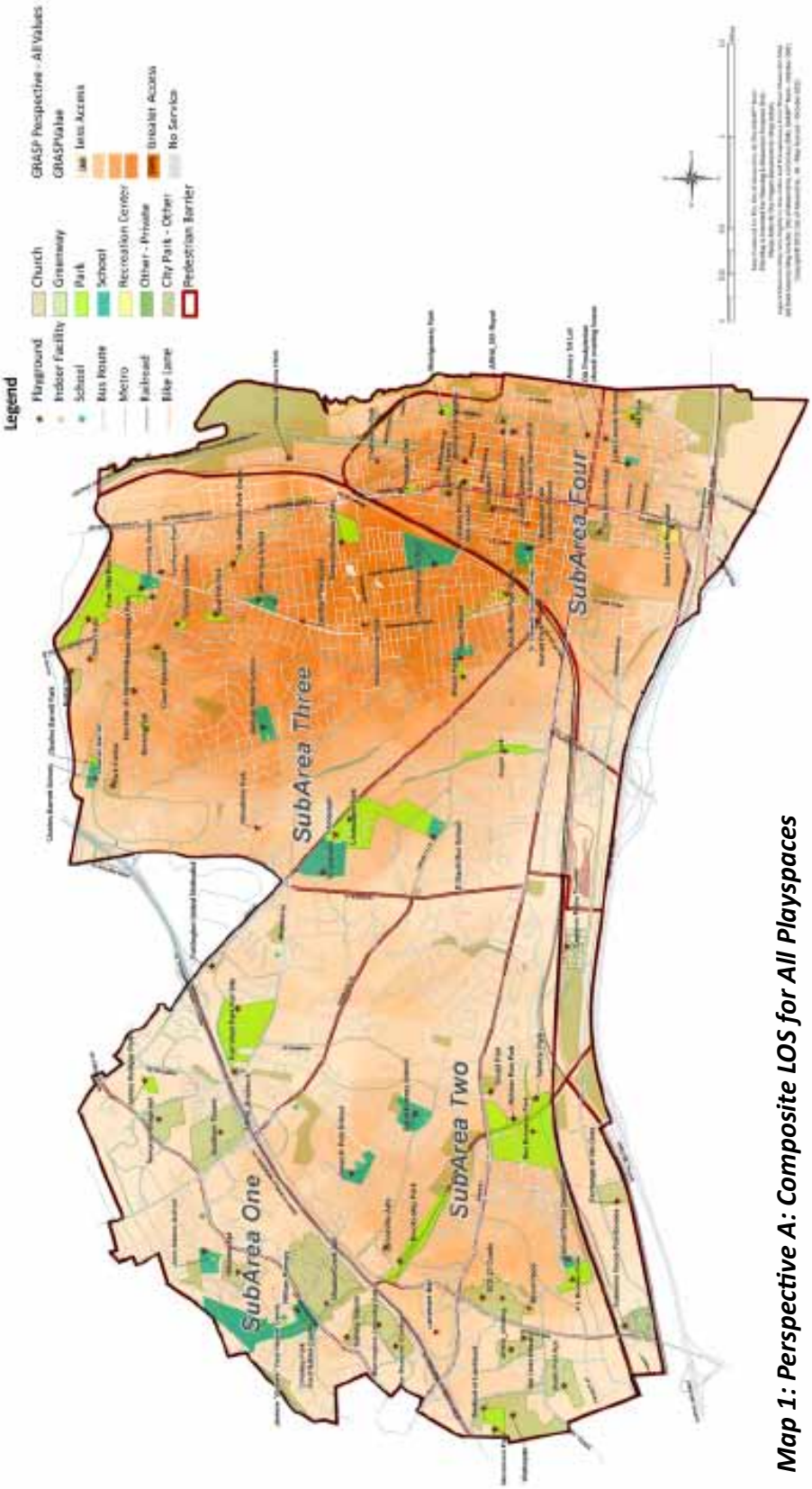
		Modifiers										Components								
LOCATION	?Ages 2-5	OPEN_ACCES	INVITATION	ACCESS	SAFE_LOCAT	CONDITIONS	MONITORING	WEATHER	SEATING	RESTROOMS	DRINKING_W	PHYSICAL_D	SOCIAL_DOM	INTELLECTU	NATURAL_EN	FREE_UNSTR	Comp_Sum	Mod_Sum	GRASP_Value	SUBAREA
Tarleton Park	Y	3	1	1	2	3	1	1	3	1	1	3	2	1	3	3	12	17	204	SubArea Two
James K Polk School	Y	3	3	2	3	3	2	2	3	1	1	2	1	1	2	3	9	22	207	SubArea Two
Charles Barrett School	Y	3	3	3	3	2	2	2	1	2	2	2	1	1	3	2	9	22	207	SubArea Three
Southern Towers	N	1	2	2	3	3	2	1	3	1	1	2	2	1	3	3	11	18	209	SubArea One
Goat Hill Park	Y	3	2	2	3	3	2	2	2	1	1	3	2	2	2	1	10	20	210	SubArea Three
Hillwood Apt	Y	3	1	2	3	3	1	1	2	1	1	2	2	2	3	3	12	18	216	SubArea One
Fort Ward Park Hist Site	Y	3	1	2	2	3	1	2	2	1	1	2	2	2	3	3	12	18	216	SubArea Two
MeadowCreek Apt	Y	3	2	2	3	2	1	1	2	1	1	2	2	2	3	3	12	18	216	SubArea One
Charles Houston Rec Center	Y	2	2	2	3	3	2	2	2	3	3	3	2	2	1	1	9	23	216	SubArea Four
Patrick Henry School	Y	3	3	2	3	2	2	1	2	1	1	3	2	2	1	3	11	19	220	SubArea Two
Mt Jefferson Park Green	Y	3	3	2	2	3	2	2	3	1	1	2	2	2	2	2	10	21	220	SubArea Three
Park Fairfax	Y	1	1	2	2	3	1	3	3	3	3	2	2	2	2	2	10	22	220	SubArea Three
Fairlington Un Methodist	N	3	2	1	3	2	2	2	3	1	1	2	2	2	2	3	11	19	220	SubArea Two
James Mulligan Park	Y	3	2	2	2	2	2	2	2	1	1	3	2	1	3	3	12	18	226	SubArea One
Potomac Greens HOA	Y	3	1	2	3	3	1	1	3	1	1	2	2	2	3	3	12	19	226	SubArea Four
Warwick Landover	Y	3	3	2	3	3	2	2	3	1	1	3	1	1	2	3	10	22	230	SubArea Three
Nannie J Lee Recreation	Y	3	1	2	3	3	2	2	3	2	2	2	2	2	2	2	10	22	230	SubArea Four
Old Presbyterian church meeting house	Y	2	2	2	3	3	2	3	2	1	1	2	2	3	2	2	11	20	231	SubArea Four
George Mason School	Y	3	2	2	3	3	2	2	2	1	1	3	2	1	2	3	11	20	231	SubArea Three
Ben Brenman Park	Y	3	2	2	3	3	2	2	3	3	3	2	2	2	1	2	9	25	234	SubArea Two
Del Ray Playground	Y	3	3	2	3	3	2	1	3	1	1	2	2	3	2	2	11	21	242	SubArea Three
D Kelley Park Fond Nat Gen	N	3	3	3	3	3	2	1	1	3	0	2	2	2	2	3	11	22	242	SubArea One
Charles Barrett Park	N	3	3	3	3	3	2	3	1	3	3	2	1	1	2	3	9	26	243	SubArea Three
Montgomery Park	Y	3	3	2	3	3	2	3	2	1	3	2	3	2	1	2	10	24	250	SubArea Four

		Modifiers										Components								
LOCATION	?Ages 2-5	OPEN_ACCES	INVITATION	ACCESS	SAFE_LOCAT	CONDITIONS	MONITORING	WEATHER	SEATING	RESTROOMS	DRINKING_W	PHYSICAL_D	SOCIAL_DOM	INTELLECTU	NATURAL_EN	FREE_UNSTR	Comp_Sum	Mod_Sum	GRASP_Value	SUBAREA
Lyles Crouch School	Y	3	3	2	3	3	2	2	3	1	1	2	1	2	3	3	11	22	253	SubArea Four
Fayette Queen Park	Y	3	3	2	3	3	2	2	3	1	1	3	2	2	2	2	11	22	253	SubArea Four
A L Barthe Park	Y	3	3	2	2	2	2	3	2	3	1	2	2	2	2	3	11	22	253	SubArea Two
Mt Vernon School	Y	3	3	3	3	2	2	2	3	2	3	2	1	1	3	3	10	25	260	SubArea Three
Brookvalley Park	Y	3	3	2	2	3	2	2	3	1	1	3	3	2	2	2	12	21	264	SubArea Two
Stevenson Park	Y	3	3	2	3	3	2	3	3	1	1	3	2	2	2	2	11	23	264	SubArea Two
Simpson Stadium Park	Y	3	3	2	2	3	2	2	2	2	3	2	2	2	3	2	11	23	264	SubArea Three
Chetworth Park	Y	3	2	1	3	3	2	2	3	1	3	2	2	3	2	3	12	22	276	SubArea Four
Beach Park	Y	3	3	2	3	3	1	2	2	2	2	3	2	2	2	3	12	23	276	SubArea Three
D MacArthur School	Y	3	3	3	3	3	1	2	2	1	1	3	3	2	2	3	13	22	286	SubArea Three
Bev Hills Un Methodist	Y	3	3	2	3	3	2	2	2	1	1	2	3	3	3	2	13	22	286	SubArea Three
Watergate	Y	1	2	2	3	3	3	2	2	3	3	3	2	2	2	3	12	22	288	SubArea Two
J Houston School	Y	3	3	2	3	3	2	2	1	1	1	3	3	2	3	3	14	20	294	SubArea Four
Chinquapin Rec Center	Y	2	1	3	3	3	3	3	3	3	3	2	2	3	1	3	11	25	297	SubArea Three
Hill Park	Y	3	3	2	3	3	2	2	2	1	2	3	3	3	2	2	13	22	299	SubArea Four
Hoffs Run Park Green	Y	3	3	2	3	3	2	2	3	1	3	2	3	2	2	3	12	24	300	SubArea Three
Beverly Park	Y	3	3	2	3	3	2	3	3	1	1	2	3	3	2	3	13	23	312	SubArea Three
John Adams School	Y	1	3	3	3	3	3	1	2	1	1	3	3	3	3	3	15	20	315	SubArea One
Charles Houston Rec Center	Y	2	2	3	3	3	3	3	3	3	3	2	3	3	1	3	12	26	336	SubArea Four

APPENDIX D: Detailed Level of Service Analyses

Perspective A: Access to All Playgrounds

The first Perspective shows the results of plotting the catchment areas for all of the playspaces in the inventory, including those suited to ages 2-5 and all others. (Other Perspectives were generated that focus on only those playspaces serving 2-5 year olds, and those are presented below.) Darker shades indicate higher service values, and there is a numerical value associated with every shade on the map. The values range from a low of 168 points (very lightest shade) to a high of 5,505 points (darkest shade).



Map 1: Perspective A: Composite LOS for All Playspaces

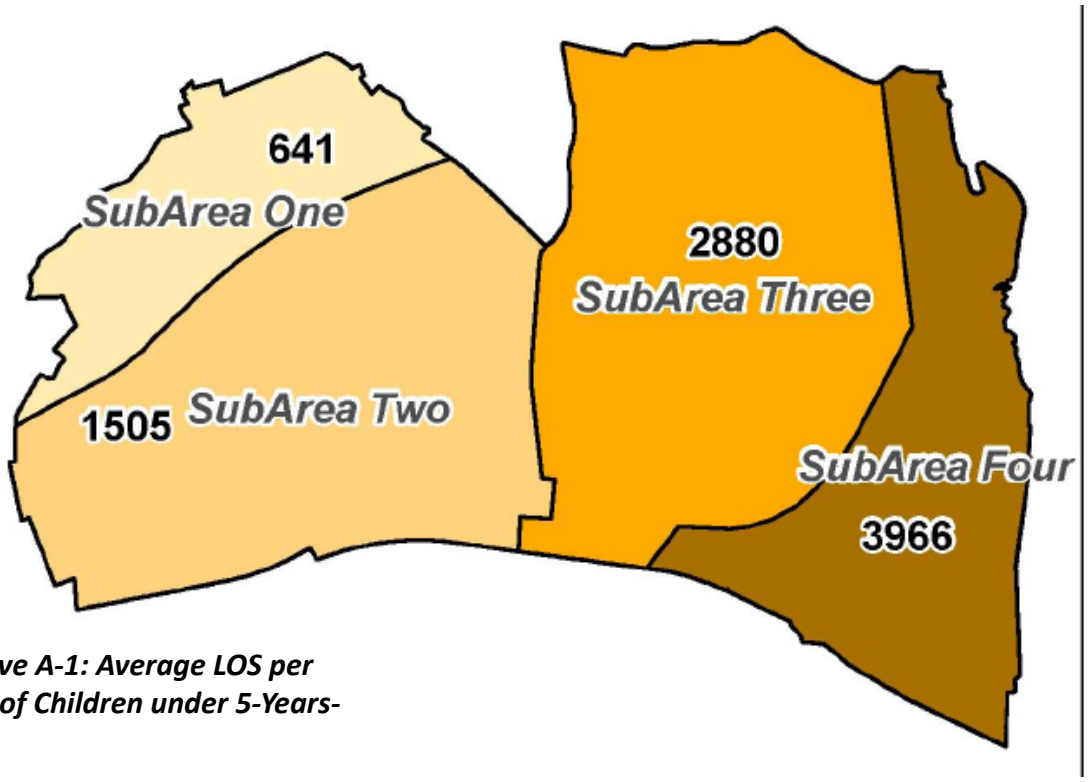
Table PA-1: Access to All Playgrounds

It is immediately apparent that higher LOS values overlay the eastern part of Alexandria (SubAreas Three and Four), and lower values overlay the central and western parts (SubAreas One and Two). Stated another way, when the combined concentration of playspaces with their computed values is analyzed, the overall value of playspaces in eastern Alexandria is higher than in western Alexandria.

Table PA (below) provides some statistics derived from Perspective A. It shows the percentage of the city that each subarea makes up and the total acres each one comprises. Under the assumptions and parameters on which this Perspective is based, the city overall and all subareas have 100 percent coverage of service, meaning that the LOS is greater than zero for all parts of the city. However, the average LOS for each subarea varies as shown in the table. SubArea One has the lowest average LOS, at 1,121, while SubArea Three has the highest average LOS value, at 2,908. The overall average for Alexandria is 2,167.

These numbers are derived from the mapping process and are not related to any set of "standards." In fact, there are no commonly accepted standards or methodology for measuring the value of play across a geographic area. The process used here was developed specifically to accomplish the goals of this project, but it could be applied to other communities.

Zone	Percent of City	Total Acres	Acres with LOS	Percent of Total with LOS	Average LOS per Acre Served
SubArea One	12%	1218.3	1218.3	100%	1121.2
SubArea Two	32%	3183.4	3183.1	100%	1475.6
SubArea Three	34%	3295.9	3295.9	100%	2908.5
SubArea Four	22%	2108.2	2108.2	100%	2657.0
Entire Area	**100%**	**9805.8**	**9805.5**	**100%**	**2167.2**



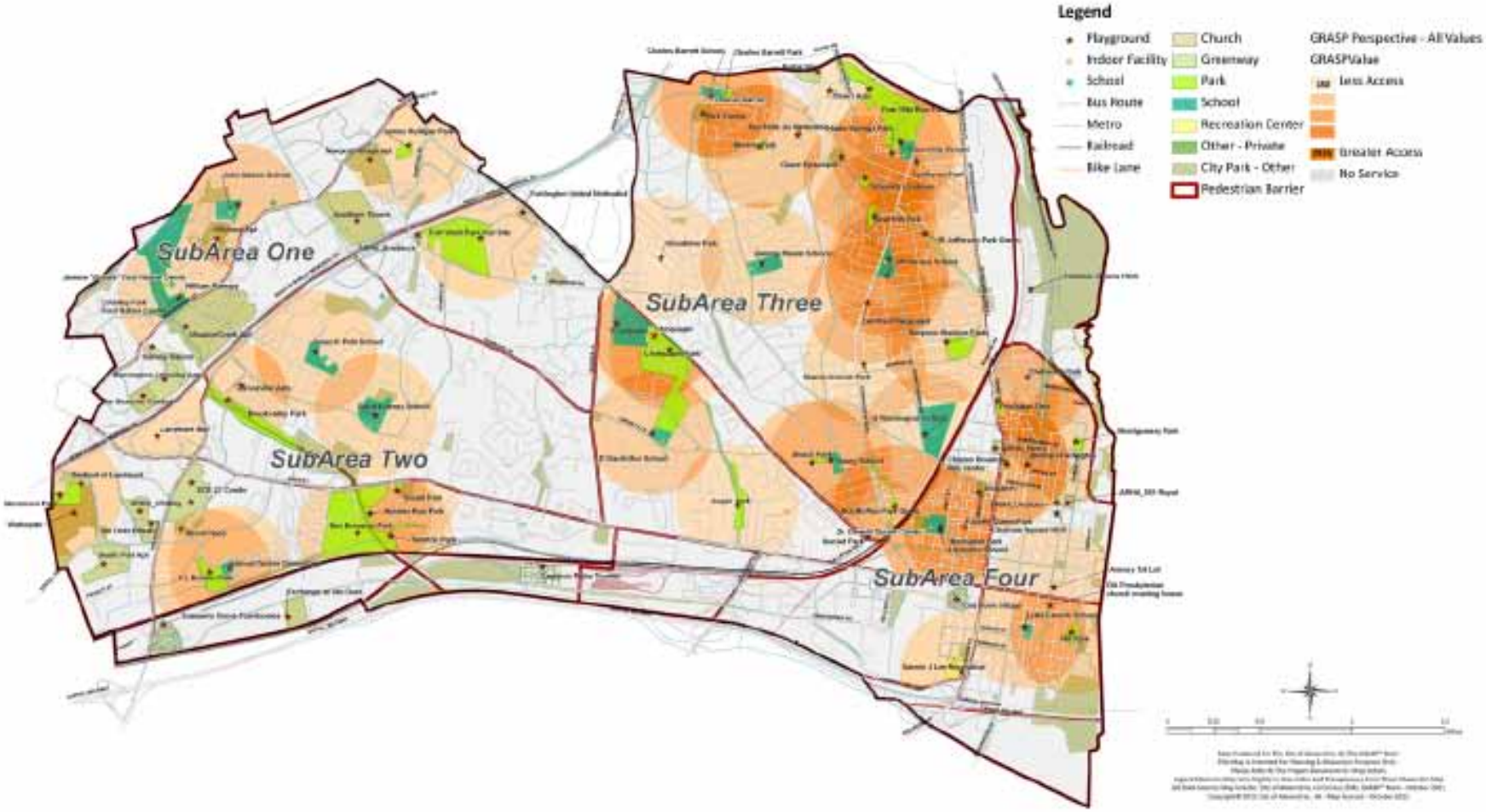
Map 2: Perspective A-1: Average LOS per Average Density of Children under 5-Years-Old by Subarea

The shades in Perspective A are in effect measuring the density of service that accrues as the catchment areas for all of the playspaces are overlaid on one another. We can compare this to the density of children age 5 and under within each subarea to get an idea of the relationship between the demand for playspaces and the value of playspaces provided. Map 2 (above) does this. (See Demographics section for more information on density and other demographics associated with children in Alexandria.)

In this map, the Average LOS per acre served for each subarea from Table PA above is divided by the average density of children 5 and under in that subarea to arrive at the numbers shown on the map. It can be seen that service as it relates to density of children is lowest in SubArea One and highest in SubArea Four by a factor of more than six—i.e., the value of service on average in SubArea Four is six times that of SubArea One.

Perspective B: Walkable Access to Playgrounds

This perspective is essentially the same as Perspective A but without the 1-mile catchment areas. Only the walkable catchment areas were used. This reveals a different picture than Perspective A. The differences in LOS from west to east do not appear as distinct, although a large gap in service in the center of Alexandria is readily apparent.



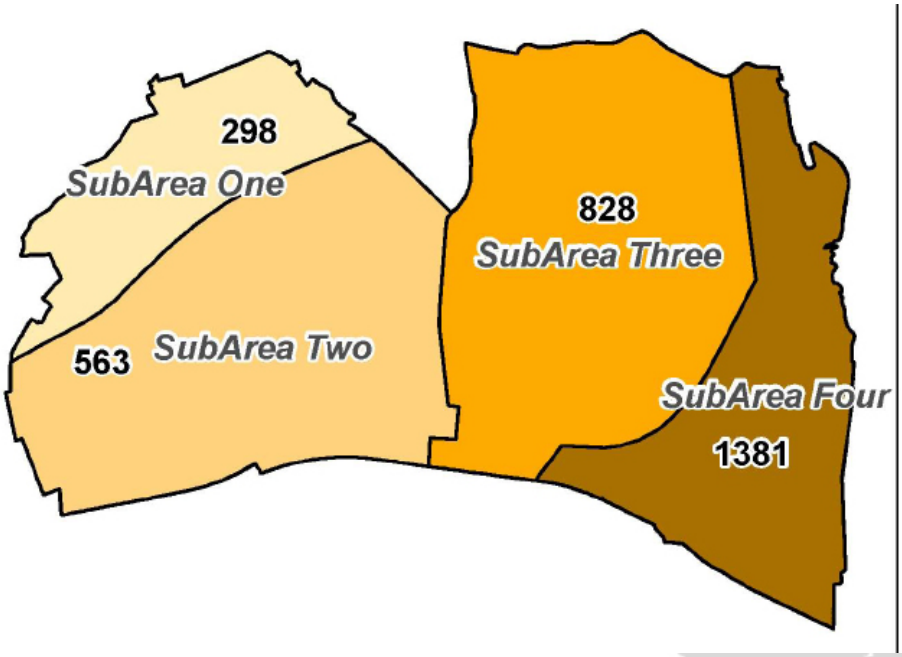
Map 3: Perspective B: Walkable Access for All Playspaces

Areas with no service occur throughout the city, and where service does exist, the LOS values range from 180 to 2836. The table below shows some of the other statistics derived from Perspective B. The Average LOS for SubArea One is still the lowest, at 521.4, and SubArea Four is the highest at 925.6. The overall average citywide is 745.7.

Table PB-1: Walkable Access for All Playspaces

Zone	Percent of City	Total Acres	Acres with LOS	Percent of Total with LOS	Average LOS per Acre Served
SubArea One	12%	1218.3	572.3	47%	521.4
SubArea Two	32%	3183.4	1340.0	42%	552.4
SubArea Three	34%	3295.9	2533.3	77%	836.0
SubArea Four	22%	2108.2	880.5	42%	925.6
Entire Area	**100%**	**9805.8**	**5326.2**	**54%**	**745.7**

Coverages for service are also lower in this Perspective. Overall, 54 percent of Alexandria has walkable service at some level greater than zero (or at least 180 to be more exact). In this analysis, SubArea Three has the highest coverage, at 77 percent, while SubAreas Two and Four each have only 42 percent coverage. So while SubArea One has low numeric values for LOS, it does not lag behind in percent coverage for walkable access, except when compared to SubArea Three.



Map 4: Perspective B-1: Average LOS per Average Density of Children under 5-Years-Old by Subarea

When the density of service is compared with the density of children age 5 and under as it was in Perspective A, the numbers shown on Map 4 (at left) result for each subarea. In this case, the highest value (SubArea Four) is nearly five times that of the lowest (SubArea One).

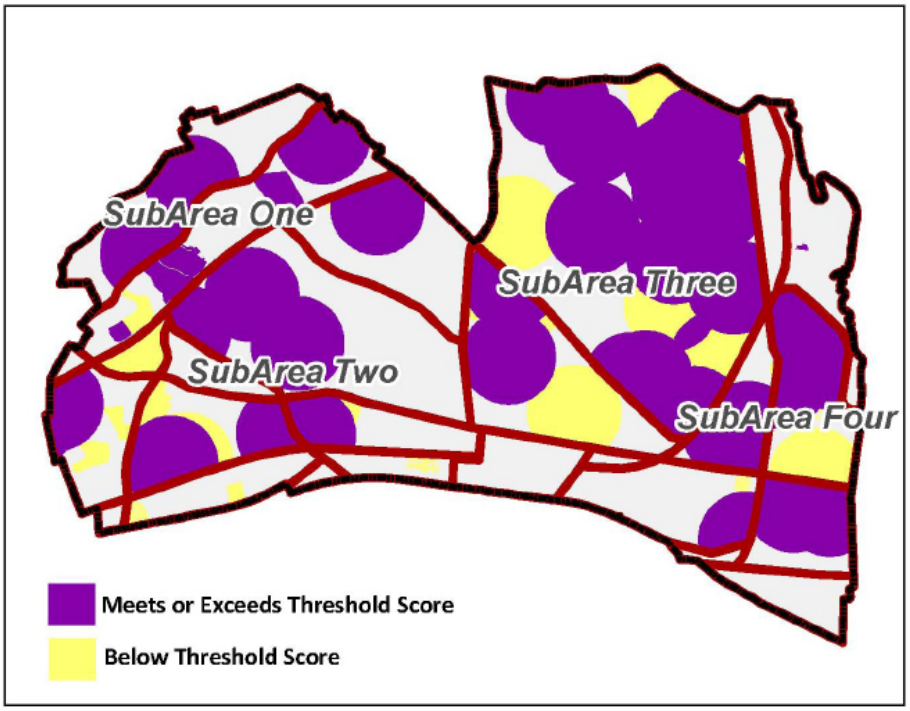
Threshold Mapping

Another way to analyze the information in Perspective B is shown in the following map (Map 5) with purple and yellow shading. On this map, the numeric values represented by the orange shades in Perspective B have been bracketed to show where the values are at or above a threshold value. The threshold value used is 400 points. This number was determined by calculating the numeric value that a playspace would have if it scored a 2 on all of the attributes in the inventory, then doubling that number to reflect the value that results when the 1/3-mile and one-mile catchment areas are overlaid for a given playspace. This effectively places a premium on walkable proximity to a playspace in the Perspectives.

A purple shade is used to show all locations where the LOS value is 400 points or greater. A yellow shade is used to show where there is some service, but the value of that service is below 400 points. Yellow areas typically indicate that there is a playspace that serves that area, but it is performing below the threshold value. This could be considered an opportunity in the sense that upgrading an existing facility to meet the threshold value may be easier than creating an entirely new playspace where there currently are none.

Areas shown in gray on Map 5 are locations where there is no playspace at all within walkable proximity, either due to distance or the presence of a barrier that prevents or inhibits walking.

The statistics for this map are shown in the following Table PB. They show that, overall, 54 percent of Alexandria has walkable proximity to a playspace that meets the threshold value. This number comes from the 9 percent of Alexandria that has some service but is below the threshold, and 45 percent of Alexandria that has LOS above the threshold.



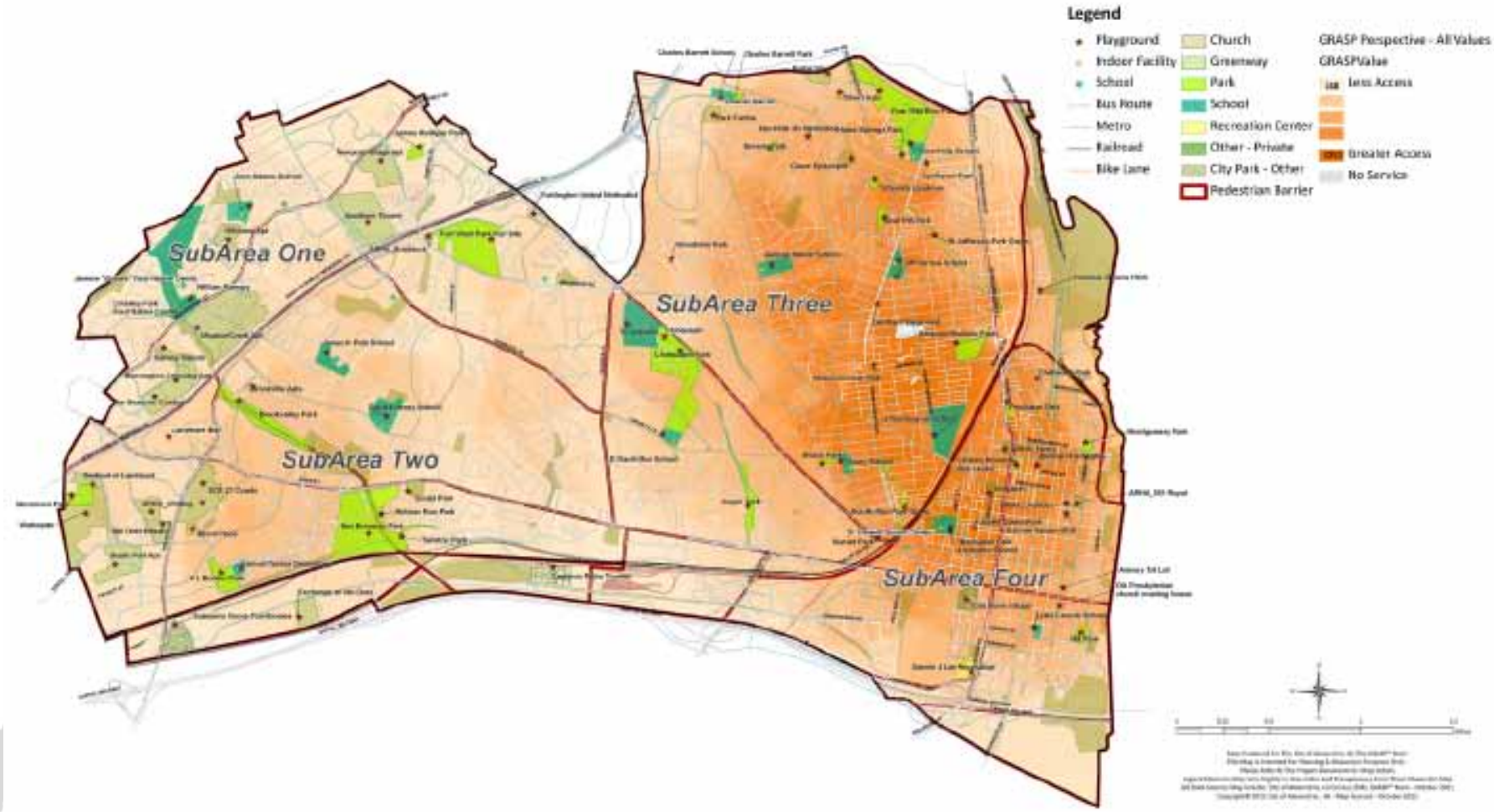
Map 5: Perspective B-2: Threshold Map

Table PB-2: Walkable LOS for All Playspaces

Zone	Percent of Total with LOS	Percent Total Area >0 AND <400	Percent Total Area >=400
SubArea One	47%	2%	45%
SubArea Two	42%	4%	38%
SubArea Three	77%	17%	59%
SubArea Four	42%	6%	35%
Entire Area	**54%**	**9%**	**46%**

Perspective C: Composite LOS for Playspaces Serving 2-5-Year-Olds

The next Perspective shows the results of plotting all of the catchment areas for only those playspaces in the inventory that are delineated as serving 2-5 year olds. The values range from a low of 168 points to a high of 5,252 points.



Map 6: Perspective C: Composite LOS for Playspaces Serving 2-5-Year-Olds

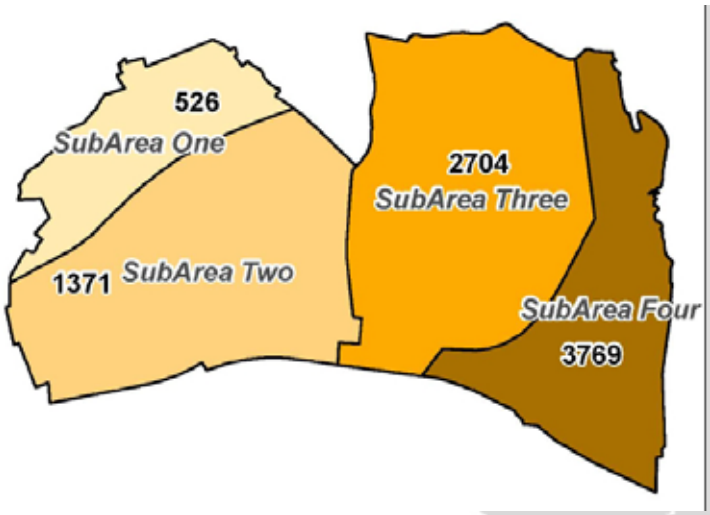
As in the previous Perspectives, higher LOS values overlay the eastern part of Alexandria (SubAreas Three and Four), and lower values overlay the central and western parts (SubAreas One and Two). This indicates that the combination of the concentration of playspaces and the computed value of the playspaces specific to 2-5-year-olds located in eastern Alexandria is higher than it is in western Alexandria.

The following Table PC provides statistics derived from Perspective C. The city overall and all subareas have a 100 percent coverage of service, meaning that the LOS is greater than zero for all parts of the city. However, the average LOS for each subarea varies as shown in the table. SubArea One has the lowest average LOS, at 921.1, while SubArea Three has the highest average LOS value, at 2730.8. The overall average for Alexandria is 2011.5.

Table PC-1: Composite LOS for Playspaces Serving 2-5-Year-Olds

Zone	Percent of City	Total Acres	Acres with LOS	Percent of Total with LOS	Average LOS per Acre Served
SubArea One	12%	1218.3	1218.3	100%	921.1
SubArea Two	32%	3183.4	3183.1	100%	1344.0
SubArea Three	34%	3295.9	3295.9	100%	2730.8
SubArea Four	22%	2108.2	2108.2	100%	2524.7
Entire Area	**100%**	**9805.8**	**9805.5**	**100%**	**2011.5**

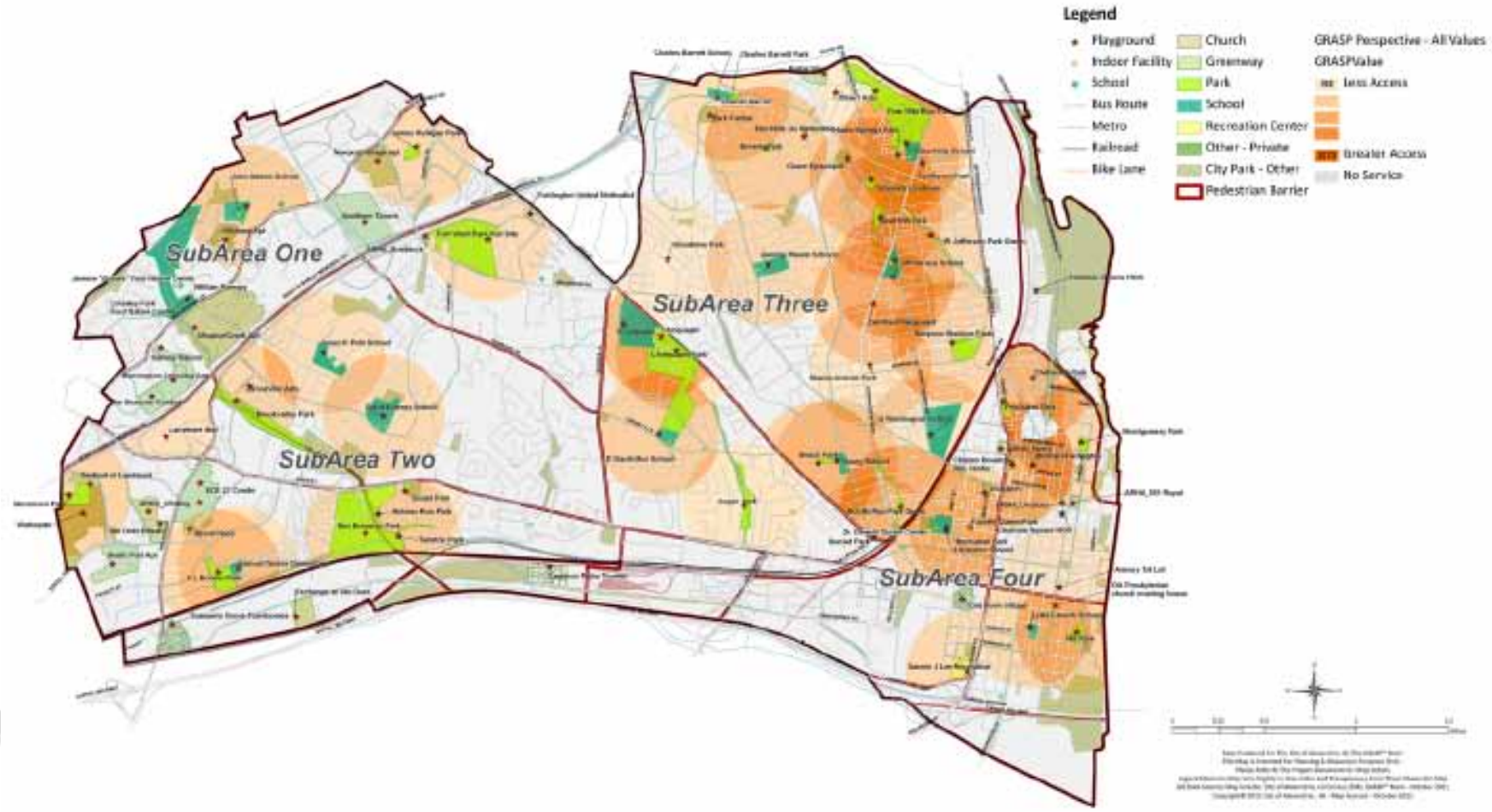
Results when the average LOS for each subarea in Perspective C is related to the density of children under 5-years-old is shown in Map 7 (below). In this case, SubArea Four has a value that is more than seven times that of SubArea One.



Map 7: Perspective C-1: Average LOS per Average Density of Children under 5 Years Old by Subarea (Playspaces Serving Ages 2-5 Only)

Perspective D: Walkable Access to Playspaces Serving 2-5-Year-Olds

Only the walkable catchment areas for playspaces rated appropriate for children ages 2-5 were used to generate this Perspective. It displays the relative access to playspaces suited to the needs of children ages 2-5 based purely on walkable proximity, after barriers that would impede or inhibit walking are taken into account.



Map 8: Perspective D: Walkable Access to Playspaces Serving 2-5 Year Olds

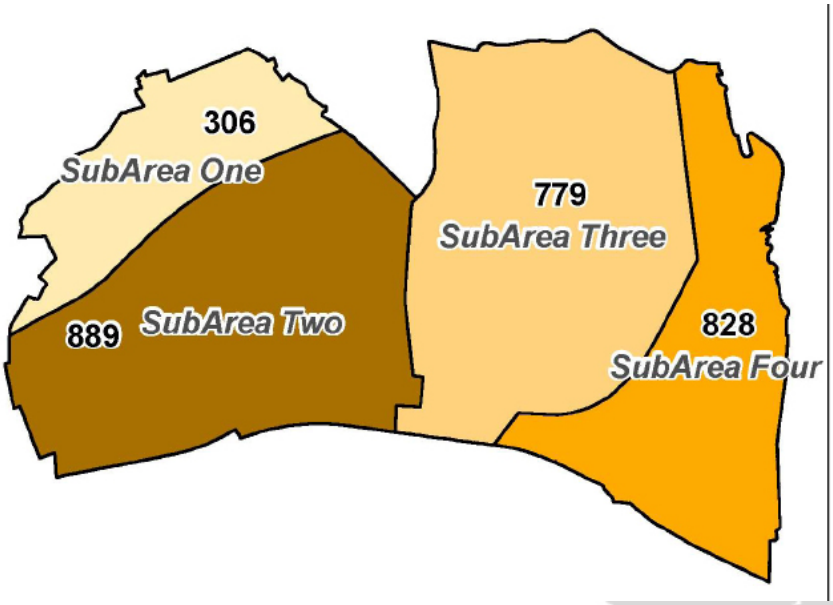
Table PD below shows the statistics derived from Perspective D. The Average LOS for SubArea One is still the lowest, at 536.2, and SubArea Two is the highest, at 870.8. The overall average citywide is 719.4.

Coverages for service are also lower in this Perspective. Overall, 52 percent of Alexandria has walkable service at some level greater than zero. In this analysis, SubArea Three has the highest coverage, at 76 percent, while SubArea Four has only 31 perent coverage.

Table PD-1: Walkable LOS for Playspaces Serving 2-5-Year-Olds

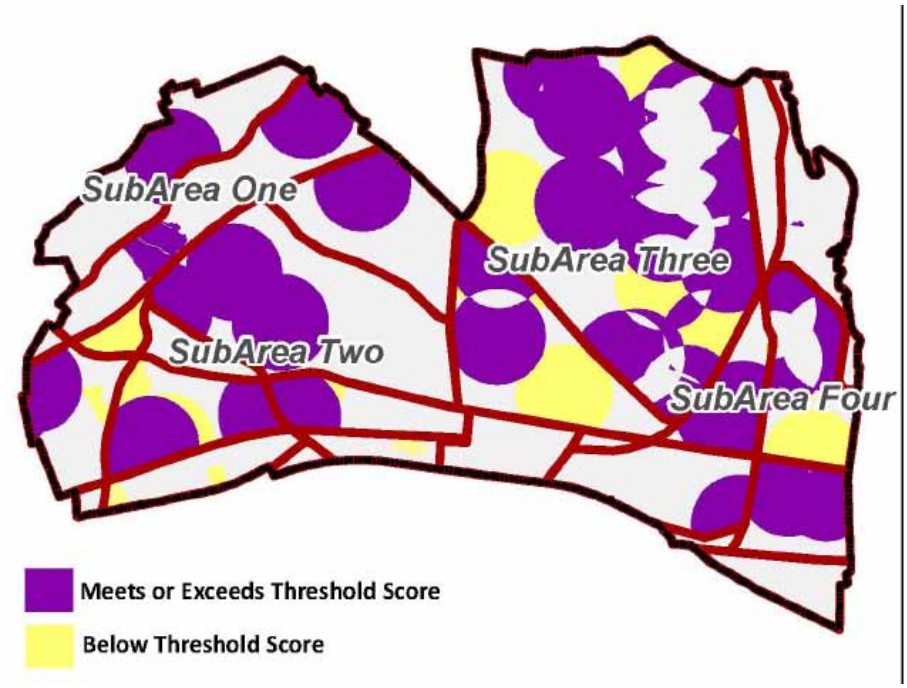
Zone	Percent of City	Total Acres	Acres with LOS	Percent of Total with LOS	Average LOS per Acre Served
SubArea One	12%	1218.3	371.6	31%	555.1
SubArea Two	32%	3183.4	1317.8	41%	536.2
SubArea Three	34%	3295.9	2519.1	76%	786.9
SubArea Four	21%	2108.2	875.0	42%	870.8
Entire Area	**100%**	**9805.8**	**5083.4**	**52%**	**719.4**

Results when the average LOS for each subarea in Perspective D is related to the density of children under 5-years-old is shown in Map 9 (below). In this case, SubArea Four has a value that is less than three times that of SubArea One. Comparing this to the numbers shown on Map 7 shows that when walkable access is considered, SubArea One is at less of a disadvantage over the other subareas than when all means of access are considered. However, there is still a significant difference. In this case, SubArea Two has the highest score, and it is 2.7 times that of SubArea One.



Map 9: Perspective D-1: Average LOS/Average Density of Children under 5-Years-Old by Subarea (Walkable Access to Playspaces Serving Ages 2-5 Only)

The Threshold Map for Perspective D is shown in Map 10. The statistics for this map are shown in the following table. They show that, overall, 52 percent of Alexandria has walkable proximity to a playspace. This includes the 8 percent of Alexandria that has some service, but that service is below the threshold, and 44 percent of Alexandria that has LOS above the threshold.



Map 10: Perspective D: Threshold Map

Table PD-2: Walkable LOS for Playspaces Serving 2-5-Year-Olds

Zone	Percent of Total with LOS	Percent Total Area >0 and <400	Percent Total Area >=400
SubArea One	31%	0%	30%
SubArea Two	41%	3%	38%
SubArea Three	76%	17%	59%
SubArea Four	42%	6%	35%
Entire Area	**52%**	**8%**	**44%**

GRASP® Index

The methodology used to evaluate play in Alexandria includes another way to look at service. It consists of an index created by adding up the total value of all of the playspaces within a given area and dividing it by the population of the same area in thousands. The index is, in effect, a per-capita value for all of the "things" in the inventory that are physically located within a given area.

In the case of this study, the population figure used is the number of children under the age of 5. For example, to calculate the GRASP® Index for Alexandria as a whole, the total value of all of the playgrounds in the inventory is divided by the total number of children under 5 years of age in the city (in thousands). This yields an index of 173.2. This number can be used as a baseline from which targets can be set and progress toward them can be measured. A higher GRASP® Index indicates a higher level of service.

For example, if improvements are made to existing playspaces that raise their scores while the population of children stays unchanged, the GRASP® Index will go up. Conversely, if no changes to the existing infrastructure of playspaces occur, but the population of children under 5 increases, the GRASP® Index will go down.

A GRASP® Index is relatively easy to update: all that is required is current data in the inventory and current population data. For this reason, it is recommended that the inventory data set and GIS shape files generated from this study be kept current. That task should be assigned to one of the partners in the study who is willing and able to take it on.

In the tables on the next page, the GRASP® Indices shown correspond to the playspaces in the inventory used to generate Perspectives A and C (as described above). Perspective A looked at the service provided by all playspaces in the inventory, and Perspective C looked at only the ones that are appropriate for 2-5-year-olds. The yellow shade in the tables indicates the highest value in each category.

From this it can be seen that SubArea Three has the highest total GRASP® Value, meaning that the total of the scores for all of the playspaces located within the boundaries of that subarea is higher than the corresponding total for each of the other subareas. But because SubArea Three also has the greatest number of children under 5, there is a greater demand upon the playspaces located within it, and a correspondingly lower GRASP® Index than SubArea Four, even though SubArea Four has a lower total value for the playspaces within it.

SubArea One has a relatively low GRASP® Index, indicating a low level of service and suggesting that the subarea is lacking in the number and quality of playspaces found there.

Table PA-2: Composite LOS for All Playspaces

Zone	Total GRASP® Value	Population (under 5)	GRASP® Index (population 1,000s)
SubArea One	1896	2128	891
SubArea Two	4569	3106	1471
SubArea Three	6374	3317	1922
SubArea Four	4405	1403	3140
Entire Area	17244	9954	1732

Table PC-2: Composite LOS for Playspaces Serving 2-5-Year-Olds

Zone	Total GRASP® Value	Population (under 5)	GRASP® Index (population 1,000s)
SubArea One	1151	2128	541
SubArea Two	3469	3106	1175
SubArea Three	5999	3317	1809
SubArea Four	3773	1403	2689
Entire Area	14572	9954	1464

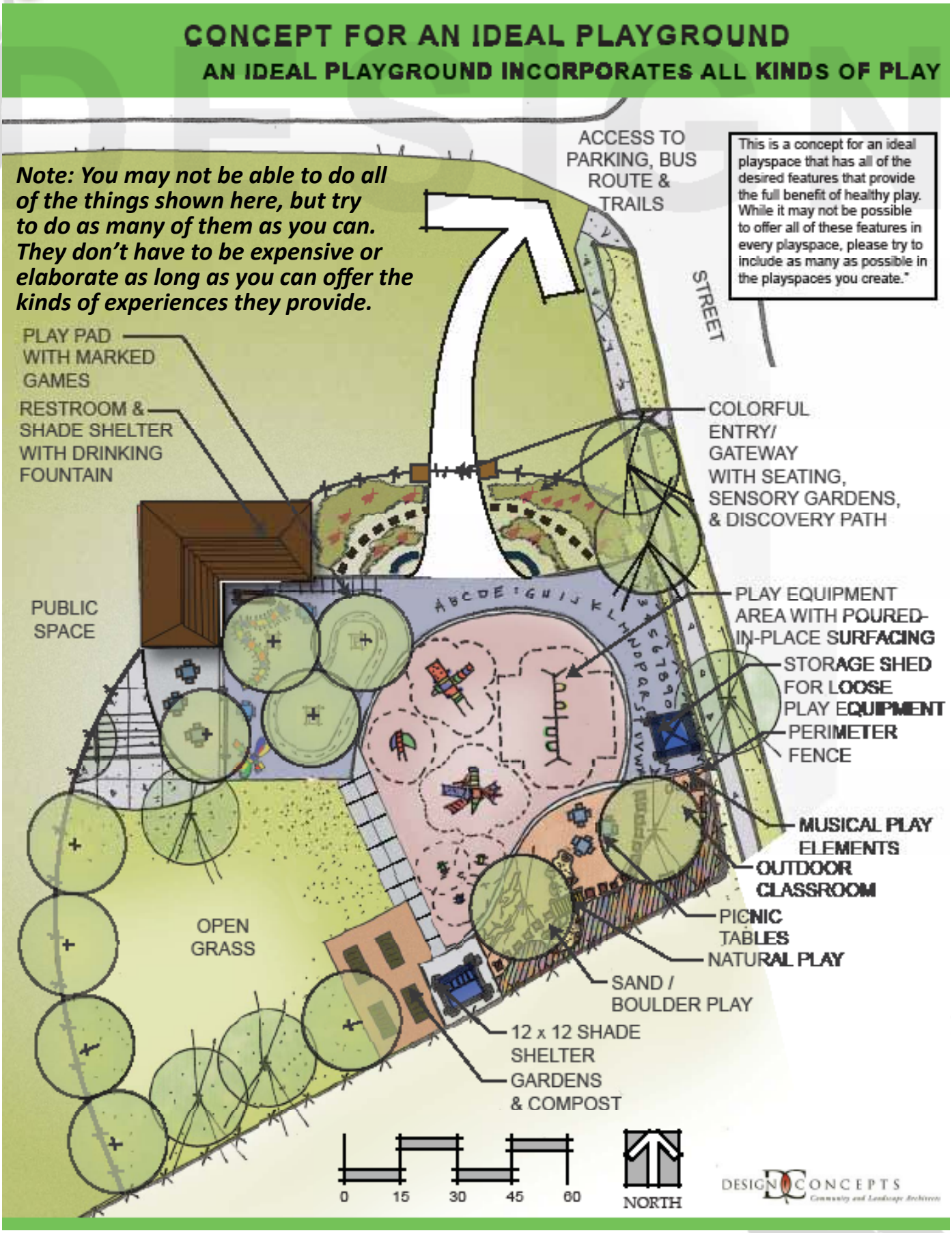
Conclusions

The analyses can be used to gain an understanding of how the current locations and values of existing playspaces are distributed across Alexandria. When combined with other information, including feedback from focus groups, demographic data, etc., these are even more useful. For a summary of conclusions and recommendations based on these analyses, see the main body of the report.

Conclusions for Appendix D

The analyses can be used to gain an understanding of how the current locations and values of existing playspaces are distributed across Alexandria. When combined with other information, including feedback from focus groups or demographic data, these will be even more useful. Those analyses will occur as we continue toward completion of the project. These findings are the initial results of the analysis and will provide a basis for discussion of the direction in which to proceed.

APPENDIX E


CONCEPT FOR AN IDEAL PLAYGROUND
AN IDEAL PLAYGROUND INCORPORATES ALL KINDS OF PLAY
Note: You may not be able to do all of the things shown here, but try to do as many of them as you can. They don't have to be expensive or elaborate as long as you can offer the kinds of experiences they provide.
ACCESS TO PARKING, BUS ROUTE & TRAILS
This is a concept for an ideal playspace that has all of the desired features that provide the full benefit of healthy play. While it may not be possible to offer all of these features in every playspace, please try to include as many as possible in the playspaces you create."
STREET
PLAY PAD WITH MARKED GAMES
RESTROOM & SHADE SHELTER WITH DRINKING FOUNTAIN
COLORFUL ENTRY/ GATEWAY WITH SEATING, SENSORY GARDENS, & DISCOVERY PATH
PUBLIC SPACE
PLAY EQUIPMENT AREA WITH POURED-IN-PLACE SURFACING
STORAGE SHED FOR LOOSE PLAY EQUIPMENT
PERIMETER FENCE
MUSICAL PLAY ELEMENTS
OUTDOOR CLASSROOM
PICNIC TABLES
NATURAL PLAY
OPEN GRASS
SAND / BOULDER PLAY
12 x 12 SHADE SHELTER
GARDENS & COMPOST
0
15
30
45
60
NORTH
DESIGN CONCEPTS