“DESIGNING A LANDSCAPE BASED ON CHILDHOOD PLAY”

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DEDICATION

This thesis was written in honor of Steve and Nilda Phillips, my mom & dad who have dedicated their careers to educating the young at heart and mind:

Your love for learning never ceases to amaze me. You have committed decades to educating within the public and private school systems, but your enthusiasm for teaching reaches much farther to all who share your lives. I dedicate this work to you as a loving tribute to your honest respect for the inner child in all of us, and belief in each one's fullest potential. I am grateful for you for all of your continued support, but especially for your confidence in me during my early childhood years.

With all my love,
Alina

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I would like to acknowledge Charlene LeBleu for her unfailing willingness to share her wealth of knowledge with me at every level. Her dedication to water quality and her love of the environment is inspirational. Her unparalleled ability to instruct and edify in a positive manner were essential to my success. She is a constant encouragement in the pursuit of changing the world one drop at a time.

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In addition, I would like to thank Joyce Griffin for kindness, her insight, her willingness and assistance in moving me forward toward my goals.

Cover Page designed by Alina Phillips

ABSTRACT:

RESEARCHING THE LANDSCAPE OF PLAY

KEY WORDS: play, landscape architecture, children, outdoor space, landscape of play, play types, nature

Children have the right to play. Throughout history we have recordings of children playing in all cultures. PLAY is a basic need along with nutrition, health, shelter and education. It is vital to the development of all children. It combines thought and action. It gives satisfaction and a feeling of achievement to both children and adults.

PLAY is the first form of communication and is vital to the development of children. Strangely, however, it is largely unaccounted for in landscape architecture. To become completely immersed within an outdoor space, a child needs to experience diverse opportunities for manipulation, exploration prospects, spatial immersion, and landscape exploration.

For these reasons and others, children's geographies have become a critical area of urban social research. PLAY is the first form of communication and is vital to the development of children. Strangely, however, it is unaccounted for in public housing project design.

This design research project asks how a PLAY-based landscape can provide specific developmental conditions for children in low-income social housing projects; specifically Moton Housing Projects in Auburn, Alabama.

Fig. 1 Sketches of child play.

The research investigates physical childhood development PLAY-types known to enhance and promote growth in children, and uses these play types as the basis for design.

Designing for childhood PLAY is therefore an important subject of landscape architecture inquiry. It is important to this project to avoid installations of contemporary adult-built structures. This design research project asks how a PLAY-based landscape can provide specific developmental conditions for low-income social housing projects.

Kids have the right to PLAY.

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Fig. 2 Image above illustrates the need for landscape architects to address the developmental needs of children.

INTRODUCTION

PROJECT DESCRIPTION

How can be designed to promote and enrich childhood play? The intention for this project was to design a landscape of play according to six specific developmental types of play. Discovering how to design without installation of adult-built contemporary equipment was an integral part of this design project inquiry. Chudacoff's definition of children's culture of play was used as the basic theory for this project. His "four contexts of children's culture" as well as the six play type categories, and their corresponding sub-categories were refined from research readings and are not exclusive. Once the play types were established, a process of landform manipulation was implemented. This process was guided by the architectural geometric projections from existing buildings. Terracing the land provided for spatial differentiation. With the play types established and the topography altered into terraced spaces, a tree framework was introduced to develop areas that would facilitate type of play. Trees were primarily chosen according to their seasonal qualities, hands-on produce, and provision of shade in addition to other criteria mentioned later in chapter six. The trees were placed in order to define public and private spaces as well as to create a diverse habitat. This was accomplished through varying the tree varieties across the site. The final step was material selection. Materials included a variety of trees, grasses, shrubs and stones of various sizes.

The development of the site into terraced zones occupied by different tree species enabled provision for the six developmental types of play through the creation of walls, steps, rams and large and small level areas, and further introduction of designed landscape features that enhance specific characteristics of children's play.

CHAPTER 1

WHAT IS PLAY?

The definition of play is a controversial and unresolved topic. No single definition of play is necessary or sufficiently defines this broad concept, according to the International Encyclopedia of the Social and Behavioral Sciences.

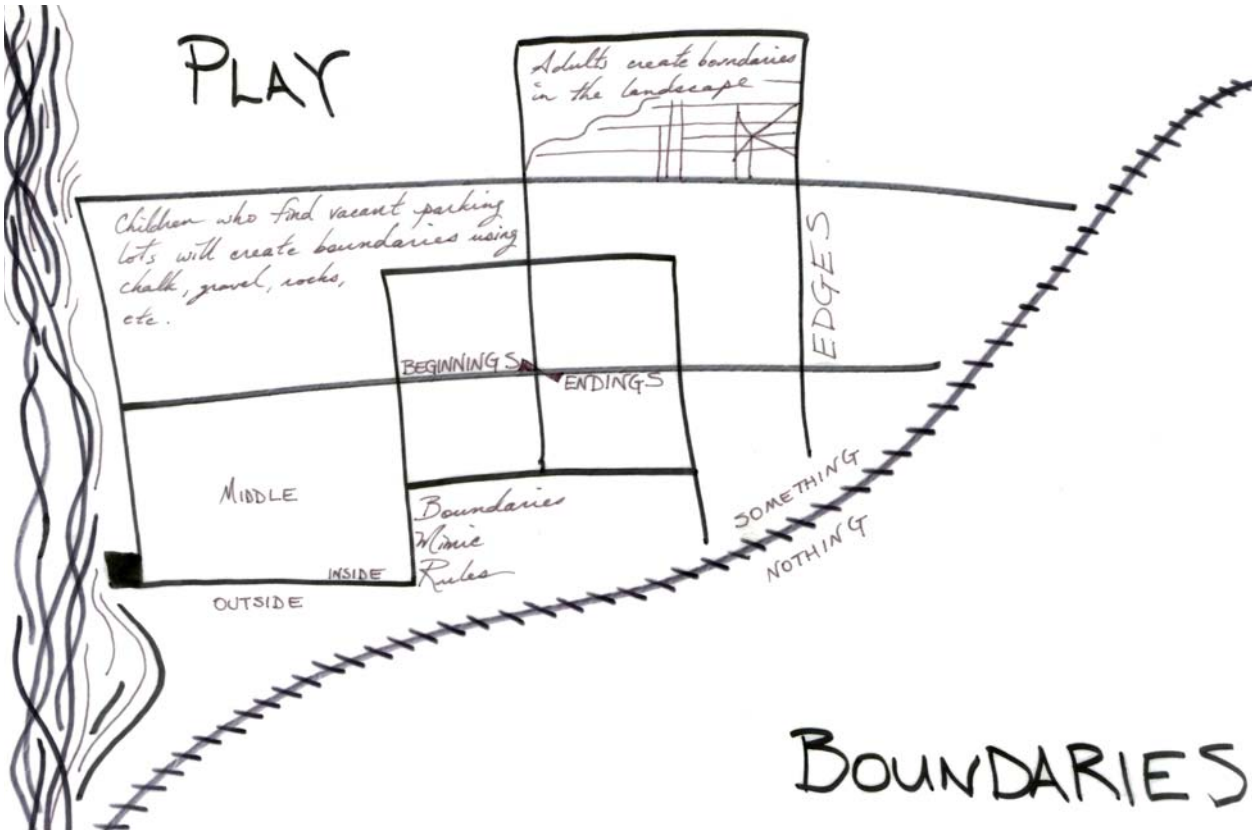
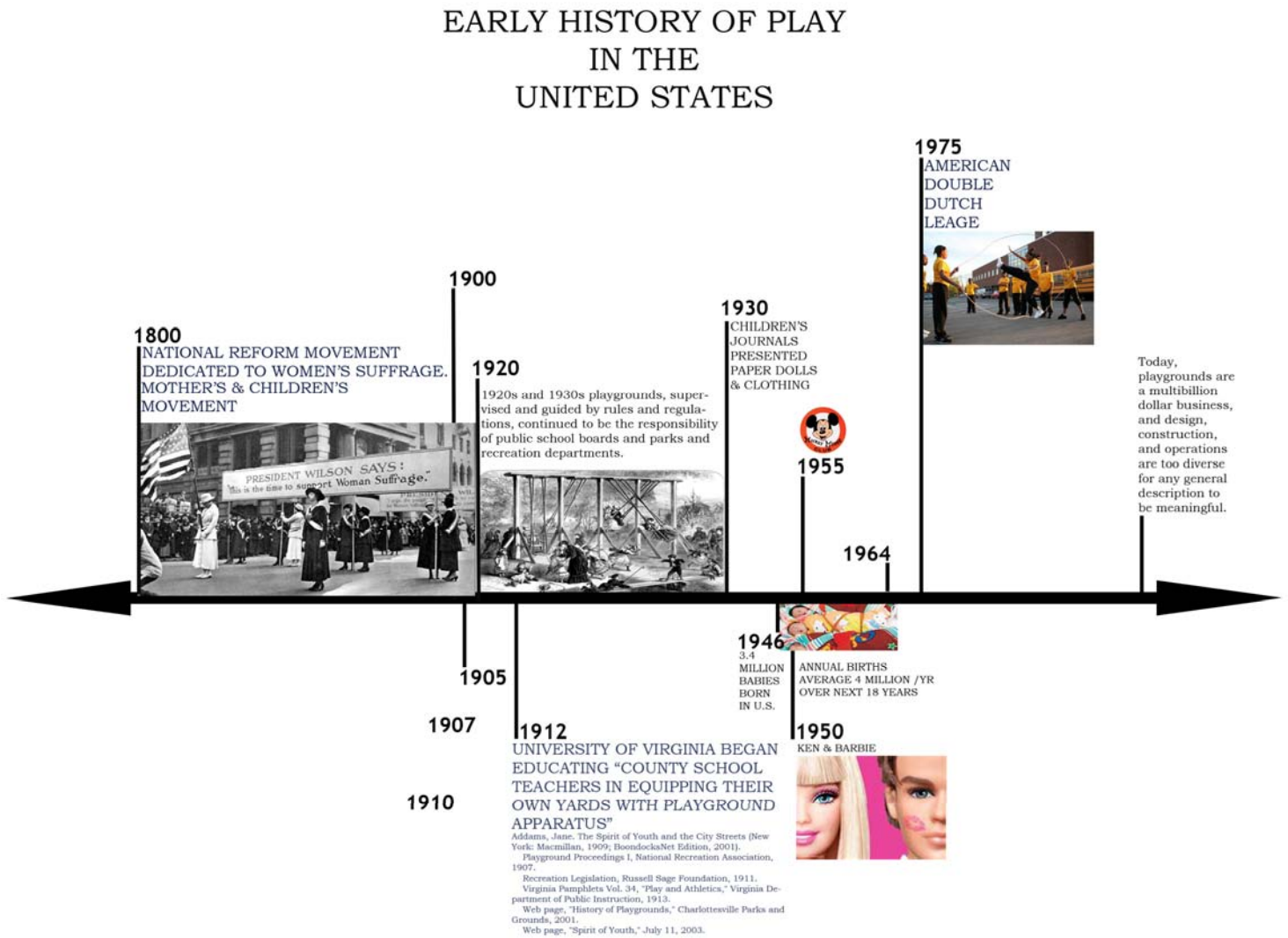


Fig. 3 The diagram to the right depicts how children defy boundaries and make attempts to create their own environments.

Historically the idea of free play began with the Women's Suffrage movement. Once women had rights, children would soon gain rights as human beings. The idea of play for children would change from a custodial responsibility oriented experience to the freedom of self-expression and lack of restrictions to create their own environment.

The Moton Housing Project construction occurred in 1953. Within a few years the Mickey Mouse Club and Ken & Barbie were in full production. This indicates a movement toward inside play as acceptable if not more desirable.

Fig. 4 A brief timeline of the early history of play in the United States.



Upon my considering play experiences three things mattered

most. First there must have been a place to explore, someplace that piques interest. It may have interesting contents or opportunities. Interesting play places are individually determined, due to variations in personality and varying environmental exposure.

Second, there must be a perceived freedom to play at will. There are several types of play that will be discussed later. At this point we will consider what is commonly called “free play”. The final factor is time. In order to feel the freedom to play, children must be able to stop and start at will and freely choose activities that allow imagination to take precedence over logic. Dynamic factors that characterize play are elation, freedom and an intensity of behavior. Other factors are fantasy, competition, risk and mimicry. [1961, Huizinga]

“*Work consists of whatever a body is obliged to do. Play consists of whatever a body is not obliged to do*. ”
Mark Twain – Tom Sawyer.

Fig. 5 Verbal transect investigating play.

Most anthropologists, sociologists, and psychologists agree that child’s play has a purposeless quality notwithstanding the immediate function in behavioral, social, intellectual, physical rewards and the development of the child into an adult. [Chudacoff, 2007] Chudacoff also defines the context of children’s culture. He identifies four contexts in which children engage with the environment and others. [Chudacoff, 2007, pg 3] This theory is later discussed in Chapter 6 under Project Design, Methodology.

ELEMENTS OF PLAY PLACES

Not only do children need to play, they have the statutory right to play according to the Child Rights Act, Article 31, which states that “every child and young person has the right to rest, play and leisure. Governments must promote children’s and young people’s involvement in the arts.” Adventure Playgrounds built in the 1970’s were formed from the ingenuity of children who choose the exciting aspect of dump grounds, construction sites and natural areas for their preferred site of play.

Childhood learning and the development of social relationships are learned through direct contacts of different environments, materials, and people. Children learn through manipulation of their environment as well as by actively doing things. Adventure Playgrounds claim that "children gain knowledge through experience-based learning, thinking through problems and ideas with adults and other children." [-Sutton, Lia, *Adventure Playground ~ "A Children's World in the City"*, http://adventureplaygrounds.hamshire.edu]

Children who attend an Adventure Playground are usually between the ages of 5-6 years old. They are supervised and assisted in their play choices. These choices can include building a tree house, playing in mud with or without an adjacent apparatus or simply playing a non-object-centered game. Essential materials on the site include: 2x4, 4x4, and 2x6's, pallets, plywood and other wood, tires, bricks/cement blocks, cloth/carpeting, permanent water-based paint, foam, cardboard, furniture, stones, branches, rope/string/wire, balls, board games, playing cards, pens markers/crayons/ paint, and some small farm-based animals. Tools needed may include hammers, short handsaws, non-galvanized nails of varying lengths, shovels, wheelbarrows, and tool boxes. Play areas include water-play, and tunnel making/digging. There are suggested hours of operation of 3-4 hours/day & 3-4 hours /week. The playgrounds are staffed and have some rules concerning the borrowing of equipment.

The essence of adventure play is that children's own ideas inspire the creation of their activity, structures and games. Therefore, the children have an immediate impact on the nature of the playground itself. Adventure playgrounds are invented by children, but they must be initiated by adults. The play and construction of the playground is governed by the children, whereas conventional playgrounds the opposite is true.

A sense of community is also important to adventure playgrounds. Providing an opportunity to socialize with other children and adults and develop friendships through games and activities is the center of adventure playgrounds, which are usually located within a neighborhood, providing free access to the open space. Adventure playgrounds support the notion that all children need a space that they can call their own. Within these places children are allowed to be loud, dirty, silly, spontaneous and anything else they think or feel is important.

“Linked-Play” refers to connectivity to one’s environment. Children’s interaction with their environment through play is the foundation of the Adventure Playground design. Sutton’s article on Adventure Playgrounds addresses children’s desire to create their own play spaces, which is also my project’s focus. Adventure Playgrounds acknowledge that children learn through direct contact with various materials, people of varying ages, and a variety of environments. Relationships and a sense of community also surface as important issues for a child’s development. This site-project is surrounded by solid network of interactive community group.

This design project differs from other playground designs by utilizing developmental play and a children’s culture concept as the foundation of the design. Key questions for this design project included the following: What is your understanding of an adventure playground? Who should have control over children’s play? What elements did you personally need or want or to try in your childhood play place? How can I design opportunities for a “free-range environment” for children? As a landscape architect, what are basic guidelines for creating this environment?

When designing a landscape of play a special stage is provided. This specific environment calls for action and can stimulate children’s play, allow for learning potential, and encourage physical activity. Outdoor play environments include the built environment as well as the natural environment. The design must provide for risk taking, while allowing children to test their emerging abilities.

Challenge is essential to learning. [Chudacoff, 2007] Children’s imaginations can be stimulated by natural play places. Designed outdoor spaces should engage a child’s sense of curiosity as they explore their physical surroundings and learn through methods beyond what indoors can provide.

Children’s play-activity spaces require certain elements. They should be evaluated on whether or not they provide adequate prospects for learning. Basic design elements include the following:

"Accessible/Inaccessible
Active/Passive
Challenge and Risk/Repetition/Security
Hard/Soft
Natural/People-Built
Open/Closed
Permanence/Change
Private/Public
Simple/Complex" [Stine, 1997]

"An adventure is only an inconvenience rightly considered. An inconvenience is an adventure wrongly considered."
~G.K. Chesterton

PLAY AND BRAIN DEVELOPMENT

It is important to understand play and its role in brain development. Based on Duerr's investigations, "…research on brain development shows that the most crucial time for a child's development is in the earliest years. [1] The act of play by a child stimulates brain development and function [2] and has a key role in building the foundation, organization, and capabilities of the brain. [3] It is very important for children to have many regular opportunities for a variety of gross motor activities. [4] Children that do not get crucial interaction in their first six years will face a lifetime of limited brain power. [5] That said, how does play directly correlate to brain development? The stages of development of the brain mirror the stages of play in early childhood. Play speeds the development of corresponding portions of the brain with patterned activities, and each stage of play promotes the growth of that portion of the brain and lays the neural connections and speeds the cerebellar synapses. [6] To help visualize what is meant by laying "neural connections" and speeding "cerebellar synapses" in relation to play, try to

imagine the connections of the brain as an overgrown, difficult-to-walk path. The more a child plays (using sensory impressions and motor-activities) the more the child, in their brain, walks that path. The more the path is walked by engaging in free play, the more defined the path becomes. Soon the path becomes a dirt road, then a street, and finally a highway. Through constant use, by repetitive play activities, going from A to B in the brain becomes very rapid—an easily negotiated highway. The child who does not stimulate those neural connections and cerebellar synapses, who sits on the couch watching TV all day, still has those connections but they remain only a path and not a highway. Playground play structures help facilitate a child's cognitive development during free play because toddlers are at a sensor-motor stage of development and they learn through their sensory impression and motor activities and the interaction of the two. [7] Playgrounds provide a space for children to enrich, build, and expand their cognitive development through play." [Duerr Evaluation Resources, 1983]

ENDNOTES

1] Palmer, L. Developmental Brain Stimulation in School and Day Care Settings. Winona State University. (www.innovationcentral.org/smar_research.htm)

2] Rivkin, M. Outdoor Experiences for Young Children. ERIC Digest. December 2000. (www.ael.org/eric/digests.edorc007.htm)

3] Perry, B., Hogan, L., Marlin, S. Curiosity, Pleasure and Play: A Neurodevelopmental Perspective. Haaeyc Advocate. June 2000. (www.childtrauma.org/Curiousity.htm)

4] Thomson, D. Matching Children and Play Equipment: A Developmental Approach. Early Childhood News. March/April 1999.

5] Galetta, J. Building Better Brains: With New Research Showing That Simulation Spurs Brain Growth. Chattanooga Times-Free Press. 3/31/2000. (www.uwchatt.org/invest_brainsarticle.htm)

6] Perry, B.

7] Thomson, D. Matching Children and Play Equipment: A Developmental Approach.

CHAPTER 2

CHILDREN'S GEOGRAPHIES

In the fields of geography, urban design, urban planning environmental psychology, landscape architecture, and urban sociology "place identity" refers to a cluster of thoughts about place. Place identity involves the meaning and the significance of the place for the inhabitants and those who use the place.

Children's geographies is the study of places and interactive spaces of children's lives, characterized by experiences, cultural politics, and ethics. It has developed within the realm of human geography at least since the early 1900's. William Bunge undertook the earliest recorded work specifically on children's geographies. He studied the concerning spatial oppression of children in Detroit and Toronto where children were deemed as the ones who suffer the most while under an oppressing adult framework of social, cultural and political forces that controlled the urban built environment.

Fig. 6 Sketch of fencing leading the journey.

Tenement housing is a prime example of this concept. This childhood developmental concept of the spatial oppression of children was derived from the realization the previous human geography had largely ignored the everyday experiences of children. Children have specific growth needs and capacities therefore experience the world differently than adults. Children's geographies are seen in parallel form to gender and feminist within geography.

Researchers working in the field of children's geographies argue that as a social group, children share a certain characteristics worthy of study. The experiences of children are markedly different in differing times and places and are affected by gender, family and class. There is a multiplicity about children's geographies due to the perspective of a child. Willingness to utilize imagination alone sets children's geographies apart from adult geographies. Children's geographies is sometimes coupled with, and yet distinguished from the geographies of childhood. The former has an interest in the everyday lives of children; the latter has an interest in how (adult) society conceives of the very idea of childhood and how this impinges on children's lives in many ways. This includes imaginations about the nature of children and the related (spatial) implications.

Qualitative techniques for understanding place identity include interviewing, participant observation, discourse analysis and mapping a range of physical elements. [Proshansky, H.M., Fabian, A.K. and Kaminoff, R. ,1983,]. Mapping children's interactions within a place can indicate a physical, emotional or sensorial movement through a space. Understanding place identity through a child's perspective would require the child's translation of her/his experiences. Place identity is also understood as the character of the place. "Cultural globalization has become a concern and a significant issue in the last 25

years in urban planning and design." [Hague, C. and Jenkins, P. (Eds)(2005)]. A sense of community and connection to the environment can be developed though a landscape of play. This project investigates the creation of place identity through the design of a play landscape physically embedded in a childhood geography of developmental play.

THE OTHERNESS OF CHILDHOOD

This phrase, "the otherness of childhood", is now being used to dispute the issue of significant differences between the lived worlds of children and adults. These differences materialize from complex results of contradictory states of emotional, physical, sentimental, neurological, and experiential existence between the lives of children compared to the lives of adults. A child's perception of any given space such as a city or a park might vary immensely from an adult's perception of the space. This child's perception is difficult to recreate through adult responsiveness. [Cloke/Jones, 2003] Both the child's perceived world and the adult's perceived world can demonstrate the duality of connectivity and remaining separate and apart. Children's affinity with disordered spaces differs from an adult society's desire for the managed and tidied spaces. Adults "try to remember" the joys or experiences of play whereas a child is "still in the moment" so to speak. This leaves the adult with attempts to fill in gaps and leaves room for implication as to what a child realistically experiences through play. "This is, at best, a highly complex and multifaceted process which, again, and cannot be assumed to give easy access to children's worlds. This question has raised some critical response within children's geographies". [Philo, 2003]

Children need to experience and manipulate their own worlds. This activity requires imagination and cooperation which are two vital skills necessary to creative development. The objective of a landscape of play is designing the land to allow for the opportunity to play freely in the environment, create play spaces invented through the imagination while avoiding program and thematic implementations of any types of constructed play equipments such as "jungle gyms".

PLAY AS A JOURNEY

Journeys are created from an experience of path and place and time. Paths represent a passageway by which we move or meander throughout a space. This can be done either by foot or in our minds. Places are where the journey stops or pauses. At this point we perceive the world and contemplate its meaning.

There are two types of journey. The first being a stroll journey and the second being a mind journey. Stroll journeys are physical and real to the touch. This is where actual events are revealed to intrigue and activate the senses which evoke profound thought. In a stroll journey you move through a space in a daily manner. It can include rituals, commuting, mundane tasks, or a change of scenery. It is a stopping here, going there, passing this, taking note of that experience. It can be planned, haphazard, or spontaneous. As the “stroller” in the landscape we follow lines of least resistance. In addition we will lessen any distance by taking a short cut. Wide sweeping curves are preferred to restricted channels. Each experience contains the same elements as a grand excursion would, such a pilgrimage, a safari, or a hiking expedition. As the landscape architect we control the pace, gait and direction of the stroll journey. In order to accomplish this we use mystery within the meandering, the aspects of ascent and decent, spatial hierarchy, anticipation, and a sheer expectancy of change. Within the journey are departures and arrivals. The path links these startings and stoppings, high and lows, in and outs, and even the meanders and straight zones. A mind journey is imaginary and occurs when we stop in a place and the scene or object seizes out attention. The focus then becomes contemplation all executed in the mind. From our mind’s perspective we utilize a viewing position which is a place that encompasses your stopping place, a frame in order to assess the various viewing positions and possibilities, and a focus which is the attraction that draws your attention.

Every journey we endeavor must have a beginning and an end, a departure and a destination. The departure is the gateway into the experience. It is the entering point or threshold between two realms. It is also a decision point to where one decides to leave one “world” and enter another. The destination is not necessarily the end, but rather a stopping place. It is where one encounters size variation, shape alterations and qualities that are differentiated from our everyday existence. It is where secret longings are fulfilled and there is an expression of our truest nature. There is the point where the stroll journey ends and the mind journey begins. This point is a creation of harmony. Harmony is giving without expecting anything in return. One experiences the place through contemplation and events.

Every journey will have a path that connects the stroll aspect to the mind aspect. It links the departure point to the destination point. The design is to encourage a continuously changing flow. Paths can be smooth, turbulent, purposeful or meandering. Visual attractions can be encouraged and influenced by levels, openings, and or the character of the ground floor. A positive journey will present mystery within the experience. Events or landmarks do not hinder the path. During any journey we experience an event or landmark. These landmarks give pause to the flow of activity of the path. It evokes thought within the participant of the journey. We as landscape architects must choose the material and place them in a way that makes them blend into one another to create harmony. How can we design so that we give to the land without expecting anything in return other than a harmonious experience? The composition of the landscape evokes the spirit of the place. It is a never-ending presentation of a design, an invitation if you will, to become one with the land.

“*Recognizing landmarks comes on average, with the full development of the brain, after about 4 years of age. Route-finding, remembering a sequence of landmark relationships, comes later.*”

[Trimble,1994]

This landscape of play was designed to enhance the level of opportunity for a child once she/he ventured outdoors. Children do not need to have primary colored playgrounds dictated by an adult designed theme. Children need the freedom to order their own world. They need permission to manipulate their perception of their environment through their imagination. From these

activities creative beings evolve with the ability to problem solve. Children's play is essential to our development. Child's play is the stepping stone to many other more complex skills. Without play a gap is left in some part of the child's development. Children have the right to play as much as adults have the right to communicate.

CHAPTER 3

THEORETICAL DESIGN BASIS

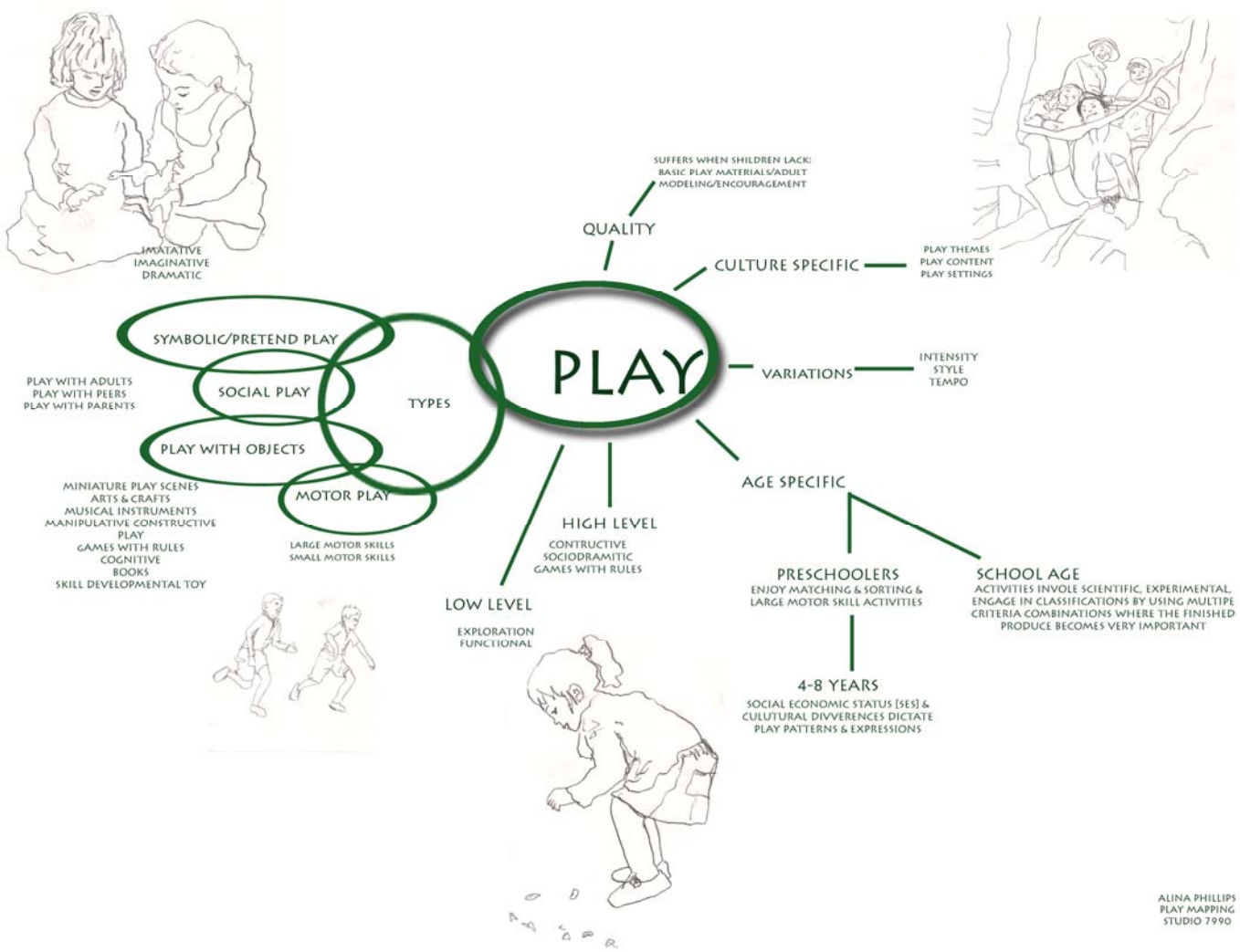
The intentions for this project were to design a landscape of play according to six specific developmental play types as well as Chudacoff's definition of children's culture of play. Chudacoff's four contexts of children's culture and the six play type categories were refined from research readings and are not exclusive. Once the play types were established a process of landform manipulation was implemented. The manipulation process was guided by the architectural geometric projections of existing buildings. Terracing the land provided for several play types and was the chosen method of land form manipulation. With the play types established and the topography altered into terraced spaces, attention was given to the tree framework. Trees were primarily chosen according to their seasonal qualities, hands-on produce, and provision of shade in addition to other criteria. The trees were placed with the intentions ordering the site by defining public and private spaces as well as creating a diverse habitat. This method was accomplished through varying the tree varieties across the site. Materials were the final detail.

"*The natural world does not judge. It exists. One route to self-esteem, particularly for shy or undervalued children, lies in the out-of-doors.*"

[Trimble, 1994]

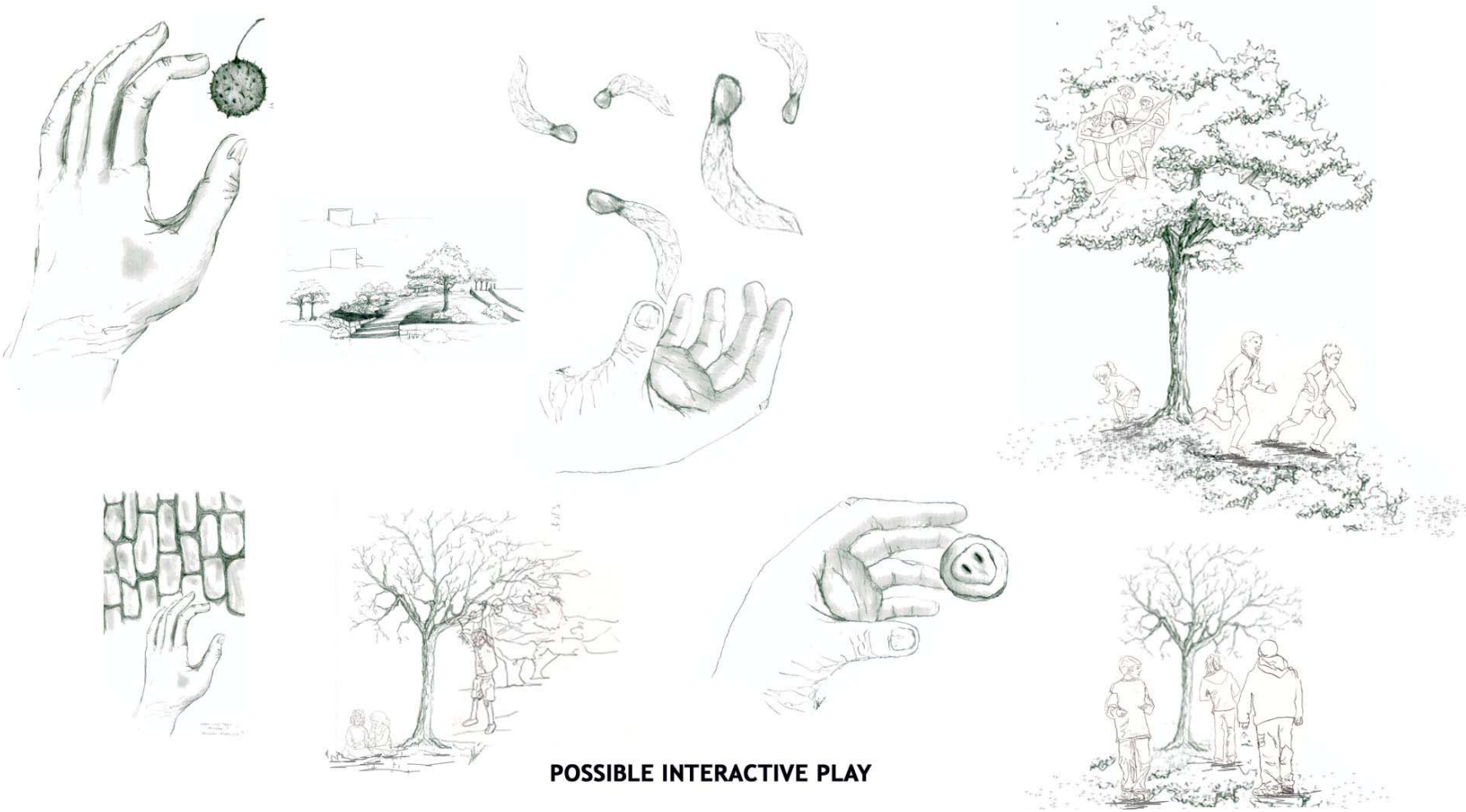
Through utilizing the elements of the natural world and integrating the benefits of the built environment, the intended focus of the landscape design was directed towards enhancing childhood experiences of children between the ages of four and seven. "*The first six years of life work their subtle power on us throughout our lives. We remember few specifics. But our bedrock emotional security, our trust-comes from this time. We spend our first years striving to develop what psychologists call 'a sense of competence.*'"[Trimble, 1994] In an attempt to maximize the developmental stages of this age range of children, the design must focus on playplaces. Children gather cultural and political understandings that allow them to become members of a societical tribe. "*Given that it had long been known that children up until about 7 years of age communicate with each other more adequately by play than in speech, an argument can certainly be made that their childhood right to play is the same as our adult First Amendment right to free speech*." [Sutton-Smith,1995]. The objective of this landscape of play was to create areas where play can occur in various formats. Allowing for the chance for play to evolve is crucial to the design of a landscape of play. These playplaces must include areas of social interaction as well as intimate-safe places.

Fig. 7 A diagram of possible childhood play.


IMATATIVE
IMAGINATIVE
DRAMATIC
SUFFERS WHEN SHILDREN LACK:
BASIC PLAY MATERIALS/ADULT
MODELING/ENCOURAGEMENT
QUALITY
CULTURE SPECIFIC
PLAY THEMES
PLAY CONTENT
PLAY SETTINGS
SYMBOLIC/PRETEND PLAY
PLAY WITH ADULTS
PLAY WITH PEERS
PLAY WITH PARENTS
SOCIAL PLAY
TYPES
PLAY
VARIATIONS
INTENSITY
STYLE
TEMPO
PLAY WITH OBJECTS
MINIATURE PLAY SCENES
ARTS & CRAFTS
MUSICAL INSTRUMENTS
MANIPULATIVE CONSTRUCTIVE
PLAY
GAMES WITH RULES
COGNITIVE
BOOKS
SKILL DEVELOPMENTAL TOY
MOTOR PLAY
LARGE MOTOR SKILLS
SMALL MOTOR SKILLS
AGE SPECIFIC
HIGH LEVEL
CONTRUCTIVE
SOCIODRAMITIC
GAMES WITH RULES
LOW LEVEL
EXPLORATION
FUNCTIONAL
PRESCHOOLERS
ENJOY MATCHING & SORTING &
LARGE MOTOR SKILL ACTIVITIES
SCHOOL AGE
ACTIVITIES INVOLE SCIENTIFIC, EXPERIMENTAL,
ENGAGE IN CLASSIFICATIONS BY USING MULTIPE
CRITERIA COMBINATIONS WHERE THE FINISHED
PRODUCE BECOMES VERY IMPORTANT
4-8 YEARS
SOCIAL ECONOMIC STATUS [SES] &
CULUTURAL DIVVERENCES DICTATE
PLAY PATTERNS & EXPRESSIONS
ALINA PHILLIPS
PLAY MAPPING
STUDIO 7990

According to Jean Piaget, [Piaget, 1969], the “preoperational stage” begins about the time that a child starts to talk up to about age 7. Personality is usually fully developed by this age as well. As the child applies his/her knowledge of language, they begin to use symbols in order to represent objects. Personification of objects also occurs early in this stage. Now there is the possibility of the child being better able to think about things and events that aren't immediately present. Conceptualizing time is difficult since the child at this age is oriented to the present. Thinking is influenced by fantasy and the way he/she would like things to be. The child then makes an assumption that others see situations from his perspective. “There was a child went forth everyday, and the first object he looked upon, that object he became, and that object became a part of him for the day or a certain part of the day or for many years or stretching cycles of years.” [Whitman, 1855] Teaching and opportunities for experimentation must take into account the child's vivid fantasies and undeveloped sense of time, as must the landscape design. A landscape design that utilizes neutral or natural features and objects that a child can manipulate gives the child an active role in their learning process. This landscape of play design give priority to the hands-on production of the living tree framework. The tree debris allows for object-centered play as well as imaginative play. Interaction with the living environment provides social and moral issues. For example, when a child encounters an insect, a power is revealed within the child. There can be a question of compassion which may allow for the release of the insect to resume its life’s agenda or scientific investigation may ensue which promotes the child’s the authority to manipulate the insect’s future. Many issues of morality and social development can flourish, especially if other children are involved and they question or attempt to persuade the child who has the insect in their possession.

Fig.8 The next image illustrates possible interactions between children and nature.



DESIGNING LANDSCAPES FOR CHILDREN VERSUS ADULTS

Design can break the boundaries conceptualized by adults so that the space designed appears to be used successfully by children. Children interact within spaces and defy spatial boundaries while they experience a space. Movable playthings and or signage may be necessary to encourage the defiance of boundaries. Discovering how to design for people through the eyes of a child is important in order to eliminate boundary restrictions. If landscape architects can design/create a space that encourages interaction of people [of all ages], eliminating their perception of boundaries as an adult, then the space designed becomes a more meaningful, memorable experience. By utilizing these factors a design can be created that is culturally respectful as well as supported by the community.

Information obtained from this analysis can enhance the design or design process for a landscape architect. It is important to create designed spaces that encourage and enhance person-to-person experiences, creating designed spaces where the experience of the space is freeing. Landscape architects can integrate what is known about children and play into designing for a better interactive space for adults and children alike.

"*Recognizing printed maps as representations of places can happen as early as three years of age, though grasping their complexities proceeds slowly after that, in parallel with developing symbolic and spatial skills.*"
[Piaget, 1969]

If an unconventional design can be created to encourage the curious, boundary-less child, then the design will encourage the curious, boundary-less child within the adult. This will in turn encourage an extension of social interaction and a socially productive space. Therefore a landscape designed for play can be beneficial for both children and adults.

CHAPTER 4

DESIGNING A LANDSCAPE FOR PLAY

METHODOLOGY

The interests of this project involved childhood play, which a precursor to childhood development and a landscape design. The landscape design was to respond to the play types of childhood development thereby providing an opportunity for play. Can childhood play be the foundation of a landscape design? In the research conducted for this project, opportunity for play was an essential part of the design. Manipulation of possible activities the children might encounter was discouraged within the design. This type of programming is prevalent among typical playground systems. This design proposes a manipulation of the landscape on two separate levels. The first design implementation was horizontal and vertical form change of the ground plane. The second design implementation was to construct a tree framework that would provide opportunities for play through tree debris shed by deciduous and evergreen trees. Shrubs and other plantings were not excluded in this planting framework, but special attention was given to the trees due to its permanent nature. The materials shed by the tree framework, also known as tree debris, provide hands-on play material. Hands-on materials is essential to the development of a child due to the levels of interaction of working with a physical object versus a photograph as can happen in school academia. In their early childhood years children are unable to differentiate between a real object and a photograph of one due to the development of their eyesight. It is essential to appeal to the other senses of the body such as touch, smell, hearing, and taste in order to establish a foundation of information upon which a child will developmentally build. Foundational learning is based on previous experiences. If a child is taught the numeral 5 and not taught the concept of five, acquiring the math skill of adding could be oppressive. Let's say a child has perforated math skills of addition. Any other math skill required of that child involving adding such as algebra can prove to be a dilemma for that child. Play that requires counting gives a child a concrete concept of the meaning of a numeral. Play also involves emotion. Emotion augments learning experiences. As a child investigates nature and the lifecycles intertwined within it, emotions are triggered. These connections are essential to childhood development according to educational theorists, psychologists and the like professions.

According to Huizinga play exists within Nature and childhood. The Goal of play is opportunity. This opportunity is distinct from ordinary life in location and duration. [Huizinga,1949] Play is a voluntary act which has an air of secrecy. It is animated by order. This aspect of play was put into practice through the ground plane change of the site and the design of the tree framework. Creating a challenge for children was an integral part of the design since challenge is vital to play. With that being said, it was important to this design to evade the installation of contemporary playground equipment and place importance on integrating the landscape as the play structure of opportunity for a child to interact with the outdoor environment. Contemporary playground equipment lends itself to large motor skill play, but can circumvent other aspects of play such as imagination. This is especially evident in playgrounds that are dictated by a theme.

Childhood developmental play types vary from fine motor skills such as writing or folding paper to large motor skills such as jumping or running. Play types vary socially from quiet solitary play such as collecting seeds to group object centered play involving complex rules such as a game of kickball. Many more play types were ascertained, but for the purposed of this project a refinement of these various play types was established. Four main play type categories were assembled with 2 subcategories. They are as follows:

1 Creative Manipulative Quiet Object-Centered Play

2 Active Cooperative Manipulative Play

[Large/Gross Motor Skills & Small/Fine Motor skills]

3 Creative Cooperative Play including Imaginative, Imitative, and Dramatic Play

4 Social Cooperative Play including Peer and Adult Play

In addition this project's theoretical framework was supported by Howard P. Chudacoff's context of children's culture concept. Childhood play is grounded in having freedom. According to Chudacoff there are four contexts of children's culture. The play type categories determined the landscape requirements. The form of the land was changed to integrate the play types such as large motor skills of running, jumping and balancing. These particular play types could be accomplished on terraced land forms. The flat plateaus can accommodate running. The short step platforms of the terraces can accommodate stepping and jumping.

The edges of the terraces provide a place for balancing. In addition terraced landscapes provide seating when the rise of the terrace is between 18 and 24 inches. This is optimum seating height for most people. Shorter terrace heights would of course accommodate children more easily. Plateaus having its edges in rising terraces provide a supervised area where caretakers are not at the child's eyelevel. This design lends itself to providing an area of secrecy which a part of play. Children who constantly perceive they are being supervised will interact with other children differently.

How can a landscape be designed on the basis of childhood play? Establishing the complexities of play is necessary. Research has revealed that play exists within Nature and childhood. [Huizinga, 1949] The goal of play is opportunity. [Mannheim] The goal of play is opportunity, therefore play is not the right of children, and rather opportunity is a right unto every child. Play can transcend the immediate demands of life thereby imparting meaning to the action of play itself. Play can also be destroyed by the imposition of reality. Designing within this notion pushes play-privacy forward in addition the concerns of supervision. All play is voluntary and adorns life. [Huizinga, 1949, p9] The enjoyment to choose to play and then act upon is the essence of play. In locality and duration play is not real life or ordinary. Reality's rules cannot impose themselves upon play. However play is connected to its limits and plays itself to an end. [Huizinga, 1949, p9] Concepts rooted in the primeval soil of play are law and order, commerce and profit, craft and art, poetry and wisdom and science.

Most sociologists, psychologists, and philosophers agree that play is not limited to humans. Play is well noted scientifically in the animal kingdom as well. The fundamentals of play according to Zondervan in 1928 as quoted by Huizinga in his book Homoludens, 1949 and reprinted in 2002, include the following:

1] Play is a discharge of super abundant vital energy.
2] Play is a satisfaction of some "imitative instinct".
3] Play expresses a need for relaxation.
4] Play is the training of the young creature for the serious work that life will demand later on.
5] Play exercised in restraint is needful to the individual.
6] Play is the innate urge to exercise a certain faculty.

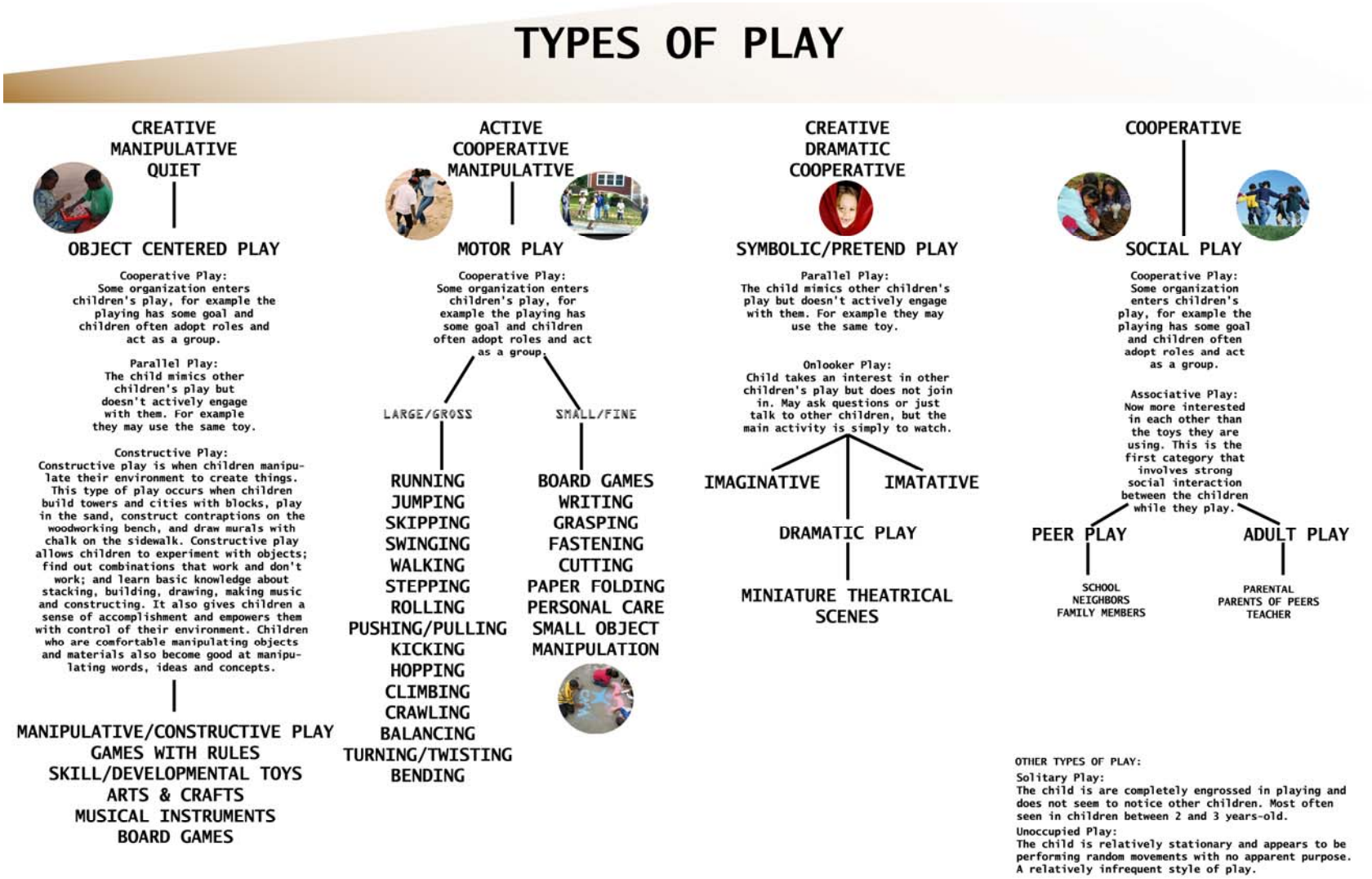
7] Play is incorporates the desire to dominate or compete.
8] Play is an abreaction, an outlet for harmful impulses. It is the necessary restorer of energy wasted by a one-sided activity or a "wish-fulfillment".
9] Play is a fiction designed to keep up the feeling of personal value.
[Huizinga, 1949, p2]

For the purposes of this research play types will be referred to in the manner in which humans execute play during childhood and its role in development. Play in childhood has an air of secrecy. [Huizinga, 1949, p12] All play moves, demands order, is animated by order, and has rhythm and harmony. All play has rules and requires tension. There is an uncertainty and a need or desire to decide; therefore when designing a landscape of play for children dead-ends must be avoided. Play demonstrates the need to manipulate and ascertain a sense of achievement. A landscape of play must include moveable parts which would lend themselves toward constructive goals. Challenge is an integral part of play and it must be addressed within a landscape of play. Dull and easily forgotten environments can delay or block development. [Moore, 1986]

PLAY TYPES AS A DESIGN FOUNDATION

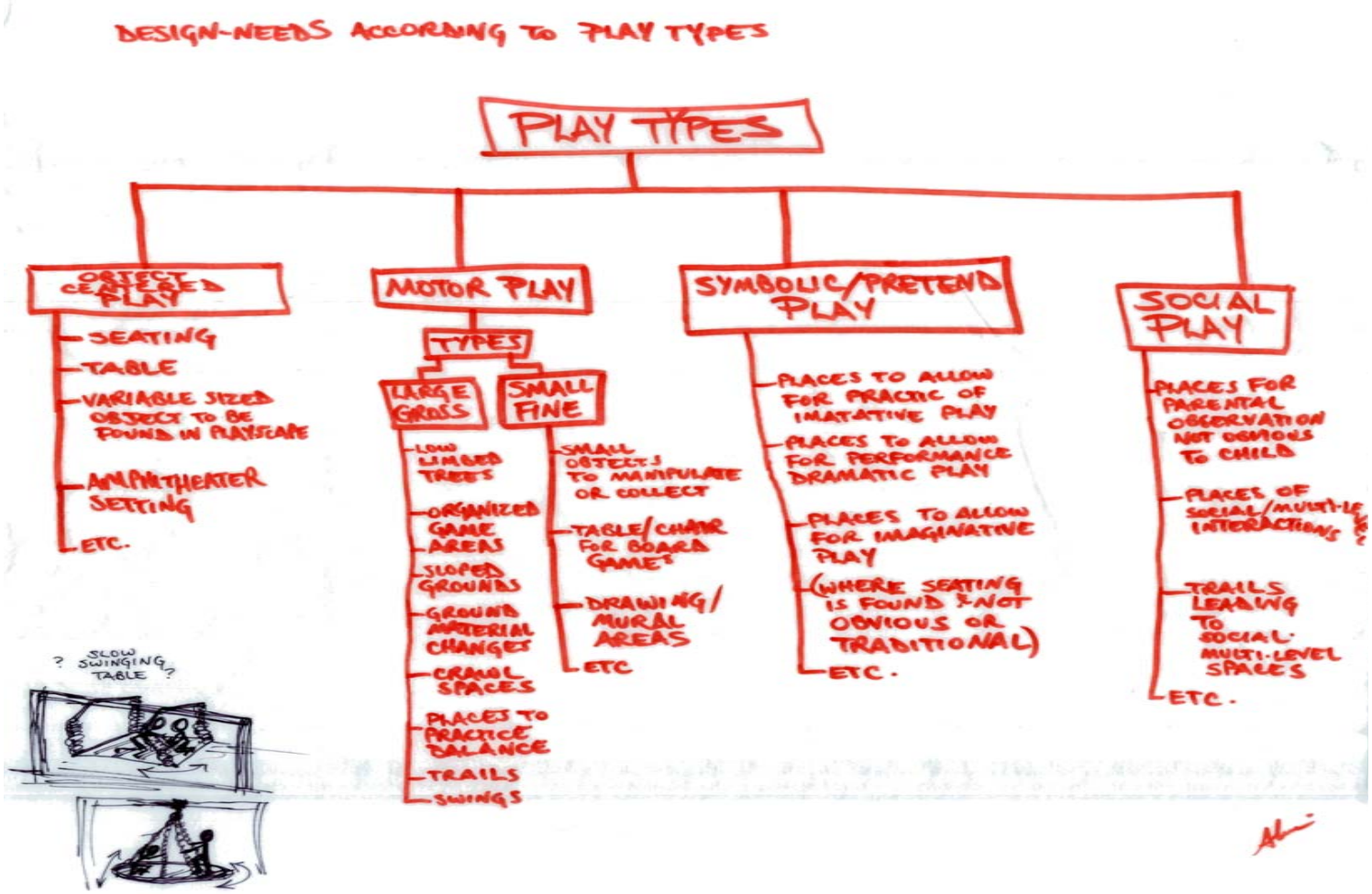
Designing on the basis of Play-Types that occur in early childhood is the foundation of my design. This project design utilizes established play types as the basis the design. Play types were derived from research readings and refined to six essential groupings.

Fig. 9 The following chart outlines the culmination of childhood play categories used in the final design.



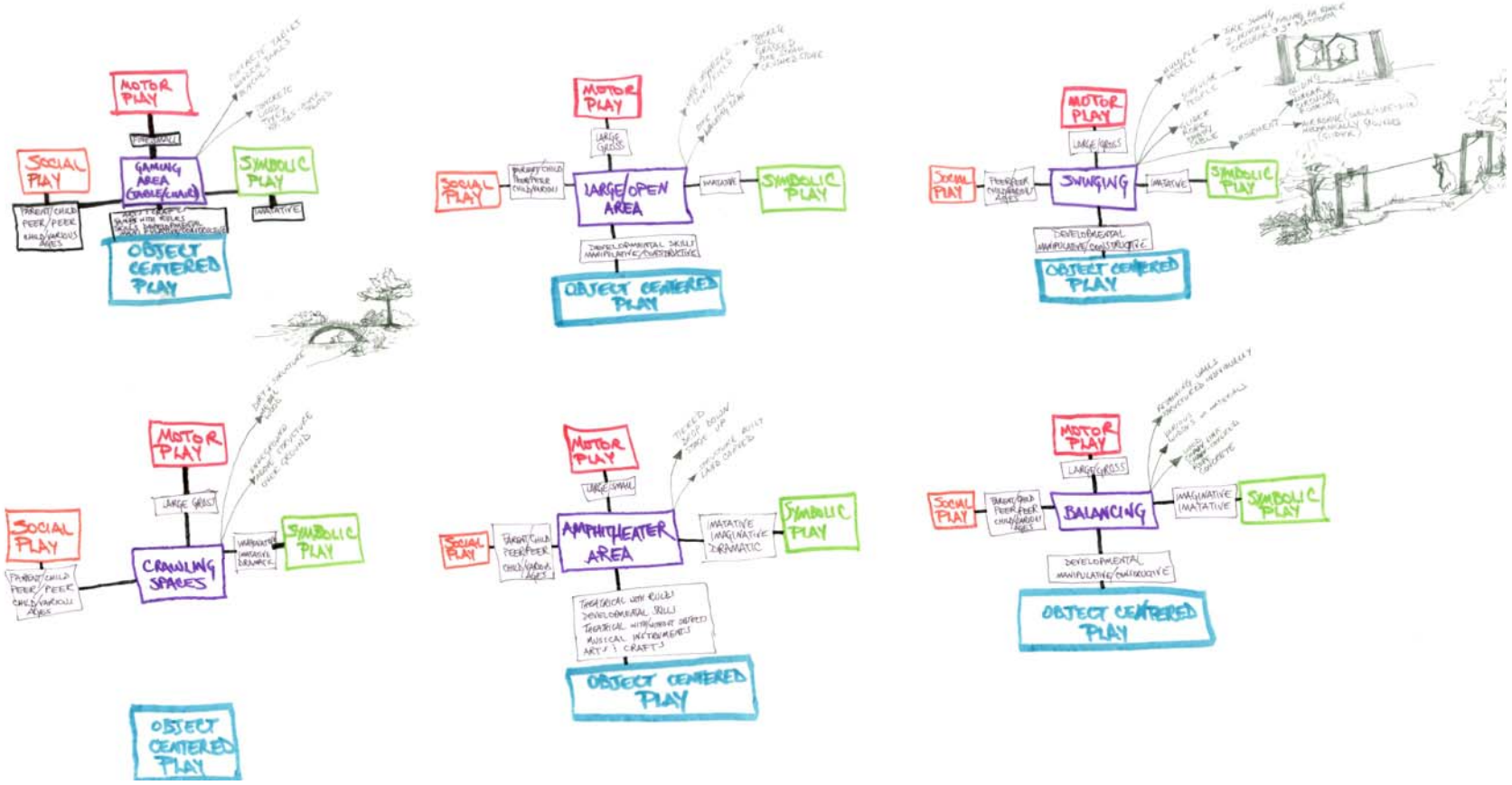
The play types were analyzed according to their landscape requirements.

Fig. 10 A graphic exploration depicting landscape elements that would respond to play types.



A reverse analysis was conducted evaluating the landscape feature as to what play types would apply. This information reinforced landscape features that should be included in the design.

Fig. 11 The image below demonstrates how landscape opportunities can allow for developmental play types.



CHAPTER 5

REGIONAL AND URBAN FORENSICS

Moton Housing Projects, Auburn, Alabama

Fig. 12 Photomontage courtesy of Alina Phillips.

The Moton Housing project is located in a neighborhood northwest of the city's center in Auburn, Alabama. Auburn is located in Lee County in the central eastern part of Alabama. Regional and urban analysis revealed that Auburn is environmentally and socially well-placed to develop a network of children –focused residential landscapes.

Fig. 13 The figure below indicates vehicular connectivity to Auburn University.

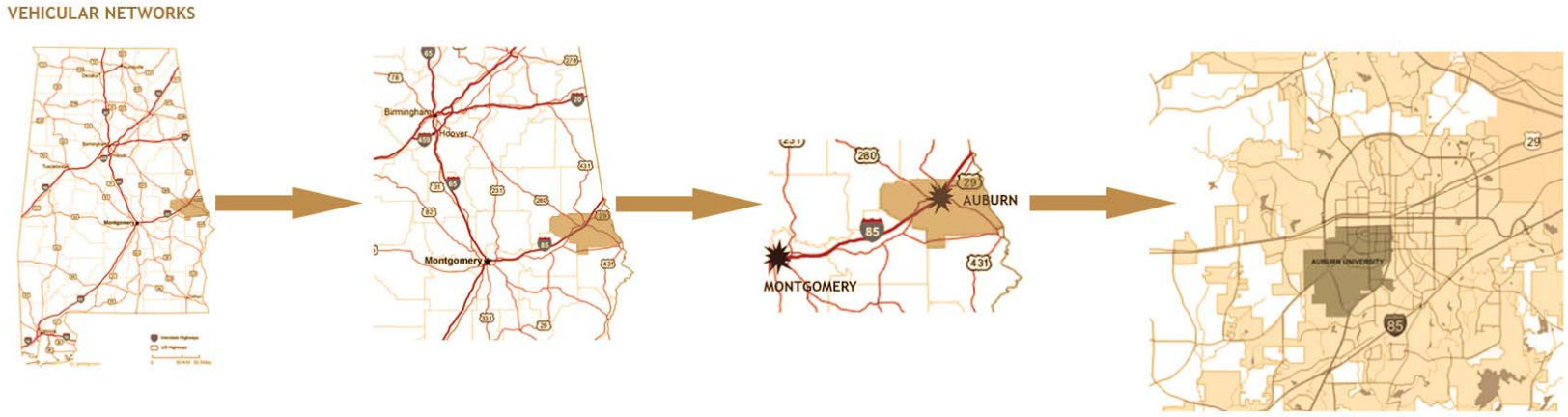


Fig. 14 The figure below indentifies soil types in Lee County.

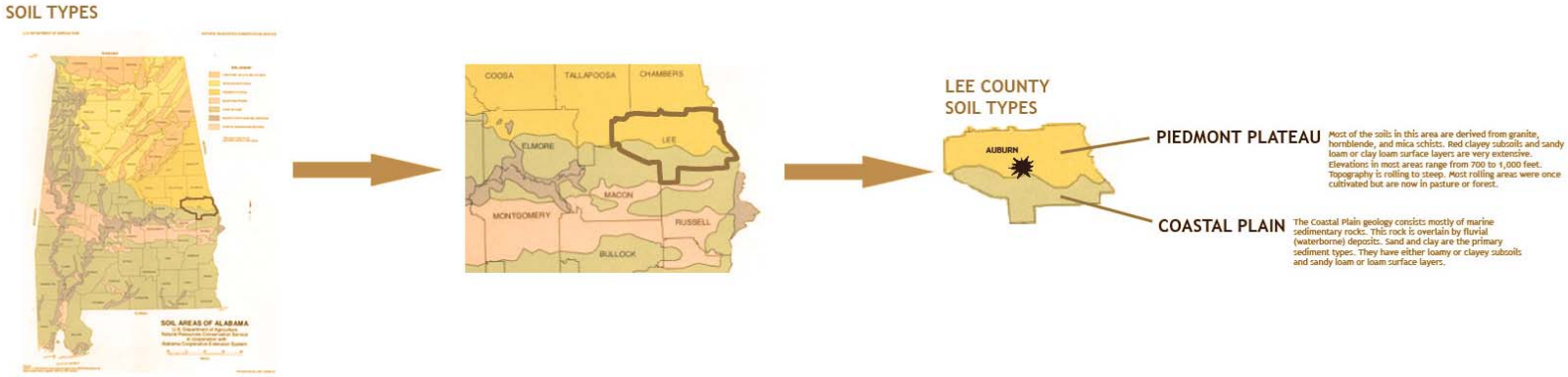


Fig. 15 Site investigations of watershed and vegetation are depicted below.

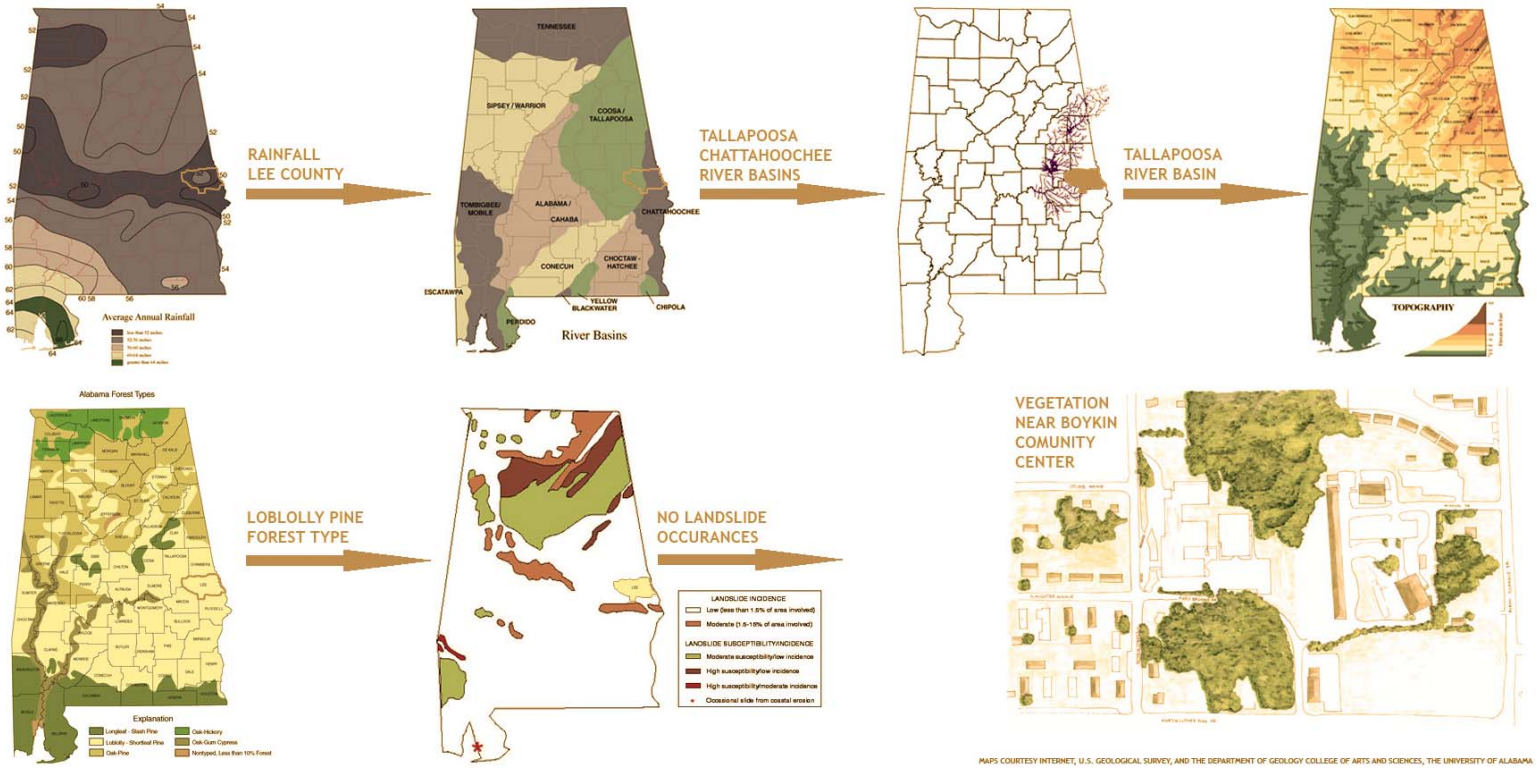
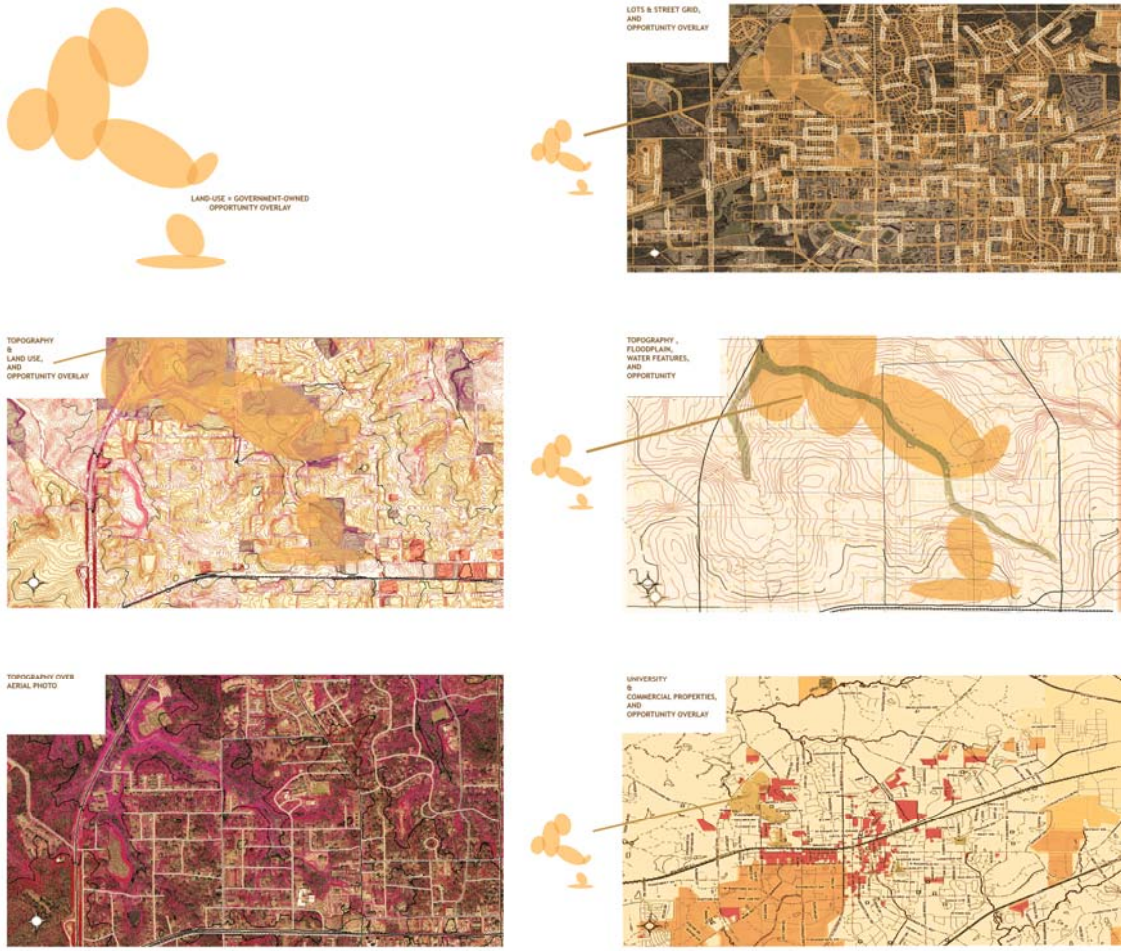


Fig. 16 The figure below shows a larger scale investigation of creating a networking of greenways and parks. This concept was entirely too large in scale for the purposes of this project.



The chosen site needed to include an established networking of community support for children.

Fig. 17 Social forensics of Auburn, Alabama.

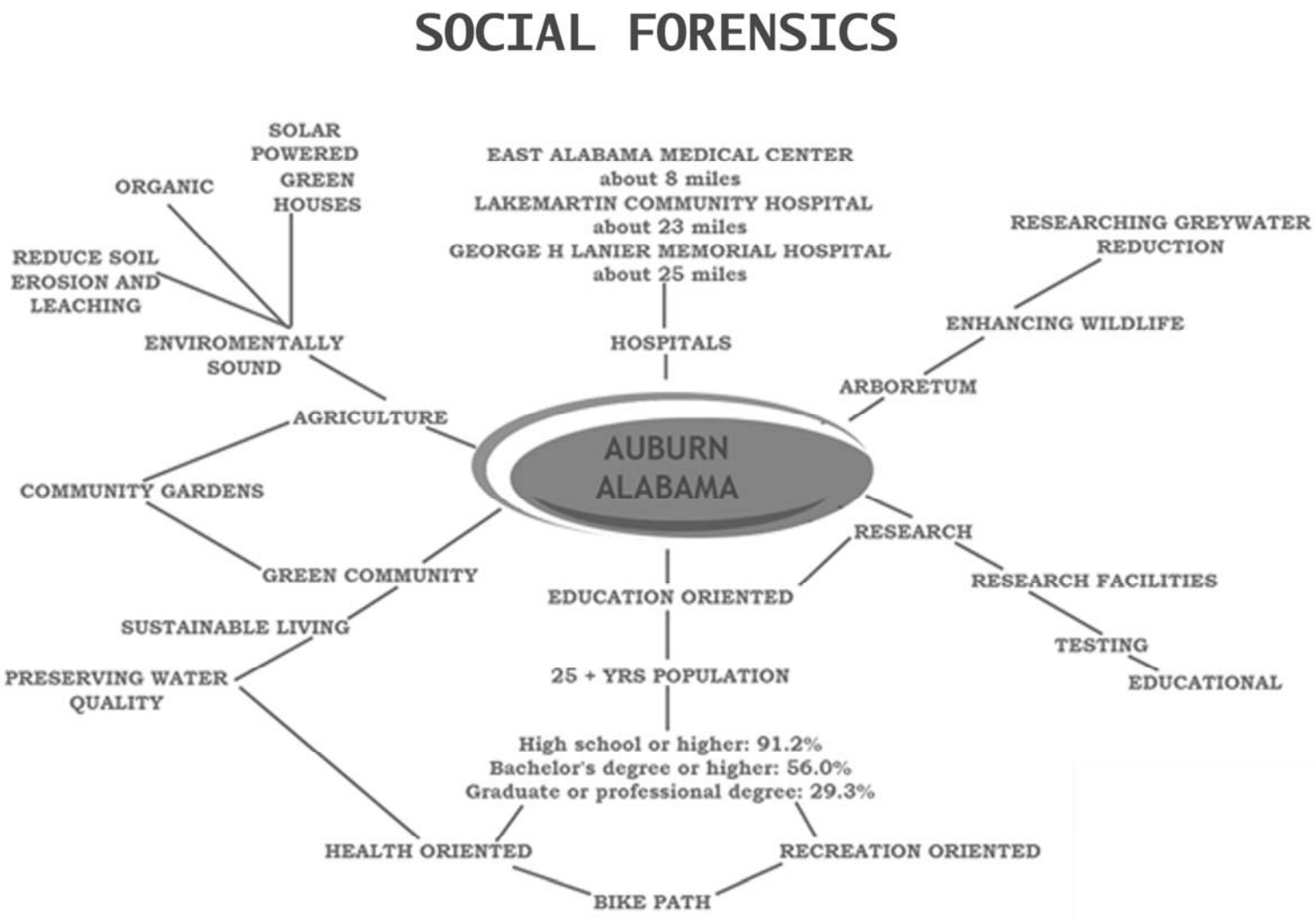


Fig. 18 A graphic conceptual representation of Auburn University property in orange compared to residential property depicted in red. The site is well connected to Auburn University. In fact the Boykin Community Center adjacent to the property has nine programs including interactive course work with the university. The blue line intersecting the center of the image is College Street which runs through downtown. The small green star north of the railroad tracks indicates the site chosen for this project.

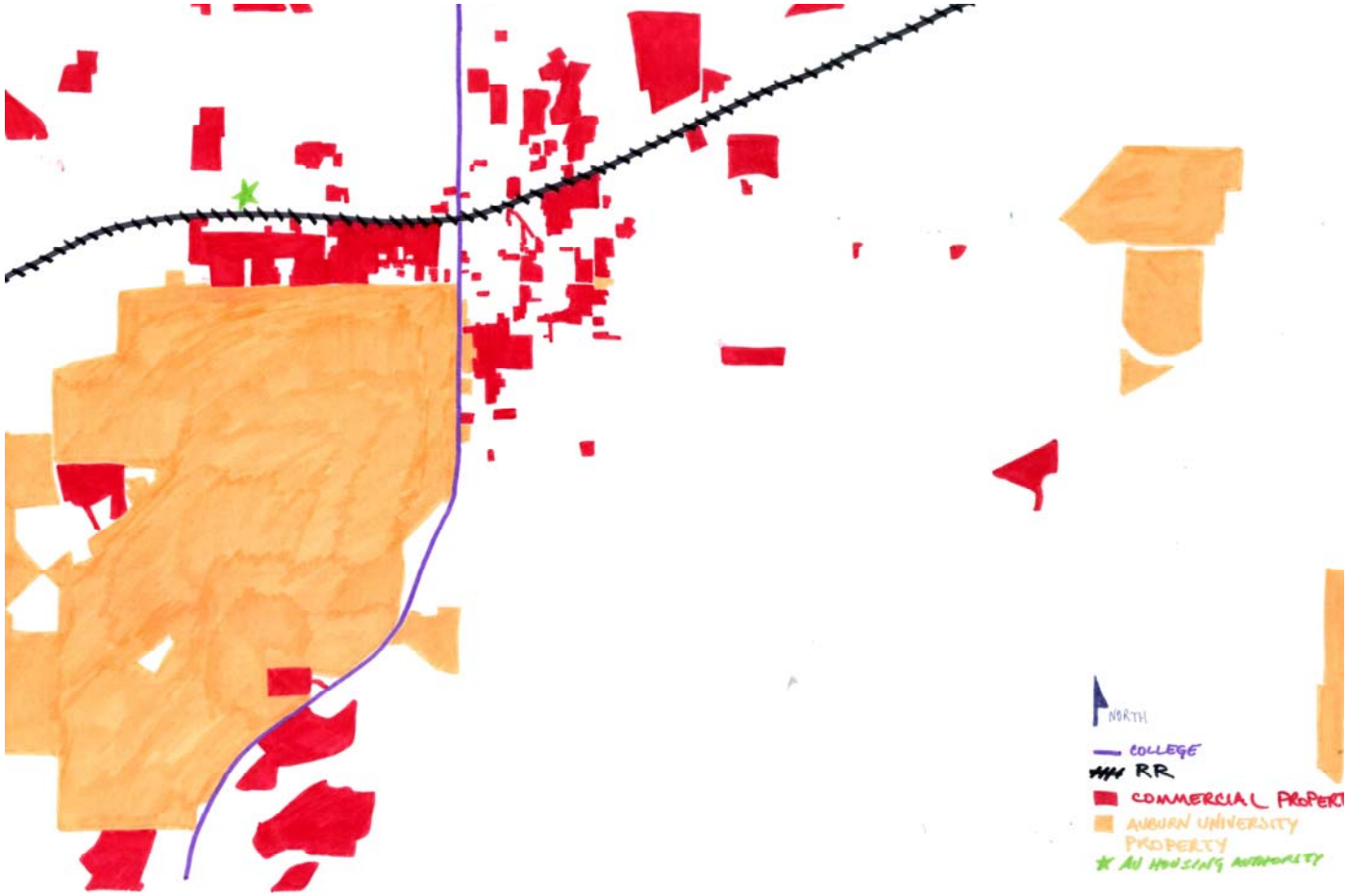
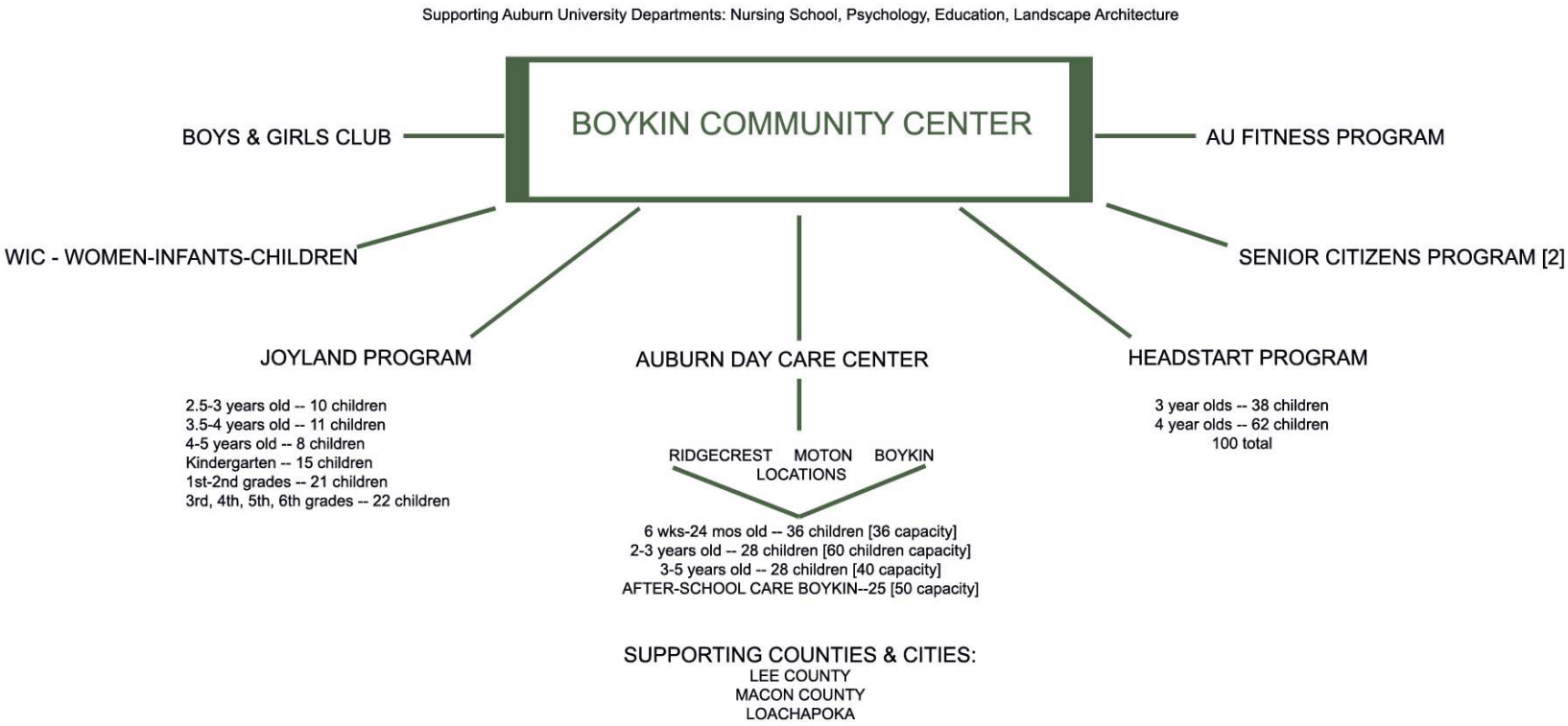


Fig. 19 The Boykin Community Center supports several child-oriented programs.



Auburn, Alabama's northwest quadrant supports the Boykin Community Center. It sustains nine programs for children and senior citizens. Moton Housing Project is located across the street. Moton was selected partially for it proximity to the Boykin community Center and the programs it offers. It's location in reference to the Boykin Community Center is important to the mental, physical, and psychological growth of a child.

Fig. 20 The diagram below shows quantity of children with in the framework of community networks. Map image courtesy of Google Maps.

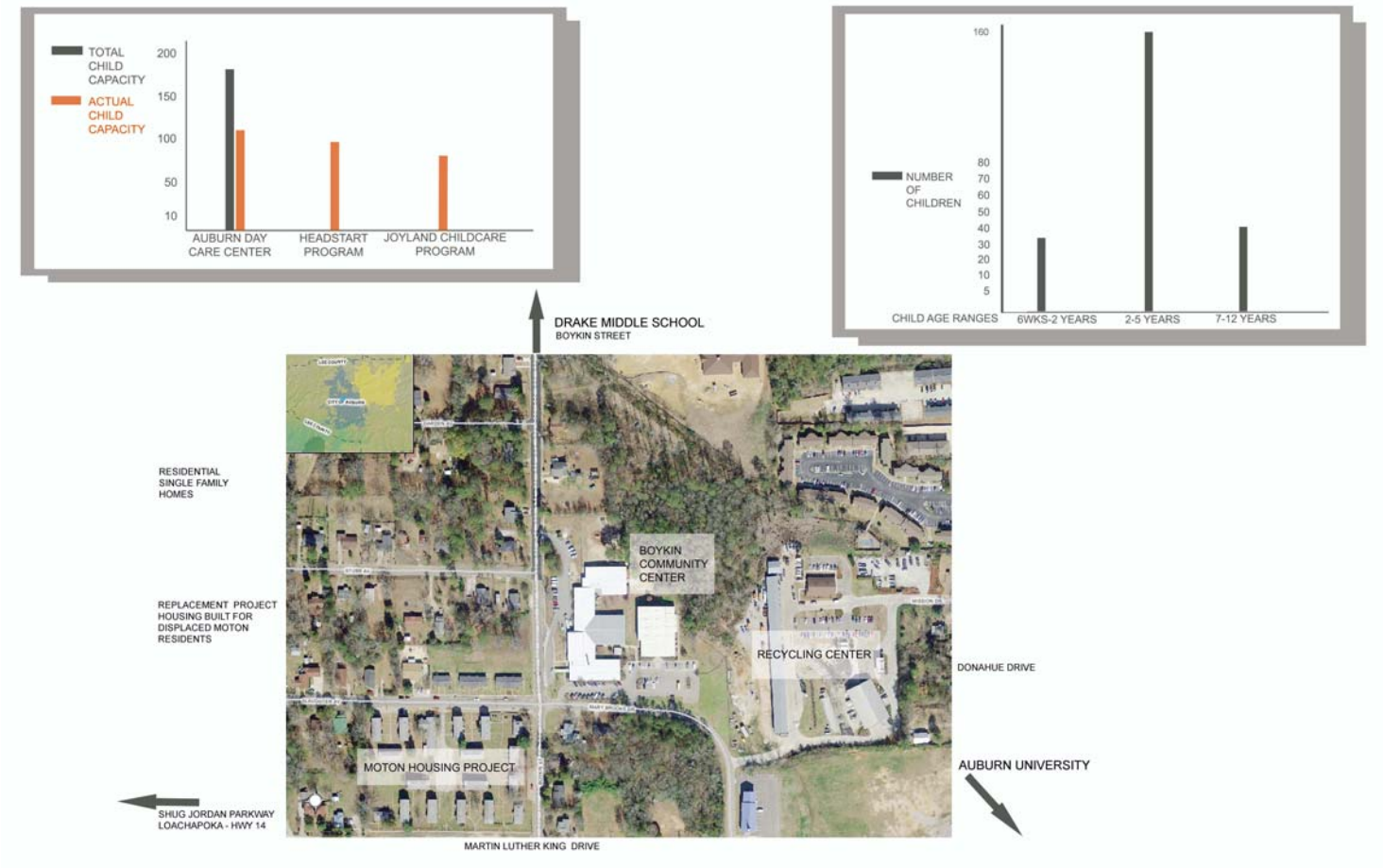


Fig. 21 The Moton Housing Projects are located at 700 Martin Luther King Drive. Map image courtesy of Google Maps. The housing units not presently occupied.

Fig. 22 Diagram of proposed trail connecting the Boykin Community Center to the Moton Housing Projects.

Map image courtesy of Google Maps.

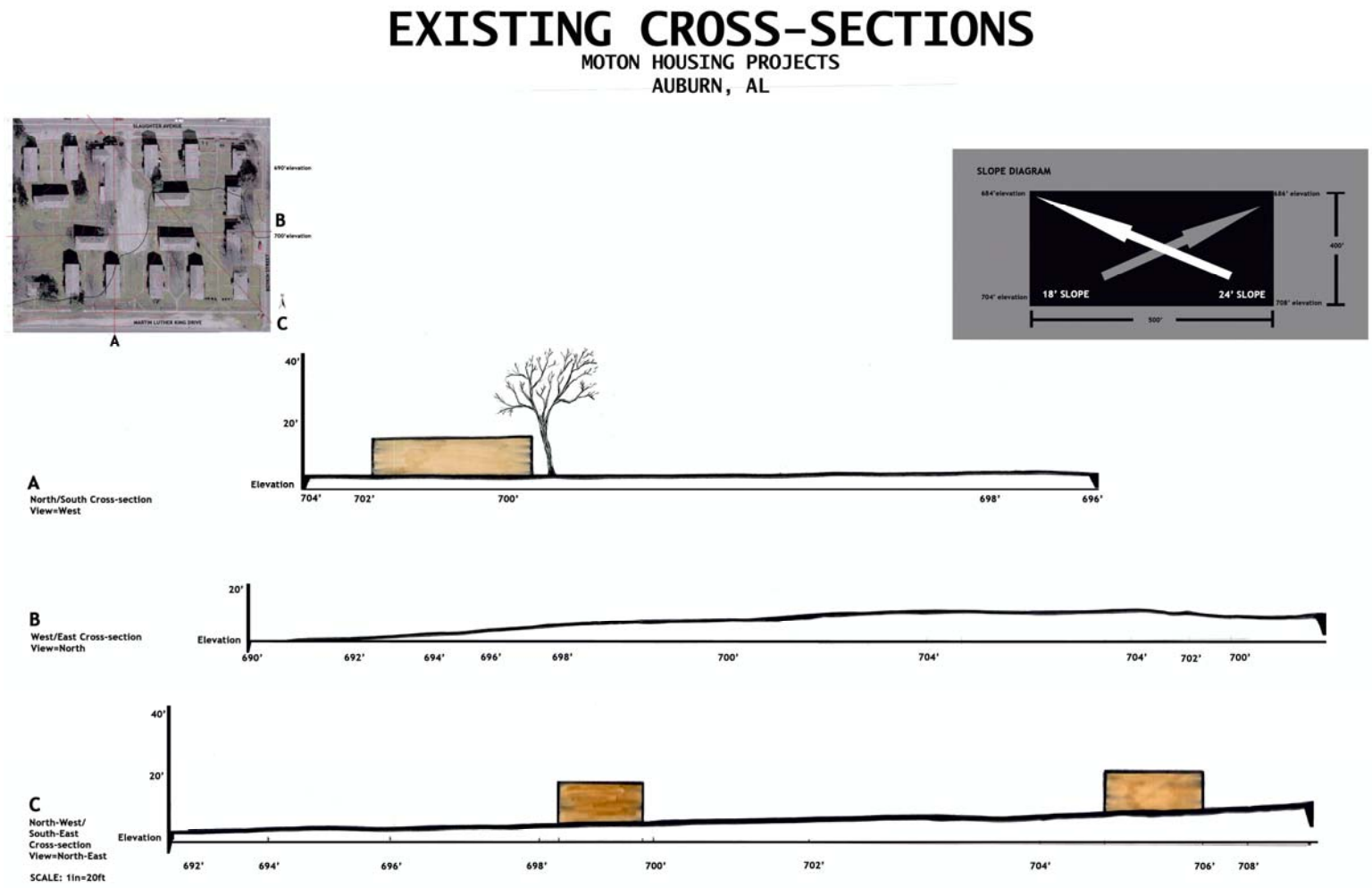
TOPOGRAPHY

Several of the buildings will be remodeled and several removed. Originally there were 18 housing units. It is presently being remodeled leaving 11 units. The site was condemned and scheduled to have remodeling completed by 2007. The site plan shows buildings to remain and be remodeled.

Fig. 23 At present there are no plans to reestablish the daycare facilities which were located in the elongated building on the top row, third from the left. Map image courtesy of Google Maps.

The existing topography was important when considering landform changes.

Fig. 24 Cross-sections were drawn of the existing site conditions. Map image courtesy of Google Maps.



PHOTOGRAPHIC DOCUMETNTATION OF EXISTING CONCITIONS

There is a proposal to redevelop this property to provide a more suitable living environment and a better sense of community for low and moderate income citizens and the surrounding neighborhood. At the moment, Moton Apartments are a fenced off eye sore. This report attempts to capture the history of Moton Apartments, the people who lived there, and to establish the need to preserve some of the past while providing a brighter future for residents and surrounding neighborhoods.

Fig. 25- 31 Photographs of existing conditions of the site taken by Alina Phillips.


Auburn Housing Authority

HISTORICAL CONDITIONS

Constructed in 1953, the Moton Housing Projects was designed to be the first housing project in Auburn, specifically for African Americans. Project housing specifically for white Americans is located on Dean Road in Auburn, Alabama.

Fig. 32-41 All historical photographs are courtesy of Auburn Housing and Community Development, City of Auburn, Alabama.


January 29, 1952 No.6
Ala. 50-2 Auburn, Ala.
Point No.1 Looking Northeast
on Loachapoka Road


February 29, 1952 No. 7
Ala. 50-2 Auburn, Ala.
Point No. 1 Looking Northeast
on Loachapoka Road


April 29,1952 No. 9
Alabama 50-2 Auburn, Ala.
Point No. 1 Looking Northeast
on Loachapoka Road


May 29th,1952 No. 10
Alabama 50-2 Auburn, Ala.
Point No.1 Intersection
Looking Northwest

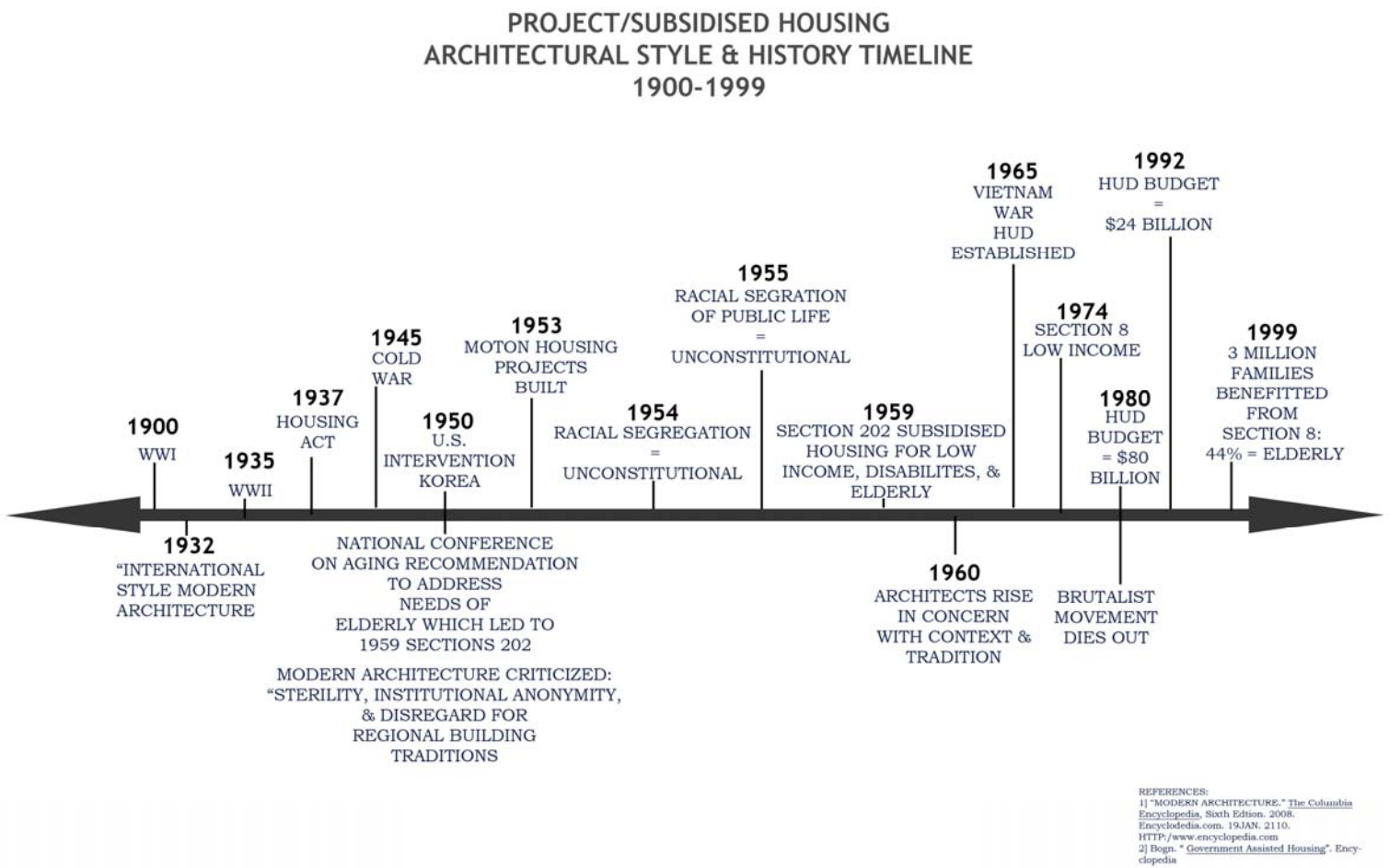

SEPT. 30, 1951 NO. 2
ALA. 50-2
AUBURN, ALA.
POINT NO. 3 LOOKING S. W.
ON SLAUGHTER ROAD


NOVEMBER 30, 1951 NO.3
ALA. 50-2 AUBURN, ALA.
POINT NO.2 LOOKING SOUTHWEST
ON SLAUGHTER STREET


SEPT. 30, 1951 NO. 2
ALA. 50-2
AUBURN, ALA.
POINT NO. 4 LOOKING N. W.
ON LOACHAPOKA ROAD


BEFORE
ALA. 50-2
JAN 1951

Fig. 42 A brief timeline of project/subsidized housing, architectural style and historical events.



REFERENCES:
1] "MODERN ARCHITECTURE." The Columbia Encyclopedia, Sixth Edtion. 2008. Encyclodedia.com. 19JAN. 2110. HTTP://www.encyclopedia.com
2] Bogn. " Government Assisted Housing". Encyclopedia

VEGETATION

Present vegetation includes some turf and approximately seven trees, some of which may be removed. A productive landscape area is proposed to encourage an understanding of nature and its benefits in the form of immediate gratification. One suggestion is a pecan grove. This can help families economically as well. The Moton Housing site is located at the bottom left of this diagram.

Fig. 43 Existing vegetation rendered by Alina Phillips

CONCLUSION FROM REGIONAL AND URBAN FORENSICS

The city of Auburn is well connected to larger cities such as Birmingham, Montgomery and Atlanta by highways with a maximum driving distance of 2 hours or less. The Moton Housing Projects is located in an education oriented area. Census indicates that 91.2% of the population has a high school degree or higher and 56% have a bachelor's degree or higher. It exists within the strong community network of the Boykin Community Center which is supported by nine programs; several of these are supported by Auburn University. Educational support was important to this project due to its significance in childhood development.

The site is sloped from the southeast corner to the northwest and drops in elevation about 24 feet. During this research project the city removed condemned buildings and few trees remained. Drainage was an issue, but was easily addressed through the landform alterations of terracing.

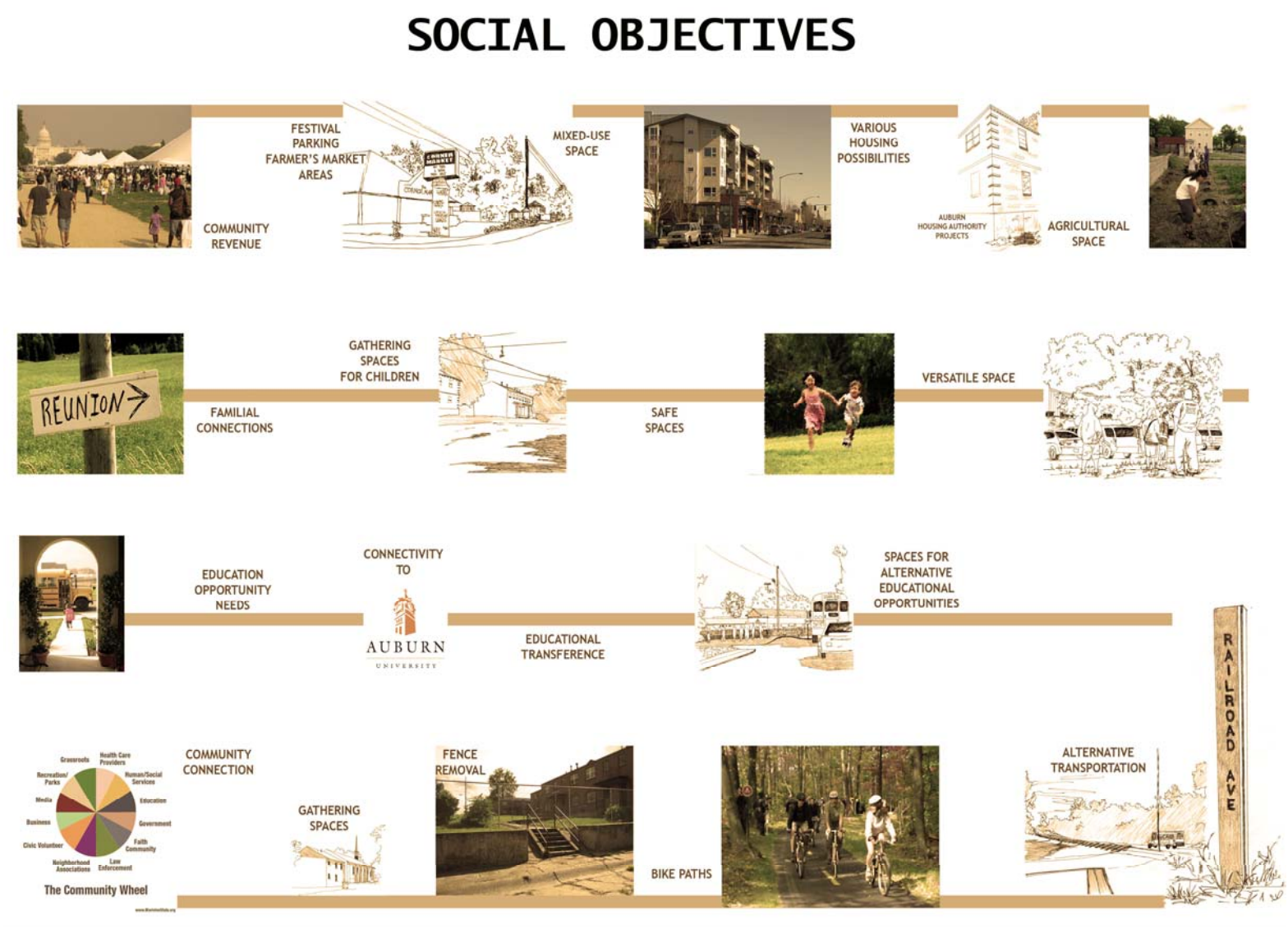
CHAPTER 6

PROJECT DESIGN

SOCIAL OBJECTIVES

Upon establishing a strong core community network, determining potential social layers was crucial to this design. What are the possible outcomes of the design? Areas for social play developed according to spatial forms. Large open areas were assigned to large cooperative play. For example this can include Farmer's Market, musical performances, and organized object-centered play such as a soccer game. Social play is vital to a child's development. Opportunity should be provided for the interaction of peer-to-peer play as well as child-to-adult play. Landform manipulations of terracing created platforms of open space as well as intricate transitional spaces. The design for a landscape of play was directed to offer opportunity for play of various types as previously mentioned.

Fig. 44 The following Figure demonstrates the desired outcome of the proposed design.



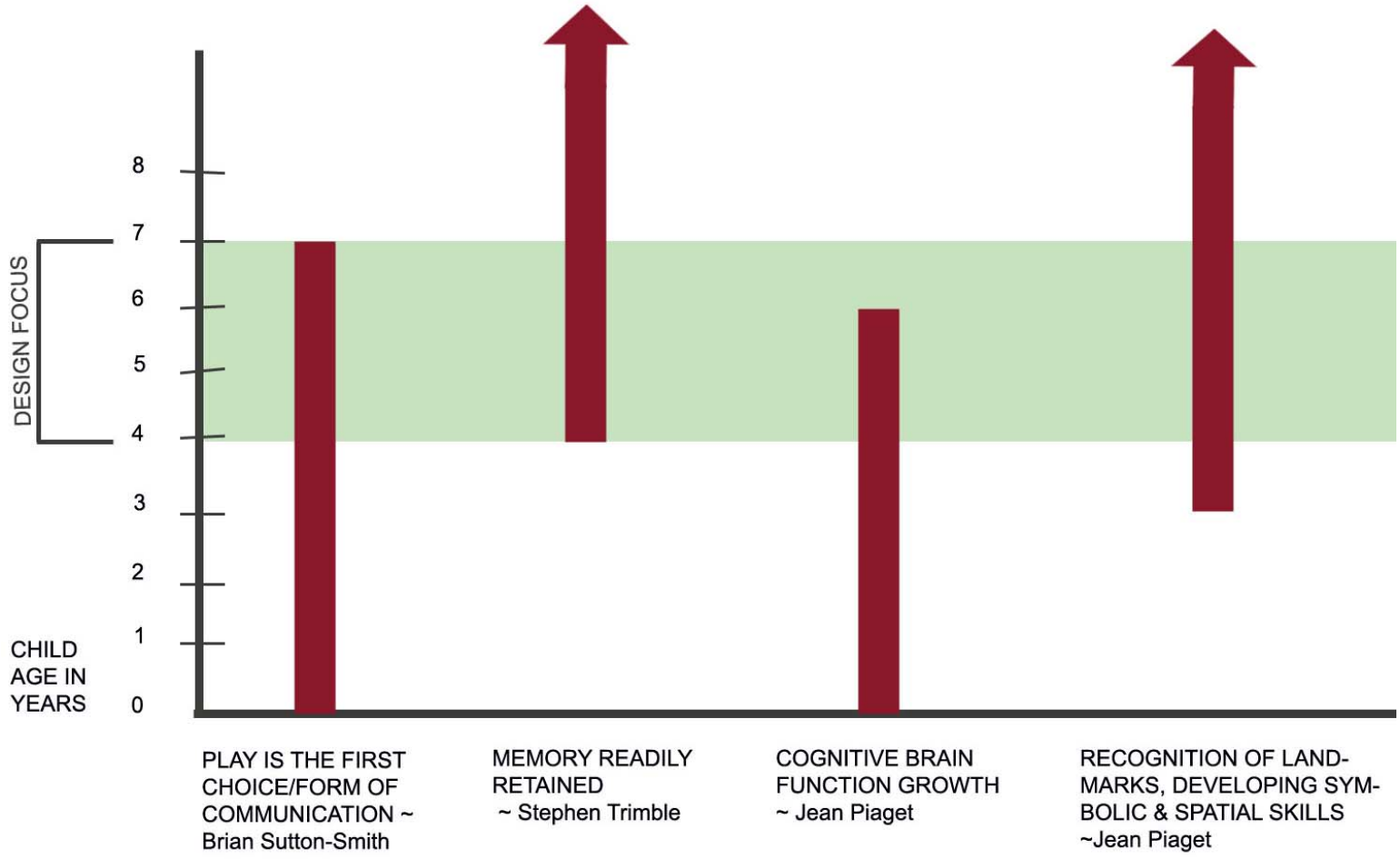
METHODOLOGY

Designing on the basis of Play-Types that occur in early childhood is the foundation of this design project. A landscape of play design utilized a refined category of play types as the foundation of the design. Play types were derived from research readings and refined to six essential groupings as previously mentioned.

This design research also established a primary target age group for the purposes of a landscape of play. The target age group is between four and seven. The chart below shows the basis for this choice. A graphic representation of developmental stages of the early childhood years was developed. This information focused the age-group of my design.

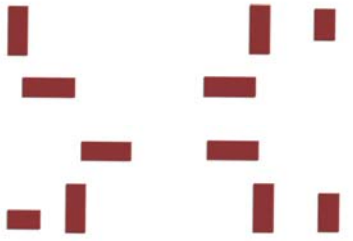
The landscape of play was designed for age group of children between the ages of four and seven. This age group was chosen due to the fact that it is a crucial phase of growth. Personality is developed by age seven and cognitive development slows considerably after the age of four. Memory is most readily recalled from the age of 4, sometimes as early 3 and very few recorded memories before the age of 3.

Fig. 45 Diagram demonstrates children's development according to theorists.

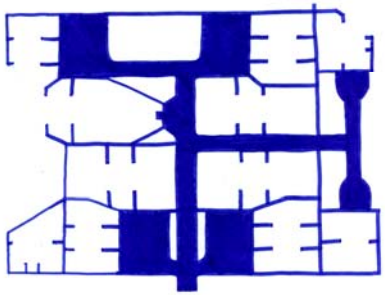


SPATIAL FORM OF DESIGN

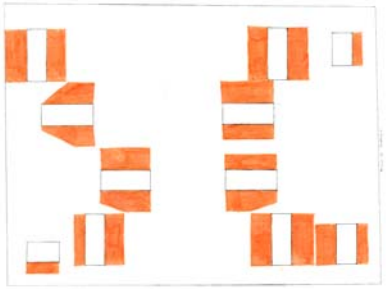
The landscape of play was generated through layers consisting of landform adjustments, a tree framework, and a play types. The play type category was refined through research readings and was the defining factor in design decisions. Landform adjustments provided spatial potential and created form on the site so that play types could occur. Analysis was carefully drawn as to the existing housing, the private-public gathering spaces, connected private-public gathering spaces, public gathering spaces and the city-proposed parking. It was important to this project to design with consideration to social interactive spaces whether private, semi-private, or public. The tree framework enhanced the potential for a range of play types to occur and define public and private spaces. Materials such as local limestone and flagstone and steppable plantings were utilized to further encourage alternate play types.



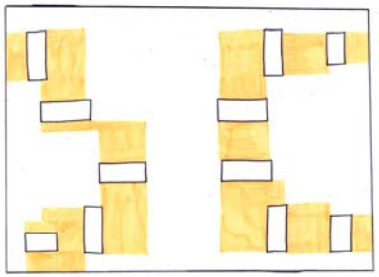
EXISTING MULTI-FAMILY HOUSING



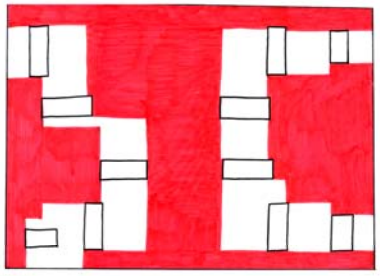
MOTON HOUSING PROJECT PROPOSED PAVING



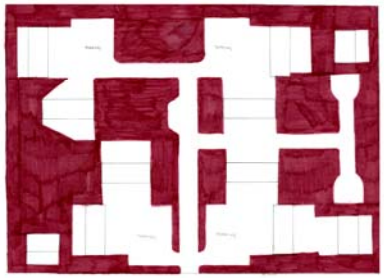
PRIVATE-PUBLIC GATHERING SPACES



CONNECTED PRIVATE-PUBLIC GATHERING SPACES



PUBLIC GATHERING SPACES INCLUDING PROPOSED PARKING



PUBLIC GATHERING SPACES EXCLUDING PROPOSED PARKING

Fig. 46 An evaluation of the site was depicted in order to access the site's potential spaces.

Developing a concept on shared space was vital to the aspect of social play in the landscape of play design. Private and semi-private outdoor spaces needed to be framed by trees in order to define these spaces.

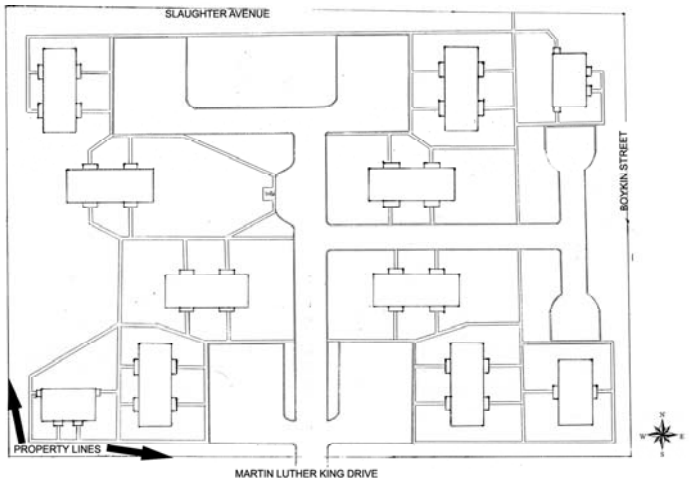
Fig. 47 An initial graphic representation of the site's public and private spaces was illustrated.

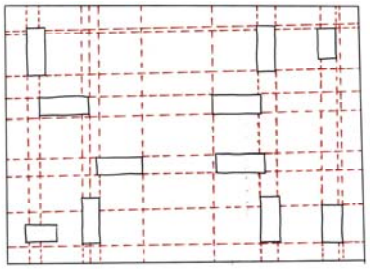
Geometric projections from the existing architecture were used to create spatial land forms. Lines were extended from the corners of the existing buildings. A design process that incorporates the process or technique of reproducing the spatial forms of a building upon a plane or curved surface or a line by projecting its points was implemented.

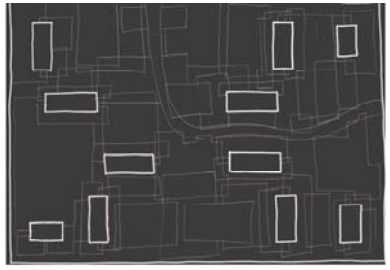
Fig. 48 Sketch drawn by Alina Phillips depicting line projections.

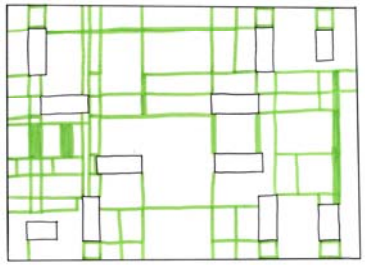
Potential spatial arrangements were explored on the basis of geometric projections from the housing units. This was done in order to link external spaces to the architecture and provide an overall organization principle for the design. These series of drawings created play spaces and determined larger open spaces, transitional spaces as well as possible private intricate spaces.

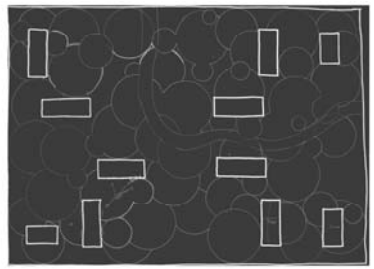
Fig. 49 A diagram illustrating the geometric forms of the existing architecture.

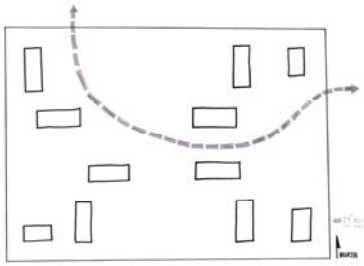



ARCHITECTURAL PROJECTED GEOMETRY

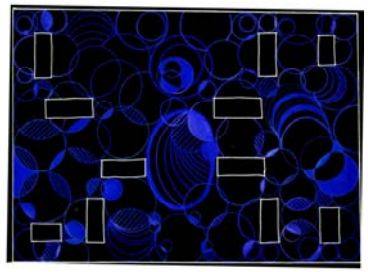

EXPERIMENTAL RECTILINEAR SPACES


SPACES CREATED USING PROJECTED GEOMETRY


EXPERIMENTAL CIRCULAR GEOMETRICAL SPACES


PROPOSED VEHICULAR TRAFFIC ROUTE


EXPERIMENTAL GEOMETRIC CONCEPTUAL DESIGN


EXPERIMENTAL CIRCULAR CONCEPT DESIGN

Once a general spatial layout had been determined, the sloping condition of the site was investigated in order to create a three-dimensional spatial form. Landform was altered in order to provide challenge, observation “perches” for parents without direct interaction, large areas to accommodate large motor play, secluded areas to allow symbolic play and fine motor play, elevated seating to set a stage for dramatic play, and vertical challenges and horizontal interests to accommodate large and fine motor skills. A model was developed. It showed that the design lacked the spatial forms required to meet the needs for large motor skill running and proper social open spaces. Also due to the manipulation of the topography, some of the buildings were left without a foundation.

Fig. 50 A first model was constructed based on the architectural geometrical projections of the existing buildings.

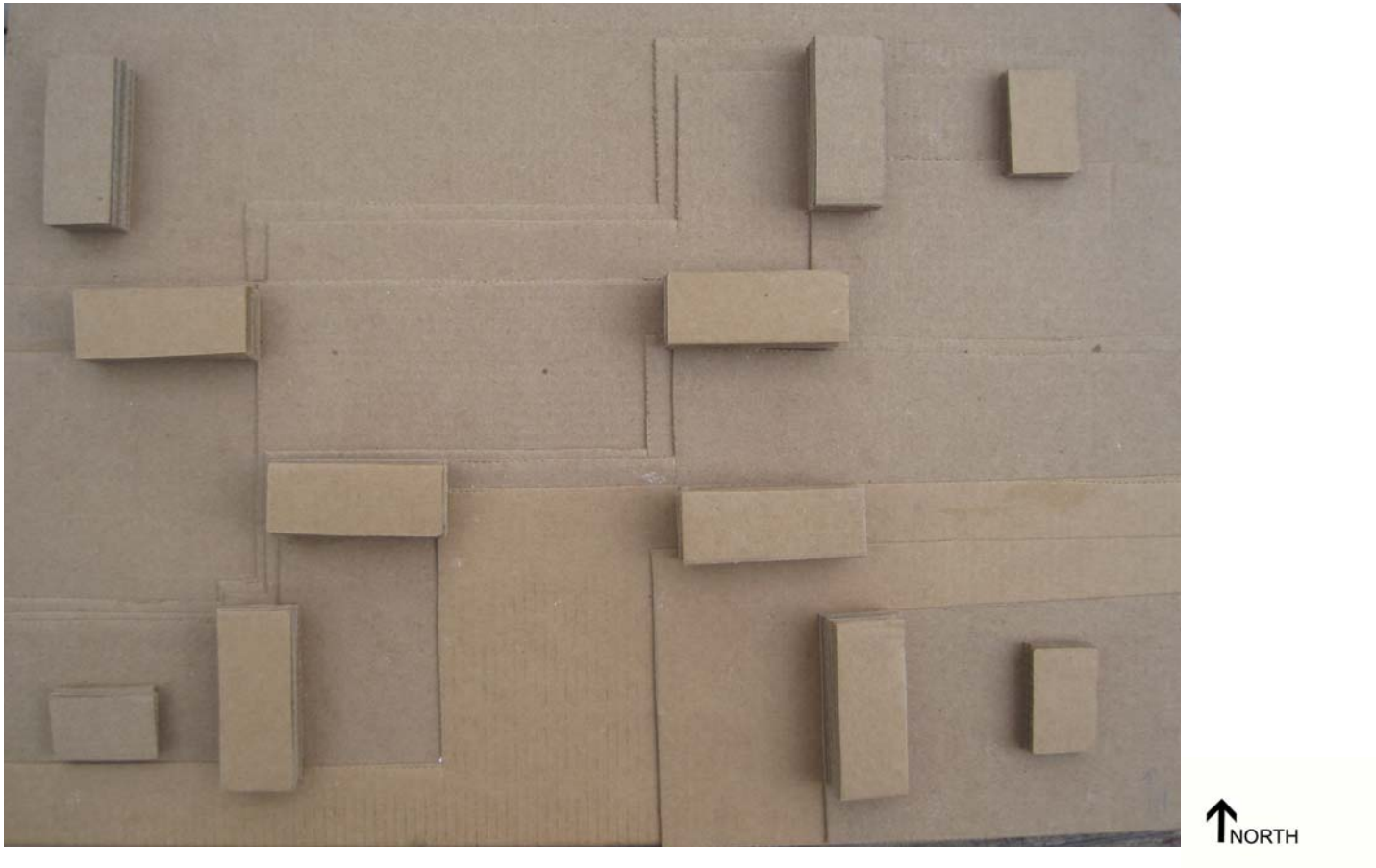
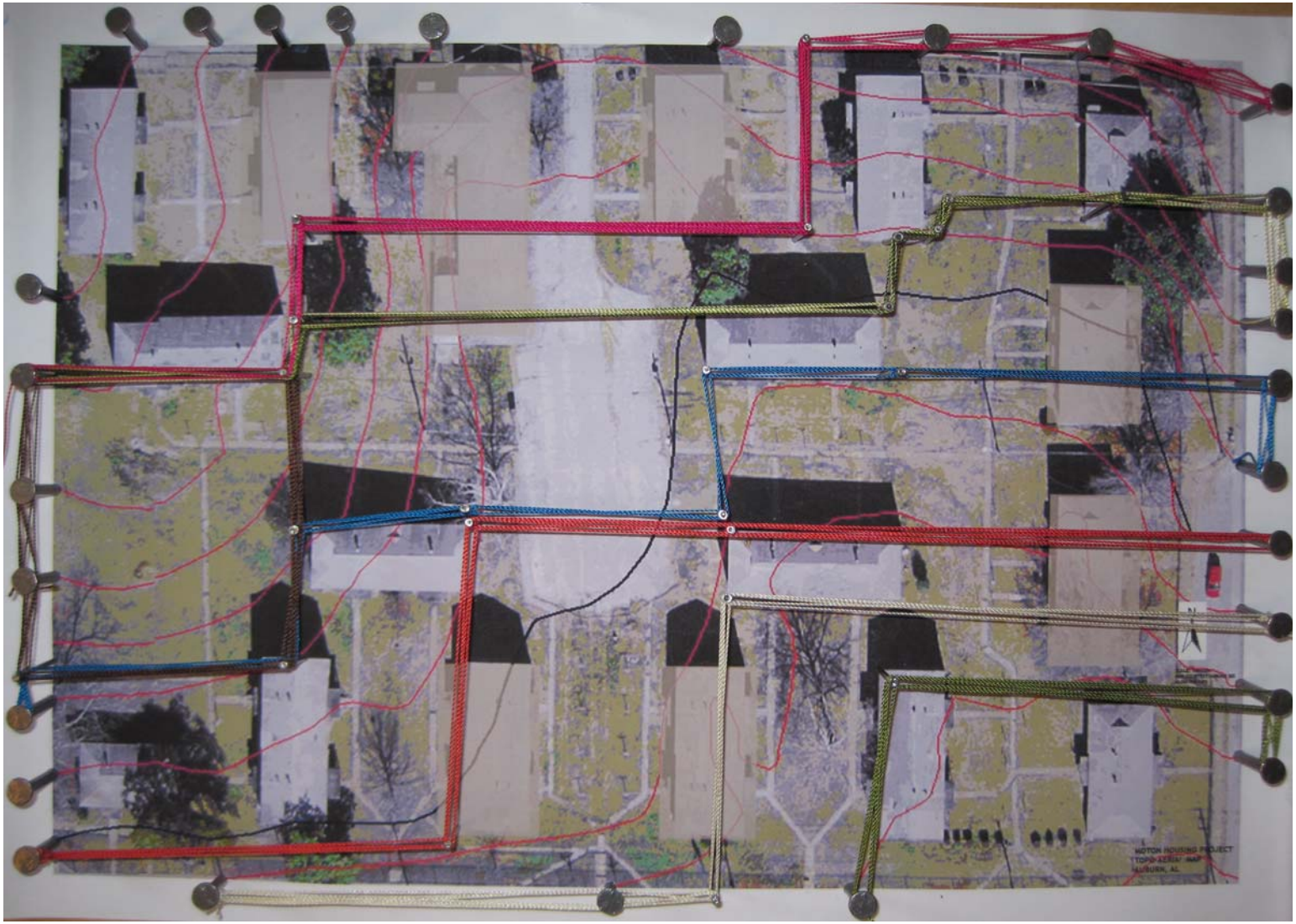
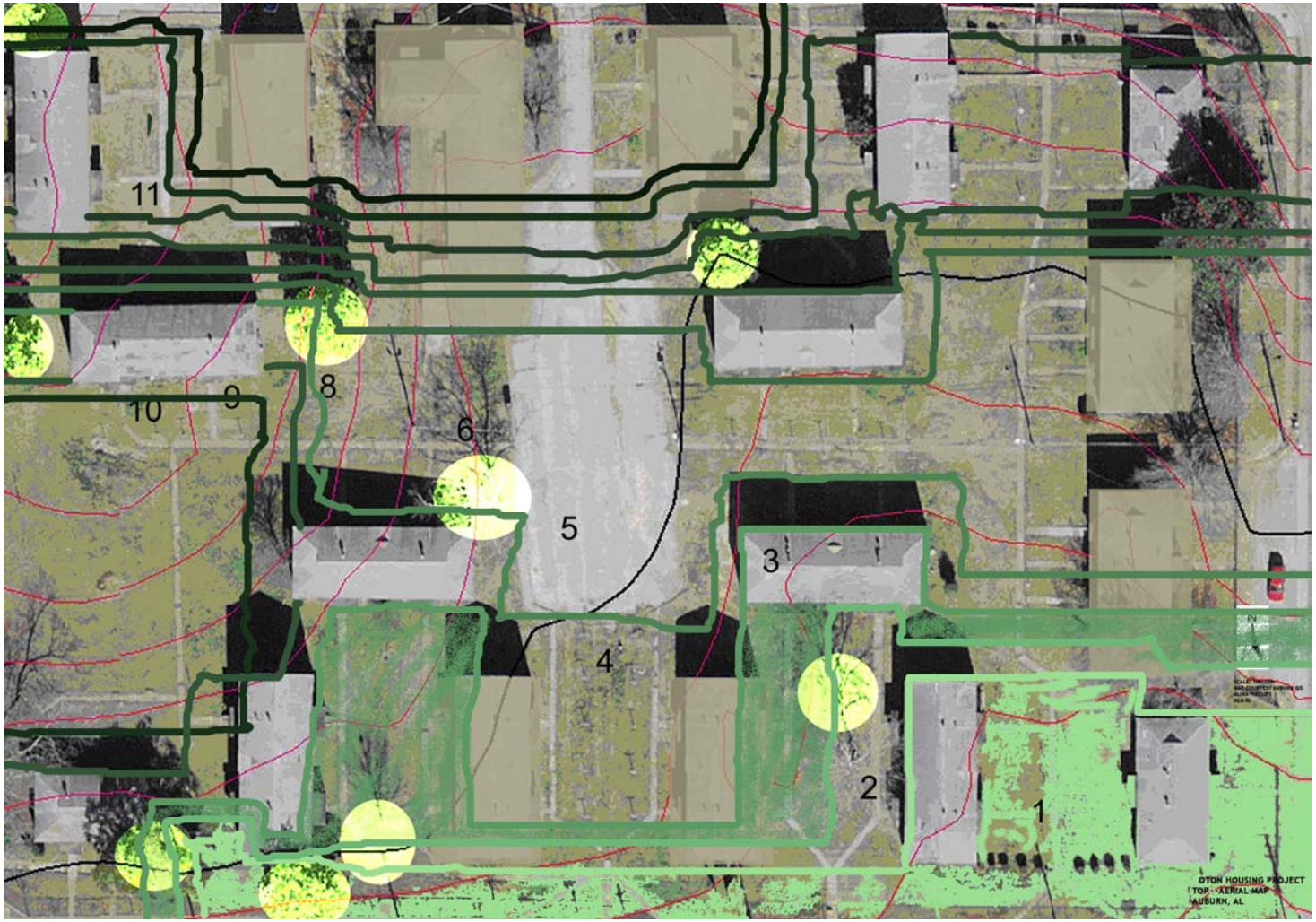


Fig.51 A physical model exploration of the topography using a map of existing topography and buildings using colored nylon string and nails. Map image courtesy of Google Maps.



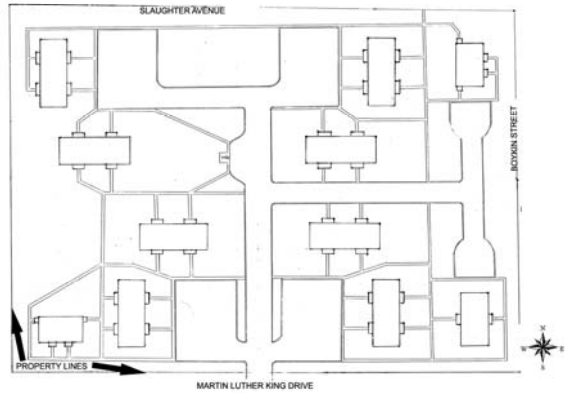
It was important to allow the existing buildings to remain on their original topographic plateaus.

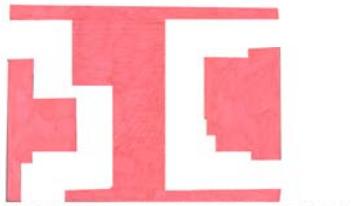
Fig.52 A graphic exploration investigates altering the existing topography with attention to the existing buildings and topography. Map image courtesy of Google Maps.

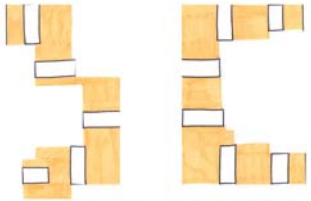


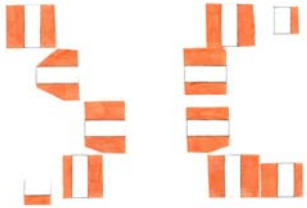
A proposed plan was graphically explored in order to determine possible spatial forms. Information from the public and private spaces evaluation was then utilized to create spatial forms which were then layered with the architectural geometric projections. Information from the public and private spaces evaluation was laid over the architectural geometric projections to create spatial forms which were then layered with the architectural geometric projections.

Fig. 53 A graphic exploration of architectural geometric projections in order to create land forms.

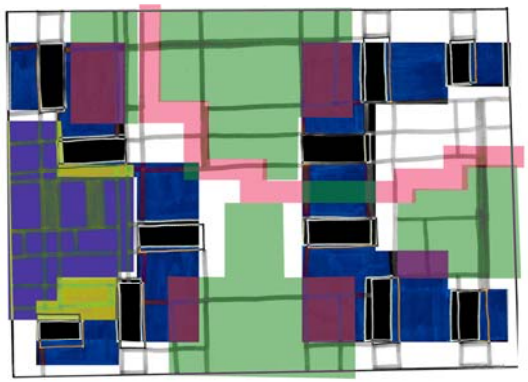


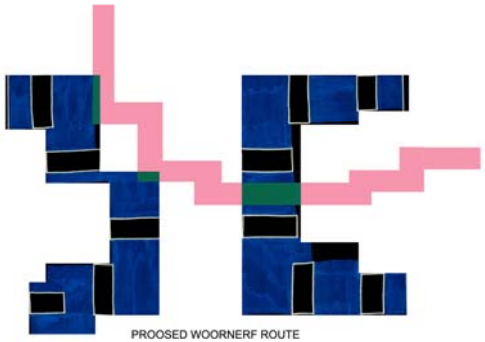

PUBLIC GATHERING SPACES INCLUDING PROPOSED PARKING


CONNECTED PRIVATE-PUBLIC GATHERING SPACES

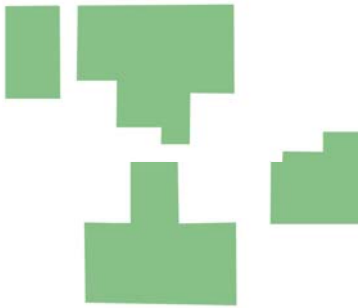

PRIVATE-PUBLIC GATHERING SPACES


PUBLIC AND PRIVATE GATHERING SPACES LAYERED




PROOSED WOORNERF ROUTE
AND CONNECTED
PRIVATE-PUBLIC GATHERING SDPACES


PRODUCTIVE PECAN GROVE


PUBLIC GATHERING SPACES
INCLUDING WATER FEATURES AND GREEN
OPEN SPACES

After accessing the existing public and private spaces a graphic exploration was conducted to create a geometric concept design.

Fig. 54 This is a graphic exploration utilizing the previously mentioned layers creating a landform altered concept design.

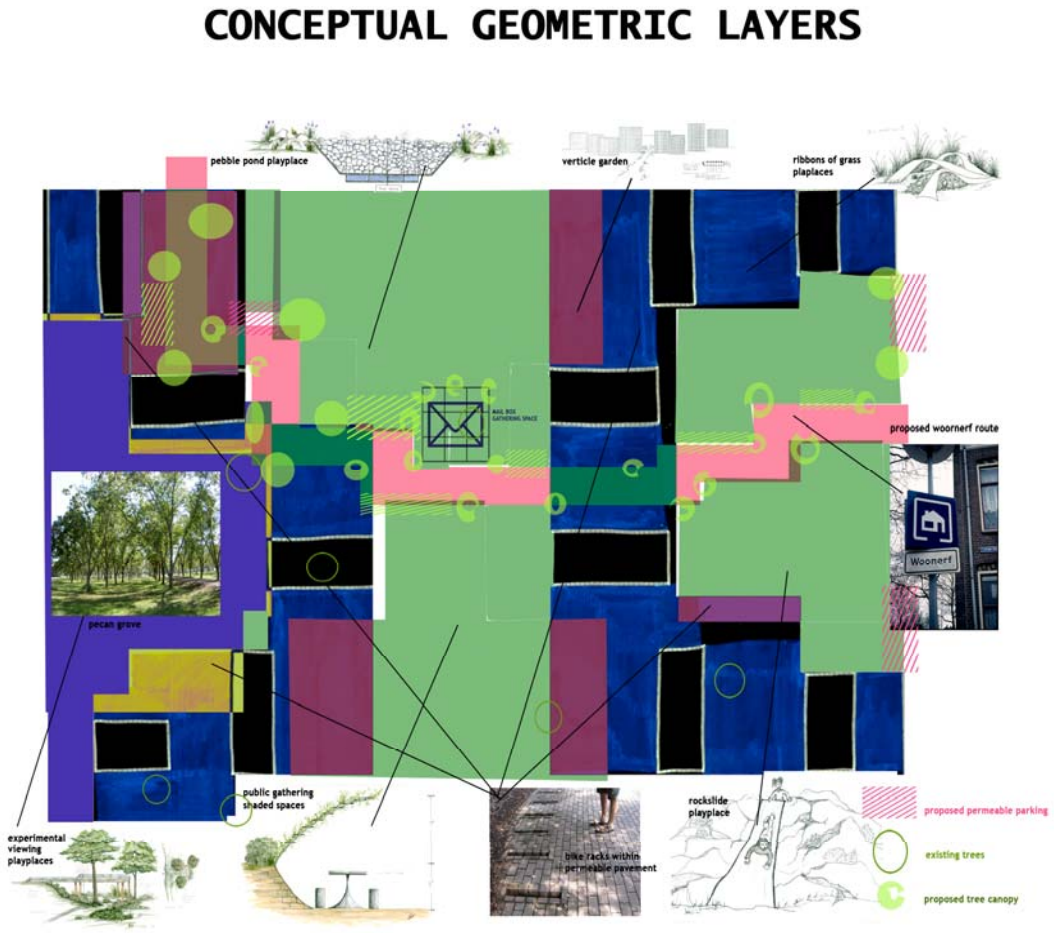
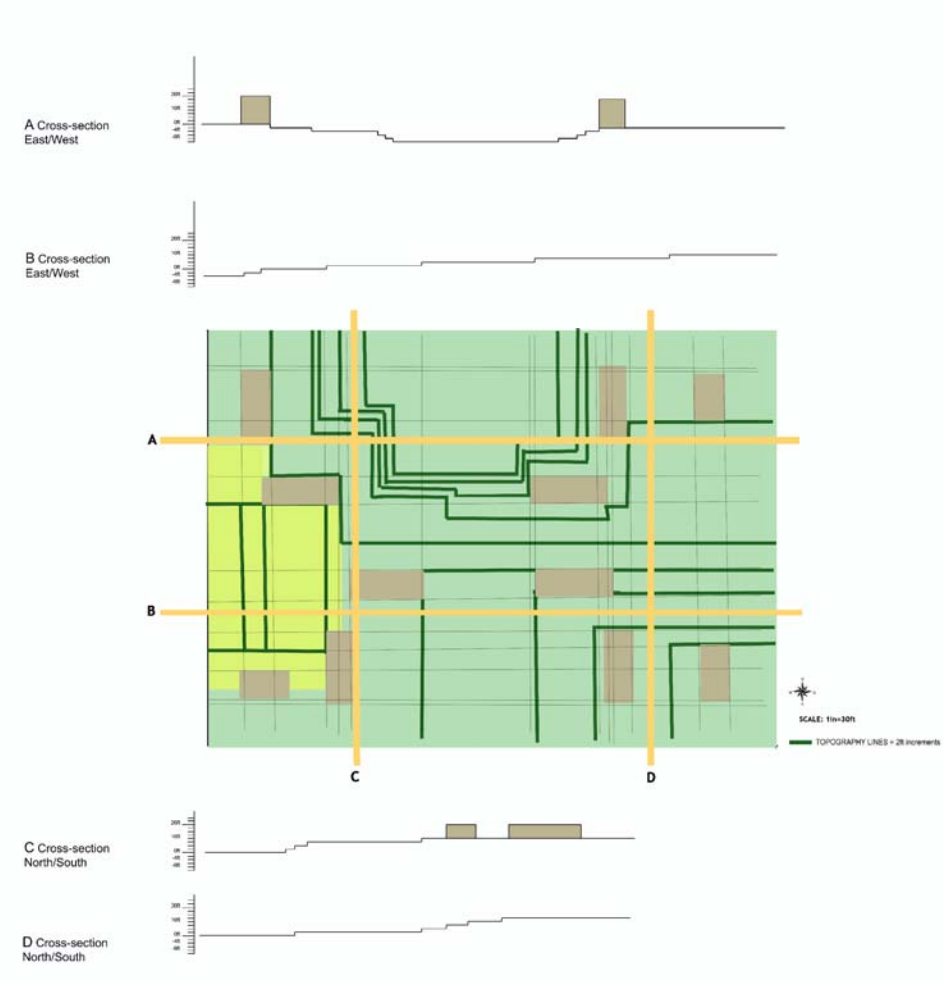
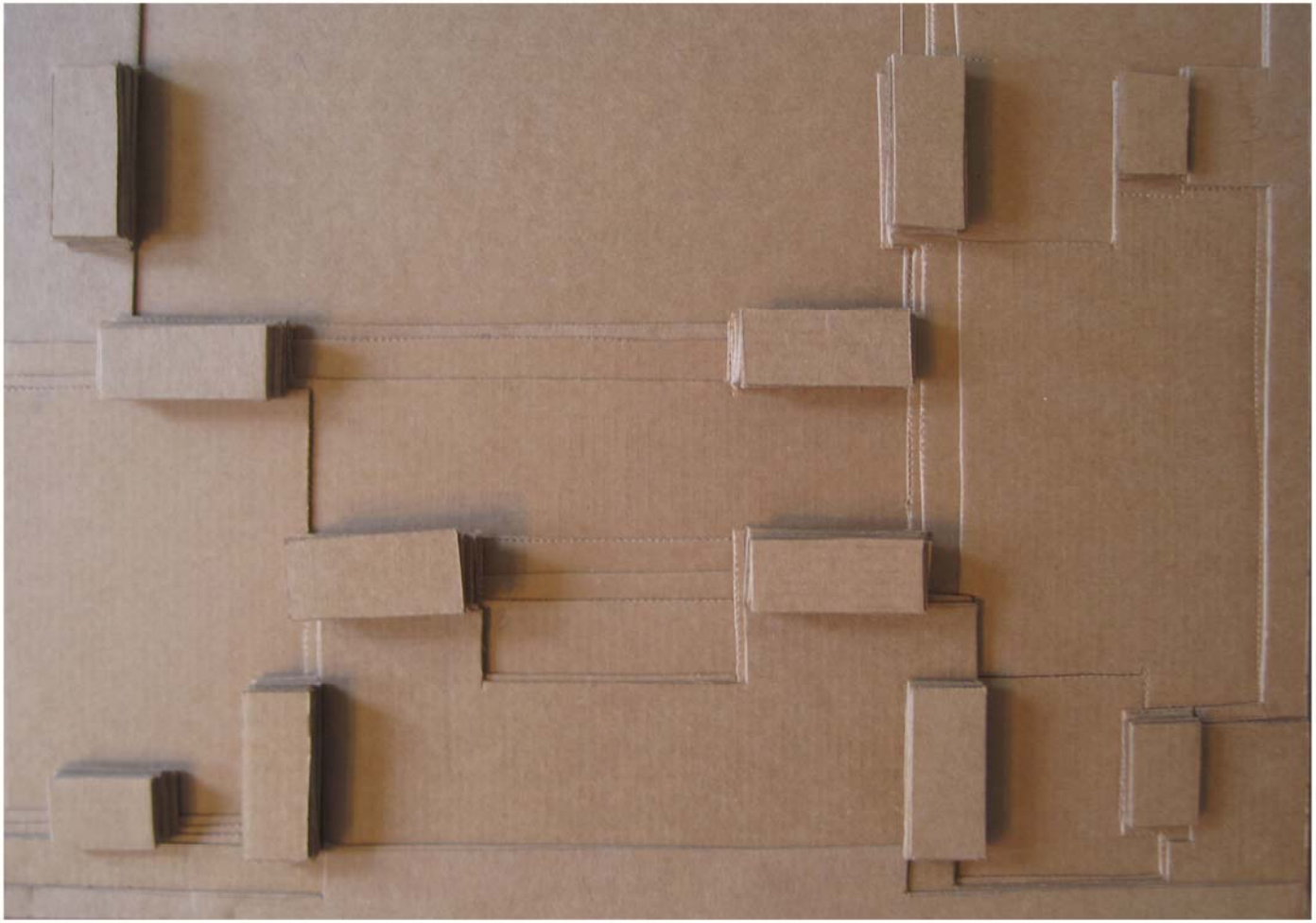


Fig. 55 Cross-sections were then drawn of the proposed land form alterations.



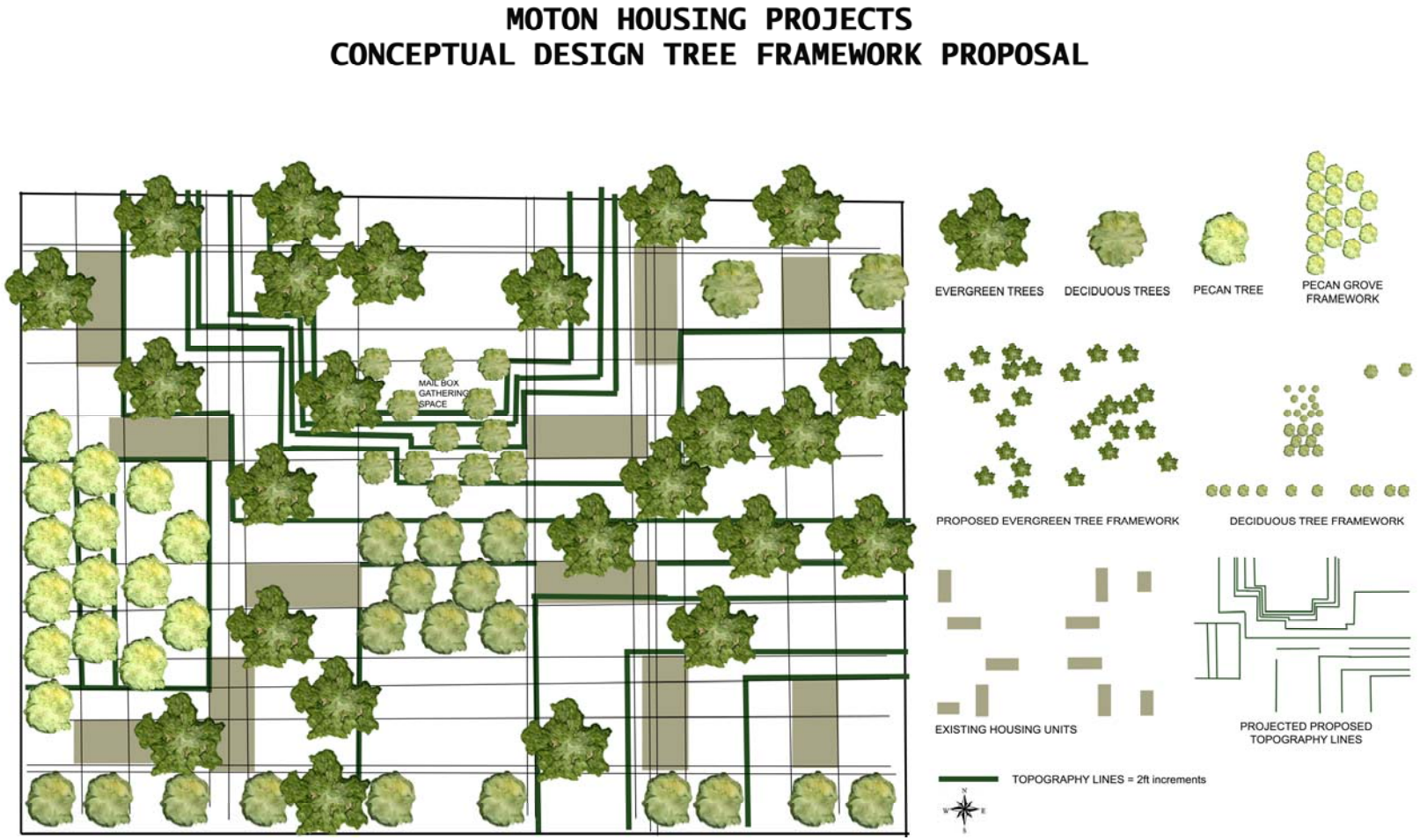
A second model scaled in a 1inch=30feet was constructed with attention to large open flat spaces to accommodate social play and large motor skills. The terracing concept was kept to accommodate large motor skills and dramatic cooperative play.

Fig. 56 Second model depicting spatial forms designed for specified play types.



After reviewing the existing public and private spaces explorations an investigation of a geometrical conceptual design was conducted.

Fig. 57 A graphic investigation of possible tree framework.



In addition to the aforementioned layers, the theory of children's culture [Chudacoff, 2007] was used as guidelines in the design. Chudacoff states there are four contexts of children's culture. These elements were implemented throughout the design of this landscape of play. They are as follows:

1] ENVIRONMENT
2] MATERIALS
3] DRAMATIS PERSONAE
4] FREEDOM

The **environment** is the setting where the play takes place. **Materials** include instruments or lack of instruments that facilitate play. **Dramatis persona** is the number of players who are playing as well as the relationships between the players. This context also includes solo-playing children.

Freedom demonstrates how much control the child or children have over their play activity and what risks autonomy entails. The context of freedom also includes supervision and adult interference. [Chudacoff, 2007] Obscurity of the child but not to the parent was also addressed in the design through terracing the landscape. If a parent were to observe a child from an upper level that rises 2-6ft above the child, the child's immediate perception of supervision is eye-level. This grants the child the space to establish the aforementioned "air of secrecy" that is inherent to play.

Within these four contexts special attention was given to the **environment and materials**. With its strong network connection, the Moton Housing Projects site addressed the issues of dramatis personae and freedom. This site will house mostly single mothers. The site's outdoors is considered a grouping of backyards as opposed to a public playground where supervision may or may not be present. Natural environments, such as backyards, are associated with the cognitive development of children through opportunities for exploration, experimentation and play. [Hart, 1994] Active learning in outdoor settings stimulates all aspects of child development more readily than indoor environments. [Moore and Wong, 1996] The design basis of the Landscape of Play theory is to manipulate the interaction levels such as the horizontal and vertical planes of the site. By

utilizing projected geometrical lines from the existing architectural structures, potential play spaces are created. Terraces were created based on the projected geometry of the existing 1953 buildings. Through modeling the terraced spaces that would accommodate specific play types were revealed. For example, the large motor skills of climbing, running, jumping, walking, crawling, balancing and/or stepping could occur across the site.

A graphic investigation was conducted to address the concern of supervision. A circle radius of 100 feet was placed around each housing unit. Each circle represents semi-supervised play zones. According to an article, "*Creating Safe Play Areas on Farms*", supervision varies and is dependent on age of the child, number of children who are playing, type of play and location. Uninterrupted play is more likely to be semi-supervised. Constant supervision is defined as the adult always being within sight or sound of the child. Intermittent supervision is where the adult is out of sight and sound of the child for at least up to 15 minutes. Periodic supervision is where the adult conducts a visual observation at lest every 15-30min. [Esser, 2003]

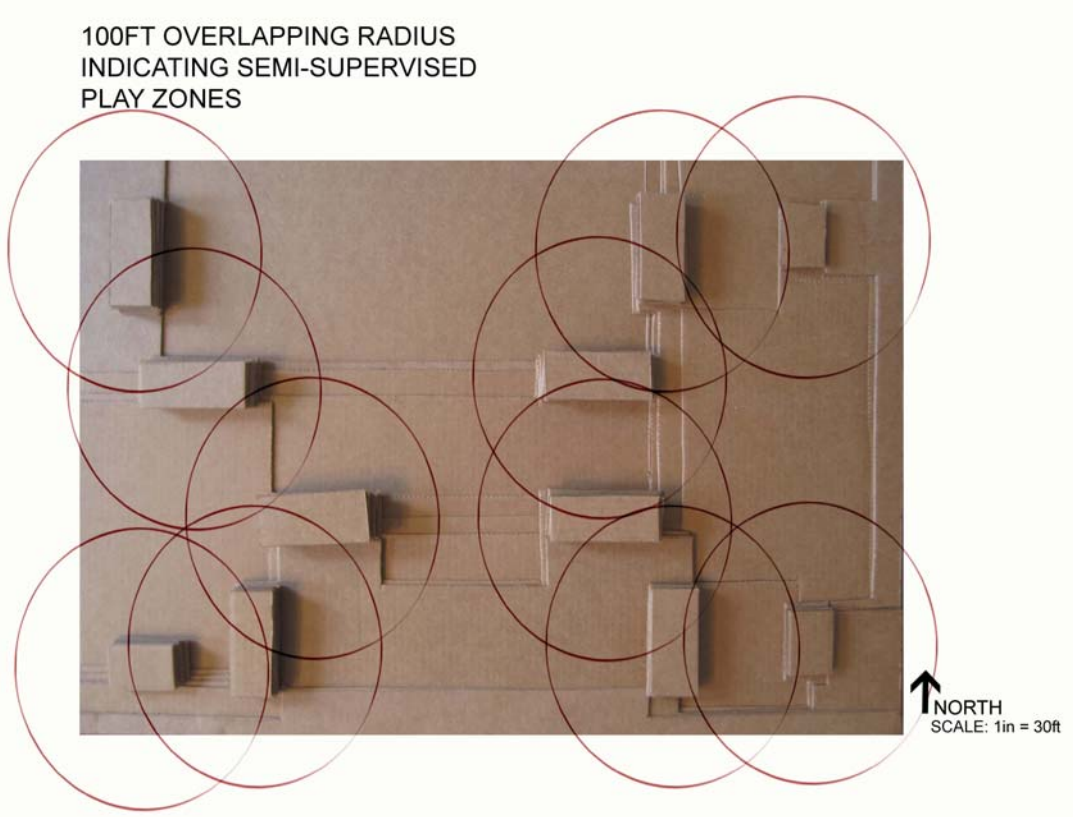


Fig. 58 This exploration revealed this area is considered semi-supervised or has intermittent supervision; therefore inducing more of backyard environment as opposed to a public playground.

Once the terracing was established to provide opportunities for play type development, a tree framework study was conducted. Evaluation criteria for the site design were as follows:

EVALUATION CRITERIA

Criteria used in evaluating the site's design were as follows:

What is the contribution to a child's development?

What is the spatial development of the site according to the play types?

Are the buildings outdoor private spaces shaded?

What are the cultivation requirements of the plantings?

What are the relative heights of the trees to the existing buildings?

What are the chosen plants' contributions to hands-on materials produced on site?

What is the overall coherence and aesthetic value of the design?

Does the design address the play types and respond to educational psychology theories?

TREE FRAMEWORK STUDY

Criteria used in evaluating the tree framework design were as follows:

What plantings will define outdoor public space?

What plantings will provide shade for private and public outdoor spaces?

What plantings will provide seasonal change?

What plantings will enhance the habitats of the environment?

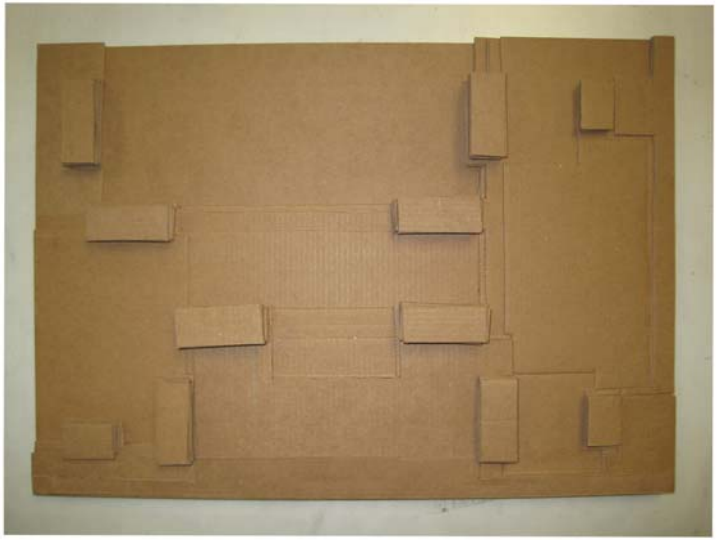
What plantings will provide spatial definition?

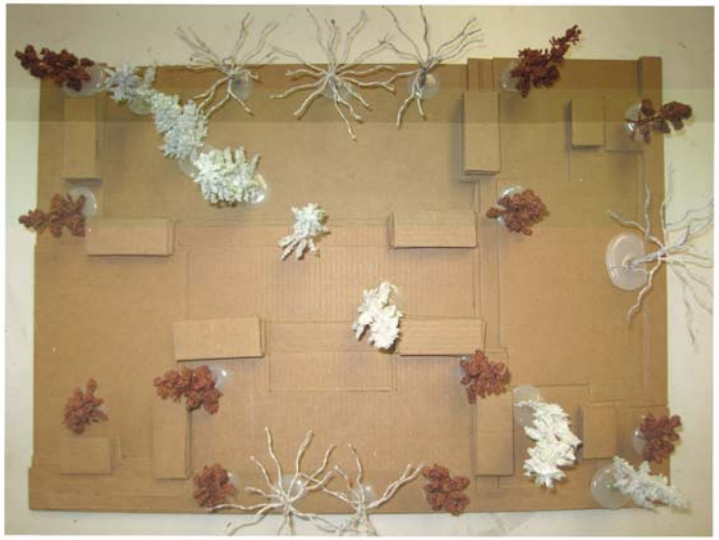
What plantings will give the site individual identity and place-making characteristics?

How will the plantings give order to the site?

An initial graphic exploration of a conceptual tree framework design was conducted.

Fig. 59 A graphic depiction demonstrates physical model explorations of the tree frame work and discusses the contribution of chosen tree frameworks.





PLAY-DESIGN PROPOSAL

MOTON HOUSING PROJECTS

SITE DESIGN BASED ON TERRACING CONCEPT PROVIDING AREAS FOR DEVELOPING LARGE & SMALL MOTOR SKILLS, SOCIAL GATHERING SPACES, SYMBOLIC/PRETEND SPACES, & OBJECT-PLAY SPACES

SITE DESIGN CRITERIA:
FUNCTION
SHADE
TREE CULTIVATION REQUIREMENTS
RELATIVE HEIGHT OF TREES
TREE HANDS-ON PRODUCE
SEASONAL ASPECTS OF TREE
AESTHETICS

DESIGN I

FUNCTION: Provides Spacial Areas for Gathering of large & small groups, no private outdoor space, open spaces/full sun, some street trees

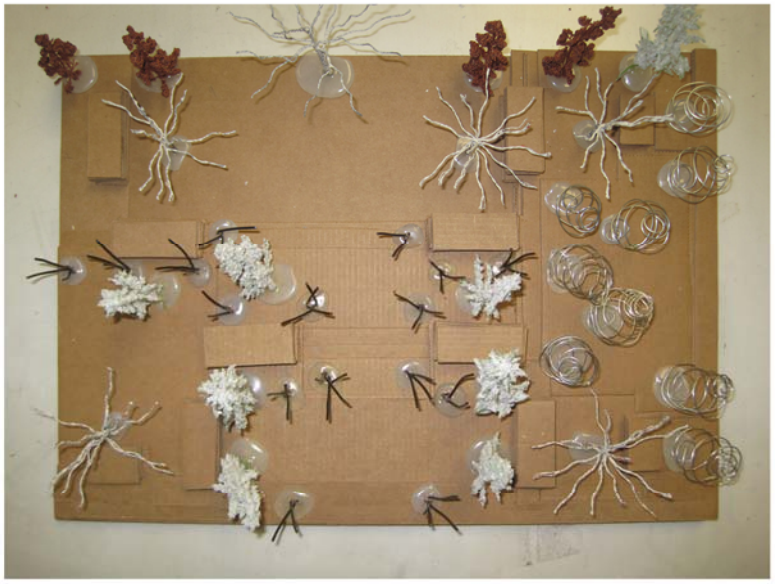
SHADE: Shade provided on Northern sides of buildings, no "private" shade spaces

TREE CULTIVATION REQUIREMENTS & HEIGHTS: Southern Magnolia-40-70ft, sunny or shady moist sites, Tulip Poplar-70-90FT, deep-moist well-drained soil, Red Oak-60-75ft, any well drained site,

TREE HANDS-ON PRODUCE: Magnolia waxy leaves, large ears of red seed pods & thick canopy, Tulip Poplar whirlybird seed pods, yellow-green flowers & well elevated canopy, Red Oak acorns, low branches, filtered sunlight

SEASONAL ASPECTS OF TREE: Magnolia-evergreen, Tulip Poplar-deciduous & flowering, Red Oak-deciduous

AESTHETICS: Tulip Poplar placed diagonally across site, Red Oaks framing all entrances



DESIGN II

FUNCTION: Provides Spacial Areas for Gathering of large & small groups, private outdoor space shaded, harvest produce, variety of hands-on produce, semi-formal design, open spaces/full sun

SHADE: Shade provided on Northern sides of buildings,

TREE CULTIVATION REQUIREMENTS & HEIGHTS: Southern Magnolia-40-70ft, sunny or shady moist sites, Tulip Poplar-70-90FT, deep-moist well-drained soil, Red Oak-60-75ft, any well drained site, River Birch-50-70ft, well-drained soil, Pecan-60-80ft,alongside streams & rivers

TREE HANDS-ON PRODUCE: Magnolia waxy leaves, large ears of red seed pods & thick canopy, Tulip Poplar whirlybird seed pods, yellow-green flowers & well elevated canopy, Red Oak acorns, low branches, filtered sunlight, River Birch paper bark & lacey canopy. Pecan harvest nuts, graceful trunks/shade

SEASONAL ASPECTS OF TREE: Magnolia-evergreen, can be trimmed up, Tulip Poplar-deciduous & flowering, Red Oak-deciduous, River Birch-paper-like bark, Pecan-harvest of nuts, deciduous

AESTHETICS: Variety of entrance trees, overlapping of tree placement, separation of evergreen & deciduous trees

DESIGN III

FUNCTION: Provides Spacial Areas for Gathering of large & small groups, private outdoor space shaded, harvest produce, variety of hands-on produce, semi-formal design, open spaces/full sun, private spaces left open, tree lined street

SHADE: Shade provided on Northern sides of most buildings, shade for small gatherings

TREE CULTIVATION REQUIREMENTS & HEIGHTS: Southern Magnolia-40-70ft, sunny or shady moist sites, Tulip Poplar-70-90FT, deep-moist well-drained soil, Red Oak-60-75ft, any well drained site, River Birch-50-70ft, well-drained soil, Pecan-60-80ft,alongside streams & rivers

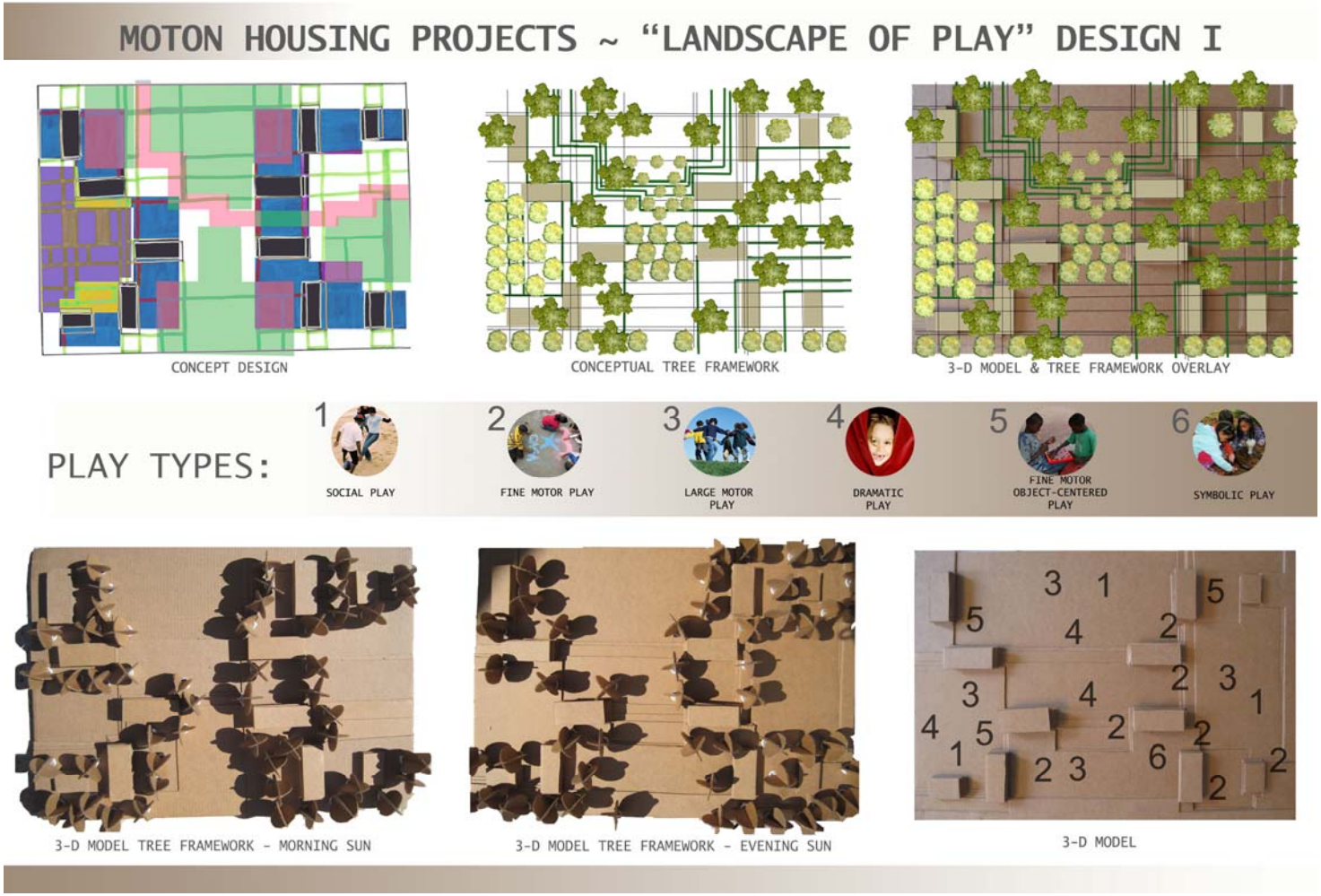
TREE HANDS-ON PRODUCE: Magnolia waxy leaves, large ears of red seed pods & thick canopy, Tulip Poplar whirlybird seed pods, yellow-green flowers & well elevated canopy, Red Oak acorns, low branches, filtered sunlight, River Birch paper bark & lacey canopy. Pecan harvest nuts, graceful trunks/shade

SEASONAL ASPECTS OF TREE: Magnolia-evergreen, can be trimmed up, Tulip Poplar-deciduous & flowering, Red Oak-deciduous, River Birch-paper-like bark, Pecan-harvest of nuts, deciduous

AESTHETICS: Variety of entrance trees with one open-space entrance for multi-use, overlapping of tree placement, mixture of evergreen & deciduous trees

Alina Phillips
Studio 7990

Fig. 60 Physical model explorations of the tree frame work.



A graphic illustration of further investigations of the tree framework possibilities and their provisions for sun and shade was constructed.

Fig. 61 Play type opportunities were identified and indicated by numbers.

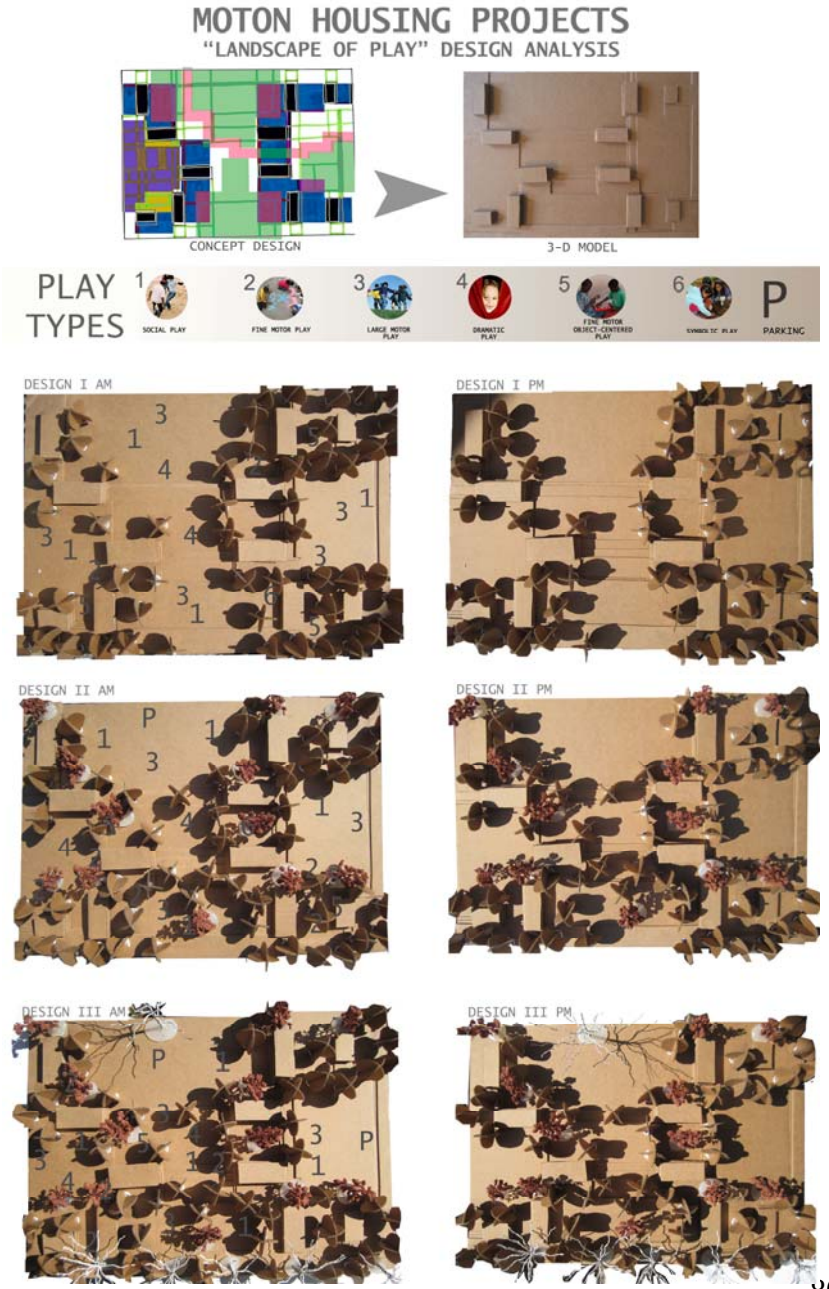


Fig. 62 A proposed site plan of the Moton Housing Projects based on previous investigations of land altered form and the tree framework. It also incorporates parking.

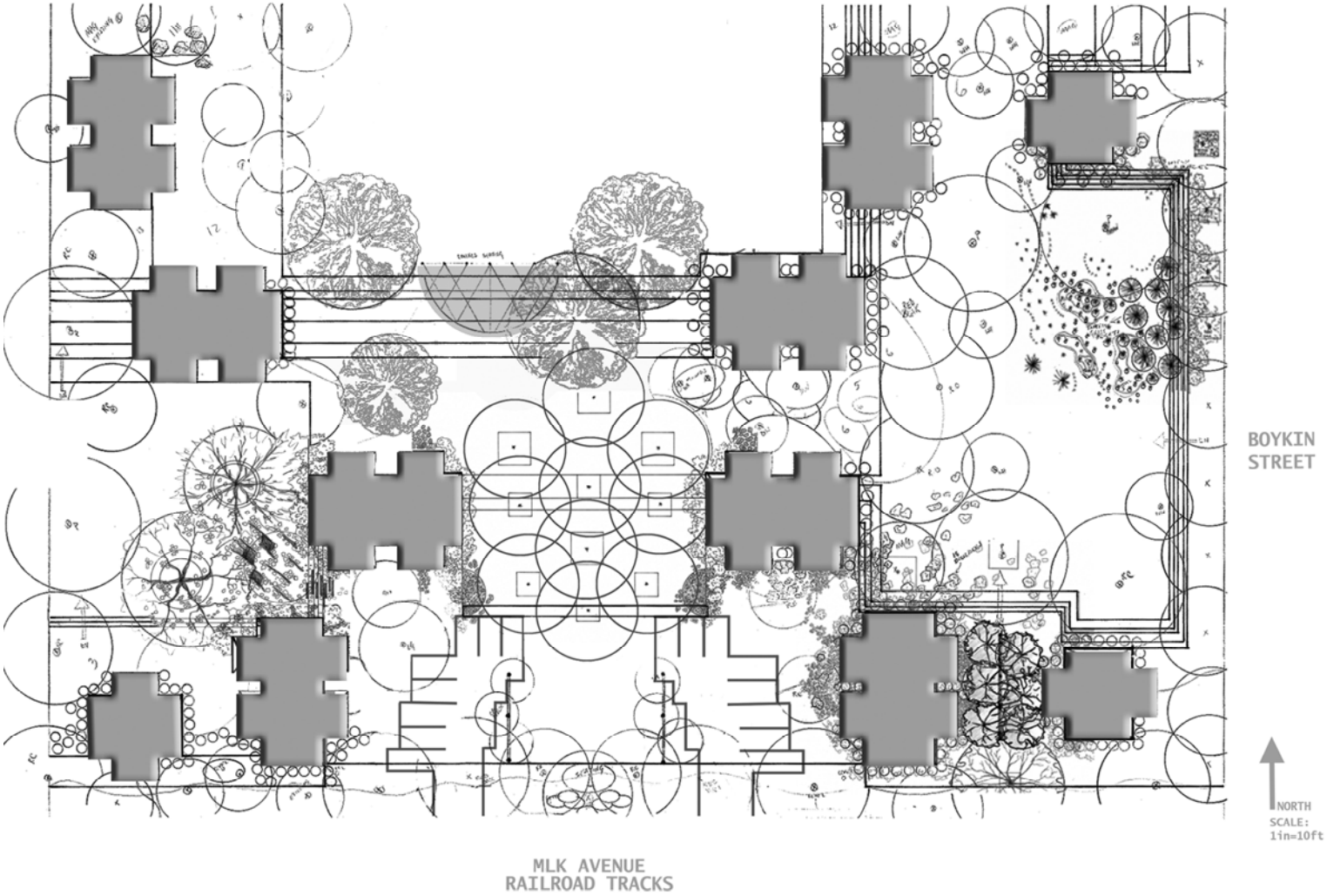


Fig. 63 A graphic rendering depicts the tree framework of the final design.

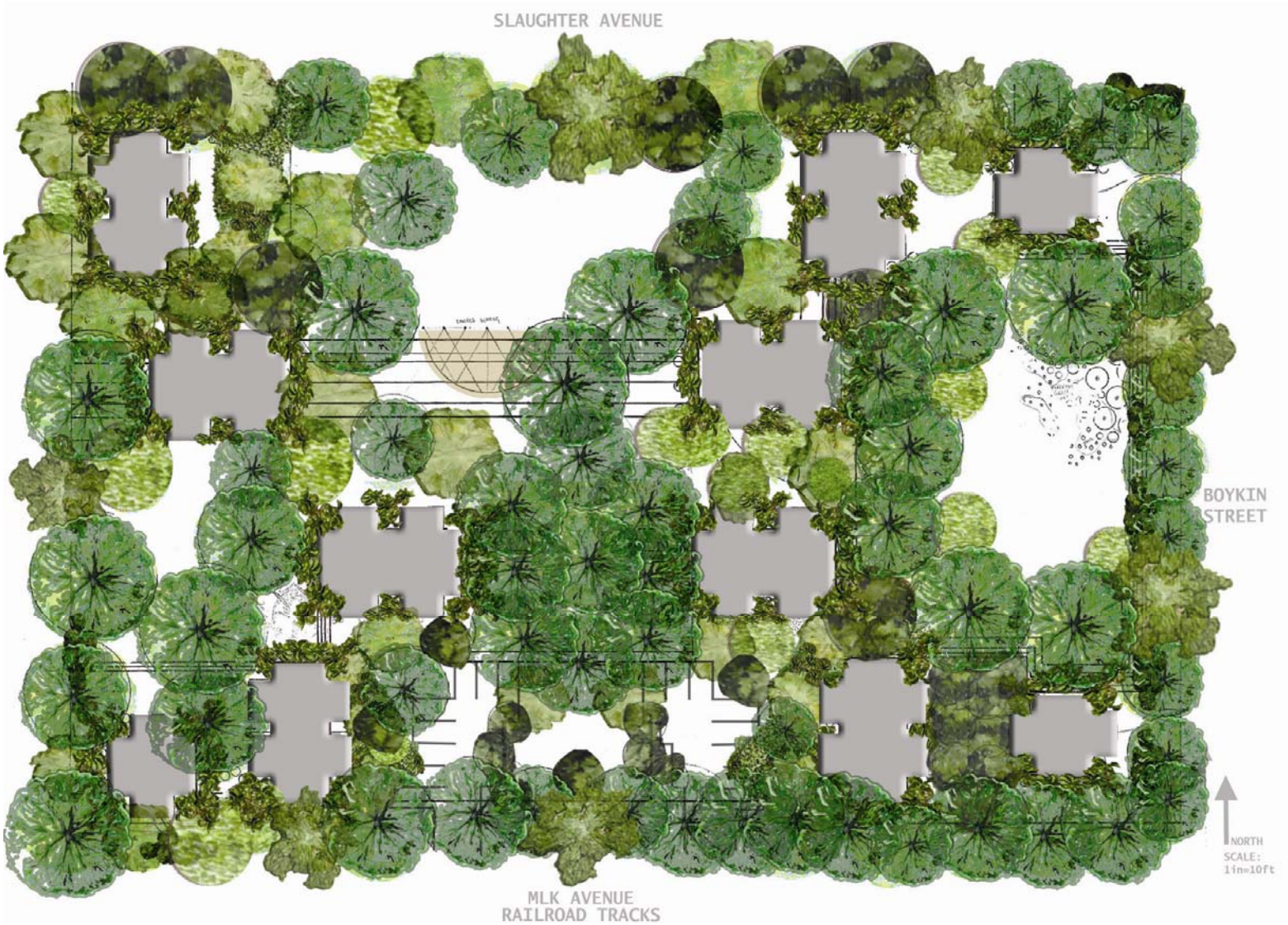
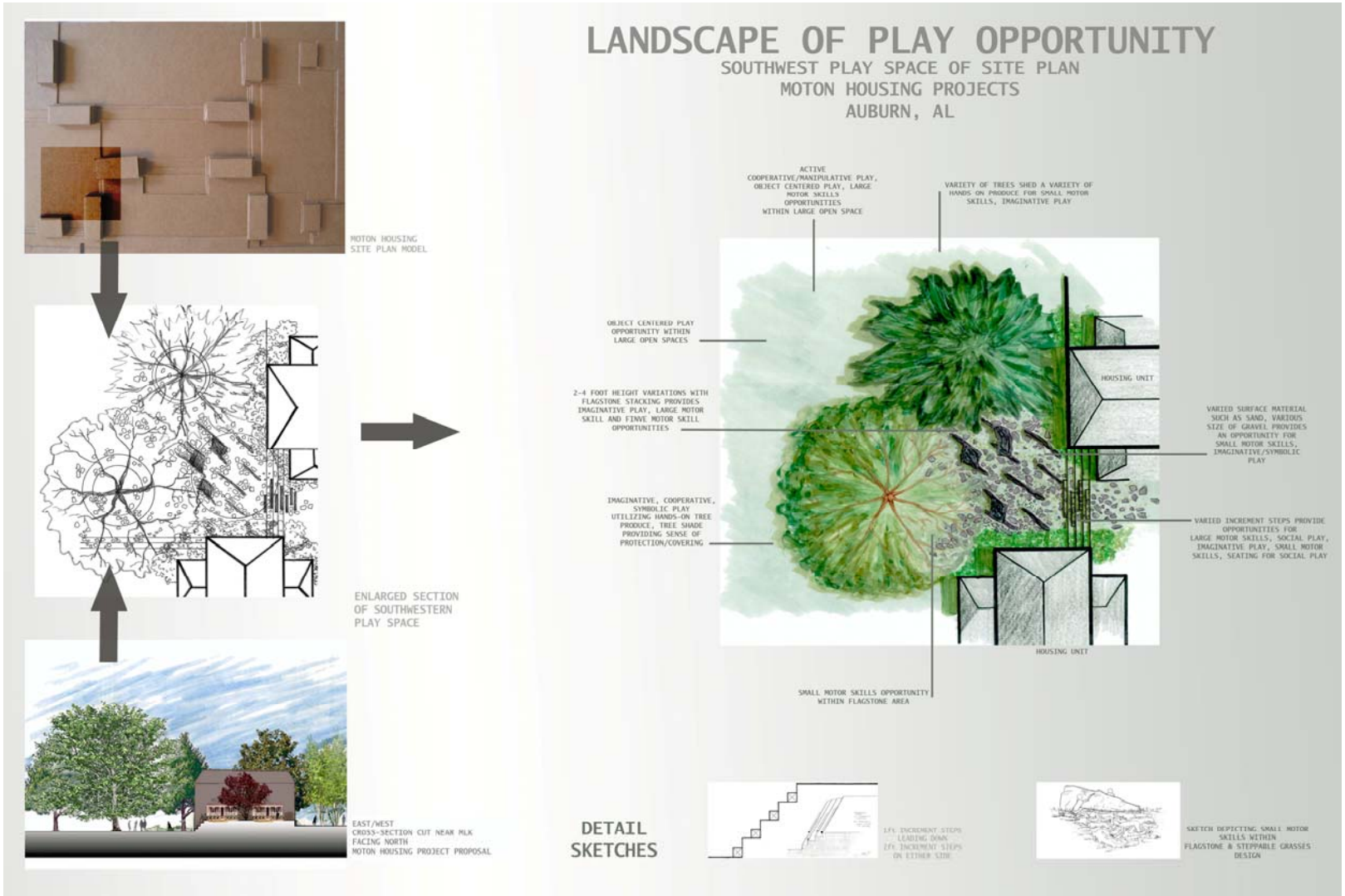


Fig. 64 Cross-sections were drawn of the proposed site.

Stepping down the terraces of 2 foot increments accommodate large motor skills, but smaller children may not be able to conquer this challenge due to size or age. One foot increment steps were designed for this afore mentioned consideration.

Fig. 65 A graphic exploration of the South West Play Space of the site.



Other areas of the site include water play. This feature was designed with the consideration of the safety of young children. This area would provide for play types while including an active water feature that would accommodate some of the site's runoff water. This provides for an opportunity for fine motor skills, creative cooperative or solitary play, object centered play, or social play.

Fig. 66 A graphic rendering of the Center Play Space of the site.

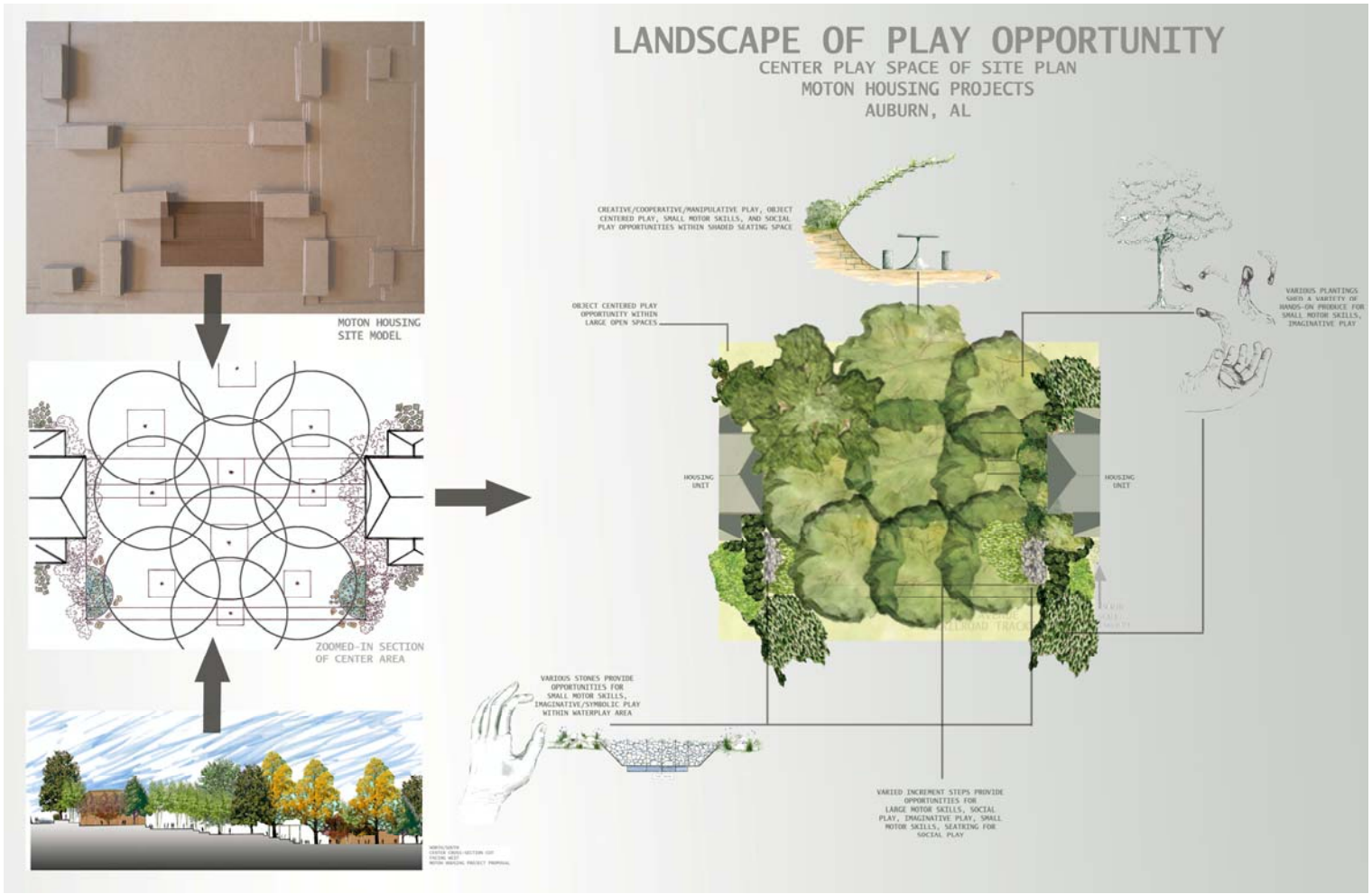


Fig. 67 This illustration shows a construction detail to address shade issues on the Moton Housing site. This feature would provide shade, an opportunity for cooperative social play among peers as well as peer-adult interactions, an area for fine motor skill activity, or cooperative object centered play.

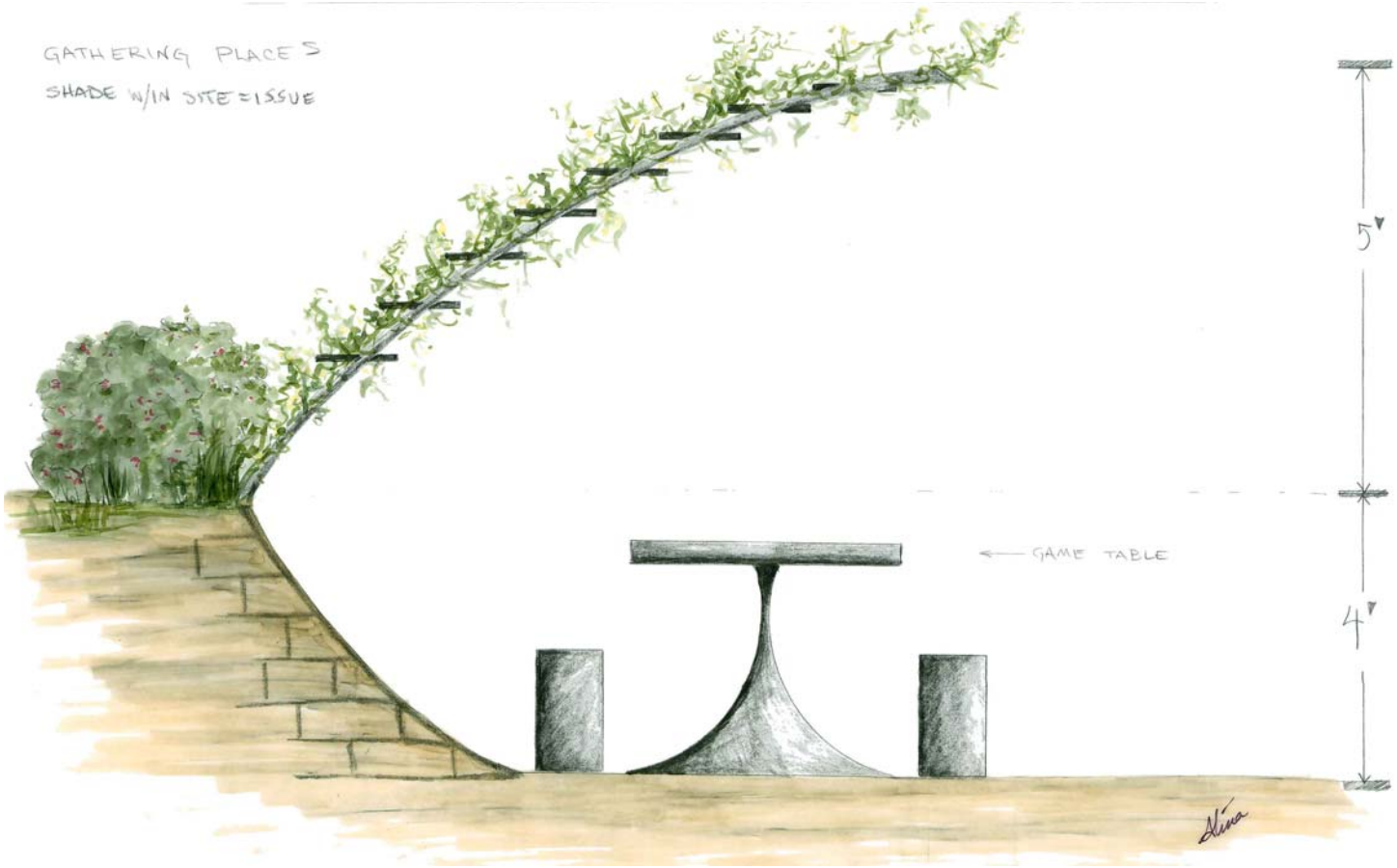


Fig. 68 A graphic rendering of the North East Play Space of the site.

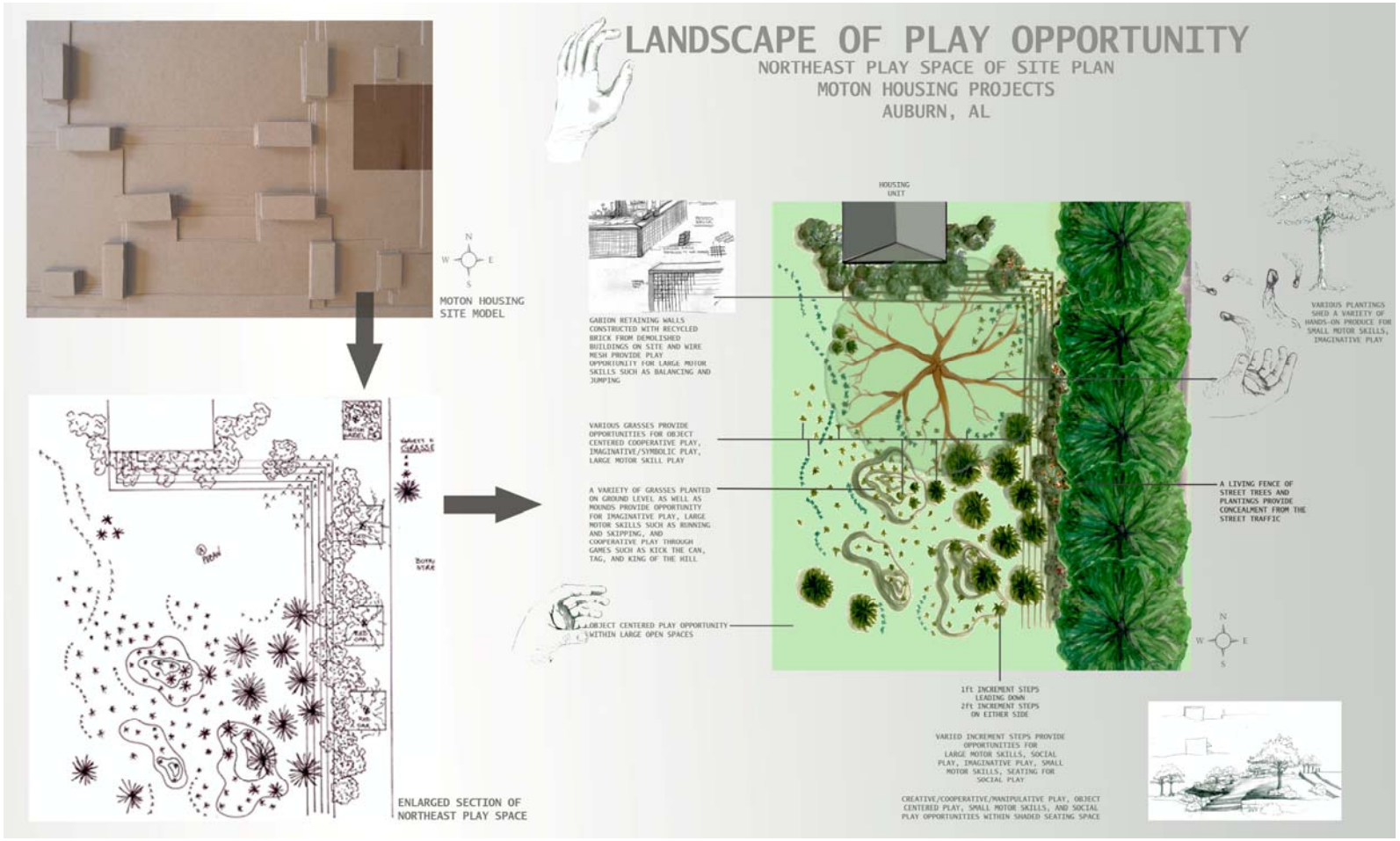
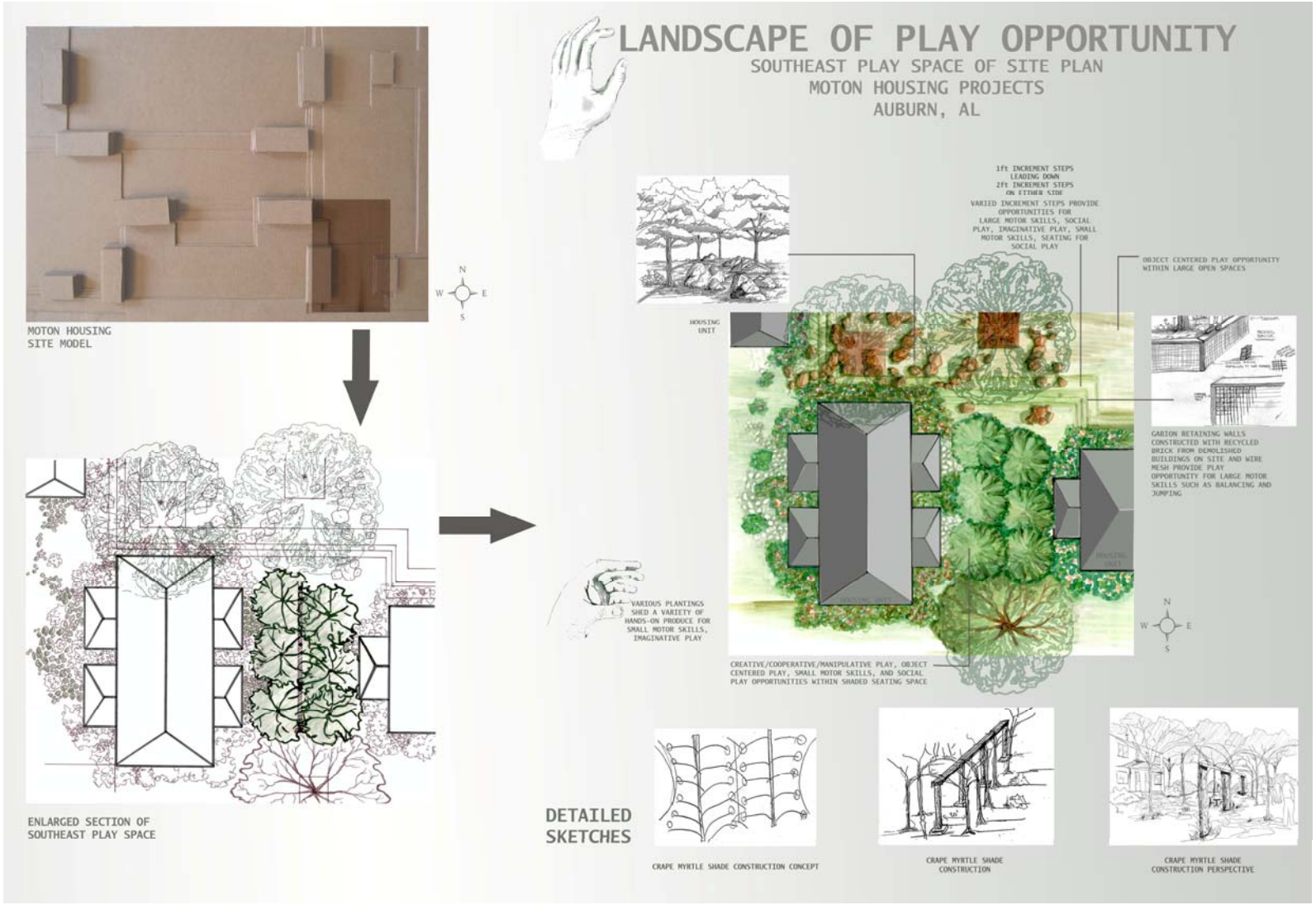


Fig. 69 A graphic rendering of the South East Play Space of the site.



CONCLUSION

The results of the project's landform investigations demonstrate that topography can be manipulated in order to accommodate specific play types. Play requires order and this method of manipulating the land created a predictable order. The terracing also provides for climbing play whereas slopes in the landscape would not. However, rolling down slopes and running down slopes are also a part of play, so slopes in the form of mounds were created in the northeastern section of the site. The mounds varied in height ranging from two to six feet. They were planted with a mixture of grasses to accommodate creative game play as well as running throughout an area with "obstacles". Through establishing and utilizing said play types as the basis and guides, altering the landforms, arranging a framework of trees and including manipulative materials, a landscape of play can be created without the use of contemporary play equipment. A design was developed that would respond to the developmental needs of children. This is important to society since developmentally delayed children struggle to catch up with the skills of their peers after a certain time period. Originally contemporary play equipment was thought to be adequate for child play and developmental skills. This project demonstrates how the landscape can become the more adequate equipment when the objective it to encourage children to interact with their environment. The tree framework produces the debris which in turn becomes the hands-on materials for a child to manipulate. This canopy layer encompasses a sub-layer that orders the site even further through detailed material choices.

A design based on play types can playfully manipulate & change perceptions thru scale, size, and distance. If boundaries can be altered through this method, and new kinds of social spaces develop. Particularly emphasizing size as though the space is experienced through a child's perception is important, as children conceptualize boundaries differently from adults. Adults, who have absorbed cultural boundaries of spaces for long periods of time, obey signage and adhere to social and cultural constraints.

Other site-altering factors of a landscape of play design include:

- provision of manipulative objects such as tree debris
- physical obstacles/challenges and/or structures such as terraces

- textures such as a variety of plantings
- differentiating visual and physical levels incorporated by implementing terracing
- plant diversity
- enhancement of wildlife and their habitats through establishing a tree framework
- open spaces for social and cultural interactions

In addition, factors of what children enjoy in an outdoor environment must be taken into consideration. For instance, path choices are essential as opposed to dead-end spaces. To become completely immersed within a space a child needs to experience diverse opportunities for manipulation, exploration prospects, as well as openness and experimentation. If an unconventional design can be created to encourage the curious, boundary-less child, then the design will encourage the "curious, boundary-less child within" [the adult]. In turn, this will encourage an extension of social interaction and a socially productive space.

Information obtained from this analysis can be used to enhance the design process of a landscape architect. It is important to create designed spaces that encourage and enhance person-to-person experiences, and to create designed spaces where the experience of the space is freeing. Landscape architects can integrate what we know about children and play into designing for a better interactive space for adults and children alike. Design can break the boundaries conceptualized by adults so that the space designed appears to be used successfully by children. When children interact within spaces, they defy spatial boundaries. Movable playthings and/or signage may be necessary to encourage the defiance of boundaries. If landscape architects can design a space that encourages interaction between people of all ages, eliminating their perception of boundaries even as an adult, then the experience becomes more meaningful. By utilizing these factors, a design can be created that is culturally respectful as well as supported by the community.

It is well established by educators, psychologists and physicians that children need experience the outdoors, have multiple opportunities to develop within the realm of nature. As Piaget states: children must be able to freely play and manipulate their play spaces, learning through their own experimentations, investigations and research, and construct for themselves in order to

understand it and become individuals capable of creativity and not simply repetition. [Bjorklid, 1982] In conclusion, children do not need to have primary colored playgrounds dictated by an adult designed theme. Children need the freedom to order their own world. They need permission to manipulate their perception of their environment through their imagination. From these activities creative beings evolve with the ability to problem solve. Children's play is essential to our development. Child's play is the stepping stone to many other more complex skills. Without play a gap is left in some part of the child's development. Children have the right to play as much as adults have the right to communicate.

Limitations on this creative process of designing a landscape of play would include the ability to find sites with established networks. Children are essentially unpredictable when it comes to anticipating what play they will choose on any given day. Adults cannot make children play since that would ruin the very essence of play which is freedom.

Future research should ask the following questions: How do children interact with space? Why do their experiences seem more free than adults? How do children defy physical boundaries? How can we learn to design so that children interact in spaces without boundaries? What are the intimidating factors/boundaries that keep children from interacting in a space? Can the landscape architect design in form by utilizing materials to eliminate preconceived boundaries encouraging children to interact with the design without structured man-made equipment? Are signs the only inhibiting factor that induce feelings of boundaries? Can signs encourage space interaction defying the existing boundaries? Does signage play a part in space interaction? To what extent do social and cultural aspects affect social interaction within a space? Why do children defy boundaries so easily?

CHAPTER 7

LITERATURE SURVEY

1] Title: *Teaching with Culture in Mind: Cross-Cultural Learning in Landscape Architecture Education.*
Authors: Hill, Margarita M.
Citation: *Landscape Journal*; 2005, Vol. 24 Issue 2, p117-124, 8p
Abstract: The articles included in this theme issue of *Landscape Journal* raise a series of questions central to the experience of cross-cultural learning in a variety of geographic and cultural settings. This introductory article examines why it is important to address the cross-cultural processes of place-making. It also outlines approaches and methods for teaching design studio and addresses the design of the pedagogical experience in an era of globalization. The article proposes a theoretical basis for cross-cultural learning in relation to a multicultural--even transcultural--society, and the increasing movement between places. It identifies patterns of relationships in the construction of identity and place, and provides normative guidance on meaningful cross-cultural exchange. It raises issues related to the challenges faced in cross-cultural communication and in overcoming biases and stereotypes. The article suggests how experiential learning and distance learning within a cross-cultural setting can help students to develop a range of skills and competencies, including the ability to engage multiple voices in diverse partnerships.
Questions/Statements: What are the experiences of cross-cultural learning? Why is it important to address the cross-cultural process of in a variety of geographic and cultural settings? The article proposes a theoretical basis for cross-cultural learning in relation to a multicultural--even transcultural--society, and the increasing movement between places.

2] Title: *Design Collaboration in the Space of Cross-Cultural Flows.*
Authors: Hou, Jeffrey, Kinoshita, Isami, Ono, Sawako
Citation: *Landscape Journal*; 2005, Vol. 24 Issue 2, p125-139, 15p, 2 diagrams
Abstract: This article examines the development and outcomes of a collaborative design studio involving two groups of landscape architecture students in Japan and the United States. Through both virtual (online) and real (face-to-face)

interactions, participating students jointly developed urban design proposals for two respective local neighborhoods in Matsudo and Seattle. The challenges for the studio included communicating across cultural, geographic, and technological barriers, as well as more subtle differences in design culture and approach. These barriers and challenges present a stark contrast to the seamless space of flows that often characterize the globalized network of transactions and communication. In analyzing the studio outcomes and pedagogical lessons, the article explores the complementarities of online collaboration and cross-cultural learning. Specifically, it examines the mechanisms of cross-cultural learning in an online environment and the processes through which cross-cultural learning often the windows for a critical understanding of the socio-cultural process of design in the distal and network age.

Questions/Statements: What are the mechanisms/barriers of cross-cultural learning in an online environment? What are the processes through which cross-cultural learning occurs? The challenges for the studio included communicating across cultural, geographic, and technological barriers, as well as more subtle differences in design culture and approach.

3] Title: *Seeing Landscape Through Cross-Cultural Eyes: Embracing a Transcultural Lens Toward Multilingual Design Approaches in the Landscape Studio.*

Authors: Shenglin Chang

Citation: *Landscape Journal*; 2005, Vol. 24 Issue 2, p140-156, 17p, 1 diagram

Abstract: This article reflects on the value of cultivating transcultural awareness in design education. The term "transcultural lens" is derived from the emerging critical concept of transculturality, or the intermingling of one's domestic culture with many other foreign cultures. This concept relates to the melding and mixing of cultural elements expressed by a group of American students in the University of Maryland's Landscape Architecture Program who worked on the Taiwanese Chi Chi Earthquake Memorial Park Competition, design. When these students examined their own American lens in designing a Taiwanese memorial park, the transformation of this lens allowed them to manipulate design patterns and languages of their native culture (American) and the newly encountered culture (Taiwanese) in an innovative yet sensitive way. This generated a new design approach that I am calling American-yet-Taiwanese; that not only distinguished the unique quality and practices of different cultures, but also blended these cultures together in an evolutionary way.

Questions/Statements: What is the value of cultivating transcultural awareness in design education? This concept relates to the melding and mixing of cultural elements.

4] Title: *Dialogue through Design: The East St. Louis Neighborhood Design Workshop and South End Neighborhood Plan.*
Authors: Lawson, Laura
Citation: *Landscape Journal*; 2005, Vol. 24 Issue 2, p157-171, 15p, 1 diagram, 2 maps
Abstract: This article reflects on cross cultural learning in the context of the University of Illinois' East St. Louis Neighborhood Design Workshop and its two-year engagement with the South End New Development Organization to develop a neighborhood plan. Initial descriptions of East St. Louis and the student body surest the cultural and experiential hurdle's to he overcome through engagement techniques. In light of service-learning and participatory design theory and methodology, the design studio provides an opportunity to advance cultural competence through a reflective, interactive design process. Acknowledging that cultural differences between students and residents was initially affecting the ability to produce a useful plan, the faculty revised the course to incorporate new approaches to design and discussion, including quick-paced scenario charrettes and development of alternative neighborhood visions. The ensuing discussions helped community members and students develop a clearer vision of what the residents wanted for their neighborhood's future, which the students could then develop into a plan and related design proposals. The essay concludes with reflections on the meaning of cross-cultural dialogue for landscape architecture education and practice.
Questions/Statements: Can cross-cultural learning be overcome through engagement techniques? The essay concludes with reflections on the meaning of cross-cultural dialogue for landscape architecture education and practice.

5] Title: *Cross-Cultural Learning and Study Abroad: Transforming Pedagogical Outcomes.*
Authors: Myers, David N., Hill, Margarita, Harwood, Stacy Anne
Citation: *Landscape Journal*; 2005, Vol. 24 Issue 2, p172-184, 13p, 1 diagram, 1 graph, 2 maps
Abstract: This article reflects on the multiple dimensions of cross-cultural learning as a transformational process. Our case study, the Sustainable Futures Programs, is a multi-institutional, interdisciplinary, collaborative study-abroad program hosted by the Monteverde Institute in Costa Rica. Community-based studio projects are focal points of the program and range from site-

scale landscape and architectural developments to conservation- based planning and design. North American students work with native Costa Ricans and naturalized Quakers living in the community, as well as with accompanying faculty from architecture, landscape architecture, and urban planning. The students gain new insights into diverse cultural systems and values, alternative professional methods and design solutions, as well as their own personal identity and career aspirations. The paper describes and analyzes each of the program structures, identifies the students' resulting personal and professional transformations from a student perspective, and summarizes program, challenges. The transformation process extends beyond the students, providing transformational opportunities for the faculty, host institution, community-based organizations, and local residents.

Questions/Statements: What are the multiple dimensions of cross-cultural learning as a transformational process? The paper describes and analyzes each of the program structures, identifies the students' resulting personal and professional transformations from a student perspective, and summarizes program, challenges.

6] Title: *Assessing International Education in Contemporary Landscape Architecture.*

Authors: Hewitt, Robert, Nassar, Hala Fouad

Citation: *Landscape Journal*; 2005, Vol. 24 Issue 2, p185-197, 13p, 4 graphs

Abstract: The paper provides needed definition and description of international education in landscape architecture through an analysis of four principal sources of data, collected from. CELA-participating landscape architecture programs between 2002 and 2005. The first two principal sources were two consecutive surveys of landscape architecture department heads concerning international education at their respective institutions. The third source was a series of focused interviews with landscape architecture department heads to supplement the two surveys. The fourth source comprised two web-based reviews of CELA-participating landscape architecture programs completed in 2002-3 and in 2005. The findings from the data were evidenced in five principal areas: 1. Program background, in terms of the number of contemporary programs offering landscape architecture international education, the historical development of those programs, and contemporary factors that influence program change. 2. Program trends and variations in terms of study destination preferences, available activities, affiliation and exchange agreements, the timing of activities within the academic year, participating students and faculty, the extent of financial aid for students, unique study destinations, and unique activities. 3. Program approaches, program emphasis, the influence of

university policy, and the role of international faculty and students in program activity, specifically in terms of internationalization and multiculturalism. 4. Student preparation and assessment in terms of student orientation and student surveys before and/or after participation in international education activities. 5. Perceived benefits and problems in terms of student and faculty international cultural experience, pedagogy, professional development, student recruitment, faculty research, program outreach, cost of participation, logistics, and administration. The paper concludes with recommendations for further research on international education and its influence on the profession of landscape architecture.

Questions/Statements: What are the four principal sources of data of international education in landscape architecture? This paper provides the needed definition and description of the four principles.

7] Title: *Learning by Teaching Others: a Qualitative Study Exploring the Benefits of Peer Teaching.*

Authors: Wagner, Mimi, Gansemer-Topf, Ann

Citation: *Landscape Journal*; 2005, Vol. 24 Issue 2, p198-208, 11p, 1 chart, 1 diagram

Abstract: This research explores how peer-to-peer teaching, a form of collaborative learning, can enhance student learning in non-studio landscape architecture courses by integrating the learning-by-doing model employed and valued in our curricula and profession. We describe a peer-teaching case study, and use qualitative research analysis to explore students' perceptions of the method's impact on their learning. Students reported that the peer teaching experience increased their understanding of the subject matter, enabled them to apply course concepts in new settings, and encouraged them to take initiative and be responsible for their own learning. We suggest that peer teaching is a valuable, even critical, experience for students in a professional education program. As this is a single case study utilizing a relatively new pedagogical approach, particularly as it relates to landscape architecture education, we encourage additional research on applications that explore the broader implications for student learning.

Questions/Statements: Can students learn in a non-studio landscape architecture format through peer-to-peer teaching by integrating the learning-by-doing model employed and valued in our curricula and profession?

DEFINITION OF TERMS

ADVENTURE PLAYGROUNDS – playgrounds developed around the 1970's which encouraged children to manipulate an outdoor environment according to the child's imagination. Supervision was required; tools such as hammers, nails, wood, and hand saws were supplied.

ARCHITECTURAL GEOMETRIC PROJECTIONS – A design process that incorporates the process or technique of reproducing the spatial forms of a building upon a plane or curved surface or a line by projecting its points. *

DIVERSE HABITAT – an environment composed of various plantings encompassing distinct or unlike elements or qualities that provide food, shelter and other living necessities for animals within that area.*

HANDS-ON - Relating to, being, or providing direct practical experience in the operation or functioning of something such as hands–on training. It can also mean involving or allowing use of or touching with the hands for example, a hands–on museum display. It is characterized by active personal involvement.* This term dates to 1969 and is prevalently used in the field of education.

LANDFORM MANIPULATION – A calculated alteration in topography that transforms the ground plane

LANDSCAPE OF PLAY – The result of applying developmental needs of children as a design method process.

PIAGET - Swiss psychologist, [1896-1980], Swiss psychologist who was the first to make a systematic study of the acquisition of understanding in children. He is thought by many to have been the major figure in 20th-century developmental psychology. [1]

PLACE IDENTITY – The distinguishing character or personality of an individual place; genus loci - the pervading spirit of a place*

PLAY – The conduct, course, or action of a game, recreational activity; *especially* the spontaneous activity of children, absence of serious or harmful intent, an act, way, or manner of proceeding. The term is derived from Middle English and dates before the 12th century. *

PLAY TYPES – Refers to categories of play refined from research indicating childhood interactions either with their environment, other children, other adults, or solitary actions. *

PLAY PLACE – Spaces where play activities occur.

THEORETICAL DESIGN BASIS – hypothesis used as a foundation for a design process.

TERRACE - A raised embankment with the top leveled; one of usually a series of horizontal ridges made in a hillside to increase cultivatable land, conserve moisture, or minimize erosion. This term is derived from the Latin "torrere" to parch, also meaning earth,/land and is dated in 1515.*

TOPOGRAPHY - The art or practice of graphic delineation in detail usually on maps or charts of natural and man-made features of a place or region especially in a way to show their relative positions and elevations. It is also the configuration of a surface including its relief and the position of its natural and man-made features.*

*Definitions courtesy of Merriam-Webster Online Dictionary. 2010. Merriam-Webster Online. 6 May 2010.<http://www.merriam-webster.com/dictionary/ >

[1] "**Jean Piaget**." Encyclopædia Britannica. 2010. Encyclopædia Britannica Online. 06 May. 2010 <http://www.britannica.com/EBchecked/topic/459096/Jean-Piaget>.

LIST OF ILLUSTRATIONS

REFERENCES

1] Caillois, Roger, Man, Play and Games, N.Y. Free Press, 1961

2] Chudacoff, Howard, Children at Play – An American History, 2007

3] Bjorklid, P. (1982). Children's Outdoor Environment. Stockholm: Stockholm Institute of Education.

4] Hart, R. (1994). The Right to Play and Children's Participation. *Presented at:* Article 31: the child's right to play, Birmingham, England. Available Online: http://www.pps.org/urbanparks/right_to_play.html

5] Huizinga, Johan, (1949), Homo Ludens: A Study of the Play-Element in Culture, Routledge, London EC4P 4EE, Digital printing 2003

6] Fromberg, Doris P., Play from birth to twelve and beyond: contexts, perspectives, and meanings, Library of Congress Cataloging-in-Publication Data, 1998

7] Stine, Sharon, Landscapes for Learning : creating outdoor environments for children and youth, J. Wiley & Sons, New York, 1997

8] Sutton, Lia, *Adventure Playground ~ "A Children's World in the City"*, http://adventureplaygrounds.hamshire.edu

9] Moore, R.S. (1986). Childhood's Domain: Play and Place in Child Development. Berkley, CA: MIG Communications.

10] Moore and Wong (1997). Natural Learning. The life history of an environmental Schoolyard. Berkley, CA: MIG Communications.

11] Pyle, Robert (2001). Eden in a Vacant Lot: Special Places, Species and Kids in the Community of Life. In: Children and Nature: Theoretical, Conceptual, and Empirical Investigations. Kahn, P.H. and Kellert, S.R. (eds). Cambridge: MIT Press (In Press).

PAGE 18

12] Proshansky, H.M., Fabian, A.K. and Kaminoff, R. (1983) 'Place-identity: Physical world socialization of the self', Journal of Environmental Psychology, Vol. 3, pp. 57-83.

13] Hague, C. and Jenkins, P. (Eds)(2005) Place identity, planning and participation, London ; New York : Routledge, 2005. ISBN: 0415262410 (hard cover) 0415262429 (soft cover) 0203646754 (ebook)
PG 19
14] Cloke, P. and Jones, 0. (2005) "Unclaimed Territory": Childhood and Disordered Spaces(s), Social and Cultural Geography, 6, 3, pp 311-323.
16] Philo, C (2003) 'To Go Back up the Side Hill': Memories, Imaginations and Reveries of Childhood, Geographies of Childhood, 1, 1, pp 7-23.
17] Stephen Trimble, 1994, “The Scripture of Maps, the Names of Trees”, The Geography of Childhood, Boston; Beacon Press
18] Sutton-Smith, Brian, (1995), The Future of Play Theory, State University of New York Press, Albany, New York.
19] Whitman, Walt, (1855), “There Was a Child Went Forth,” Leaves of Grass, 1855, Penguin Group, London England.
20] Piaget, Jean, and Inhelder, Barbal, (1969), The Psychology of the Child, Basic Books, New York, New York.
21] Esser, N., Heiberger, S. and Lee, B. (Eds.) (2003). “*Creating Safe Play Areas on Farms*”. Marshfield, WI: Marshfield Clinic, National Children’s Center for Rural and Agricultural Health and Safety
22] Duerr Evaluation Resources, (1983), 55 Hanover Lane, Chico, CA 95973 (http://www.duerrevaluation.com/)

ENDNOTES

2] Palmer, L. Developmental Brain Stimulation in School and Day Care Settings. Winona State University. (www.innovationcentral.org/smar_research.htm)

3] Rivkin, M. Outdoor Experiences for Young Children. ERIC Digest. December 2000. (www.ael.org/eric/digests.edorc007.htm)

4] Perry, B., Hogan, L., Marlin, S. Curiosity, Pleasure and Play: A Neurodevelopmental Perspective. Haaeyc Advocate. June 2000. (www.childtrauma.org/Curiousity.htm)

5] Thomson, D. Matching Children and Play Equipment: A Developmental Approach. Early Childhood News. March/April 1999.

6] Galetta, J. Building Better Brains: With New Research Showing That Simulation Spurs Brain Growth. Chattanooga Times-Free Press. 3/31/2000. (www.uwchatt.org/invest_brainsarticle.htm)

7] Perry, B.

8] Thomson, D. Matching Children and Play Equipment: A Developmental Approach.

BIBLIOGRAPHY

Websites:

Natural Learning Initiative, North Carolina State University
http://www.naturalearning.org

Consumer Product Safety Commission Playground Safety
Publications
http://www.cpsc.gov/cpscpub/pubs/playpubs.html

Alsup, R.E. (2000). Commentary on the Convention on the Rights of the Child.
Available Online: http://www.sonoma.edu/psychology/humanistic/child_rights.html

The American Association for the Child's Right to Play.
(1982). IPA Declaration of the Child's Right to Play IPA. Available Online:
http://www.ncsu.edu/ipa/IPA pages/Declaration.html

Amnesty International. United Nations Convention on the Rights of the Child
Frequently Asked Questions.
Available online: http://www.amnestyusa.org/group/crn/crcfaq.htm

Books and Articles:

Almy, M. (Ed.). (1968). Early childhood play: Selected readings related to cognition and motivation. New York: Selected Academic Readings.

Altman, I. & Wohlwill, J. F. (Eds.). (1978). Children and the environment. New York and London: Plenum Press.

Cooper, C. C. (1970, October). Adventure playgrounds: Europe leads U.S. in reuniting its children with "the lost landscape of spontaneity." Landscape Architecture, pp. 18-29, 88-91.

Bee, H. L. (1992). The Developing Child. New York: HarperCollins College Publishers.

Bengtsson, A. (1972). Adventure Playgrounds. New York and Washington: Praeger Publishers.

Caplan, F. & Caplan, T. (1973). The Power of play. New York: Anchor Press/ Doubleday, Garden City.

The Great Outdoors: Restoring Children's Right to Play Outside. Mary Rivkin. National Association for the Education of Young Children, Washington, D.C., 1995.

Kamii, C. & DeVries, R. (1978). Physical knowledge in preschool education: Implications of Piaget's theory. Englewood Cliffs, NJ: Prentice-Hall.

Play for All Guidelines: Planning, Designing and Management of Outdoor Play Settings for All Children. Robin C. Moore, Susan M. Goltsman, Daniel S. Iacofano. MIG Communications. Berkeley, Calif.,1992.

Plants for Play: A Plant Selection Guide for Children's Outdoor Environments. Robin C. Moore. MIG Communications. Berkeley, Calif., 1993.

Places for Childhood: Making Quality Happen in the Real World. J. Greenman. Child Care Info Exchange. Redmond, Wash., 1998.

Outside Play and Learning Book: Activities for Young Children. Karen Miller. Gryphon House. Beltsville, Md., 1989.

ANNOTATED BIBLIOGRAPHY

Books were chosen with regard to park design, human characteristics, factors and perceptions, human development in diverse cultures, play-grounds, and how children spend their time.

Some of my motivating thesis thoughts were as follows: If I can design a space that encourages interaction of people [of all ages], eliminating their perception of boundaries as an adult, then the space designed becomes a more meaningful, memorable experience. Questions considered were as follows:
How do children interact with space?
Why does their experience seem more free than adults?
How do children defy physical boundaries?
How can we learn to design so that adults interact as children act in spaces without boundaries?
What are the intimidating factors/boundaries that keep adults from interacting in a space?
Are signs the only inhibiting factor that induce feelings of boundaries?
Can signs encourage space interaction defying the existing boundaries?
Does signage play a part in space interaction?
To what extent does social and cultural aspect affect social interaction within a space?
Why do children defy boundaries so easily?
What if spaces have a certain detail, such as the scale or dimensions that drive whether or not the boundaries will be defied?
Can the mystery of design intrigue & enhance interaction and disregard boundaries?

1] Whyte, William H., <u>The Last Landscape,</u> [1968], University of Pennsylvania Press, Philadelphia, Pennsylvania

This book is hailed as “The Best Study Available on the Problems of Open Space” by the New York Times. The author conveys a theory about urban sprawl and how to make it “a thing of the past”. He establishes there is only the same amount of land and we all deserve un-cramped and rewarding lives. This book reveals an agenda as a collection of actions to make sprawl

a thing of the past. Concentration is noted as the genius of the city. Whyte tackles a concept defined as a two-generational problem. It is the struggle to reconcile land conservation with the growth occurring in America since the end of World War II. Whyte discusses two ideas: scenic easements and cluster development. He had spent ten years working on landscape and development as a respected policy as well as a legislation writer for new state and federal laws and regulations. Whyte also acted as co-chairman of President Lyndon B. Johnson's Task Force on Natural Beauty. This book reveals a concept about the reduction of urban sprawl, utilizing scenic easements, a legally forcible restriction of altering the land's existing scenery, donating this land to a government conservation agency or nonprofit community group [aka: land trust] and incorporating open space. It proposes an option to incorporate parks into the community legally without encouraging sprawl. Knowing how to avoid the problems of open space as well as implement places of interaction will assist my thesis design. In comparison with Viewing Olmsted this book also considers the open landscape to be valuable and worth manipulating for the pleasure and preservation of/for future generations.

2] Roopnarine, Jaipaul L, Hooper, Frank H., Johnson, James Ewald, Children's Play in Diverse Cultures, [1994], State University of New York, Albany

The authors discuss the need to analyze play in diverse cultural settings. Cultures contexts that were chosen include East Indian, Taiwan, Japan, Polynesia, Puerto Rican, Italian, and Yup'ik Eskimo. Age ranges of interaction include early childhood, elementary, and teenagers. The issues pertain to intracultural and intercultural variations in young children's cognitive and social development in reference to these two types of development have come into the forefront of American society. They attempt to extend their cultural understanding based on a key aspect of young children's development. This aspect is "play". Motivations to compile this information relied heavily on the changing demography in the U.S., population movement to urban centers in developing countries and the diverse social-structural familial organizational patterns that are evident in preschool-age children and their families in the U.S. and abroad. In addition the increased emphasis on early childhood stimulation through play for young children prior to kindergarten and the establishment of national preschool/daycare programs in a number of countries in the world, the need to broaden their theoretical understanding of the cultural context and developmental dynamic in young children as well as the need to expose and educate early childhood professionals influenced the topics discussed in this book. This book can assist in the understanding of children and the framework of play [here in the

U.S. as well as abroad] and therefore influence landscape architectural design in the realm of how children interact without regard to boundaries. This book in combination with the article,*"How American Children Spend their Time"* can give comparison concept of how children developmentally play. From this information we can discern and implement designs suitable to encourage higher developmental learning levels among children.

Roopnarine completed his Ph.D. at the University of Wisconsin. He is Professor of Child Development at Syracuse University. His research interests include relationships across cultures, children's play across cultures. He was also Indo-U.S. senior Professor of Psychology at the University of New Delhi, and a Visiting scholar at the University of West Indies in Jamaica. He is also the author of several books addressing childhood and families.

3] Baljon, Lodewijk, Designing Parks, [1992], Architectural & Natural Press, Amsterdam

The author describes the phenomenon of the park as a research project. The concept of comparative design analysis is introduced based on the objectives, instruments and characteristics of the method of design analysis. Baljon uses the Parc de la Villette in Paris as his comparative design analysis. He also discusses the circumstances of the competition, the existing characteristics of the site in addition to the nature of the program required. He terms a park to be a place of reconciliation between nature and man. I hope to apply techniques concerning park designing by utilizing the information with regard to understanding of the layout and spatial coherence of the park. Once the understanding of the spatial relationships of the park is established, I can then apply the cognitive understanding of children and play in order to develop a design of high interaction and disregard of boundaries.

4] Kaplan, Rachel, Kaplan, Stephen, and Ryan, Robert L., With People in Mind – Design and Management of Everyday Nature, [1998], Island Press, Washington, D.C.

A study of the relationship between people and nature revealed that there was very little research on this topic. The authors address this issue in addition to the preference of people concerning natural environments vs. other settings, if there were benefits beyond the mere fact of enjoyment. They did the research in hopes to find orderly enough patterns in which to make scientific research possible and that the results would have a beneficial effect on the design and management of the natural landscape. Their book addresses the fact that there has not been an easy way to access the research literature

pertaining to putting research findings into practice and translate it into usable recommendations. This book is oriented towards participation rather than final solutions. It is more focused on small spaces rather than large ones and is concerned more about the psychological dimensions of having nature nearby than about detailed, site-specific considerations. Its primary focus is on the aspect of people and the framework of what encourages interaction with nature. I intend to apply this framework to answer my thesis question: Can a design encourage interaction and a disregard of social boundaries through the manipulation of perceptions through scale, size and/or distance?

5] Flink, Charles, A., Olka, Kristine, Searns, Robert M., Trails for the Twenty-First Century – Planning, Design, and Management Manual for Multi-Use Trails, [2001], Island Press, Washington, D.C.

The authors of this book intend to assist planners, designers, architects, and managers of multi-use trails in acquiring a desired trail. Its primary focus is the multi-use trail; to promote a systems approach to trail development; and to use trail and greenways to shape the urban fabric. The authors encourage communities to find ways to empower themselves to build trails and greenways. The authors guide the reader through the process of creating a trail form start to finish. It includes regulations and guidelines for designing well-built trails for all types of users and people of all abilities in such a fashion that also heals the landscape and restores ecological integrity. This book will assist in developing a method to collect information regarding a community's demand for a trail or greenway, assessing materials details, and incorporating public involvement. Public involvement can indicate social and cultural assumptions that will affect the ultimate design. Flink is founder and president of Greenways Inc., and coauthor of Greenways: A Guide to Planning, Design, and Development. Olka was a former projects assistant at the Rails-to-Trails Conservancy. Searns was the project director of Denver's Platte River Greenway which was one of the nation's benchmark urban trail projects.

6] Mackenzie, Dorothy, Design for the Environment, [1991], Rizzoli, New York

The relationship between design decisions and environment issues is the primary focus of this book. Mackenzie demonstrates the significance of the designer's contribution to minimizing environmental problems. She offers assistance in the form of compartmentalizing designers and their specific contributions to environmental problems via architecture and interior design, product design, packaging design, print and graphic design, textile design and the changing face of design. She

discusses the impact of new technologies. These new materials can assist in the design of parks with regard to environmentally sound materials choices. She indicates that designers have a responsibility to the environment on several levels. This information can assist me as an answer to my materials design choices as I consider the psychological aspect of park designing. Can a park become more inviting if it is more environmentally sound? Will people engage in the landscape more if they know the design is environmentally compatible? Designing Parks and the information from Design for the Environment can be collaborated to create a design that is ecofriendly as well as a design that can withstand the test of time.

7] Mitchell, Keith, The Garden Sanctuary, [2000], Hamlyn, Octopus Publishing Group Limited

Mitchell addresses the need to "speak the earth's language". He understands and assumes a relationship between the user and the land and encourages exploration of the relationship and its possibilities. He suggests movement and urbanization have created spiritual introverts who have lost their "sense of the fitness of things". This loss forces a lack of connection with a greater knowing and knowledge that might provide our lives with a more meaningful context. Information is presented with regard to ancient traditions, archetypal symbols, and seasonal affects on the land. He addresses the healing factor of interacting with the land as well as using elements to create space. Mitchell's perspective on the earth as a sentient being capable of intelligent action encourages a more sensitive view of the landscape and its capabilities. In addition the information presented encapsulates design theories that consider the landscape and its authority of seasons. The information presented will assist in designing with the purpose of human interaction with nature. Mitchell implies the evidence of psychology suggests that connectedness, peace, and clarity are attainable and that the choice to attain these is a natural and healthy mode of human consciousness. We begin our search for these connections through an exploration for our deepest relationship with nature. Garden Sanctuary and Children's Play in Diverse Cultures both address cultural issues. Children's Play in Diverse Cultures can be used to understand culture and create a design can which can be altered to implement ancient traditions characteristic to that culture as indicated by Garden Sanctuary.

8] Lambert, Phyllis, Viewing Olmsted, [1996], MIT Press, Cambridge, Massachusetts

This book assesses Fredrick Law Olmsted and the intentions of his designs at 100 years of maturity. "What artist so noble, as he, who, with far-reaching conception of beauty and designing-power, sketches the outlines, writes the colors, and

directs the shadows, of a picture so great that Nature shall be employed upon it for generations, before the work he has arranged for her shall realize his intentions." –F.L. Olmsted

Lambert discusses the changes of his designed parks over time as well as the impact of physical and social changes his work has made on North American cities. Some of the sites included are Prospect Park, Seaside Park, "Biltmore", Cherokee Park, The Arnold Arboretum, The Cliff-Central Park, and the Country Park. This book uses black and white as well as color photography to illustrate some of the changes over time. Lambert uses interviews to create a more realistic perception of Olmsted and his works. I intend to use the example of his designs to assist me in making design decisions to create a timeless place of interaction.

9] Broadhead, Pat, Early Years Play and Learning- developing social skills and cooperation, [2004], RoutledgeFalmer, New York, New York

The author emphasizes an understanding of the need for time for momentum to build and for children to develop high levels of reciprocity between interacting peers. Broadhead establishes a continuum of four levels including associative play, social play, highly social play and cooperative play. Utilizing the social play continuum is displayed as a tool for research and pupil assessment and creating an emergence of the "whatever you want it to be place". This theory encourages imagination within the participant. This concept will assist in designing a place with the potential for allowing the imagination to take over. If this is accomplished the designed place can become "timeless" for both children and adults. Promoting well being through making choices is vital to a child's development. By utilizing this concept the design of preference must allow for choices to be made by the individual.

10] Brownell, Blaine, Transmaterial, [2006], Princeton Architectural Press, New York

The accelerated pace of materials innovations in addition to the breadth of their applications enhanced Brownell's awareness into writing this book. It is an encyclopedia of materials and their trends. He addresses motivations, trends, ultra-performance, multidimensional, repurposed, recombinant, intelligence, transformational, interfacial aspects of materials. The Transmaterial project originated from a realization of the importance of studying materials and the conventional thinking that accompanies these materials. Brownell expresses the value of material innovation and its implications for design. I intend to

apply these new uses of materials in addition to innovative materials to my design process in order to encourage and enhance the overall experience of a designed space. Also it is important to adults and especially children to experience a place through all five senses in order to have a memorable experience. This tactile information can be applied throughout any design in order to incorporate a particular sense.

11] Special Education and Facilities Branches, The Universal Playground: A Planning Guide, [January 1996], DIANE Publishing Company

The primary focus of this document is the significance for playground design, the importance of play, the value of integration, and developmental issues in relation to age factors. Cost/benefit analysis, and local modification are presented as part of the planning process. Playground etiquette is addressed in relation to planning. The book presents playground adaptations in reference to site development concerns as well as layout. The purpose of this document is to display planning playgrounds for children of all abilities showing this can be done using limited resources. I intend to use the information presented as a guide to organize planning and identify the most useful adaptations on a given site in conjunction with the psychological assessments of children in order to design spaces that will address interaction without regard to boundaries.

12] Hofferth, Sandra L., Sandberg, John F., *"How American Children Spend their Time"*, Journal of Marriage and the Family, Vol. 63, No.2, [May 2001], pp. 295-308

This article examines how American Children under the age of thirteen spend their time, sources of variation in time use and associations with achievement and behavior. Data is derived from the 1997 Child Development Supplement to Panel Study of Income Dynamics. The results suggest that parents' characteristics and decisions regarding marriage, family size and employment affect the time children spend in educational, structured, and family activities which in turn affects their academic achievements. This information can assist in placement of parks according to the given economic backgrounds of an area. Making deductions according to an assessment as to how children spend their time, can lead to a more effective park design. In knowing children's tendencies as to how they choose to spend time will guide and enhance the design features. This article argues that children do not learn only in formal settings and that for younger children, play is their work. Besides motor skills, children develop initiative, self-regulation, and social skills through play.

13] Metzger, Phil, Perspective Without Pain, [1992], North Light Books

Understanding perspectives is essential in the design process. Once a site plan is sketched, perspective drawings can bring the design to life, especially to the client who more than likely does not know how to read a site plan. The author gives step by step instructions on achieving the illusion of depth by gradually diminishing the sizes of and distances between similar objects. Depth is also introduced by manipulating color and value. The author compartmentalizes drawing perspectives into three separate parts. The basics are established noting techniques such as overlapping, varying size and spaces, modeling, details and edges, converging lines, color and value change, vanishing point and eyelevel. The second part defines playing with vanishing points, using and establishing the perspective center, getting angles correct in addition to other techniques. The last part ascertains curves and inclines through circular objects, combinations of cylinders, arches, measuring relative sizes, vertical lines converging, and extends to sketching the landscape. This book will assist in creating perspectives of a design to show interaction at a personal level. A “feeling” of the designed place can be drawn from a perspective drawing.

14] Woodson, Wesley, E., Human Factors Design Handbook, [1981], McGraw Hill, Inc.

The author presents a general reference to key human factors questions and human-product interface design suggestions to be utilized by designers and engineers with a minimum or research or study. It displays information at the designer’s fingertips. Its purpose revolves around the standpoint of user efficiency, interface problems and solutions at any and every level. Appropriate consideration is given to the human factors in order that further constraints are not instituted and prevent detailed design from being optimized. Woodson addresses architectural systems, transportation systems, industrial systems agricultural systems, and communication systems. These systems focus on the human factor and how these factors should be considered at the concept formation stage as well as at all the succeeding development stages. The information presented in this book is useful in design implementation of physical human characteristics. For example it includes dimensions for walkways and diagrams what is too high and too low or dimensions for a manual trolley system. These measurements will be useful in my thesis design as I alter perspectives through scale. Knowing “acceptable” design scale for an average human to feel comfortable using a facility will assist me in my design.

15] Forsyth, Ann, Masacchio, Laura R., Designing Small Parks – A Manual for Addressing Social and Ecological Concerns, [2005], John Wiley & Sons, Inc.

Small parks are ubiquitous in the urban landscape and are considered neighborhoods within themselves that provide recreational benefits. They play a crucial role in metropolitan areas but their designs rarely reflect what is known about people, ecology, and landscapes. This book makes a connection between to key areas of research: human factors research [which is how humans interact with open space] and ecological research. This information reveals that small parks have much to offer and are appreciated for their contribution to neighborhood and district needs for recreations particularly in established municipalities close to the urban core. The park's size, shape, and number matters. From a social perspective the quantity of parks provides a high frequency of opportunities for people to experience "nature". This book addresses social interaction and ecological strategies as well as using vacant lots as parks. This book can be particularly useful in addressing issues of my thesis that pertain to social characteristics and Human Factors Design Handbook can address physical issues.