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I thank Carl, Cheryl, Karthik, and Warren for all your help, support and patience during this research study. My thanks to all the friends I have made here from all over the world and fellow students in the Landscape Architecture program from whom I have learnt so much.

December 3, 2012
Abstract

PUBLIC PERCEPTIONS OF URBAN COMMUNITY PARK BENEFITS:
A STUDY IN ARLINGTON, TEXAS

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The University of Texas at Arlington, 2012

Supervising Professor: Pat D. Taylor

This thesis is a study of the public perceptions of urban community park benefits and the identity they foster among people. It addresses the conjecture that parks, by encouraging self-expression through interaction and use, contribute to the identity of a place (Garvin 2000).

Identity is a way of organizing information about the self (Clayton and Opotow 2003) and perception is an experience which is occasioned by the stimulation of sense organs (Dennis 1951). These have practical implications on research. Understanding people’s response to their surroundings leads to an understanding of perceptions of self and community.

Park benefits are gained through interaction among people and the surrounding environment. Activities which form these benefits include social connections, health of mind and body, restorative setting, recreation and environmental education (Clayton and Opotow 2003; Garvin 2000; Taylor 1999). This research study examines the perceptions of users and designers regarding three classifications of park benefits: Public health; social, and economic (Sherer 2003; More et al 1988).
The literature review examines the existing knowledge base of open space and park use and their benefits from established reports, for example, Journal of Landscape Research (JLR) and Trust for Public Land (TPL), with design program data for each park; as extracted from the 2004 Arlington Parks Recreation and Open Space Master Plan, and the Hike and Bike System Master Plan for the City of Arlington, Texas. The study then ties these data to the three park benefits of public health, social, and economic. In so doing, the study also provides an understanding of the elements regarding identity and the environment (Lindholm 2007; Kaplan and Kaplan 1998; Clayton and Opotow 2003).

This research uses qualitative data collection and analysis techniques—observable behavior and interviews (Taylor and Bogdan 1998)—with data gathered from interviews with landscape architects and park and recreation professionals involved in three chosen parks in Arlington, Texas. The three community parks selected for the study include a linear community park, a large community park, and a campus community park. These parks are the River legacy Park, Veteran's Park and the Green at College Park, respectively.

Data from park visitors was included to determine user perceptions regarding the three park benefits. Data collected from these observations and interviews revealed the qualitative effects of public park spaces on individuals as executed by park designers.

The resultant finding measures user perceptions and expands the understanding of the role of landscape architects in fostering that link. The findings appear to agree with the literature reviewed for this research. The public health benefits and economic benefits were identified by park users as the main attractions of the parks studied; these tie into information gleaned from the literature review.
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Chapter 1
Introduction

1.1 Background

This study deals with the significance of community parks to the people who use them and the cities that support them. Existing research shows the benefits of the effects of open space on individuals (Clayton and Opotow 2003; Hayden 1997). For example, parks serve to balance community needs with recreational activities. Parks provide opportunities for activities and facilities for their surrounding community. This research points out the role of parks in connecting a community with its members by encouraging the community to interact within themselves and the environment. The creation of and participation in community parks, and the activities and recreation facilities they provide, brings about a sense of identity to the individuals of a community in a city or town.

Based on the information available from publications by the City of Arlington (2004 Park Recreation and Open Space Master Plan; the Hike and Bike System Master Plan) and reports from the Trust for Public Land (TPL), there are three main factors that influence a community’s needs, namely the public health, social, and economic benefits that parks contribute to the city (Sherer 2006). This research examines three of the community parks listed by the Arlington Park and Recreation Department within the north and central Arlington regions, to understand user’s perceptions and the impacts the parks have on the community. The three parks in this study are River Legacy Park, Veteran’s Park, and the Green at College Park. This research is aimed at assessing the user perceptions of park benefits.

This study identifies perceptions of users and designers regarding three classifications of park benefits (Sherer 2006; More et al 1988):
• **Public Health Benefits** – The primary on-site benefits are the opportunities for recreation supplied by the park. They provide increased opportunities for health and activity through active and passive recreation (Harnik and Welle 2011). Physical activity helps prevent obesity and related medical problems, and providing places to exercise — parks, primarily — can improve health (Sherer 2006; Gies 2006; Harnik and Welle 2011).

• **Social Benefits** – These benefits may include but are not limited to a reduction in crime, recreation opportunities which focus on the importance of play and creating stable neighborhoods with strong community, and providing opportunities for socializing and environmental awareness (Sherer 2006; Gies 2006).

• **Economic Benefits** – These benefits include providing increased property values, effects on commercial property values, an increase in economic revitalization by attracting and retaining businesses and residents, and tourism benefits (Sherer 2006).

1.2 City Of Arlington - Parks

Recognizing the importance of urban parks and their benefits to the surrounding community, the City of Arlington created with a vision for the city in 2004:

“Arlington is a beautiful, clean, safe and fun place widely recognized as the most desirable location in North Texas to live, learn, work and do business. It is a diverse community where residents want to stay, businesses thrive and to which visitors and our children want to return” (Park Recreation and Open Space Master Plan, 1).

The City views itself as:

“A community that embodies a fun, attractive and vibrant atmosphere that is appealing to both residents and visitors, and that encourages new
and diverse businesses to locate here” (Park Recreation and Open Space Master Plan, 6).

This is also established in the byline “Great parks: The foundation of a great community” which proposes that the development and redevelopment of the city’s park system can play a key role in stimulating the effort to form a successful community (Park Recreation and Open Space Master Plan, 7).

Understanding the need for identity and community requires an understanding of an individual. Individual perceptions are based on memories and experiences of the animate and inanimate aspects of the surrounding world (Schama 1995; Clayton and Opotow 2003). Understanding what makes people passionate about the environment makes it easier to determine the mechanisms capable of fostering protective environmental policies and behavior.

This understanding determines what it is about the environment that encourages the identity of the community and is achieved through the design and use of public park spaces. This fosters a foundation for the community to improve its quality of life and create a sense of place. It also bridges the connection between the individual and the natural environment.

Arlington has grown to be the third largest municipality in the Dallas-Fort Worth area. The U. S. Census Bureau shows it to be a fast paced city in terms of suburban population growth post World War II. With the growth of urban sprawl and the need for revitalization of inner city areas (Garvin 2000), the relationship between the individual and the natural environment has become an important aspect of urban life.

Understanding how and why public parks came into existence in North America and where they are today establishes the connection between an individual and the environment. This understanding shows the need for pockets of green space which
enhance the surrounding community and determine the three benefits studied in the research.

1.3 Public Parks In North America

Public parks in North America owe their existence to the efforts of Frederick Law Olmsted and Calvert Vaux when they teamed together on an entry for the Central Park, New York competition of 1858. Central Park included the strengths of landscape architecture that are drawn from its garden design heritage which Turner (2005) noted:

- The design tradition of balancing utility, firmness and beauty (p. 378).
- The word ‘landscape’ to mean ‘a good place’—as the objective of the design process (p. 378).
- A comprehensive approach to open space planning involving city parks, greenways and nature parks outside towns (p. 378).
- A planning theory about the contextualization of development projects (p. 378)
- The principle that development plans should be adapted to their landscape context (p. 378)

Olmsted preferred that public parks be paid for and that they be designed for use by the local public thereby tying to Andrew Jackson Downing’s belief that parks would have a civilizing and refining influence on the people of a city (Olmsted 1870). This was seen as a way of bringing an improvement to the local citizens’ lives and enriching their sense of community through parks (Olmsted 1870). This was to be achieved by bringing in rural recreation for city residents who had no other access to such spaces. Some of the best examples of these parks have been Central Park, New York in 1858 (Figure 1-1) and Boston’s Emerald Necklace network of green parks in 1878 (Figure 1-2).
Figure 1-1 Central Park, NY

Figure 1-2 The 1894 plan for the Emerald Necklace Park System in Boston, Massachusetts (Source: National Park Service Olmsted Archives 1898; 1976-1980)
1.3.1 The Four Stages in Park Development

Cranz (1989) argues that city parks have become an instrument of social policy with the potential for reflecting and serving social values. She categorizes the evolution of park design into four stages:

- The pleasure ground (1850-1900)
- The reform park (1900-1930)
- The recreation facility (1930-1965)
- The open space system (1965- and after)

These four stages form elements that people look for when they consider parks as a space for leisure activity either active or passive in nature. Many types of leisure activities contribute to the main elements seen in parks today; the playground space, the hike and bike trails, nature trails, and natural areas (Cranz 1989); that are a result of the above four park stages.

1.3.2 Public Parks Today

Some of the larger older parks have been converted to regional and national parks while the smaller ones in urban areas now form pocket parks, community parks and neighborhood parks (Garvin 2000). These mainly cater to the needs of most of the demography in the area surrounding them, mainly focusing on public health, social and economic benefits. The categories of parks found currently are:

- Regional parks
- National parks
- Community parks
- Neighborhood parks
- Pocket parks
These parks now form an integrated system within cities for each of its park components to function in conjunction with one another. These components include:

- Play areas for young children
- Play fields for designated active recreation
- Open space for passive recreation
- Nature trails and Hike and Bike trails

These amenities, although not limited to the above mentioned, provide a wide range of recreation opportunities desired by a varied urban population (Sutton 1971). These attributes are further discussed in the literature review sections 2.2 and 2.3.

1.4 Problem Statement

The City of Arlington recognizes public parks, trails, open space and recreational facilities to be critical in ensuring the health and quality of life of its residents (Park Recreation and Open Space Master Plan 2004). This study looks at the perceptions of park users; whether they are able to perceive these benefits themselves and whether it coincides with the identity of the city, as perceived by the governing bodies.

The Arlington Parks and Recreation Department declares a vision for the city to be a destination of great parks and exceptional recreational opportunities. This vision is based on the belief that these elements are essential to the quality of life and well-being of the citizens. The Park, Recreation and Open Space Master Plan has outlined goals for the City to be a network of neighborhoods with easy pedestrian access to a system of parks, open spaces, trails and gathering places promoting interactions within and among neighborhoods. Availability of open space for leisure recreation strengthens neighborhoods and families and also encourages physical activity. The city’s hike and bike master plan is an initiative to create off-street and on-street trail connections with
schools, neighborhoods, etc. These trails and open space systems are part of the city's goal for a clearly established identity.

1.5 Purpose Of Study

The purpose of this study is to understand the relationship between community and identity. This study expands the knowledge database already existing on the subject of park benefits and users with a specific focus on the city of Arlington, Texas. In order to do this, the study was carried out using three community parks in Arlington, Texas, along with design program data for each park (as extracted from the 2004 Arlington Parks Recreation and Open Space Master Plan, the City of Arlington, Texas Hike and Bike System Master Plan). The parks studied are the River legacy Park, Veteran's Park and the Green at College Park. The study then tied these data to the three park benefits of public health, social, and economic.

By studying the observable behavior of park users and using a qualitative research method of data collection, user perceptions of the three benefits were catalogued and then analyzed to determine the link between parks and community. These data were further analyzed by comparing it to the design data and client requirements gained from the firms involved in the design and execution of the parks.

1.6 Research Questions

In order to increase their knowledge on contemporary users of public parks, landscape architecture professionals should realize the community needs as well as the perceived benefits of these spaces. To determine the solution to this knowledge need, the following questions need to be considered:
1. **Who are the user groups in community park spaces?**

   Understanding the end user group allows the designer to cater to the needs and requirements of that category. This understanding justifies the creation, requirement and market need for the space.

2. **What is the predominant usage of the community park?**

   Knowledge of the utilization of the park gives the designer an insight as to how these spaces function. This knowledge explores whether the place is being used in the manner in which it was designed for and whether it serves the purpose for which it was created; determining the success of the park.

3. **What are the benefits gained from the availability of community parks?**

   This question aims to understand the contribution of the park to the identity of the individual and thereby the community. It also factors in the user perceptions of public health, social and economic benefits that are gained by the community. For example, the opportunities for experience of physical fitness, availability of open space for recreational activity and gatherings, as well as the increase in land values and residential building values located with near proximity to park space. The question measures the relationship between the users and the profession of landscape architecture.

4. **Do community parks foster a community identity?**

   This query gives an insight into an individual's experience of, or within, the space. Understanding the benefits of the outdoor park space helps professionals, such as landscape architects and designers, to determine when and where certain functions are appropriate; i.e., active and passive recreation, group interaction and development, et cetera.

   Communities facilitate social interactions among its members and foster the process of identity formation. According to Komito (1998) norms developed within a community guides the behavior and enable the members to develop collective identity (Afzal 2008).
The questions listed above determine how the availability of open park space and public use combine to create the feeling of community identity. This study examines the role of the landscape architect in fostering the same and also provides a data source to establish priorities for the future development and management of parks and recreation facilities within a community.

1.7 Key Terms

Environment: The surroundings, conditions or influences that affect an organism (Davis, 1989).

Identity: A manner of organizing information about the self which describes social roles and roles entail responsibilities (Clayton and Opotow 2003).

Perception: An experience which is occasioned by the stimulation of sense organs (Dennis 1951).

Community: A group of people with diverse characteristics, who are linked by social ties, share a common perspective and engage in joint action in geographical locations or settings (MacQueen et al. 2001) or, A group of persons in social interaction within a geographic area and having one or more additional common ties (Kaufman 1959, 9)

Nature: The environment in which the influence of humans is minimal or non-obvious, the living components of that environment (Clayton and Opotow 2003; Weigert 1997).

Park: Any land selected, obtained, or acquired by the city for use as a public park, or recreation or playground area, and any building or facility thereon, owned and maintained by the city as a public park, or recreation or playground area, whether or not such areas have been formally dedicated to such purpose (NRPA, National Recreation and Park Association 1996)
Community Park: Larger parks designed to balance community needs with programmed recreational activities. Community parks should be large enough to provide certain functions to the entire city while providing opportunities for activities and facilities for the surrounding community (NRPA, National Recreation and Park Association 1996).

Community Identity: An identity formed by a connection of the human and non-human environment that comprises a community (Sayers 1996, Hummon 1990). For example, the users of a park who come from areas within close proximity to it become a community, and they in turn form connections to the amenities and the environment of the park, creating a community identity for the place.

Triangulation: A process that involves using multiple data sources in an investigation to produce understanding (Patton 2001, Denzin 1978).

1.8 Research Methods

This study used qualitative methods set forth by Taylor and Bogdan (1998) and methodological references (triangulation) from Guba et al.(1985). The study primarily included surveys and interviews concurrently with on-site passive observations.

Open-ended questions were used as a guide to the surveys and interviews. For the purpose of this research, a pool of forty park users and landscape professionals (involved in the design and execution of the parks selected) were approached to participate in the study (with twenty one accomplished successfully). The study was done using three community parks as the locations for study, namely, River Legacy Park, Veteran’s Park and the Green at College Park on the campus of The University of Texas at Arlington. These parks were selected on the basis of being “community parks” by the City of Arlington and The University of Texas at Arlington. They serve a varying target group, such as neighborhoods and the residential student body, which become the “community” each park serves. These parks were studied on regular days and not on
days when special events took place so as to assess the daily use of the parks. Survey questionnaires were administered with park users and then interviews with landscape professionals were conducted with the aim of using data triangulation methods to retrieve data relevant to the study.

On-site observations were done during site visits by the researcher to gain better knowledge of the sites under investigation. Data gathered from surveys were tabulated, observations were documented, and interviews transcribed; which were then analyzed using data triangulation (Guba et al.1985, Taylor and Bogdan 1998).

1.9 Significance And Limitations Of The Study

The significance of this study is to evaluate the perceptions of users regarding the three park benefits: public health, social, and economic; and apply this knowledge to the profession of landscape architecture. The intent of this study is to achieve a better understanding of user perceptions of the benefits derived from the availability and use of parks in urban areas; to analyze public awareness of the benefits and compare them with design intent.

A major constraint of this study is that it is limited to a small data pool of three specific parks in Arlington, Texas and a total of forty people who were approached for the purpose of qualitative data collection. Due to the limited study sites, this research could not be generalized to all parks of the City of Arlington or the State of Texas.

1.10 Summary Of Chapter

The primary objective of this study is to measure the user perceptions of the three benefits offered by parks (public health, social and economic benefits) using qualitative processes in surveys, observations and interviews. Observations and surveys are conducted with daily park users and interviews reveal inputs from designers and park and recreation department officials of the City of Arlington. A secondary objective of this
research is to determine awareness of the identity for the city as perceived by the Park, Recreation and Open Space Master Plan. The format of this thesis is organized into 5 main sections:

1) Introduction, 2) literature review, 3) research methods, 4) analysis and findings, and 5) conclusions.

The first chapter, Introduction, raises issues regarding public parks and open spaces in the City of Arlington; with a brief look into the three park benefits, namely: public health, social and economic. It also touches upon the evolution of parks through four stages. The next chapter, Literature Review, covers the history of city parks and the three park benefits in detail. The Research Methods chapter discusses the design of data collection and analysis and their significance and limitations. The Analysis and Findings chapter focuses on terms and responses distilled from the data analysis. The final chapter, Conclusion, discusses of the significance of the study, how it relates to the profession of landscape architecture, and possible future research.
Chapter 2

Literature Review

2.1 Introduction

The literature review for this study begins with an understanding of the need for parks in urban environments found in existing published records. Both planners and designers must be concerned with achieving the needs of park users (Garvin 2000: Whyte 1980) while maintaining an environmental awareness of the surroundings. This literature review interprets the relationship between parks and individuals. It reviews the three benefits of parks and expands on the need to promote vitality and identity in the community. Looking at the physical settings that tend to attract park users and the qualities leading to the successful utilization of the space, community parks were chosen to be documented and investigated in this study.

2.2 Parks And Cities

For the remainder of this thesis, the term “park” refers to the urban park which is defined as an “anti-urban ideal that dwelt on the traditional prescription for relief from the evils of the city-to escape to the country” (Cranz 1982). Parks are open spaces that provide citizens with opportunities for active and passive recreation (Clayton 2003). Parks also provide cities and metropolitan areas with places to experience nature. Parks and open spaces improve physical and psychological health of the individual, strengthen communities, and make cities and neighborhoods more attractive places to live and work (Sherer 2006).

Nineteenth century park visionaries such as Olmsted, Vaux and Downing among others anticipated the need for pockets of green open space as a respite for local citizens from the hustle and bustle of a city’s urban environment (Garvin 2000; Fein 1968). The predominant concerns of these visionaries was that parks were to be available to all city
residents particularly those who did not have access to escape to rural environments (Rogers 2006; Repton 1907; Olmsted 1870).

The latter half of the 19th century saw American cities build grand city parks to improve the quality of life of residents. At the time, these parks were seen as refuge from crowded, polluted, stressful cities; they became places where citizens could experience clean, fresh air, nature and provide recreational space accessible to everyone. This saw a gradual need for open space dedicated to recreational activities in each suburban neighborhood (Garvin 2000). By the late nineteen-hundreds, the post-war period, middle-class Americans resided primarily in single-family houses; there was a shift towards the suburban neighborhood developments. There was no longer a major need for new park spaces as there were parks already existing within cities by then, offering the opportunity for public leisure recreation. Landscaped parkways leading to major parks became the norm in the twentieth century, with more attention being paid to the conservation of open park space as an added goal.

The Trust for Public Land (TPL), founded in 1972 to conserve land for people as parks, gardens, and other natural places, launched the Parks for People initiative in support of its belief that every individual and child should enjoy convenient access to parks and playgrounds. The program involves various groups of individuals such as students, parents, teachers, city and school administrations, neighborhood volunteers and other community representatives to address the components of ongoing maintenance of completed project sites, program activities for children and families, and safety concerns in parks and playgrounds.

The City of Arlington falls within the intermediate-low density population in terms of acres of parkland as a percentage of the city area with 7.6 percent of the city land area
used as parkland (TPL 2011 City Park Facts). Table 1.1 (page 12) shows the acreage of parkland within the city limits in and around Arlington.

<table>
<thead>
<tr>
<th>City</th>
<th>Population</th>
<th>Land Area (acres)</th>
<th>Park Acreage Within City Limits</th>
</tr>
</thead>
<tbody>
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<td>Arlington, Texas</td>
<td>380,083</td>
<td>61,322</td>
<td>16,684</td>
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<tr>
<td>Austin</td>
<td>786,386</td>
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<tr>
<td>Austin Water Utility, Wildland Conservation Division</td>
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<td>Texas Parks and Wildlife Department (within city of Austin)</td>
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<td>Travis County Parks (within city of Austin)</td>
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<td>Dallas</td>
<td>1,299,542</td>
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<td>Dallas Park and Recreation Department</td>
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<td>Fort Worth Parks and Community Services Department</td>
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<td>Garland, Texas</td>
<td>222,013</td>
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<td>Garland Parks and Recreation Department</td>
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<td>Dallas County Planning and Development (within city of Garland)</td>
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<td>Houston</td>
<td>2,257,926</td>
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Table 2-1 Acreage of Parkland within the City Limits (TPL 2011)

2.3 History Of City Parks: Inception, Decline, Revival

In the nineteenth century, elaborate city parks were established in order to improve the quality of life of the residents. These parks include New York's Central Park and San Francisco’s Golden Gate Park. At the time, these parks were seen as a refuge from the crowded, polluted, stressful cities-places where citizens could experience and enjoy fresh air, sunshine, and nature (Garvin 2000). They became a place for recreational activity and a public space where people from different walks of life could mix
on equal terms. The new parks were meant to be pieces of the country, with fresh air, meadows, lakes, and sunshine right in the city (Cranz 1982).

2.3.1 The Inception

Leading landscape architects and park advocates believed that parks were important instruments of enlightenment and social control. Consequently, they praised and promoted parks for their health-giving characteristics and character-molding capabilities (Cranz 1982). Many of these parks became spaces of social and political contestation. As varied social strata used these spaces, there came about a need for appropriate park use and behavior (Taylor 1999).

2.3.2 The Decline

The Great Depression began the lack of spending and maintenance on public parks across the nation. This was followed by a period of gradual population shift towards the suburb communities which had a direct effect on the funding available to parks (Cranz 1982). During this period, while there was a decline in the procurement of land for leisure recreation purposes, the State of Texas saw a consistent increase in the development of parks. The Civilian Conservation Corps (CCC) designed and built more than fifty State Parks in Texas before the economy recovered and the program ended 1942, forming the foundation for the parks system existing in Texas today (http://texascccpcparks.org, http://tshaonline.org).

2.3.3 The Revival

Towards the second half of the twentieth century and the start of the twenty first century, there was a renewed interest in urban parks that came about with the rising economy of the time (Sherer 2006). This evolved with the focus of importance moving in favor of public spaces that welcomed and engaged the community in general and the pedestrian in particular (Sherer 2006). The revival also came about due to the efforts of
environmentalists who demanded that parks offer sustainable habitats for flora and fauna (Garvin 2000). In present times, budget crises threaten city parks due to the bursting of the economic bubble and federal government cuts in city parks spending since the late nineteen nineties (Sherer 2006).

2.4 The Purpose Of Public Parks In Society

A good public park becomes the center of a community (Clayton and Opotow 2003). It offers recreation and green space to residents and visitors to the community. According to architectural critic, Paul Goldberger, as cities grow exponentially or shrink dramatically, the quality of the public realm becomes increasingly significant to social well-being in the twenty first century (Goldberger 1982, 1986, 1987). Garvin (2011) gives an insight into what it takes to create great parks by elaborating on their design, finance, and management and also by explaining how people should behave in them.

Public Parks and the issues related to them are not static. They are more than the product of readily-identifiable, visible or objective conditions (Taylor 1999). Urban parks are the products of many events and were defined through collective processes (Hannigan 1995). That is, groups in a society perceive, identify, and define park problems by developing shared meanings and interpretations of the issues.

The City of Arlington recommends itself as a community of people who care, with the parks and recreation system being an important aspect of the citizen’s decision to live there. The Parks and Recreation Department implemented programs such as Park Partners to involve citizens in volunteer projects within the City’s parks; these programs involved projects to improve and beautify city parks because:

"Involving citizens in park improvement and upkeep gives people a feeling of ownership. It also provides opportunities for interaction between neighbors, resulting in a "stronger sense of community" (Park Recreation and Open Space Master Plan, 11)."
2.5 Perception

Dennis (1951) defines perception as an experience which is occasioned by the stimulation of sense organs. He further examines cultural factors that influence perception by examining historical and anthropological evidence. The value of open space includes people’s attitudes towards nature and the desire for contact with it (Thompson 2002). Reed (1988) and Cherry (2010), among others, describe how an individual’s perception depends on various factors; some of which are:

- Personal characteristics of the perceiver, such as attitudes, moods, motives, self, interest, cognitive structure (which is an individual's pattern of thinking), as well as expectations.
- Characteristics of the target, such as appearance, sound, and size of the target being perceived.
- Characteristics of the situation in which the interaction between the perceiver and the target takes place.

2.6 Identity In Society

Identity can be described as a way of organizing information about self. We have multiple identities varying in salience and importance according to the immediate context and to our past experiences. Each level of identity may suggest its own perspective. Understanding which identities are salient is important for understanding how people react to a particular threat or distribution of rewards. There are clearly many people for whom an important aspect of their identity lies in ties to the natural world: connections to specific natural objects such as pets, trees, mountain formations, or particular geographic locations for example place identity (Clayton and Opotow 2003, 45).

Clayton and Opotow also describe how strong environmental identities have significant impacts by guiding personal, social, and political behavior.
The preference for natural environments may be explained as being due to their psychological and physiological benefits" (Clayton and Opotow 2003, 48).

There are also many direct and indirect benefits that individuals derive from natural environments including self-confidence, physical fitness, curiosity and calm as detailed by Kellert (1997). Exposure to a view of nature or natural settings such as a park or garden has been shown to strengthen cognitive awareness, memory, and general well-being and to decrease depression, boredom, loneliness, anxiety, and stress (Hartig, Mang, and Evans; Parsons, Tassinary, Ulrich, Hebl, and Grossman-Alexander 1998; Ulrich 1984). “Three qualities seem to be desired parts of everyone's identity: autonomy or self-direction; relatedness or connection; and competence (Ryan and Deci 2000)” (Clayton and Opotow 2003, 49).

2.7 Benefits Of Parks

Existing research demonstrates the benefits of city parks. Generally, the literature verifies that they improve physical and psychological health, strengthen communities, and make cities and neighborhoods more attractive places to live and work (Sherer 2006).

The presence of natural areas contributes to the quality of life in many ways. Besides many environmental and ecological services, urban nature provides important social and psychological benefits to human societies, which enrich human life with meanings and emotions (Chiesura 2004).

2.61 The Public Health Benefits of Parks

The Centers for Disease Control and Prevention (1996) reports document that regular physical activity has been shown to increase health and reduce the risk of a wide range of diseases including heart disease, hypertension, colon cancer, and diabetes. Physical activity also relieves symptoms of depression and anxiety, improves mood, and enhances psychological well-being. Research also shows that contact with the natural
Despite the importance of exercise, obesity remains a problem in many American cities. The Centers for Disease Control and Prevention (CDC) has also called for the creation of more parks and playgrounds to help fight this epidemic.

Evidence reveals that accessibility to parks increases their use (Kahn et al. 2002). Parks provide an outlet for increased opportunities of health and activity through active and passive recreation (Harnik and Welle 2011). The presence of a natural environment provides the added psychological relief that reduces the effects of stress and exhaustion (CDC).

Contact with the natural world has been shown to improve both physical and psychological health (TPL 2006, Ulrich 2001). For example, Ulrich’s study revealed patients with tree views had shorter hospitalizations, less need for painkillers, and fewer negative comments in the nurses’ notes, compared with patients with brick-wall views (TPL 2006).

According to Sherer (2006) and Garvin (2000), green spaces in urban areas provide substantial environmental benefits. In particular, Scherer notes that the abundance of trees leads to a reduction in air and water pollution, while at the same time they keep cities cooler.

2.6.2 The Social Benefits of Parks

R. Kaplan and S. Kaplan (1989) and S. Kaplan (1995) have discussed the ability of the natural environment to serve as a restorative setting for people. Specifically, the Kaplan's and others (Herzog et al. 1997, Tzoulas 2007) have shown that people rate natural settings as the best place for achieving restorative goals (Clayton and Opotow 2003).
Other literature show that people and communities require an outlet for self-expression and that parks provide space for this outlet. For example, Garvin (2011) substantiates this when he examines the function of parks as investments that are essential to the well-being of all citizens. Giddens (1984) also mentions that individual action and social structure are mutually constitutive of each other.

There is a theory on good spaces that "supply creates demand" (Whyte 2009, 105). Well designed and well planned spaces induce people into new habits (Whyte 2009). According to Whyte, the best used spaces are the sociable spaces, where there can be higher chances of use by larger groups than those designed for less-use purposes.

Parks produce important social and community benefits. Sherer postulates that parks make neighborhoods more livable and offer recreational opportunities for young children, youth and low-income families. They provide places where people can feel a sense of community. There is an increased awareness of the importance of play and learning environments for child development; and an increased attention focused on specific outdoor space needs for the elderly, college students, and hospital patients and staff (Marcus and Francis1997). Children are the future of all communities. They require space and interaction to form social ties, and physical and intellectual development (Clayton and Opotow 2003; Sherer 2006). Parks encourage the development of stable neighborhoods with strong communities.

Research shows that residents of neighborhoods with greenery in common spaces are more likely to enjoy stronger social ties than those who live surrounded by barren concrete (Sherer 2006).

In inner-city neighborhoods where common spaces are often barren no-man’s lands, the presence of trees and grass supports common space use and informal social contact among neighbors (Kuo et al. 1998).
In addition, vegetation and neighborhood social ties were significantly related to residents' senses of safety and adjustment (TPL 2006; Kuo et al. 1998).

Access to public parks and recreational facilities has been linked to reductions in crime and reduced juvenile delinquency among at-risk youth (Witt and Crompton 1996). Research supports that community involvement in neighborhood parks is correlated with lower levels of crime (Sherer 2006; Sampson and Raudenbush 2001).

2.6.3 The Economic Benefits of Parks

The economic benefits of parks include providing increased property values of surrounding residential areas (Crompton 2000). Crompton's study reveals the higher value of these homes means that their owners pay higher property taxes. In some instances, the additional property taxes are sufficient to pay the annual debt charges on the bonds used to finance the park's acquisition and development.

The higher value of these homes means that their owners pay higher property taxes. In some instances, the additional property taxes are sufficient to pay the annual debt charges on the bonds used to finance the park's acquisition and development. “In these cases, the park is obtained at no long-term cost to the jurisdiction,” Crompton writes. (Sherer 2006, 15).

Parks affect commercial property values. Garvin (2000) used the example of Bryant Park, New York, to demonstrate the economic advantages offered by parks. Part of the success of the redesigned park was the inclusion of a café, restaurants and kiosks that became a draw to people who would otherwise not have a reason for being there. This indirectly became a benefit on commercial property value.

Location and quality of life become factors that induce economic vitality to attract and retain businesses and residents. For example, “City parks such as San Antonio’s River-walk Park often become important tourism draws, contributing heavily to local businesses” (Scherer 2006). The Klyde Warren Park in Dallas, Texas; which opened on October 2012; is another example of an economic draw perceived by the city. The park is
aimed at luring visitors from the entire North Texas region and beyond. The restaurants within and around the park, the public transportation destination location (the DART stop), vehicular and pedestrian access also serve as local economic generators for the city.

“The park is an enormous economic development opportunity—unlike any we’ve seen in a long time," says John Crawford, president and CEO of Downtown Dallas Inc. "Within a quarter-mile to a half-mile radius, since we’ve started talking about the park, we’ve seen well over $1 billion in new projects, both residential and commercial. A lot of people were betting that the park would become a reality, and it has” (D Magazine 2012)

Parks also act as a more effective and economic way to manage storm-water runoff than concrete sewers and drainage ditches (Scherer 2006). This study does not measure the economic benefits directly. Rather, it tries to understand whether or not the users perceive any economic benefit.

2.8 Community Parks In Arlington

Community parks are large parks designed to balance community needs with programmed recreational activities. They provide activity space to the entire city while focusing on opportunities for activities and facilities for the surrounding community.

Since the focus of the research is on user perceptions of parks, the sites selected for the study were community parks; this would include a wider range of people that were from neighborhoods surrounding the parks. Parks sites were selected based on the park categories labeled as community parks.
2.7.1 River Legacy Parks

701 NW Green Oaks Blvd, Arlington, TX 76012

Initially donated as over 200 acres of land (that was part of the original homestead of the family of pioneer James Gibbins) and named Rose Brown May Park, it formed the nucleus of the current River Legacy Parks system comprising of over 1300 acres to date (see figure 2-1 for the site plan). The park encompasses a picnic area, pavilions, restrooms, playgrounds, swings, historical marker, nature trails, informal practice field, bike/hike trails, off-road bike trail, and exercise stations. It contains about seven to eight miles of trails between the Fort Worth and Grand Prairie city limits (Preserving Arlington 2010).

The park forms a major link in the areas’ Trinity trail System with expansions taking place in three phases with the final phase being completed in 2004, fulfilling the
Arlington City segment of the Trinity Trails Project. The park is aimed at preserving and enhancing the Trinity River flood plain as a natural, educational and recreational amenity.

2.7.2 Veteran's Park

3600 W Arkansas Lane, Arlington, TX 76016

Located in central Arlington, this community park was created in remembrance of the city’s citizens that served in the military. The park (figure 2-2) is made up of 103 acres of bike/hike trails, equestrian trails, a disc golf course, nature area with trail, a pavilion, a performing arts shell, a picnic shelter, playground and practice fields, a wildscape garden and a xeriscape garden. The park features an interpretive trail that winds through a variety of ecosystems. The half mile trail covers ten acres of wetland, prairie, dense woodlands and post-oak savannahs (http://www.arlingtontx.gov).
The trail also goes through native plant communities, natural creek ecology, and various species of plant communities that are unique to Veteran’s Park. The Interpretive Trail is also a habitat for small animals, several bird species and some larger animal species such as raccoons, ringtails, red fox, gray fox, and coyotes (www.arlingtontx.gov).
2.7.3 The Green at College Par

UT Arlington, 601 S. Pecan Street, Arlington, TX

Figure 2-4 Layout of the Green at College park with features (http://www.aashe.org)

The park (figure 2-4) comprises of 2.6 acres of park space as part of a twenty acre College Park District that is a part of the campus at The University of Texas at Arlington. This park uses the campus of the college and the College Park District as the community that it serves. The park was a former brownfield that was renovated to reflect the temperate grasslands, savannas and shrublands native to the region with a native and adapted plant garden and is a park that predominately functions as an ecological water detention system and large-scale rain garden.

The site includes a gathering plaza, activity lawn, pedestrian promenade and shade arbors, as well as layers of seating. The park is located adjacent to a mixed-use
development. It forms a defining edge and gateway to the campus at the southeast corner of the site and the campus.

Figure 2-5 The Green at College Park, UT Arlington (http://www.uta.edu)

The Green at College Park is the focal point along the Center Street Pedestrian Trail in the City of Arlington (figure 2-5). It was designed by Schrickel, Rollins and Associates, Inc. (SRA). The site features a large lawn, a curved stone as seating, paving materials made from recycled bottles that allows water to permeate, native grasses, adaptive plants, and a dry creek bed that will help manage rainwater and storm water runoff that drains into Johnson Creek. It was designed as part of the Sustainable Sites Initiative.

2.9 Summary Of Chapter

This chapter describes the relationship between the individual perception, identity and park benefits. It outlines the need for open park spaces and the benefits gained from them. The review of the literature found in the Arlington Parks Recreation and Open Space Master Plan and The Trust for Public Land (TPL) shows that there are three predominant benefits derived from parks in the eyes of the community,

- Public Health Benefits
- Social Benefits, and
- Economic Benefits

A brief introduction to the parks studied in this research is given to form the background for the observations and surveys conducted at the sites.
The intent of this study is to explore the perception of these benefits--through visual observable behavior, surveys and interviews—surveys in each park and interviews with professionals involved in the park design and execution (detailed in chapter 3 — Research Methods).
Chapter 3
Research Methods

3.1 Introduction

This chapter focuses on the methods used in studying this topic to extract an understanding of the perceptions of the three park benefits according to park users. A qualitative approach is used through surveys, observable behavior and open-ended interviews to derive descriptive data that are based on people’s spoken words (Taylor and Bogdan 1998). This research documentation method is first approached by surveys filled out by park users, then through interviews with designers and practitioners in the field of landscape architecture. These data are then further supplemented through passive observation documentation. The following sections include a framework to describe and systematically organize this research.

3.1.1 Institutional Review Board

The IRB and University protocols for research on human subjects were met before any survey and interviews were conducted. This was done by first addressing the training certification exercise process that permits the researcher to conduct human behavior surveys and then filling out the forms pertaining to the thesis title, research emphasis and the questions to be posed in the questionnaire and interview process. Once this protocol was met and approved, the research surveys were conducted and data gathering process began.

3.2 Overview Of Research Design

The research was carried out using qualitative techniques of data collection in three stages. The first stage involved surveys, the second involved open-ended interviews with the professional practitioners and the third was passive non-participant observation.
The study sites were chosen based on their geographical location, and their surrounding community. Interview respondents were selected from the pool of design professionals who are involved in park and recreation design in the City of Arlington. They were contacted through email and, upon consented agreement, open-ended interviews were conducted. Comparisons were then made between study sites and data responses collected to a selection of key questions.

3.3 Research Instruments And Tools

Over the course of this study, surveys and observations in public park spaces were conducted alongside Interviews with selected city design professionals in the field of landscape architecture. These interviews took place primarily through e-mails or phone conversations. The phone interviews were recorded and the conversations transcribed. The method for selecting interviewees involved contacting actively involved professionals, coordinators and participants in park planning and landscape architecture design.

3.3.1 Study Location

The study sites were chosen based on their geographical location, and their surrounding community and accessibility to the researcher. Located in the north and central regions of the city, these parks serve a wide range of communities comprising of many neighborhoods within close proximity. These communities are primarily residential in character and provide a varying group of users who provide a rich source of information to enrich the study. River Legacy Park lies within the northern part of the city while Veteran’s Park and the Green at College Park are located in central Arlington.

3.3.2 Surveys

Firstly, the research focused on the benefits gained by the users of parks within the surrounding community. Questionnaires were designed to garner data that would
inform the study. These were done in the form of simple questions for the purpose of obtaining constructions of user perceptions and concerns; which gather insight into the site’s perceived benefits.

Questions posed to park users in the community in the surveys (also shown in Appendix D):

1. What are the health and wellness benefits gained from the park?
2. What are the social benefits gained from the park?
3. What are the economic benefits gained from the park?
4. What are the impacts of these three park benefits on the community?

Further sub-questions and considerations to inform the research:

5. How do you access the park?
6. What are the most important amenities that the park offers?
7. What is your primary reason for using the park?
8. Would you care if the park were not there? Why? _______
9. What improvements would you like to see added to the parks?

3.3.4 Interview Background

All of the professional design practitioners and their contact information were found via the internet through City of Arlington Park and Recreation Department and Design Firm websites. Phone calls and / or electronic mail were then used to inform the possible subjects of this study and to request their involvement. Upon their assent to be interviewed, times for phone calls or meetings were scheduled, and then conducted at the selected times.

The interviews process focused on the underlying design considerations by professionals, in the field of landscape architecture, involved in the design of the parks.
This was done to extract professional practitioner’s opinions and concerns on information available in literature review.

Questions posed to professional practitioners:

1. Tell me about the design of the park
2. What are the factors or significant requirements that determine the design of the park?
3. How do these factors impact the design of the park?
4. What are the health and wellness benefits gained from the park?
5. What are the social benefits gained from the park?
6. What are the economic benefits gained from the park?
7. What is the professional’s role in the process to determine the functionality of the park?
8. How do you see it benefiting the community?
9. Does it foster community growth?

Once the interview started, a few additional questions were asked to qualify the respondent for clarification purposes pertinent to the way the interview progressed. All questions were asked to each interview respondent. The question would be asked using the exact wording recorded in the IRB forms, and then asked again if clarification was needed. When necessary, the words were slightly adjusted ease the flow of conversation with the respondent. The interview would then proceed for approximately twenty to thirty minutes in length.

3.3.3 Observation Forms

The schedule for recording observations was determined in order to study a random sampling of activity and use (see Table 3-1). For details on dates the observations were carried out, see appendix D. A model observation form was created to
catalogue the observation data (Taylor and Bogdan 1998, 223) in order to collect selective data which would further inform the study (see Table 3-2).

They contained information such as date, activity, location, time, and description and place usage. In addition, columns were reserved for notes to record weather conditions, gender, rough estimate of age group (such as children, young adults, middle aged), etc. These notes were later referenced when developing the descriptive notes. Observations were carried out as the researcher progressed through the parks. Data collected was maintained in a research diary in the model observation forms (Table 3-2).

Table 3-1 Timetable for fieldwork

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Table 3-2 Model Observation Form

SITE NAME:  
TIME:  
DATE:  
SITE DATA:  
ACTIVITY TAKING PLACE:  
running  
walking  
cycling  
relaxed leisure  
ADDITIONAL NOTES:  

35
3.6 Research Procedure

The research procedure involved in this thesis was a qualitative data collection and analysis method as “research that produces descriptive data based on people’s spoken words and observable behavior” (Taylor and Bogdan 1998, 7). Data collection was done in accordance with the rules of Institutional Review Board (IRB), at The University of Texas, Arlington. The data was collected first-hand, recorded, and then transcribed word for word. The interviews with professional practitioners were accomplished by means of telephonic interviews.

The first part of the data collection process was the surveys. These were conducted by approaching park users and requesting their permission and agreeability to participate in the survey process. Interviews through surveys were used to obtain here-and-now constructions of users, motivations, and experiences, all of which gather insight into the user perceptions of the sites studied (Lincoln and Guba 1985).

The second part was in-depth interviews conducted with professionals in the field of landscape architecture, particularly focusing on the people involved with the design and execution of the study sites in particular. These were conducted to develop an understanding of the client requirements and designer intent for each project. The interviewees were identified from data mentioned in the park and recreation department website for the city and through further referrals from them and faculty at the landscape architecture program at the UT Arlington.

Each interviewee was contacted either by email or by phone to set up an interview appointment (see Appendix A and B). Interviewees are listed in the interviews in Appendix C as Interview Respondent # ___ or “IR#”. One respondent was not available
in time to be included in the research data. The analysis was then carried out based on inductive reasoning, thinking and theorizing by the researcher.

The third stage was the collection of observable data at the park sites. These were done through passive non-participant observations in areas of the parks.

This form refrains from interventions in the field—in contrast to interviews and participant observations. The expectations linked to this are outlined as follows: “Simple observers follow the flow of events. Behavior and interaction continue as they would without the presence of a researcher, uninterrupted by intrusion” (Adler and Adler 1998, p. 81) – Taylor and Bogdan 1998, 223.

These data were collected and recorded by maintaining a research data diary to log in details observed. Time of day for fieldwork was taken into consideration since recreational activities would vary according to normal workday schedules (see Appendix D). Passive observation was used for site inventory and to maximize the researcher’s ability to notice unconscious behaviors and customs because it allowed the researcher to see the park from the perspective of the user (Taylor and Bogdan 1998, Lincoln and Guba 1985).
### 3.7 Method Of Analysis

Data were collected from the surveys, in-depth interviews; which were recorded and then transcribed; and observations. These data were categorized by each question to focus on the response on each with respect to the three sites selected. This method gives a brief overview of data discovered. This method of analyzing data provides a triangulation between data gathered in observations (using field notes and pictures) and surveys; the in-depth interviews; and the literature review using the case study approach for each location. This allowed specific answers about each park to be revealed. This method of qualitative analysis gave the researcher the chance to compare the respondents’ answers with actual site observations that were supported by field notes and pictures. Data discovered were then cross-referenced with the literature review to see if the respondents’ answers coincide with what the literature says about the three benefits of parks. Figure 3-5 describes the methodology of analysis followed in the following chapter.

![Figure 3-1 Analysis Methodology](image-url)
3.8 Methodological Significance And Limitations

For the focus of this research, it is determined that observations, surveys and interviews provide the greatest depth of understanding on a broad range of settings and people (Taylor and Bogdan, 1998). Literature suggests that there are limitations when using interviews as data collection; they are primarily based on the difference between an individual’s words and actions (Taylor and Bogdan, 1998). Taylor and Bogdan also elaborate that people have fixed attitudes and will respond in a distinct manner in given situations. Non-participant passive observation is chosen as a research method to compensate for the potential lack of candid interview responses (Lincoln and Guba, 1985).

3.9 Summary Of Chapter

The research procedures involved in data collection and analysis in this study primarily takes its reference from qualitative research theory and utilizes non-participant passive observations and open-ended interviews. These methods are applied to this research to assess and identify the qualities and attributes that parks provide to support and relate the literature available on the benefits of parks.

The sites were selected to feed into data collected through the interviews and site observations. A qualitative data analysis method was used to form the background for the major findings and conclusions of this paper. The interview respondents and site study backgrounds have been included in this chapter because of their importance to the qualitative research method used in this study. They set the background for the findings and conclusions of this paper.

Based on the observations on site and the interviews in the following chapter, the study sites were analyzed next in terms of surrounding neighborhood, participant demography, distance from the park, and the design and amenities it contains. The
background of the parks and their surrounding settings sets the field for gathering data from the participant responses. The strategies and techniques used to analyze the collected data are enumerated in the following chapter.
Chapter 4
Analysis And Findings

4.1 Introduction

This chapter analyzes data gathered through passive non-participant observations (conducted unobtrusively so as to limit interference with subjects) and through surveys filled out by park users. Additional data were gathered through interviews with professionals in the field of landscape architecture and employees in the Park and Recreation department of the City of Arlington. This qualitative research method was used to extract emergent themes from collected data (Taylor and Bogdan 1998). Qualitative research focuses on the importance of looking at variables in the natural setting in which they are found. Detailed data were obtained through open-ended questions that provide direct quotations.

Data collection was done over a period of five weeks from the start of the IRB approval date (under the study title: Urban Park Benefits and Community Identity: A Study in Arlington, Texas). Data collected at each park studied were compiled in a table with the respondents listed with a coded reference, such as, Respondent 1 (R1); Respondent 2 (R2); and so on.

The qualitative research was three-fold:

- Questionnaire surveys (Appendix D),
- Open-ended telephone interviews with firm designers and officials in the park and recreation department of the City, and
- Data gathered through site observations (passive non-participant observations) made at the three parks (Appendix D).

Information gathered through observations became an informative source about the present park conditions and amenities available to users in addition to behavior patterns.
exhibited by park users. These data, combined with the survey questionnaires, aided in evaluating the users’ perceptions of the park and its three benefits: public health, social and economic. This resulted in an emerging set of descriptive terms used by the respondents. Next, common descriptive words were used to categorize the perceptions, and compared with the design program data (gained from interviews with designers and planners) and the parks master plan for the city. Field observation data were included in the site-specific analysis as well as the designer’s perspective of the study site.

4.2 Structure Of Procedure

For the purpose of the study, the findings from data collected were grouped into three categories:

- Findings from surveys.
- Findings from observations.
- Findings from interviews.

These categories were then synthesized to derive themes from all three sections and analyze them with information found in the literature review.

The questions in the survey (see Appendix D) were grouped together to derive key descriptive terms that the users used to describe use, activity and preferences. Questions one to three:

1. What are the health and wellness benefits gained from the park?
2. What are the social benefits gained from the park?
3. What are the economic benefits gained from the park?

were designed to gain user perceptions of the facilities available to them in the parks and their awareness of the same.

Question four:

4. What are the impacts of these three park benefits on the community?
was designed to perceive the users knowledge of park benefits to them as individuals of a community.

Question five to seven:

5. How do you access the park?
6. What are the most important amenities that the park offers?
7. What is your primary reason for using the park?

were aimed at defining the extent of the community the park served while questions eight and nine:

8. Would you care if the park were not there? Why?
9. What improvements would you like to see added to the parks?

were designed to analyze the individual needs felt by the users of the parks (see section 4.2.2).

4.2.1 Survey Analysis Findings

Data revealed from the survey responses are addressed in this section. These data were the user perceptions at each of the three parks and form a collective database for this study.

4.2.1.1 Public health benefits

A large number of the nineteen participant user respondents were individuals or groups who had an easy access to the site. They were people who lived within a ten to fifteen minute drive to the parks. Other respondents were there as team-building activity promoters in their places of employment.

- At River Legacy Parks, the overwhelming response was the ease of free access to the trail system for biking, walking, jogging or running purposes; a need for fresh air in a natural setting was also considered an added advantage. Some users came to roller blade along the trails while others came for a long stroll with
their dogs. One respondent was there as a form of continuing physical therapy after a knee surgery (R5). The responses from bicyclists and runners were related more toward regular overall health maintenance, while other respondents stated weight control issues as their reason for health benefits.

- At Veteran’s Park, the main health benefits listed were exercise, play area and weight control maintenance. There were parents who viewed the playground as an important source of healthy outdoor activity for their children and grandchildren (R2 and R5).
- The Green at College Park had a more varied pool of responses; one respondent listed exercise and fresh air as the primary health benefit. Another stated he/she was unaware of any health benefits the park offered.

4.2.1.2 Social benefits

Some respondents were in doubt as to whether there were any benefits to them as a community as well as individually. The park users appeared to be there for quick morning or evening fitness routines. This reveals that the individual users make use of the facilities primarily as part of their regular routine. They did not appear aware of the overall benefits to the general surrounding community. They did not concern themselves with the activities related to larger group interactions. These are activities that may be seen to occur when there are special events conducted at the venues rather than on regular days, when there are no events (as noted in conversation with respondent R4, when asked for clarification on the meaning of social benefits).

- The River Legacy Park respondents, on average, had a positive opinion which focused largely on the chances of interaction with like-minded people pursuing similar recreational leisure activities. Some respondents stated that they did not
consider there to be any social benefits to themselves individually (R5, R6, and R7).

- At Veteran’s Park, the respondents unanimously agreed that the park offered social benefits in the form of interaction between fellow citizens, parents, children and dog owners.
- The Green at College Park also served to provide a space for the individuals to meet fellow students and street neighbors.

4.2.1.3 Economic benefits

The park users did not consider the overall economic benefits that the parks could generate. The River Legacy Park and the Veteran’s Park both have pavilion areas available for rental purposes, and educational aspects to their parks in the form of a science center, nature trails and xeriscape gardens.

The Living Science Center at River Legacy (which explores nature trails surrounding the Center and teaches through a Nature School program) uses donations and education programs as economic generators for the park system of the city. The park offers a canoe launch along the river trail on the West Fork of the Trinity River which traces through the heart of the 1,300 acre park and provides opportunities to spot herons, egrets, turtles, kingfishers, chickadees, and bobcats. It provides a water navigation route through the middle of the Dallas-Fort Worth area.

- The River Legacy Park survey responses revealed a largely unaware group of individuals as to the possibility of parks as economic generators to the community.
- Veteran’s Park surveys showed that the citizens preferred the free and easy access to the park and one respondent mentioned that increase in use of the park for fitness reasons reduces the need for healthcare expenses (R4). Another
respondent was a young parent who preferred the close proximity of the park for recreation purposes for her child as opposed to other daycare and supervised indoor play facilities.

- Respondent data collected at the Green at College Park revealed free access and safe areas to relax in as major economic benefits perceived.

4.2.1.4 Impacts of park benefits

It was determined that none of the park users at the three sites observed were aware of any data formally collected on the benefits or perceived benefits of the park system. The park users unanimously agreed that as observers and users of the parks themselves, the positive benefits are clearly evident for their individual use.

- River Legacy Park surveys show that a majority of the people prefer the park and its facilities for the purpose of interaction with like-minded people as well as a chance to gain environmental awareness through experiencing nature trails. One respondent mentioned that the park has made the city a more attractive place for people to live and work.

- Veteran’s Park surveys reveal that the park provides ample opportunities for people to interact with one another, good facilities/amenities, and easy accessibility; one respondent (R5) listed reduced expenditure on fuel when commuting to the park.

- The Green at College Park shows that safety and ease of accessibility are the primary impacts of the three benefits.

4.2.1.5 Accessibility

This was a question inserted to determine the rough geographic distance that the people travel in order to access the park. The answer to this question establishes the extent of the surrounding area that the park and its amenities serve. The park users at
each site were residents from nearby neighborhoods that spent less than ten minutes walking or driving to access the park. This was revealed to be one of the primary factors in the use of each park.

- Respondents at River Legacy Park used private vehicles as the main method of transportation to the park; while one respondent revealed that he cycled over to the park (R1). All responses revealed the individuals experienced a maximum of a ten to fifteen minute drive to reach the park.

- Veteran’s Park respondent’s listed private vehicular transportation was used to access the park with a maximum of a five to ten minute driving distance.

- The Green at College Park showed unanimous walking access to the park. All respondents revealed they resided within a two block radius of the park.

4.2.1.6 Park amenities

The park users at all three of the selected sites agreed that the open space itself is perceived as an important benefit. A majority of park users stated that the park attracts individuals and user groups from various age groups as well as inside and outside of the community to use the space. The parks provide a relaxed open space for individuals and groups to enjoy and use for whatever purpose they deem necessary.

- The trails at River Legacy Parks factor as the most important amenity for all the participants in the survey.

- At Veteran’s Park the trails become the primary amenity, followed by the playground facility.

- At the Green at College Park, the space to walk dogs and the pathway within serves as the main attraction coupled with the fact that the park is located nearby to all the users.
4.2.1.7 Primary usage

The dominant factor of use in the parks studied is for public health benefit aspect in all the park users responses. The need for open space that is natural and offers a chance to hone social interaction skills among the young is also an important factor.

- River Legacy Park is used mostly as a place to concentrate on health and fitness with a natural setting acting as an incentive to utilize the park.
- Veteran’s Park surveys reveal the playground facility and the trail pathways for exercise to be the primary draw.
- Survey responses at the Green at College Park reveal social interaction and exercise as the main uses of the park.

4.2.1.8 Existence

The majority of the survey responses reveal that the individuals consciously realize that they are bound to the parks that they use regularly. The question immediately reveals, through the responses, that the lack of the existing park would alter their perception of space and activity zones.

- River Legacy Park and Veteran’s Park surveys show that the people using the park feel a definite attachment and need for it. All respondents use the park regularly and mostly for recreational activity related to public health (particularly so at River Legacy Park) and for interaction with other people. The unassigned open space areas are also used as picnic spaces aside from the existing pavilion areas in both parks.
- The Green at College Park reveals a more varied set of responses. One participant responded with a definite “no” revealing no general concern if the park were not there (R1).
4.2.1.9 Improvements

There is scope for improvement and enhancement of certain elements and features in almost every park; whether they are feasible and necessary remain to be determined.

- River Legacy Park users cite the need for lengthier trails and a desire for more trails, with a couple of respondents desiring the need for cleanliness along the river banks (R3).
- Veteran’s Park users appear to be overall satisfied with the current upkeep and maintenance; although there was mention of the need for increased parking space (R3).
- The Green at College Park has a relatively passive response, with the majority of respondents stating that “don’t know” or that there were no necessary improvements needed.

4.2.2 Findings From Observations

Observations made in the parks were noted using field notes made in a format containing information such as date, time, location, weather and activity in the area. The notes recorded a variety of detailed activity. These were used to supplement the information from the surveys conducted subsequently. Special attention was paid to the activities of the users of the space.

From the observations conducted on-site, the predominant activity at each of the parks was the use of trails for physical exercise such as walking, jogging, running and cycling. There appeared to be a balance between male and female park users. Some came in groups of two and three people while others were solitary individuals with headphones. The weekend park users also consisted of a few young families with children in strollers while the weekdays saw a predominance of runners and cyclists.
The areas designated as open space gave people the opportunity to use the space in a manner of their own choice. Some people used the open space as a relaxed picnic location and others used it as impromptu playing fields.

The initial method of open ended recorded interviews was switched to a short written questionnaire when the individuals approached were reluctant to an interview that would take more than ten minutes. Other individuals refused to participate in the questionnaire survey and were uncomfortable with the idea of a survey even after being informed that it was an anonymous one. The researcher opted to forego these people in order to prevent them from any discomfort. Data from each of the respondents were examined and entered into spreadsheets to determine common descriptive terminology.

4.2.2.1 River Legacy Parks

Site access was more prominent from the Collins Street/ HW 157.

Figure 4-1 River Legacy Trail Map (Source: http://www.arlingtontx.gov)

Facilities available within the park (see figure 4-2 through to figure 4-8):
The Legacy Pavilion features a fully covered area (126’ x 42’) that is handicap accessible, 14 picnic tables, a large grill, lighting and seats 130 people.

The Elm Grove Pavilion features a handicap accessible shade-structure (72’ x 72’), which seats approximately 65, 4 grills, and lighting.
The trails at River Legacy include eight miles of paved hike and bike trails winding through thick forest and expansive greenbelts and a six-mile mountain bike trail with off-trail biking included. The observations concluded a predominance of runners and bicyclists while a lesser number of people were seen walking their dogs in the park.
River Legacy Living Science Center acts as the gateway to River Legacy Parks. It is a 12,000 square-foot nature center designed with a sustainable design structural form to have minimal impact on the environment. It houses the River Legacy Foundation’s environmental education program, nature school and offers public programs and events. Among the amenities provided are the interactive environmental exhibits, aquariums and terrariums with native wildlife, a gift shop, nature trails, and a pond. River Legacy Foundation is a non-profit corporation dedicated to preserving and enhancing Arlington’s segment of the Trinity River Floodplain.
Figure 4-7 Pedestrian Bridge (Source: Leonelle D'Souza 2012)

Figure 4-8 Playground (Source: Leonelle D'Souza 2012)
Visitors to the park engage in activities such as a family getting ready for a run along the park trail (see figure 4-9) and a woman walking her pet dog (see figure 4-10) in the park.
4.2.2.2 Veterans Park

The park includes amenities such as trails and wildscape gardens (figure 4-12) focusing native and xeriscape plantings. The memorial to veterans (figure 4-11) was the most recent addition to the park commemorating the citizens who served in the military.

Figure 4-11 Veteran's Memorial (Source: http://durangotexas.blogspot.com)
The playground area (figure 4-13) of the park was most visited by the young families and the grandparents on outing with their grandchildren. It was observed that the playground was most used in the mornings with children below the age of six years.
4.2.2.3 The Green at College Park at The University of Texas at Arlington

![Figure 4-14 Panoramic view of the Green's](Source: Leonelle D'Souza 2012)

![Figure 4-15 3D Aesthetic of the Park Design](Source: http://www.uta.edu)

The Green was observed to be predominantly utilized in the early morning hours between six and seven by individual users and those in groups of two. The users were from nearby, walkable distances residing in campus housing facilities and nearby residential buildings.

The observations were conducted during the fall season of 2012 and therefore the parks did not see much usage at the peak afternoon periods of the day due to increased temperatures. The heat was a common factor in all parks and was considered a limitation as data collected was only covered over a specific time frame and did not support a continuous mapping throughout the seasons of the year.
4.2.3 Designer’s and Planners Perspective

The three parks used as site studies were all designed with the theme of protecting the environment as well as retaining and showcasing the naturalness of the local geography. The parks were also intended to be used as sources of outdoor recreational activity which would enhance the quality of life and provide the surrounding communities with a safe and welcoming atmosphere. One response was that “the concept of the park...was always to be a passive natural park...that was tied to the river the Trinity River and the use of the open space in the Trinity River flood plain”(IR 1) with respect to the design of River Legacy Park.

Conservation and preservation were main factors that played important roles in the design and execution of the parks. For River Legacy Parks, it is also considered a regional park aside from being a linear community park and as respondent IR 2 stated, “Since it is bordering the Fort Worth city limits as well, it was designed really as a regional park that would benefit people from even further than just the immediate surrounding areas. The un-designed open spaces were to allow the people to make maximum use of the open space in the manner that they preferred rather than designating separate fields for different activities.” From the designers firm, the response was “River Legacy...It's a basic connection to the Trinity River...its very, very important, especially in the Dallas-Fort Worth area...people don't understand how important Trinity River is to this area.. to the history, to the economy of the area. But it's really one of the reasons we are here...” – IR 1.

Both the designers and the City Park and Recreation Department professionals reveal that the economic draws of parks are an immeasurable added benefit. The surrounding real estate property would be the primary beneficiaries of a neighboring park. “It definitely becomes an economic draw in terms of real estate developer's wanting to set
something up there...” (IR 2). “I see it as having economic benefits in terms of improving the quality of life within the community... ...although I think they improved the property values of the areas around them... That’s a proven fact but they just provide a higher quality of life to people who are around those particular areas. Yes, very definitely” (IR 1).

Park needs vary over a period of time and community parks undergo the process of evolving needs depending on the surrounding socio-economic needs. Park amenities become an overall reflection of the needs of the user groups. Respondent IR 2 mentions “Socially, it’s a way for the people to meet and have activities together. I mean the place is sometimes used for people conducting classes and group activities so that’s a kind of benefit for sure” with respect to the River Legacy Park. Respondent IR 1 mentions that (with respect to all three parks in the study) “it serves as a safety valve in my opinion, to just go around and experience nature... ”

The open space as a place for passive recreation that is user-defined is a major influence in designating the undefined open spaces in the parks; this allows users to determine their own activity functions in the place. “It’s definitely got benefits in terms of clean fresh air and nature and environment preservation. I mean you’d also see a large number of people using the place and trails, especially in great weather. There are times when you won’t even find enough parking spaces in the parking lots. They’d be full (IR 2).” This was seen to be true of both River Legacy as well as Veteran’s Park. The Green at College park did not see as much use in cooler weather, though larger turn-outs were seen when there were games or functions taking place in the neighboring sports facility building on The UT Arlington campus.

The parks become an active source of informal education to the users. The availability of the Living Science Center at River Legacy Park, the xeriscape gardens at Veterans Park, and the native plant palette of the Green at College Park are seen by
respondents as various methods used to create awareness of local environments and the conditions surrounding them. Signage depicting the history and pertinent facts about the parks and the environment become another tool to educate the visiting public and the user.

4.2.3.1 Themes derived from interviews with designers and planners

The interviews revealed four main concerns regarding the design and implementation of the parks studied. These were:

- Conserve and protect the environment.
- Showcase the natural local environment.
- Improve quality of life.
- Source of environmental awareness.

One of the primary issues in the design of the parks from the designers’ perspective as well as the client agenda involved in the process was the need for conservation and protection of the local environment. This was seen as a way of giving value to the history of the city and the being sociologically sensitive (IR-1). The River Legacy Park is an important part of the Trails System in place along the Trinity River, which is the foundation of the development in this area (IR-1).

All three parks studied in the research reveal opportunities that define the local ecological environment. The river path and flood plain within River Legacy Park, the wildscape gardens in Veteran’s Park and the rill garden at the Green at College Park enable users to bear witness to the varying flora available within their community. Vegetation influences the satisfaction of park users (Taylor and Francis 1986).

One vital role that urban parks play is providing space for the expression of diversity, both personal and cultural (Thompson 2002). The availability of the parks and the opportunities they provide for the purpose of recreation and interaction cause the
users to perceive them as a benefit to the community by their presence alone. The additional value of the park as an educational tool to increase the public's awareness of environmental surroundings and the efforts for conservation (achieved by informative signage depictions in the parks) is seen as a boon to the city (IR-1, IR-2).
4.5 Synthesis Of Surveys, Observations And Observations

After the observation and survey data was collected, the information was read and reread in order to derive descriptive words which were common to all or most of the survey respondents. These words were associated with words that were found in the literature review to describe the benefits of parks. In tables 4-1, 4-2, and 4-3, the descriptive terms that emerged revealed that they fell under a broader terminology under which activities can be classified. Each park is listed separately with terms that appeared to be dominant in the survey interviews conducted.

These data were analyzed to identify common themes and perceptions that were unique to the particular respondent. They revealed that there were three basic categories that tie the descriptions into the three park benefits:

- Individual descriptive terms related to activity function
- Influences:
  - Need for natural settings
  - Safety
  - Interaction
- Activity zones

The first category, individual descriptive terms, was used to classify the respondent's descriptive words or phrases in their response to the three park benefits. The second category, the influences, was used to classify information into categories reflecting the particular influences stated by respondents. The third category, the activity zones, is the classification of space for the type of recreation activity.[Tables 4-1, 4-2, and 4-3 are listed on the following pages].
<table>
<thead>
<tr>
<th><strong>RIVER LEGACY PARK</strong></th>
<th><strong>R1</strong></th>
<th><strong>R2</strong></th>
<th><strong>R3</strong></th>
<th><strong>R4</strong></th>
<th><strong>R5</strong></th>
<th><strong>R6</strong></th>
<th><strong>R7</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>1 What are the health and wellness benefits gained from the park?</td>
<td>exercise</td>
<td>exercise</td>
<td>exercise, fresh air</td>
<td>exercise</td>
<td>fresh air, scenery</td>
<td>improves health</td>
<td>exercise</td>
</tr>
<tr>
<td>2 What are the social benefits gained from the park?</td>
<td>interaction with people</td>
<td>interaction with people</td>
<td>open space and picnics</td>
<td>interaction with same interest</td>
<td>none</td>
<td>none</td>
<td>none</td>
</tr>
<tr>
<td>3 What are the economic benefits gained from the park?</td>
<td>save money</td>
<td>don’t know</td>
<td>don’t know</td>
<td>cost free activity area</td>
<td>don’t know</td>
<td>improves health</td>
<td>none</td>
</tr>
<tr>
<td>4 What are the impacts of these three park benefits on the community?</td>
<td>social interaction</td>
<td>health awareness</td>
<td>environmental awareness</td>
<td>interaction with same interest people,</td>
<td>environmental awareness, physical activities</td>
<td>draws people to the city to live and work</td>
<td>none</td>
</tr>
<tr>
<td>5 How do you access the park?</td>
<td>bicycle</td>
<td>drive</td>
<td>drive</td>
<td>drive</td>
<td>drive</td>
<td>drive</td>
<td>drive</td>
</tr>
<tr>
<td>6 What are the most important amenities that the park offers?</td>
<td>bike trail</td>
<td>trails</td>
<td>trail, nature</td>
<td>trails</td>
<td>trails</td>
<td>bike trail</td>
<td>trails, water fountains</td>
</tr>
<tr>
<td>7 What is your primary reason for using the fitness facilities?</td>
<td>fitness</td>
<td>fitness</td>
<td>fitness</td>
<td>fitness</td>
<td>physical rehab</td>
<td>weight</td>
<td>fitness</td>
</tr>
<tr>
<td>8 Would you care if the park were not</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Why? _____</td>
<td>workout place</td>
<td>outdoor environment</td>
<td>workout place</td>
<td>physical activities</td>
<td>no other nearby place</td>
<td>enjoy riding in the park</td>
<td>place to walk and bike</td>
</tr>
<tr>
<td>9 What improvements would you like to see added to the parks?</td>
<td>cleaner trails, longer trails</td>
<td>more water, fountains</td>
<td>longer, wider trails, clean up river bank</td>
<td>upkept all the time</td>
<td>none</td>
<td>more trails</td>
<td>more trails</td>
</tr>
<tr>
<td>VETERAN’S PARK</td>
<td>R1</td>
<td>R2</td>
<td>R3</td>
<td>R4</td>
<td>R5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>----------------------------------------------------</td>
<td>------------------</td>
<td>------------------</td>
<td>------------------</td>
<td>------------------</td>
<td>------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. What are the health and wellness benefits gained from the park?</td>
<td>exercise, play</td>
<td>exercise, play</td>
<td>weight control</td>
<td>weight control, fitness</td>
<td>exercise, fresh air</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. What are the social benefits gained from the park?</td>
<td>meet people</td>
<td>meet parents and kids</td>
<td>meet other dog lovers</td>
<td>meet people</td>
<td>meet people</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. What are the economic benefits gained from the park?</td>
<td>free, open space</td>
<td>free activity zone for kids and adults</td>
<td>interaction with people</td>
<td>better health - less money on healthcare</td>
<td>keep people close to home</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. What are the impacts of these three park benefits on the community?</td>
<td>meet people</td>
<td>great location, facilities, activity zone</td>
<td>safe place for exercise</td>
<td>financial benefit to the city</td>
<td>less use of gasoline, more picnics/food bought</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. How do you access the park?</td>
<td>drive</td>
<td>drive</td>
<td>drive</td>
<td>drive</td>
<td>drive</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. What are the most important amenities that the park offers?</td>
<td>trails</td>
<td>playground and trails</td>
<td>trails</td>
<td>trails</td>
<td>playground, trails, restrooms</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. What is your primary reason for using the park?</td>
<td>fitness, playground</td>
<td>playground</td>
<td>walking the dog</td>
<td>outdoor recreation</td>
<td>fitness, time with grandchildren</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Would you care if the park were not there?</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Why? ____</td>
<td>like the park</td>
<td>use of playground, fitness</td>
<td>go elsewhere for outdoor activities</td>
<td>will have to look elsewhere for outdoor activities</td>
<td>no good place to jog/play</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. What improvements would you like to see added to the parks?</td>
<td>don’t know</td>
<td>don’t know</td>
<td>more parking</td>
<td>none</td>
<td>more grass, shade</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Table 4-3 The Green at College Park Survey Data

<table>
<thead>
<tr>
<th>THE GREEN AT COLLEGE PARK</th>
<th>R1</th>
<th>R2</th>
<th>R3</th>
<th>R4</th>
<th>R5</th>
<th>R6</th>
<th>R7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>What are the health and wellness benefits gained from the park?</td>
<td>don't know</td>
<td>exercise, fresh air</td>
<td>relaxation, romance</td>
<td>exercise, see lids play</td>
<td>exercise, fresh air</td>
<td>well maintained greenery, clean, exercise place</td>
</tr>
<tr>
<td>2</td>
<td>What are the social benefits gained from the park?</td>
<td>hang out</td>
<td>meet people</td>
<td>meet people</td>
<td>made friends</td>
<td>meet people</td>
<td>meet people, incentive to exercise</td>
</tr>
<tr>
<td>3</td>
<td>What are the economic benefits gained from the park?</td>
<td>don't know</td>
<td>free to use</td>
<td>information sharing, knowledge transfer</td>
<td>not sure</td>
<td>free to use, nearby</td>
<td>good experience</td>
</tr>
<tr>
<td>4</td>
<td>What are the impacts of these three park benefits on the community?</td>
<td>place to walk dog, stroll</td>
<td>place to walk dog, hang out</td>
<td>playground, safety</td>
<td>safety, green space</td>
<td>interaction with same interest people</td>
<td>don't know</td>
</tr>
<tr>
<td>5</td>
<td>How do you access the park?</td>
<td>walk</td>
<td>walk</td>
<td>walk</td>
<td>walk</td>
<td>walk</td>
<td>walk</td>
</tr>
<tr>
<td>6</td>
<td>What are the most important amenities that the park offers?</td>
<td>place to walk dog, stroll</td>
<td>pathway, nearby</td>
<td>playground</td>
<td>place to relax, play</td>
<td>morning exercise route</td>
<td>cleanliness and greenery</td>
</tr>
<tr>
<td>7</td>
<td>What is your primary reason for using the park?</td>
<td>hang out with friends</td>
<td>walk dog, exercise</td>
<td>walking</td>
<td>walks with friends</td>
<td>exercise</td>
<td>enjoy and meet friends</td>
</tr>
<tr>
<td>8</td>
<td>Would you care if the park were not there?</td>
<td>no</td>
<td>maybe</td>
<td>no</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>9</td>
<td>Why?</td>
<td>aesthetic function</td>
<td>close by, not far to reach</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>What improvements would you like to see added to the parks?</td>
<td>don't know</td>
<td>none</td>
<td>entertainment</td>
<td>prune plants, uneven grass</td>
<td>don't know</td>
<td>water fountains</td>
</tr>
</tbody>
</table>
The respondents, through the interviews, revealed that the park system network in the Arlington City limits is being used as a zone for public health and social interaction. The surveys revealed that the parks indirectly tie the surrounding areas into it forming a form of community. The parks become used for individual and group activities; such as team-building sport activities, walking, biking and jogging for fitness, as well as educationally through the planting of xeriscape gardens, butterfly gardens and nature trails.

Previously in this section, commonly observed behaviors were arranged with the commonly cited insights of the interview respondents to identify three basic categories that tie the descriptions into the three park benefits. These are listed below.

4.5.1 Individual Descriptive Terms Related To Activity Function

This focuses on the amenities available within the parks and the perceptions of park users with respect to these amenities. It reveals the primary reason for the individuals use of the space, which in turn justifies the market need of the space.

4.5.2 Influences

This category reveals the social and psychological preferences of the users. Using words such as need for natural settings, safety, and interaction divulges information on the contributing elements which influence the relationship between people and place. These are perceptions based on personal character traits and behavior, and are influenced by surrounding environments. The space (park) is seen as a combination of setting, landscape and activity.

4.5.2 Activity zones

The term ‘activity zones’ focuses on the activities that are participated in within the parks. It determines the predominant use of the space and consequently the varying age group that utilizes the space. For example, open fields were observed to be mostly
utilized by youth and by families for activities involving physical sports, while pavilions were mostly used for shaded picnics and barbecues at both River Legacy Park and Veteran's Park. Observations at the Green noted the open space being used for a combination of leisure and active recreation, in part due to the smaller space available when compared to the other two parks. This developed an interaction between individuals who did not arrive at the park in the same group for a shared activity. It was activity created through the interaction of individuals at the site.

Although the selected study sites came under the umbrella of community parks, they vary in terms of the type of user group and park style. For example, River Legacy Park is a linear park that showcases the Trinity River's importance and functions as a link to cities other than Arlington itself. According to information revealed through the surveys, the user group comes from the surrounding Dallas-Fort Worth area. The park visitors are not restricted to the City of Arlington.

The main promoters for the public parks are the city planning departments and institutional organizations, which saw the need to create welcoming open spaces within the city and promote a feeling of environmental awareness. This need for parks is also actively supported by the city community members as indicated in the literature review.

The survey participants were typically focused on how the parks affected the overall health of the mind and body (predominantly the social and health benefits) and used the parks as a tool to achieve this goal. The respondents had specific ideas of what they wanted in terms of usage benefits from the parks; therefore, it is important for the designers and planners to know about the specifics requirements of the end user groups. Designers need to achieve a good balance of providing the aesthetic functionality along with the ability to derive solutions based on the historic, environmental and client requirements.
The City of Arlington promotes parks as an escape from a hectic, fast-paced world, which from literature studies appears to be a common practice adopted by urban cities in general. People desire places that provide clean fresh air, uncluttered, natural environment and a space for themselves and their families to relax. Still others want a space that gives back to the community by defining places for recreation and relaxation.

4.8 Summary of Chapter

The findings in this chapter reveal that each individual relates to the environment through an identity of their own, which is influenced by the surroundings, both human and non-human. All of the emerging themes revealed through the analysis link back to previously studied benefits of parks.

These findings reveal an awareness of the benefits that parks offer (although it is not a cognitive recognition) by the user towards the self rather than the larger community. The primary benefits which are appreciated are the health and interaction benefits provided by parks. These are not easily measured as compared to economic benefits which can be measured.
Chapter 5

Conclusions

5.1 Introduction

The primary objective of this study is to assess the user perceptions of park benefits: public health benefits, social benefits, and economic benefits. The literature review identified the three benefits as important elements in the development of public parks for people. This thesis is primarily informed by qualitative model of analysis and the methods used to perform the analysis were observations, surveys and in-depth interviews. It provides a measure of information on the awareness of users towards the three benefits described by practitioners in the field of landscape architecture.

A methodology was used to derive key terms used in descriptions of participant respondents by relating them to observable behavior and design intent. Three community parks were chosen as study sites because of the category of parks they were classified under, the accessibility for the researcher, and the common amenities present within each such as hike and bike trails, nature trails, recreation amenities and surrounding residential areas.

5.2 Review Of Research Findings

The researcher’s main purpose is to create an enhanced understanding of user perceptions by landscape architects. This section uses the findings in chapter 4 to answer the primary research questions (seen in section 1.6):

1. Who are the user groups in community park spaces?
2. What is the predominant usage of the community park?
3. What are the benefits gained from the availability of community parks?
4. Do community parks foster community identity?
5.2.1 Research Questions

As described in chapter 4 (see section 4.5) certain descriptive words were derived from the responses to the surveys. The interview with professionals described the previously derived terms that helped to answer the research questions. Data were analyzed (see chapter 3 for procedure) based on individual interview and survey questions and then summarized to answer the four main research questions of the research.

5.2.1.1 Who are the user groups in community park spaces?

Parks provide the citizens with free, easily accessible open natural spaces to enjoy. Parks function as a tool to draw a community together by providing a place for recreational activity; such as a morning jog, run or even walking the dog; and is used as an educational tool to create awareness of the environment (through the use of signage, educational and community awareness programs). Parks provide opportunities for denizens of the community to venture outdoors and get moving around, thereby increasing their contact with nature and the surroundings. This in turn is proven beneficial to the general health and social well-being of the individuals and therefore the community.

From survey responses and observed data, park users were people who made use of the amenities provided mainly for health and interaction purposes. The observations revealed the users were generally single users, especially on weekdays, as opposed to larger groups of people that are expected on days when there are special events that take place within the parks. There are a large number of park users on a regular basis, with people using the space three to four times a week.
5.2.1.2 What is the predominant usage of the community park?

The research reveals that the predominant use of all three parks studied is primarily for public health benefits that the park offers. This was closely followed by the opportunities for social interaction among various people and age groups.

Observations and surveys revealed that park users primarily make use of the trails available within the parks for running and biking activity. Playgrounds and undesignated open space were used primarily by children and families for group activities. Literature reveals the benefits of interaction, especially among children and youth.

5.2.1.3 What are the benefits gained from the availability of community parks?

From data collected and analyzed, the benefits to the individual user are not tangibly measured. All of the respondents are users of parks. They reveal that parks provide them with a place to enjoy a better quality of life.

The social benefits of parks are not tangibly measured. This study reveals users are aware of the benefits of interaction and group activity individually, although they do not qualify it as the main benefit. Literature reveals how city parks also make neighborhoods more livable. It also reveals social interaction as a tool to develop personal identity and future relations.

This is achieved through relations with similar age groups in the case of young children and youth. The economic benefits, according to the research, are easier to measure. Having a park nearby suggests an increased level of property value. The frequent use of the park also leads to better maintenance management and incentives for the users to maintain the area. The opportunities for real estate development and small scale business developments around or near the park are another advantage. Parks
invite the community residents to spend time there and make use of the available facilities and/or amenities.

5.2.1.4 Do community parks foster a community identity?

This study reveals that while parks may contribute to the development of an identity for the city, they are not the sole primary contributor to identity. Parks play an important part in improving the quality of life that a city offers to denizens. Through the encouragement of self-expression (which is observed through activity taking place in a park) and the creation of programs that encourage interaction among the people of a community (such as volunteer programs and special events involving active recreation), parks foster a feeling of belonging in the denizens.

Parks foster an identity, though this may not be cognitively recognized by the individual user. By providing a place for activity, gatherings, educational and environmental development of the mind and body, parks unobtrusively create a draw among their surroundings. Visual aesthetics aside, the presence of a large area of open natural space instills a calming relaxed influence on the users as well as the surrounding community. Maintenance and safety issues relating to the parks and surroundings encourage users and planners to work together. This in itself becomes a part of developing a community gathering through interaction that ties the individuals of a community together.

5.3 Conclusion And Discussion

There were similarities between the information gained from data collected and data in the literature review. This may be due to the fact that most of the informants selected were people who actually constantly made use of the parks and their facilities.

According to the literature review, parks are becoming more and more important as cities grow and expand. The need for clean open spaces for active and passive
recreation, while also encouraging the feeling of a park belonging to its surrounding community, will only increase the value of the city as an area to live and work.

Of the three parks selected, the Green at College Park was the newest addition, as it only opened in 2012, and caters to the student body community of the Center Park District of The UT Arlington Campus. The users are generally students who have moved to the vicinity for their college degrees and these are a more transient demographic than users of River Legacy Park and Veteran’s Park, which have both been in place since the nineteen eighties. These two parks tend to have a more stationary resident user group and have more families present in the parks.

The strongest relationship derived between the literature and collected data is the contemporary need for open space. Both the literature and the respondents confirmed that people see a free natural open area as a gauge for a better quality of life. This also addresses one of the vision goals that the Master Plan has envisioned for the City.

5.3 Relevance To The Field Of Landscape Architecture

Landscape Architecture is a field that involves, but is not limited to, the design and planning of outdoor public areas. It involves the understanding of environmental and social behavior besides providing aesthetic solutions towards planning.

As urban cities see an increase in development (residential, commercial, transit-oriented infrastructures) there is a need to preserve and maintain existing assets while anticipating future needs. There is a need to focus on the service priorities of citizens, and on strategies that will provide the most improvement in these services.

There is a growing appreciation towards green practices in present times and this is reflected by people’s preferences towards activities and location (which is seen through user perception studies); this provides opportunities for landscape architects and
planners to create design objectives and incentives, while raising awareness among citizens to protect and maintain their natural and environmental communities. They have the incentive to provide services based on philosophical approaches as a response to the needs of communities in an effort to protect and maintain existing public recreation spaces.

5.4 Future Research

Several findings emerge with respect to the data collected and analyzed in this study. Judgments of perceived safety and environmental quality are generally consistent across within the observer groups. A small minority of observers hold divergent views on both qualities, and this can be further investigated further with larger samples of user groups.

The following recommendations for further study were obtained from findings in this study and discussions with landscape architects who design and plan public parks:

- Analyze the need for preservation of land for ecological and environmental benefits. The environmental quality depends on the presence of fresh air and natural vegetation, in either nature-like settings or in man-made parks. What was less clear during this study was the respondents’ perception regarding the environmental surroundings and the possible benefits it provides.

- Public awareness of maintenance and safety issues relating to parks and their surroundings. In general, security is associated with open areas with long view distances and with signs of development and nearby populated areas (Schroeder and Anderson 1984). An study of an individual's perception of safety in a public space versus the occurrence of actual crime in the area would provide an actual reference to the topic.
Appendix A

IRB Approval Documentation
Institutional Review Board
Notification of Exemption

October 09, 2012

Leonelle Vincia Dsouza  
Dr. Pat Taylor  
School of Architecture  
Box 19108

Protocol Number: 2013-0071

Protocol Title:  URBAN PARK BENEFITS AND COMMUNITY IDENTITY: A STUDY IN ARLINGTON, TEXAS

Type of Review:  Exemption Determination

The UT Arlington Institutional Review Board (IRB) Chair, or designee, has reviewed the above referenced study and found that it qualified for exemption under the federal guidelines for the protection of human subjects as referenced at Title 45 Part 46.101(b)(2). You are therefore authorized to begin the research as of October 09, 2012.

Pursuant to Title 45 CFR 46.103(b)(4)(iii), investigators are required to, “promptly report to the IRB any proposed changes in the research activity, and to ensure that such changes in approved research, during the period for which IRB approval has already been given, are not initiated without prior IRB review and approval except when necessary to eliminate apparent immediate hazards to the subject.” Please be advised that as the principal investigator, you are required to report local adverse (unanticipated) events to the Office of Research Administration; Regulatory Services within 24 hours of the occurrence or upon acknowledgement of the occurrence.

All investigators and key personnel identified in the protocol must have documented Human Subject Protection (HSP) Training on file with this office. Completion certificates are valid for 2 years from completion date.

The UT Arlington Office of Research Administration; Regulatory Services appreciates your continuing commitment to the protection of human subjects in research. Should you have questions, or need to report completion of study procedures, please contact Robin Dickey at 817-272-9329 or robind@uta.edu. You may also contact Regulatory Services at 817-272-3723 or regulatoryservices@uta.edu.
UT Arlington
Informed Consent Document

PRINCIPAL INVESTIGATOR
Leonelle V D’Souza, Program in Landscape Architecture, University of Texas at Arlington
Phone: (914) 217-9831 (cell)
Email: leonelle.dsouza@mavs.uta.edu

FACULTY ADVISOR
Dr. Pat D Taylor, Program in Landscape Architecture, University of Texas at Arlington
Phone: (817) 272 - 2801 (Office)
Email: pdt@uta.edu

TITLE OF PROJECT
URBAN PARK BENEFITS AND COMMUNITY IDENTITY: A STUDY IN ARLINGTON, TEXAS

INTRODUCTION
You are being asked to participate in a research study. Your participation is voluntary. Refusal to participate or discontinuing your participation at any time will involve no penalty or loss of benefits to which you are otherwise entitled. Please ask questions if there is anything you do not understand.

PURPOSE
To determine the link between the environment and identity and thereby expanding understanding of the role of landscape architects in fostering that link.

DURATION
Participation in this study will last approximately 30 minutes.

NUMBER OF PARTICIPANTS
The number of anticipated participants in this research study is 40.

PROCEDURES
You will be asked questions and your answers will be recorded with an electronic device (digital recorder.) After the interview, the tape will be transcribed, which means they will be typed exactly as they were recorded, word-for-word, by the researcher. The tape will be destroyed after transcription. Your name and any items of identification will be removed and replaced with an alphabetic coding system.

IRB Approval Date: OCT 09 2012
IRB Expiration Date:
You will be provided with a copy of the abstract of the research. The questions asked will be related to the usage and design of parks in Arlington, Texas with respect to the park in discussion, to understand the link between community identity and environment.

POSSIBLE BENEFITS
There is no direct benefit as a result of your participation, but you will be contributing to the general knowledge database of the impacts of parks on their surrounding communities.

POSSIBLE RISKS/DISCOMFORTS
There are no perceived risks or discomforts for participating in this research study. Should you experience any discomfort please inform the researcher, you have the right to quit any study procedures at any time at no consequence.

COMPENSATION
There is no compensation for participation in this study.

ALTERNATIVE PROCEDURES
There are no alternative procedures offered for this study. However, you can elect not to participate in the study or quit at any time at no consequence.

VOLUNTARY PARTICIPATION
Participation in this research study is voluntary. You have the right to decline participation in any or all study procedures or quit at any time at no consequence.

CONFIDENTIALITY
Every attempt will be made to see that your study results are kept confidential. A copy of this signed consent form and all data collected [including transcriptions/tapes if applicable] from this study will be stored in ARCH 203 for at least three (3) years after the end of this research. The results of this study may be published and/or presented at meetings without naming you as a participant.
Additional research studies could evolve from the information you have provided, but your information will not be linked to you in anyway; it will be anonymous. Although your rights and privacy will be maintained, the Secretary of the Department of Health and Human Services, the UTA Institutional Review Board (IRB), and personnel particular to this research have access to the study records. Your records will be kept completely confidential according to current legal requirements. They will not be revealed unless required by law, or as noted above. The IRB at UTA has reviewed and approved this study and the information within this consent form. If in the unlikely event it becomes necessary for the Institutional Review Board to review your research records, the

IRB Approval Date: OCT 09 2012
IRB Expiration Date:
UT Arlington
Informed Consent Document

University of Texas at Arlington will protect the confidentiality of those records to the extent permitted by law.

CONTACT FOR QUESTIONS

Questions about this research study may be directed to Leonelle D’Souza at (914) -217 -9831 (cell) or Dr. Pat D. Taylor at (817) 272 - 2801 (Office).
Any questions you may have about your rights as a research participant or a research-related injury may be directed to the Office of Research Administration; Regulatory Services at 817-272-2105 or regulatoryservices@uta.edu.

As a representative of this study, I have explained the purpose, the procedures, the benefits, and the risks that are involved in this research study:

Signature and printed name of principal investigator or person obtaining consent

CONSENT

By signing below, you confirm that you are 18 years of age or older and have read or had this document read to you. You have been informed about this study’s purpose, procedures, possible benefits and risks, and you have received a copy of this form. You have been given the opportunity to ask questions before you sign, and you have been told that you can ask other questions at any time.

You voluntarily agree to participate in this study. By signing this form, you are not waiving any of your legal rights. Refusal to participate will involve no penalty or loss of benefits to which you are otherwise entitled. You may discontinue participation at any time without penalty or loss of benefits, to which you are otherwise entitled.

SIGNATURE OF VOLUNTEER

DATE

IRB Approval Date: OCT 09 2012

IRB Expiration Date:
Appendix B

Email Sample Requesting Interview
Dear Mr. / Mrs. XXX:

My name is Leonelle D’Souza. I am a graduate student in the Program in Landscape Architecture at The University of Texas at Arlington. I am conducting research for my Master of Landscape Architecture thesis titled “Urban Environment And Identity: The Role Of Parks In Connecting The Community To Its Members In Arlington, Texas.”

I would like to request your participation in my thesis research via a telephone interview. The purpose of this research is to determine the link between parks and community identity and the role of the landscape architect in fostering that link. The interview will take approximately 30 minutes of your time.

I will be available to conduct the interview at your convenience. The abstract of the thesis is attached along with the email in order to understand the subject of the research. If you would like to participate, please reply to either of the email addresses or call the phone number listed below to schedule the interview. Before agreeing to participate you will be given an Informed Consent form. As it will be a phone interview, I will read the Informed Consent information over the phone. This form will explain the study in further detail. Participation in the study is voluntary.

Thank you for your consideration. Your participation is very much appreciated.

Sincerely,

Leonelle V D’Souza                                               Faculty Advisor,
Graduate Student                                               Dr. Pat D Taylor
Program in Landscape Architecture                             Program Director for Landscape Architecture
The University of Texas at Arlington                           The University of Texas at Arlington
Phone: (914) 217- 9831 (cell)                                   Phone: (817) 272 - 2801 (Office)
Email: leonelle.dsouza@mavs.uta.edu or leonelled@gmail.com
Appendix C

Telephone Script Requesting Interview
Dear Mr. / Mrs. XXX:

My name is Leonelle D’Souza. I am a graduate student in the Program in Landscape Architecture at The University of Texas at Arlington. I am conducting research for my Master of Landscape Architecture thesis titled “Urban Environment And Identity: The Role Of Parks In Connecting The Community To Its Members In Arlington, Texas.”

I would like to request your participation in my thesis research via a telephone interview. The purpose of this research is to determine the link between parks and community identity and the role of the landscape architect in fostering that link. The interview will take approximately 30 minutes of your time.

Is this a good time to talk?

(If yes) Excellent, Thank You. I will go over the study in further detail so that you may make an informed decision to participate. I will read the Informed Consent information over the phone. This form will explain the study in further detail. Participation in the study is voluntary.

You will be asked questions and your answers will be recorded with an electronic device (digital recorder.) Your name and any items of identification will be removed and replaced with an alphabetic coding system.

There are no foreseeable risks or discomforts for participating in this study. There are no potential health risks in this study. There are no alternative procedures and/or treatments offered when participating in this study; however, you are free to quit or decline involvement at any moment. Withdrawal from the study can happen at any time without any consequences.

Confidentiality

If, in the unlikely event, it becomes necessary for the Institutional Review Board to review your research record, then The University of Texas at Arlington will protect the confidentiality of those records to the extent permitted by law. Your research records will not be released without your consent unless required by law or a court order. Data resulting from your participation may be made available to other researchers in the future for research purposes not detailed within this
consent form. In these cases, the data will contain no identifying information that could associate you with it or with your participation in any study. Questions about this research or your rights as a research subject may be directed to Dr. Pat Taylor at (817) 272 - 2801 (Office). You may contact the Chairperson of UT Arlington Institution Review Board at (817) 272- 3723 in the event of a research related injury to the subject. Do you agree to participate in this research study?

Time:
Date:
Signature: ______________________________

Leonelle V D’Souza

(If yes) I will then be leading into the informed consent speech and interview. You will also be presented with information relevant to the Arlington parks and Recreation Master Plan and Arlington 2025 Vision before the interview starts.

(If no) OK, when would a good time to be to schedule the interview? I will go over the study in further detail at that time so that you can make an informed decision to participate and you will be presented with information relevant to the Arlington parks and Recreation Master Plan and Arlington 2025 Vision ahead of time as part of the informed consenting process. I look forward to hearing from you!

Thank you for your time.
Appendix D

Observation Schedule And Sample Survey Questionnaire
<table>
<thead>
<tr>
<th></th>
<th>Time and date schedule of Fieldwork</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>RIVER LEGACY PARK</strong></td>
<td></td>
</tr>
<tr>
<td>Observations</td>
<td>OCT 10th, 2012 9.00-11.00am and 5.00-7.00pm</td>
</tr>
<tr>
<td></td>
<td>OCT 20th, 2012 10.30am -12.30pm</td>
</tr>
<tr>
<td>Surveys</td>
<td>OCT 13th, 2012 9.00am-11.00am</td>
</tr>
<tr>
<td></td>
<td>OCT 23rd, 2012 5.00pm-7.00pm</td>
</tr>
<tr>
<td><strong>VETERAN’S PARK</strong></td>
<td></td>
</tr>
<tr>
<td>Observations</td>
<td>OCT 11th, 2012 10.00am -12.00pm</td>
</tr>
<tr>
<td></td>
<td>OCT 12th, 2012 10.00am -12.00pm</td>
</tr>
<tr>
<td>Surveys</td>
<td>OCT 14th, 2012 4.00pm-5.00pm</td>
</tr>
<tr>
<td></td>
<td>OCT 25th, 2012 10.00am -12.00pm</td>
</tr>
<tr>
<td></td>
<td>OCT 26th, 2012 10.00am -12.00pm</td>
</tr>
<tr>
<td><strong>GREEN AT COLLEGE PARK</strong></td>
<td></td>
</tr>
<tr>
<td>Observations</td>
<td>OCT 16th, 2012 7.00am-8.00am and 6.00-7.00pm</td>
</tr>
<tr>
<td></td>
<td>OCT 20th, 2012 6.00am-7.00am</td>
</tr>
<tr>
<td>Surveys</td>
<td>OCT 19th, 2012 5.00pm-7.00pm</td>
</tr>
<tr>
<td></td>
<td>OCT 23rd, 2012 6.00am-7.00am</td>
</tr>
</tbody>
</table>

Table A-1 Time and date schedule of Fieldwork
Respondent no.: ________

Park Name:

1. What are the health and wellness benefits gained from the park?

2. What are the social benefits gained from the park?

3. What are the economic benefits gained from the park?

4. What are the impacts of these three park benefits on the community?

5. How do you access the park?

6. What are the most important amenities that the park offers?

7. What is your primary reason for using the park?

8. Would you care if the park were not there? Why? _____

9. What improvements would you like to see added to the parks?
References

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D magazine: What the park means for Dallas real estate


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Biographical Information

Leonelle D’Souza was born in the port city of Mangalore in South-West India and grew up in the Middle East where she did her primary and secondary education. She returned to India, where she received her Bachelors’ Degree in Architecture from Manipal Institute of Technology, Manipal, India in 2005. She has lived in three countries with rich, vastly differing cultural backgrounds and has travelled quite a bit in her home country, experiencing the different ethnic backgrounds of each society and developing a deep appreciation for them. Ms. D’Souza has worked in India for a few years before deciding to continue her education and enrolled in landscape architecture program at the University of Texas at Arlington.