

TREE PRESERVATION AND ITS IMPACT ON  
RESIDENTIAL DEVELOPMENT AND  
REAL ESTATE VALUE

by

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## ABSTRACT

# TREE PRESERVATION AND ITS IMPACT ON RESIDENTIAL DEVELOPMENT AND REAL ESTATE VALUE

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Mature trees create more attractive residential neighborhoods and contribute a significant amount to the resale value of a home (Benotto, 2002). According to the National Arbor Day Foundation, one mature tree can amount to at least \$10,000 of a home's resale value and will typically account for 15 percent of the property's value (Benotto 2002). In addition, the combined economic value of a street lined with mature trees is greater than the net sum of the value of the individual trees (Benotto 2002). While large, mature trees add substantial economic value to a residential development, tree growth is a slow process that delays full accrual of economic benefits. In fact, because it can take forty years or more for new trees to establish into a mature size, it would

take half a lifetime for homeowners to realize the economic value of plantings in new neighborhoods established with young trees (Benotto 2002 and Kidd 44). And yet, many developers frequently remove all vegetation from a site before developing the land (Ewan 46-47).

The hypothesis which generated this research is that using conservation-focused design techniques, such as minimizing site re-grading and tree removal, can be both profitable and cost saving for developers, enhancing the economic value for involved stakeholders. As many developers believe that accommodating designs to established vegetation and pre-existing site grades is more costly, this thesis investigates whether the preservation of trees and open space can yield economic rewards. As a result, the research in this paper challenges the notion that modifying the existing landscape by stripping a site of existing trees to accommodate new development is more profitable than preserving it.

This paper includes an analysis of Montgomery Farm, a residential conservation development in North Texas, which contains a cost analysis of the site's preservation techniques used in the development process. The study finds that in some cases, such as where tree ordinances exist, land can be developed profitably while preserving, and transplanting, existing, mature trees. Due to the infancy of the Montgomery Farm development, further research was also conducted at Providence, another residential development in North Texas, which shares similar attributes to the Montgomery Farm development.

The research at Providence included a real estate appraisal analysis of two separate sections within the development -- one where mature trees were preserved along a creek and another where no mature trees existed. This research compared real estate resale values between the two divisions within Providence to determine if lots with mature trees sold at a premium over lots without mature trees. While this study of the Providence development yielded no significant variation in resale value between the different parts of the development, other research has shown developments with mature trees to exhibit greater appreciation than comparable properties without mature trees. The lack of value appreciation that the data from this study exhibit stresses the importance for cities to place greater requirements on developers to preserve mature trees through ordinances. In addition, further study and investigation is recommended to fully understand the effects of tree preservation on the appreciation of real estate values.

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## CHAPTER 1

### INTRODUCTION

#### 1.1 Research Objectives

The first objective of this study is to determine whether real estate values in residential subdivisions where mature trees are preserved appreciate at a greater rate than those without mature trees. Within this study is an examination of the costs surrounding tree preservation for a developer of a conservation subdivision – defined as residential developments where 25 to 70 percent of the buildable land is preserved – with a specific emphasis on the economics accrued from their tree preservation efforts. The second objective of this study is to understand the effects of tree preservation on real estate value appreciation. This paper focuses on the economic benefits of conservation development. It does so from the perspective of developers and homeowners, and does not address other important aspects of conservation development, such as its benefits to the environment or the larger community.

#### 1.2 Research Questions

A number of researchers have argued that urban sprawl has negatively transformed American communities, citing its detrimental effects on the aesthetics of communities' surroundings and the resulting collective quality of life

(Benfield et al 2001). One of the effects of sprawl is the replacement of historical homes and surrounding landscapes with what some critics call “McMansions” (*Id.*). Another equally pronounced effect is the degradation of natural areas in favor of new, “cookie-cutter” developments, constructed on barren properties with little or no differentiation between them (*Id.*).

Some scholars, landscape architects, and city planners have argued that neighborhoods with mature trees, due to their greater aesthetic value, generate higher economic returns than “cookie cutter” developments (Arendt 1999, 88, Mohamed 376). Despite these opinions, developers of residential suburban communities tend to destroy the existing landscape in favor of larger homes surrounded by denuded land (Benotto 2002).

Among the hurdles discouraging developers from building residential neighborhoods that preserve mature trees, is the belief that preservation results in higher costs and less profit (Bright 12-12-07, Appendix F). This perception assumes that mature trees do not add incremental real estate value and that tree preservation is more costly than building on a site which has been re-graded through extensive earthwork.

The following questions are therefore central to this research and are of concern to the profession of landscape architecture:

- Whether there is an economic benefit to real estate developers who preserve mature trees.

- Whether there is an economic benefit to homebuyers who purchase homes on lots surrounded by mature trees.

### 1.3 Definition of Terms

**Benching:** Process of cutting and filling the base of an individual building lot in preparation for placement of a house foundation.

**Conservation Development:** Residential developments in which the subdivision permanently preserves 25 percent to 70 percent of the prime, buildable land – not just unbuildable areas. These developments allow for the same number of home sites or density as–conventional subdivision developments (Arendt 4-5 and Land Choices 2006).

**“Cookie-Cutter” Developments:** Colloquial term for residential developments that use a traditional subdivision design approach in which “all of the developable land within a tract is divided into roads and house lots, typically subject to minimum lot size requirements. Open space typically consists only of the undevelopable portions of the tract, such as wetlands and steep slopes. In other words, most of the land is either built upon, apportioned to individual lots as yards, or surfaced for roads” (Gilroy). Developments of this type are described as lacking originality because they look almost identical to others in terms of street layouts, home designs, building materials and landscaping.

**Healthy Tree Growth:** Maturation process of trees resulting in the largest possible specimens that can be anticipated, both in terms of caliper and canopy size for a typical tree of a particular species.

**Erasure:** Development practices which destroy historical references embedded in the landscape and remove any traces of how the landscape was used or functioned in the past years (Ewan).

**Fragmentation:** “The process that spatially segregates those entities that belong together in order to function optimally. It is a land-use phenomenon so significant that it influences agriculture, native systems, outdoor recreation, and even the quality of urban life...Human activities that influence habitat fragmentation include agricultural development, urban development, and transportation infrastructure development” (Taylor, 79).

**Greenway:** “Corridor of undeveloped or modestly developed land [that] can help to connect wildlife habitats and allow migration and movement of species [which] also may be used for outdoor recreation” (Benfield, et al 190).

**McMansion:** Derogatory term used by critics to describe oversized homes on small lots that resemble mini mansions. Like the name suggests, homes that are referred to in this manner, are both very large – like mansions – and ubiquitous – like McDonald’s fast food restaurants (McGuigan 2003).

**Modern Building Techniques:** Building practices followed by homebuilders in the last 60 years, which rely on mechanized earth-moving construction equipment instead of “steam shovels, horses and manpower” (Kidd 46).

**Natural:** Existing characteristics and features of the land, such as plant materials, habitats, wetlands and contours, that contribute to the overall character of the landscape before it is developed.

**New Urbanism:** More formal approach to design of land development than conservation development (Arendt 1996, 8). The approach is premised on the notion that “the layout of the land is as important as the layout of the houses” and that “social dimensions of life are as important as physical ones” (Arendt 1994, 60). May entail use of higher density, mixed use development with shorter street setbacks and pedestrian friendly trails and walkways (Arendt 1996, 8). Also called “neo-traditional” design and Traditional Neighborhood Development (TND) (*Id.*).

**Older Neighborhoods:** Neighborhoods built more than 60 years ago, using manual building equipment such as “steam shovels, horses and manpower” (Kidd 46).

**Open Space:** Areas located within developments that are purposefully set aside to remain undeveloped, without building upon the land. Such areas are generally un-programmed spaces which can be left with the natural

existing landscape or enhanced with vegetation, trails or seating for the use and enjoyment of people who live and work in the vicinity of the area.

**Smart Growth:** “Approach to developing cities, suburbs, and metropolitan regions in ways that allow us to thrive environmentally, economically, and socially while providing all the assets of the American Dream and conserving our landscape” (Benfield, et al 2). Such developments often include denser living and working areas, while preserving community-wide greenways and open space networks.

**Sustainability:** “To leave behind as much or more in resources as was there before you got there” (Philip Williams 12-11-07).

**Traditional Neighborhood Development (TND):** See New Urbanism.

## CHAPTER 2

### LITERATURE REVIEW

#### 2.1 Economic Value of Mature Trees to Residential Developments

Whether homebuyers did it subconsciously or with full awareness, they collectively pronounced an appreciation for mature trees by placing a premium on properties with large, established trees. Mature trees are also associated with creating more aesthetically pleasing environments, making neighborhoods more desirable and contributing to the character of a community (Benotto 2002). This is evidenced by properties with trees having increased real estate values and faster selling cycles than their treeless counterparts (Hoff 9).

Numerous studies have shown the positive impact that mature trees have on residential real estate prices. According to a study conducted by the University of Washington College of Forest Resources, the presence of trees on residential properties accounted for a three-and-a-half to six percent increase in home values compared with homes with equivalent features (i.e. square footage, number of bathrooms and location) that did not have trees on the property (2006).

Other studies have shown even more dramatic figures. According to the Minnesota Society of Arboriculture, "Good tree cover' or 'well spaced' mature trees can increase the value of a developed property by six percent to 15 percent or add 20 percent to 30 percent to the value of an undeveloped property"

(Hoff 9). The National Arbor Day Foundation also states that one mature tree can amount to at least \$10,000 of a home's resale value and will typically account for 15 percent of the property's value (Benotto 2002).

Furthermore, the presence of many trees within a neighborhood has an incremental impact on the real estate values of the individual homes within the larger development. Properties with mature trees on a street with other treed properties have greater value than the individual treed lots would have on a street with barren lots. Therefore, the combined economic value of a development of homes on streets lined with mature trees is greater than the net sum of the value of the individual lots (Benotto 2002).

Given the increased value of treed developments, residential developers would seem to have financial incentive to preserve as many existing mature trees on their development sites as possible. Maintaining rather than felling mature trees would yield higher sale values for the completed homes and, by inference, higher prices that the developer could charge the homebuilders for benched lots.

## 2.2 How Trees Grow

One of the reasons trees are such value-enhancing real estate assets is because it takes decades and sometimes generations of homeownership for them to establish into mature specimens (Benotto 2002 and Kidd 44). In fact, because it can take forty years or more for new trees to establish into a mature

size, it would take half a lifetime for homeowners to realize the economic value of trees planted in newly established neighborhoods (Benotto 2002 and Kidd 44). However, as Kenneth Kidd notes in his article, *Why Suburbs Will Never Have Tall Trees*, families in newly established neighborhoods may never see mature-sized trees on their properties due to a combination of factors related to the way in which trees grow and the detrimental effects that current building methods have on tree growth (44-46).

To understand Kidd's assertion, one must first look at what conditions are necessary for young trees to grow and how current homebuilding techniques inhibit that process. When most people think about trees, they envision large, thick root systems that grow very deep and have tremendous strength (Kidd 44). However, young trees have very small root systems that grow close to the ground's surface and can be as thin as human hair (Kidd 44). In order for those tiny roots to grow into a mature size, they require soil that contains plenty of oxygen as well as enough surface area to spread out as far as the tree is tall (Kidd 44).

### 2.3 How Modern Building Techniques Inhibit Healthy Tree Growth

Modern building techniques typically used by residential developers rob the nutrients and alter the structural composition of soils that tree roots need to sustain healthy growth (Kidd 44-46). Such building techniques not only create

sub-standard growing environments, but also prevent healthy tree growth from ever occurring (Kidd 44-46).

In preparation for building a house foundation, a typical homebuilder begins by removing all of the topsoil from the site, grading the property to level and benching individual home sites (Kidd 44-46). The result of this scrape-and-bench process is the removal of all but a base of lower strata soils, called hardpan (*Id.*). Some of those soils may consist of densely packed clays, sands, stone or a combination of them.

If working on a site with expansive soils, homebuilders will typically remove the base layer of soil and replace it with a non-expansive soil or try to stabilize the soil by chemically treating it with a mixture of lime, cement or flyash (Wray 36-37.) The theory behind chemically treating soils is that the chemical mixture will stabilize the soil and prevent it from heaving and shrinking by sealing it “to a specified depth from subsequent penetration of water” (Wray 37.)

Though hardpan and chemically treated soils are unsuitable for planting, they are the material and method of choice for engineers who want a sturdy base for foundations that is easy to mold to grading specifications (Kidd 44-46 and Wray 36-37). The soil is then further compacted during the building process, when heavy machinery is repeatedly driven over the surface of the construction site, leaving the soil even harder and more dense, much like the consistency of concrete (Kidd 44-46). Once the home is built, some developers will reuse the same topsoil that was removed and set aside at the beginning of

the process directly on top of the compacted material (Kidd 44-46). However, the topsoil that was once healthy prior to the building process is now in a compromised state (Kidd 44-46).

Because the topsoil is typically left unmanaged, usually sitting in a stagnant pile during the entire building period, it becomes anaerobic, killing all of the growth-enhancing microbes and organisms that once lived in the soil (Kidd 44-46). In addition, the amount of topsoil replaced on the completed site is not enough to support any plants other than turf (Kidd 44-46). While newly planted trees typically need about 60 centimeters (23.61 inches) of topsoil to support healthy growth, most builders will place only 20 centimeters (7.87 inches) of topsoil (again, of substandard quality) back on the site (Kidd 44-46).

“So you end of with less-than-ideal topsoil spread thinly over a layer of clay hardpan that often includes pieces of brick and other debris [left over from the building process,]” states Kidd – collectively called “builder’s loam” – which creates poor growing conditions (44-46). In fact, as Kidd notes, planting trees in this environment is often doomed, as neither roots nor water are able to penetrate the compacted clay soil (44-46), or any chemically altered soil. As a result, when water is unable to penetrate the soil, roots get waterlogged, killing the tree with root rot (Kidd 44-46). For the trees that do survive, the roots will often encircle themselves because they are unable to spread properly in the soil, permanently stunting their growth and preventing them from ever growing to a mature size (Kidd 44-46).

An example of such stunted growth is illustrated by a Canadian subdivision built in the 1970's on what used to be an apple orchard (Kidd 46). As a result of the modern building techniques discussed in this section, trees that were planted at the inception of the subdivision which today should be 50 to 60 feet tall are only 10 to 12 feet tall (Kidd 44-46). While this example is illustrative of the damaging effects of modern building techniques on tree growth, it is also demonstrative of the long-term effects of those detriments. In this case, trees planted thirty years ago have only reached 20 percent of their expected size. Such an example also serves to reinforce the need for residential developers to preserve mature trees on building sites. By doing so, developers would maximize the long-term value of their developments and avoid the enduring and harmful effects that modern building techniques have on new trees.

#### 2.4 How Older Neighborhoods Are Able to Have Large Trees

As the prior section has illustrated why modern neighborhoods are unable to generate healthy tree growth which would produce large-canopied, mature trees, we now turn our discussion to why such conditions do not exist in older neighborhoods. As Kidd states in his article, because of the technology available at the time, and therefore the way in which homes were built, homebuilders who worked prior to the 1940's did not disrupt the soil the way modern builders do today (46). "Armed with only small steam shovels, horses and manpower, developers essentially plopped houses onto the existing terrain"

(Kidd 46). Therefore, much of the soil remained unaffected, leaving the original grades and condition of the soil as well as many of the existing trees intact (Kidd 46). Undoubtedly, many more of the existing trees were also left intact as a result of older neighborhoods also having significantly smaller building envelopes. Nonetheless, given the soil conditions resulting from older building methods, newly planted trees in such neighborhoods were planted in healthier soils with significantly better growing conditions than modern building methods provide today (Kidd 44-46).

Another factor that helped generate larger trees in today's older neighborhoods is that the older building methods did not disrupt the soil profile (Kidd 48). As Kidd states, the ideal planting soil consists of a "gradual transition from the topsoil down to the underlying material, rather than a sharp divide between topsoil and the more mineral-laden soil underneath" (48). Soil profiles of this composition take decades of plant decay, worms and weather conditions to create, and, as discussed in the previous section of this paper, are completely inhibited by current building techniques (Kidd 48). As a result, primarily older neighborhoods which used less invasive building techniques are able to develop mature trees.

## 2.5 Conservation Subdivision Design versus Conventional Subdivision Design

In response to real estate development which has rapidly spread across the country, “consuming important natural resources and converting them into bland, unproductive suburban lawns, streets and parking lots,” a new type of development, called “conservation subdivisions,” has emerged (Arendt 1). These subdivisions take an environmentally sensitive approach to development by protecting community-wide greenways and open space networks and organizing the living areas around those preserved natural features (Arendt, *Creating Greener Communities*). While conventional subdivision design – sometimes referred to as “cookie-cutter” developments– divides all of the developable land within a tract into only roads and equal-sized house lots, conservation subdivision designs create smaller lots with the same number of homes as conventional developments while preserving 25 to 70 percent of the land as protected open space (Arendt, Gilroy, Land Choices). As a result, conservation subdivision design produces the same number of lots as conventional subdivisions, but organizes them around the natural and cultural resources of the community (Arendt 3).

The advantages of conservation subdivision design over the conventional approach include maximizing development potential of a tract of land, while minimizing environmental impact and preserving open space (Arendt, Gilroy Mohamed). For example, a 50-acre tract consisting of equally-sized 10,000-

square foot lots would yield approximately 200 houses in a conventional subdivision (Gilroy). However, the same tract in a conservation subdivision could yield the same number of homes on 5,000-square foot lots, while leaving the rest of the land undeveloped (Gilroy).

While conventional subdivision design only preserves unbuildable space, such as areas that are steeply sloped or located in the floodplain, conservation subdivision design concentrates development in upland areas and areas with good drainage (Gilroy). The remaining areas that are preserved in conservation subdivisions can include “ecologically or culturally-rich areas, such as wetlands, forest land, agricultural land/buildings, historical or archeological resources, riparian zones (vegetated waterway buffers), wildlife habitat, and scenic viewsheds” (Gilroy, Arendt).

### 2.6 Economic Benefits of Conservation Subdivisions

In the results of a study entitled *The Economics of Conservation Subdivisions*, Rayman Mohamed concluded that “...lots in conservation subdivisions carry a premium, are less expensive to build, and sell more quickly than lots in conventional subdivisions” (376). Such results are not surprising when one considers the cost-savings inherent to the development process of conservation subdivisions. Arendt discusses four different ways in which conservation subdivisions reap economic benefits for developers: 1) lower costs

2) marketing and sales 3) value appreciation, and 4) smoother reviews (Arendt 1999, 88-90).

### *2.6.1 Development Costs*

Lower costs are typically realized within developers' budgets for construction and engineering of infrastructure as the nature of conservation subdivision design often generates higher density or more compact neighborhoods (Arendt 1999, 88). Such reduced infrastructure requirements include shorter streets and utility lines, less pavement and smaller stormwater management systems – all of which translate into lower development costs (Arendt 1999, 88). Further cost savings are also achieved through the elimination of much of the costly soil movement and manipulation required by conventional neighborhood designs (Arendt 88). Because large portions of conservation subdivisions are left unaltered and preserved in their original condition, developers are less reliant on leveling the soil and clearing vegetation to accommodate the amount of building space that conventional neighborhoods require (Arendt 1999, 88 and Burney, May 2006). In addition, developers who fully utilize the principles of conservation subdivision design – through creation of lots with modified building envelopes that accommodate existing vegetation and grading contours to complement existing elevations – further minimize the necessity for and expense associated with soil manipulation (Arendt).

### *2.6.2 Marketing and Sales*

According to Arendt, developers can also capitalize on the unique nature of conservation subdivisions through marketing and sales (1999, 88-89). With an environmentally focused marketing strategy, developers can utilize marketing materials to sell the amenities of preserved greenways, trails and natural site features, allowing developers to obtain premiums for lots within their subdivisions (Arendt 1999 88-89).

As Arendt notes, developers have successfully marketed the benefits of living within a conservation subdivision by emphasizing that homebuyers actually benefit from much more land than the individual lots they purchase (1999, 89). For example, Arendt states “in a development with half-acre lots and 40 acres of open space, a smart salesperson would describe the opportunity to buy 40-and-a-half acres of land for the same price that one would otherwise spend on a one- or two-acre lot with no attendant open space” (1999, 89).

Numerous studies have illustrated that consumers agree with this line of reasoning as research has substantiated homebuyers’ preference for lots abutting or facing protected land (Arendt 1999 xxi and 89). For example, in a national survey where people who shopped for or purchased a home were asked to rank 39 features that influenced their home-buying decision, “lots of natural open space” and “plenty of walking and biking paths” were ranked second and third on the list of characteristics that affected their decisions (Arendt 1999, 89).

These beliefs are further reinforced by sales data which show that lots near protected land are faster selling and command higher prices than comparable lots in other areas (Arendt 1999, 89, Brewer 73 and Mohamed 376). In addition, a study reported by the National Park Service determined that while proximity to greenbelts positively impacted property values, distance from greenbelts negatively impacted them (NPS 1993).

Further supporting these data is a quote in *Big Builder*, a magazine targeted towards developers, which noted that even developers who care little about the environment are capitalizing on the marketing edge that conservation development provides by using it as a way to generate favor with homebuyers (Burney, May 2006).

### *2.6.3 Home Value Appreciation*

Value appreciation, as Arendt notes, is the third way in which developers can benefit economically (Arendt 1999, 89-90). One of the reasons developers of conservation subdivisions are able to command premium pricing for their lots is because home values within their developments generally exhibit greater and faster appreciation than those in conventional developments (Arendt 1999, 89-90, Brewer 73). An example of this was illustrated by a study which compared the appreciation of home values in two subdivisions located in Amherst, Massachusetts (Arendt 1999 89-90).

In this study, the homes in the two subdivisions were comparable in terms of style, age, size and original price (Arendt 1999, 89-90). However, one subdivision was a conventional design that consisted of little community open space, with homes that were located on half-acre lots, while the second subdivision consisted of homes built on quarter-acre lots with 36 acres of open space set aside for the community (*Id.*).

As the study reported, twenty years after they were established, the amenities in the second subdivision enabled homes in that development to generate an average of 13 percent more than their counterparts in the other subdivision where lots were twice as large (Arendt 1999, 90).

#### *2.6.4 Smoother Review Process*

The fourth and final method Arendt states in which conservation subdivision design benefits developers is through a smoother building approval process (Arendt 1999, 90). Because the very nature of conservation subdivision design responds to community concerns about development in a proactive and thoughtful way, developers are often able to reap the benefits in terms of quicker city approvals and fewer disputes, resulting in lower costs (Arendt 1999, 90).

As the study performed for this paper revealed, such results were also experienced by Montgomery Farm. According to Susan Campbell, Arborist for the City of Allen, by internalizing the community's concerns, the Montgomery Farm development was able to satisfy the various City approval processes

quicker and less expensively than other developments in the city of Allen (Susan Campbell, 4-3-08).

### 2.7 Summary of Literature Review

Academic studies indicate that mature trees provide additional value to both undeveloped and developed property. Modern building techniques, however, usually entail razing most mature trees and treating the soils under and in the vicinity of houses in a manner to inhibit foundation movement. These techniques sacrifice soil nutrients for stable foundation soils. The net result is the inability of trees planted in modern subdivisions to attain the mature tree growth associated with neighborhoods developed prior to the 1940's.

Conservation development seeks to balance the perceived irreconcilable interests of maximizing developable land, on the one hand, and maintaining open space and mature trees, on the other hand. Academic and case studies have shown that conservation development results in lower development costs, easier marketing of homes constructed in those subdivisions, and greater home value appreciation. These studies, by inductive reasoning, indicate that the perceived conflict between development and conservation is a false one; a developer should be able to maximize developable land while maintaining mature trees and reducing development costs.

## CHAPTER 3

### RESEARCH METHODS

This chapter describes the qualitative and quantitative research methods used in this study and explains the appropriateness of each methodology in understanding the economics surrounding tree preservation in relation to residential land development. Qualitative methods were used in order to understand the methodologies and perspectives of practitioners who have implemented conservation design techniques in their developments. The research also used quantitative method, however, in order to verify the integrity of any economic values associated with the enlisted methodologies.

#### 3.1 Data Gathering

An analysis of the hard costs related to tree preservation was conducted and in-depth interviews of field experts were conducted in relation to the various aspects of the study. These data and interviews were gathered from and conducted with the Montgomery Farm Development and the City of Allen to understand the costs incurred to preserve trees in the development. Scholarly literature was also reviewed that examined the economic value of mature trees and conservation developments, conservation development techniques, and landscape ordinances that effect the costs associated with the preservation of mature trees.

Findings from these data concluded that for Montgomery Farm, located in Allen, Texas, where strict tree ordinances exist, it was more profitable for the developer to preserve and transplant existing trees throughout the site than to remove them before developing the property. Despite studies conducted by other researchers cited in this paper which find significant value appreciation of residential properties with mature trees, this study was not able to confirm the same findings. In Providence, where a real estate analysis was conducted by Douglas C. Phillips, a state certified and licensed real estate appraiser and owner of real estate appraisal company, D.C. Phillips and Associates in Allen, TX, the data indicated no significant price premium for homes located on lots with mature trees versus those that were not.

### 3.2 Laboratory Analysis

For this research, the two sites were used as research laboratories:

- Montgomery Farm was used as a case study to examine the land development process in conservation developments and the effects of tree preservation on development costs;
- Providence was used to study the effects of tree preservation on real estate values.

This study was conducted in the form of two analyses that examined the economic costs and benefits related to tree preservation. The two analyses conducted included (1) a tree preservation cost analysis, and (2) a real estate

appraisal. The first of the two analyses examined the costs incurred by Montgomery Farm to preserve mature trees on the site; the second investigated real estate value of homes in the Providence development.

Tree preservation costs were only examined at the Montgomery Farm development, because it is located in a city that imposes tree ordinances with financial consequences for tree removal. Due to the recency of the development and the lack of a sufficient quantity of homes available for re-sale, Montgomery Farm was not analyzed in the real estate appraisal analysis. For this reason, the real estate appraisal was only conducted for the Providence development.

The Providence development was selected as a supplement to the Montgomery Farm study as it was deemed by a licensed real estate appraiser as a comparable laboratory from which data and conclusions regarding home value appreciation in relation to mature tree preservation could be extrapolated and applied to the Montgomery Farm development.

### *3.2.1 Tree Preservation Cost Analysis*

The tree preservation cost analysis assessed the value generated by preserving and/or transplanting trees in the Montgomery Farm development. To conduct this part of the study, data were used to determine the costs related to tree preservation for the Montgomery Farm development and compared them with costs the developer would have incurred to replace them. Trees counted in

the study were those that the local landscape ordinance would have penalized the developer for removing.

Replacement costs were figured according to the mitigation requirements set forth by the landscape ordinances of the City of Allen.—Costs were included only if the City would have required that a saved tree be replaced had it been removed. For example, if the City ordinance required that the developer replace a 36-inch caliper tree with three times the number of caliper inches -- in this case, 108 caliper inches -- and ensure that the replaced trees live for three years passed the replacement date, the replacement cost would include the cost to purchase and plant the replacement trees plus the maintenance costs incurred for the following three years.

According to Montgomery Farm, it costs the developer \$200 per caliper inch to purchase, install and guarantee a tree for three years (Audrey Beard). As a result, a cost of \$200 per caliper inch was used to calculate the replacement costs for trees requiring mitigation by Montgomery Farm. In this example, then, the cost would have been \$21,600 (or 108 caliper inches x \$200 per inch.)

### *3.2.2 Real Estate Analysis*

A second analysis of the Providence development was conducted to examine whether a premium exists for residential real estate that is located among mature trees. This appraisal was used as a means to compare how

mature trees effect real estate values. The real estate appraisals for this analysis were conducted by Douglas C. Phillips, a licensed real estate appraiser.

For this analysis, Multiple Listing Service (MLS,) a common database used by real estate agents, was employed. MLS was used to collect sales data within the Providence community to compare and analyze home resale values from two areas within the development. The two areas were the Creek Village subdivision and more broadly, other subdivisions throughout the development. The Creek Village subdivision might be characterized as a conservation development and, of the subdivisions in the Providence community, most closely resembles the Montgomery Farm development. The Creek village subdivision is the only part of the Providence community that was designed around a greenbelt and creek bed and the only part where large mature trees abound throughout the properties.

### 3.3 Selecting the Research Sites

Montgomery Farm, because of its designation and marketing as a conservation subdivision, was a natural starting point for this study. However, the recency of the development and lack of completion meant an additional site was needed to best understand the effects of tree preservation on real estate value.

The rarity of conservation subdivisions in the north Texas area also translated into few opportunities for objective comparisons and comparative real

estate appraisals. Ideally, research of this topic would occur between two identical developments with identical homes, city ordinances, geographic locations, amenities, school districts, and access to retail and transportation corridors, with the only differentiating element being the existence or lack of mature trees. In the real world, however, such a perfect model does not exist. For this reason, the research aimed to find the best site to be used as a point of comparison where mature trees were preserved versus where they were not. The Providence development was selected as that point of comparison.

The Providence development was chosen for this research based on several similarities in how it and Montgomery Farm were developed. For instance, like Montgomery Farm, the developer of Providence:

- Spent time and money saving natural resources such as mature trees and topography
- Worked to create a development unlike others surrounding it (both developments are unique in their development approach compared with others in their vicinities)
- Had a large selection of similar homes in terms of style, size and quality from which a real estate appraiser can compose an “apples to apples” comparison, and
- Was willing to grant the researcher access to the development and data regarding their design process, costs and motivations.

### 3.4 Expert Interviews

Data gathering techniques included qualitative research methods in the form of face-to-face interviews with experts in the fields of land use planning, conservation development, landscape architecture, arborological services, real estate appraisal, and home building. Participants were selected based on the extent of their professional experience and/or familiarity with the Montgomery Farm site or similar developments.

In addition, much of the author's knowledge was gathered informally over a three year period during which she worked on the Montgomery Farm development for Rosa Finsley, the landscape architect of record for the site. In this capacity, the author was able to familiarize herself with many of the processes and motivations behind the planning and design of the development. As a result, many of the experts who were interviewed (both formally and informally) worked directly on the Montgomery Farm development, and were therefore intimately familiar with the details of the project.

### 3.5 Summary of Research Methods

To test the hypothesis of this paper, i.e., whether preserving mature trees results in savings to the developer and increased resale values for the homeowners, several different research methods were employed. A laboratory analysis of Montgomery Farm, a conservation development located in Allen, Texas, was performed. Included in that study was an analysis of the costs of

preserving mature trees and a comparison of the mitigation costs the City of Allen would have imposed had the mature trees been felled.

To test the hypothesis that mature trees add incremental resale value to houses, resale values of houses located in the Providence development, also located in Allen, Texas, was conducted. The recency of the Montgomery Farm development precluded obtaining sufficient data to determine what resale premium, if any, buyers would pay for houses located in subdivision with mature trees.

Interviews with several experts were conducted. The interviewed persons included the developer and landscape architect involved in the Montgomery Farm development as well as the developer of the Providence development.

CHAPTER 4  
MONTGOMERY FARM

4.1 The Development

Located on five-hundred acres of prairie and woodlands, Montgomery Farm is a classic conservation development with more than fifty percent of the buildable property devoted to open space. Its sales literature touts the community as an environmentally focused real estate development, connecting residents with nature by surrounding the development with habitats, native wildlife and meadows. To achieve this goal, the development was planned to preserve natural settings and open spaces. The development also surrounded clustered residential neighborhoods with interconnected greenways, allowing homes to be encircled by nature.

The development is located in a growing suburban area of the Dallas-Fort Worth region. It is adjacent to U.S. 75, a major north-south thoroughfare which connects residents to downtown Dallas in approximately twenty-five minutes. Employment centers, shopping and recreation are also located within a few miles of the development. In addition, top-rated elementary and middle schools are located in the neighborhood. Home values within the community range from \$280,000 to over \$1,000,000.

## 4.2 The History

*...the way that we have approached this is by saying, look if we have sufficient landscaping, if we create a context where the landscape – the living landscape – dominates, then the architecture by consequence is going to be subordinate to the living landscape (Philip Williams 12-11-07).*

The property that comprises Montgomery Farm was acquired in the 1920s by Montgomery, the grandfather of Philip Williams, the current President and principal owner of the eponymous development company. Montgomery first learned of the property while working as a surveyor with the Corps of Engineers' crew that surveyed U.S. 75. He assembled the 300 acre tract by acquiring several smaller farms over three decades. In a sign of how unrelenting and predictable our society's march towards development has been, Montgomery purchased the land because he believed the value of the property would increase due to its proximity to a major north-south transportation artery.

When the land was acquired, it and the neighboring farms were used primarily as cotton farms. The farms were eventually over cultivated, leading to the severe erosion of the blackland prairie during the 1920s and 1930s. Montgomery worked to revitalize the landscape of his farm through soil and water conservation, importing fill and changing the landscape in the process. While such efforts might be interpreted in modern times as the exact opposite of conservation development, at the time those efforts were an attempt to stave off

ecological disaster and make the property sustainable. From the 1930s until recently the property was predominantly used as a horse pasture.-

The idea of developing the land was a family project suggested early on by Phillip Williams' mother. Phillip Williams is the President and majority shareholder of the development company for the property. Williams first began seriously examining the financial aspects of developing the property in the 1970s while pursuing his MBA. As Williams has stated, "I began to use my family's ownership of the property as grist for my own education mill" (12-11-07).

Williams' business sensibility was counterbalanced by his sense of responsibility towards the environment. By employing a sustainable approach towards development of the property, the current generation of the Williams family has paid homage to the efforts of the family's earlier generations to maintain, or at least tie into, the land's agrarian heritage (Williams 12-11-07).

The result is architecture and layout of the built forms on the property that are subordinate to the natural features on the site. For example, native vegetation and berms were used to screen homes and architecture while the earth's sculpted forms were blended with infrastructure. Built structures were also clad with natural materials, such as limestone from Leuders, Texas, and native plant materials were used throughout the site, to give an organic feel to built forms.



*Image courtesy of Montgomery Farm*

*Fig. 4.1 Bridge at Montgomery Farm*

Bridge clad in Leuders Limestone and planted with *Euonymus fortunei*, native grasses and wildflowers.

#### 4.3 Conservation On The Site

Conservation areas at Montgomery Farm consist primarily of spaces that were pre-selected especially for existing habitats and other qualities related to the aesthetics and species inherent to the landscape. This is in marked contrast to the prototypical development which preserves only what was left over after the built areas are defined. In this way, what was conserved at Montgomery Farm does not only include undesirable or unbuildable parcels of the property, but rather carefully selected areas that reflect the most precious elements of preserved nature. In addition, part of the conserved areas includes the

Connemara Conservancy, one of the state's earliest private land trusts, which was donated by the Williams family to the site.

Further setting the design and conservation of the Montgomery Farm development apart from other developments, is Bethany Drive. Bethany Drive is an east-west six lane artery that serves as the main access road to the development from US-75. Rather than simply adding a straight road between the highway and the development entryways, Bethany Drive was designed to "take what is a significant amount of road and make it a different experience...[that] impact[s] the five senses" and results in cleaner water, cleaner air and energy conservation (Philip Williams 12-11-07).

By designing the road as an elongated traffic circle and eliminating the need for intersections, the developer eliminated the need for traffic lights, resulting in less start and stop traffic and therefore less fuel use along the road. Also contributing to energy conservation along the road is the use of native grasses, wildflowers and landscaping on either side of the median which require infrequent mowing. By using fewer lights and incorporating "a set of criteria called dark sky" to illuminate the road at night, the developer also reduced energy usage and light pollution.

Reduction of pollution caused by storm water runoff was also taken into account by incorporating oversized catchment basins along Bethany Drive. The catch basins allow flood water that comes off the road surface containing heavy

metals and other pollutants to leach into the concrete basins before entering the storm water system.

Finally, by encasing the road in a set of berms, the developers were able to utilize the design of the road to reduce noise and visual pollution for the people living adjacent to the road. Through these efforts the developer was able to make a significant impact on the sustainable design of the property and the community.

#### 4.4 The Development Process

*...in general you look at the maximum usability of the land area and what's left over becomes what you conserve or use as open space or parkland. We did it inside out. (Philip Williams 12-11-07).*

##### *4.4.1 The Development Team*

The team assembled by the developers of Montgomery Farm consists of a group of professionals from an array of fields related to conservation-based planning, development, landscape and design. While certain field professionals, such as civil engineers and architects are fundamental team members in any development, the evolution of the eclectic group that makes up the development team at Montgomery Farm grew out of an ad-hoc process that progressed as new needs were perceived by the developers.

The professionals who made up the development team were added based on a shared ethic related to the Williams family's respect for sustainability and a hands-on approach to the property. Each of the consultants was expected

to familiarize themselves with the actual property rather than work only with planning documents and maps. As a result, Williams says what “became the litmus test for anybody associated with the project was the difference between dealing with it in the abstract on paper or images – two-dimensional representations of the property – versus someone who said let me put boots on the ground and see what’s here.”

#### 4.4.2 The Site Planning Process

*We took [the natural features of the site] as a fixed feature of the property, rather than something to be moved around...We said high ground, middle ground, creek bottom, Central Expressway versus thick woods to the far west and said those things are our context. And where the water flows is where the biggest plants will grow, including the biggest trees. So, we'll protect and enhance those areas both to improve the water quality as well as the aesthetic of the property by having more and different landscaping (Philip Williams 12-11-07).*

The developers' desire to maintain an established landscape coupled with the City of Allen's strict tree ordinance resulted in a plan to maintain a mature tree canopy. The plan encompassed not only the conservation of open space areas, but also the residential subdivisions.

This plan was executed in three ways:

- 1) the design of a community master plan that identified open spaces first, then planned the residential areas around them,

- 2) the careful planning of street and lot layouts within residential subdivisions that protected and maintained existing mature trees, and
- 3) the preservation of trees by harvesting and transplanting them to different parts of the development.

#### *4.4.2.1 Designing The Master Plan*

Randall Arendt, land use planner, author and expert in conservation planning, led the team in the development of the community's master plan. The design process followed the approach Arendt advocates in many of his books, and began with an inventory analysis which identified and analyzed the site elements such as soils, topography, water, drainage patterns, and vegetation.

Once the site's natural features were assessed, conservation areas were identified based on the sensitivity and importance of the ecological features, such as wetlands, wildlife habitats and woodlands (Arendt 1999, 54-65). Conservation areas were also determined based on view corridors both into and out of the site. In this way, the most attractive views could be taken advantage of for maximizing important vistas, such as those from new home sites, and buffers identified where developers might want to screen unattractive views, such as rooflines from the main road (Arendt 1999, 61).

Much the way landscape architectural designs are executed, the layout of the community was designed by overlaying the conservation elements on tracing

paper and outlining the forms of the areas to be conserved. Ultimately, a pattern emerged of distinct spaces for conservation areas and development areas— locations where home sites would be located (Arendt 1999, 63). Though the master plan is complete, the actual development of the site is still in progress. Therefore, at the time of the writing of this paper, some of the subdivisions discussed in this research were still under construction or had not yet begun.



*Fig. 4.2 Montgomery Farm Master Plan.*

#### *4.4.2.2 Locating House Sites, Streets and Trails*

When locating house lots and streets in areas designated for residential use, careful consideration was made to maintain the existing mature landscapes. For example, for the layout of the Hamilton Hills East subdivision of Montgomery Farm, designed by landscape architect, Rosa Finsley, mature trees were designated as conservation areas bordering on home lots. The trees tie into the greenbelts surrounding the subdivision (see Figure 4.2.) In this way, the developer could ensure that mature trees would be preserved, while enhancing both the values and profitability of the neighboring lots. Lot sizes also vary, allowing for a diversity of property values, home sizes, styles and residents within the division. For example, depending on lot size and proximity to open space areas, lots in the Hamilton Hills East subdivision range in price from \$202,000 to \$701,000. This diversity of lot sizes and proximity to open space also allows for homebuyers in less expensive lots to have access and/or views to open space areas, which enhance both short and long-term values of the properties (Phillips). For example, while lot E6 (see Figure 4.2) at \$202,000 is the smallest (64' x 114') and least expensive lot in the subdivision, it faces directly onto an open space area which links directly to the greenbelt trails and parks. The lot's views of and access to the greenbelt may enhance the long term appreciation of this property more so than comparable properties that do not have the same access or views to open space (Phillips).



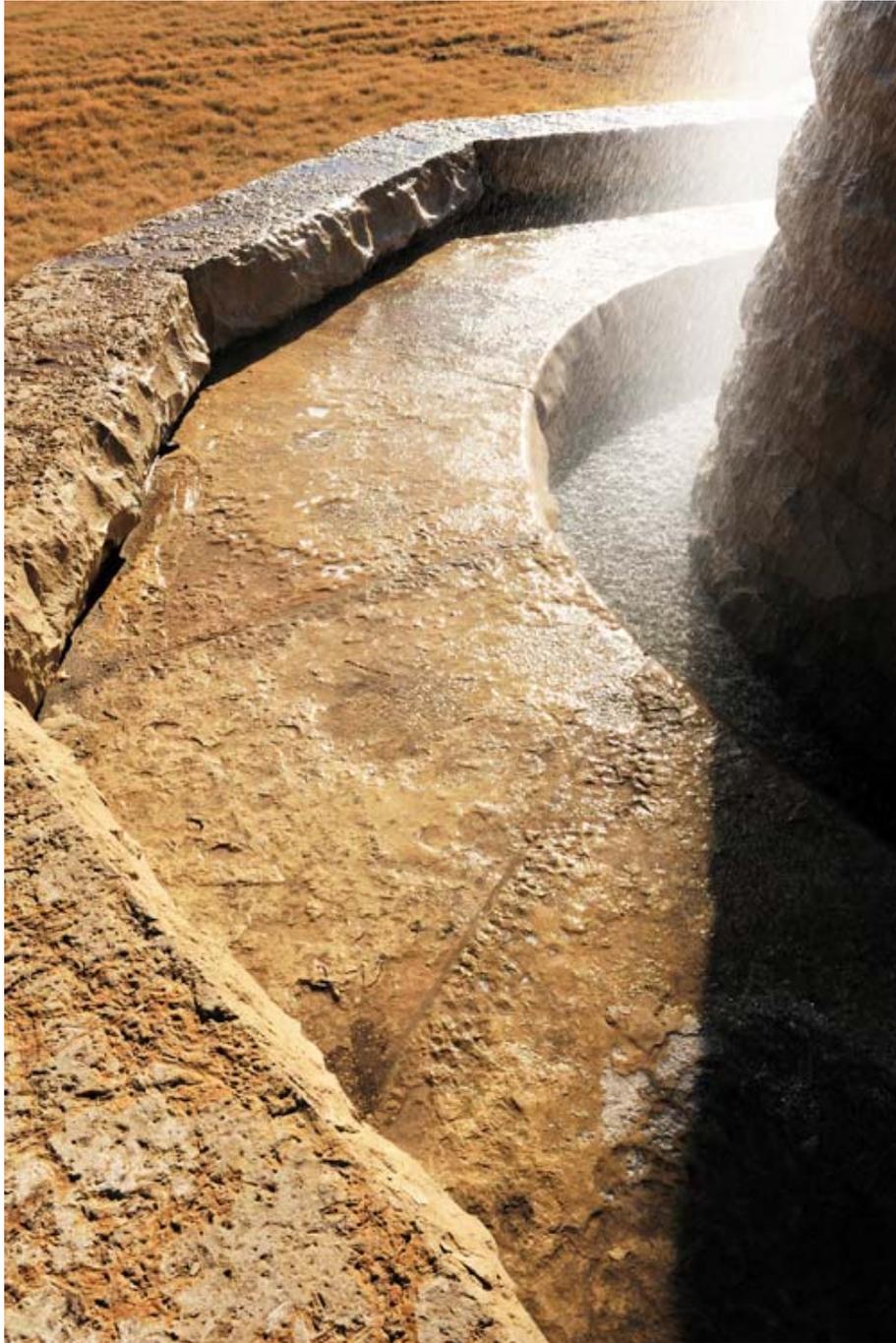
*Fig. 4.3 Hamilton Hills East*

A residential subdivision within Montgomery Farm where mature trees were protected by designating them as conservation areas that border home lots. This ensures residents will continue to have a mature landscape with access to greenbelts and a trail system surrounding the subdivision. This subdivision also borders directly onto a larger open space area of the development called the Cisterna (see Figs. 4.4-4.7).



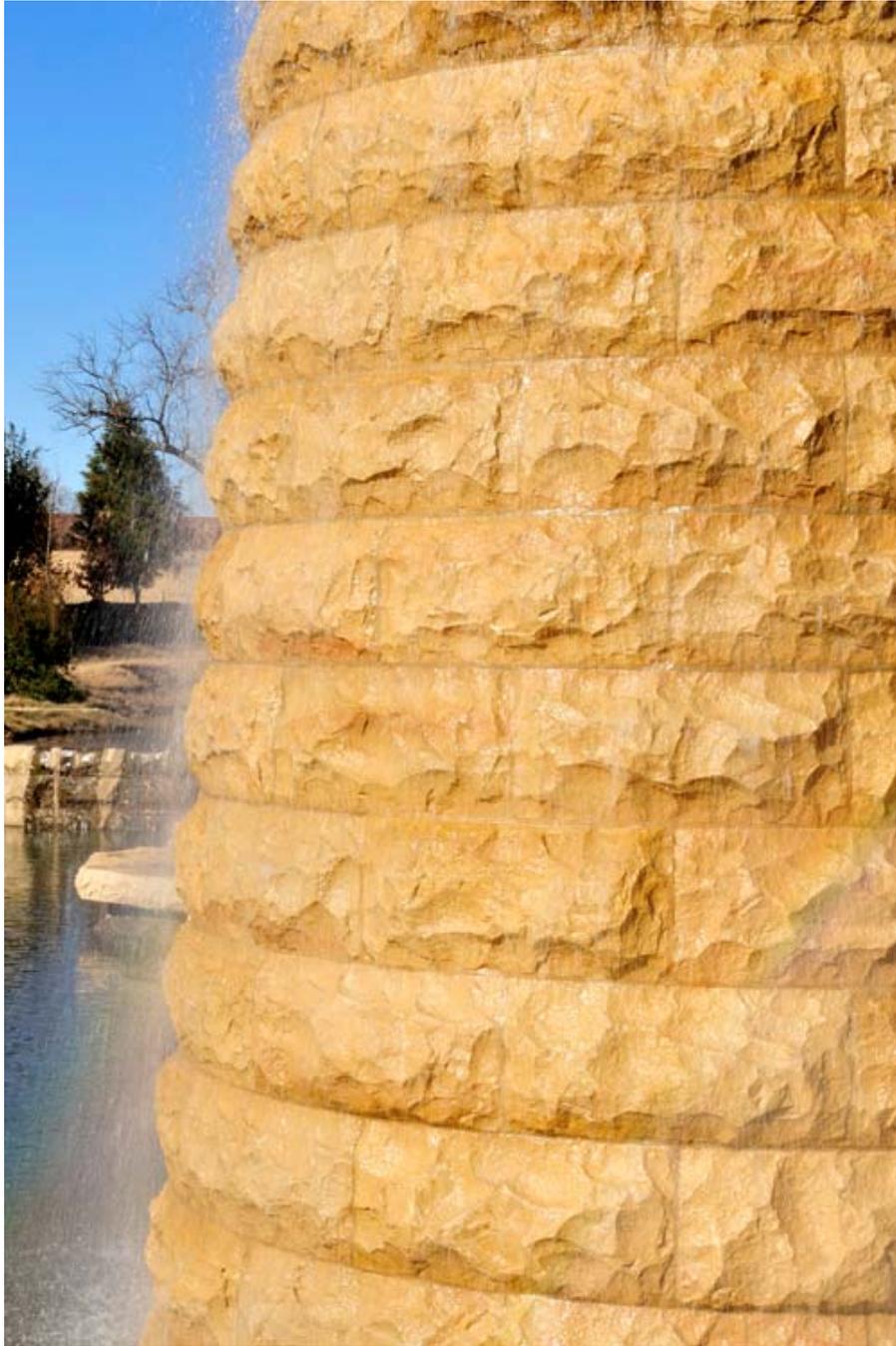
*Image by Brad Goldberg, courtesy of Montgomery Farm*

*Fig. 4.4 The Cisterna*



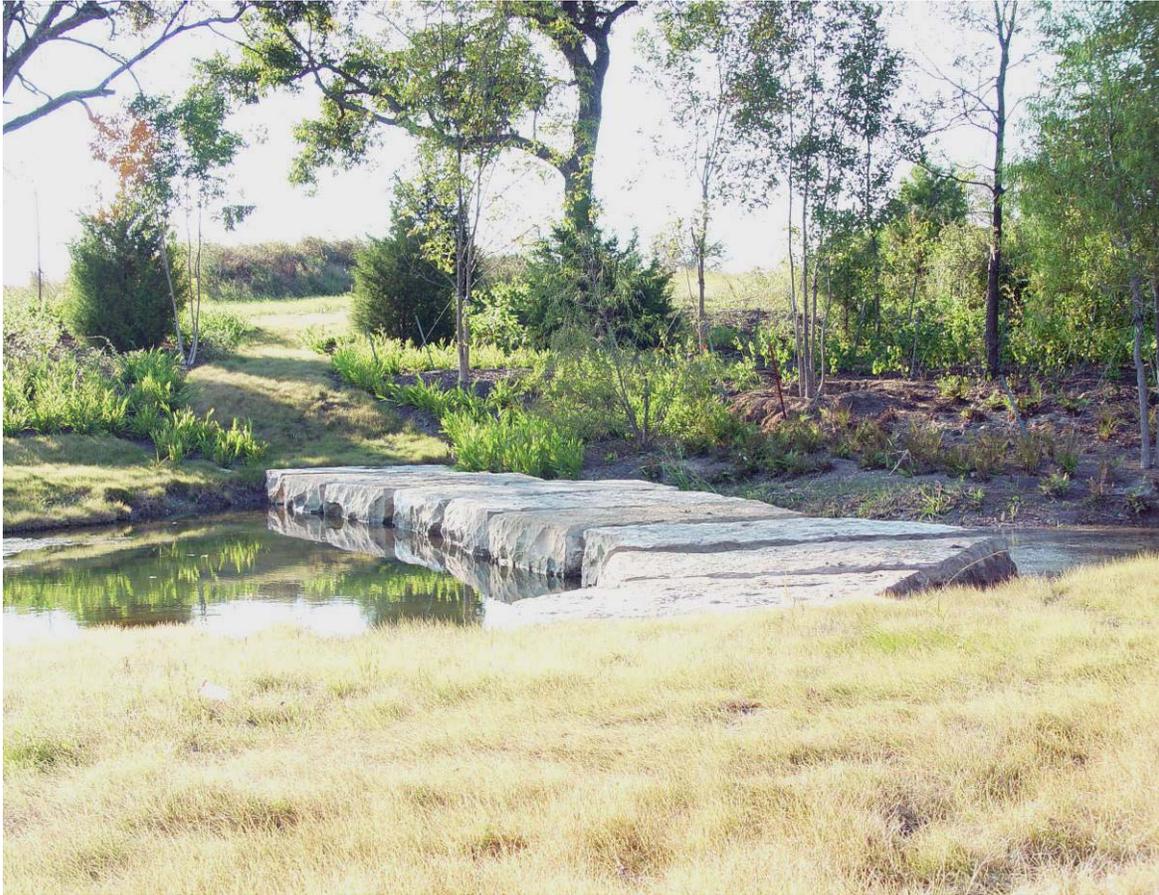
*Image by Brad Goldberg, courtesy of Montgomery Farm*

*Fig. 4.5 The Cisterna*



*Image by Brad Goldberg, courtesy of Montgomery Farm*

*Fig. 4.6 The Cisterna*



*Image by Melissa Gerstle*

*Fig. 4.7 The Cisterna*

*Figs. 4.4-4.7 The Cisterna:* An open space conservation area and park at Montgomery Farm which contains a wind turbine, designed by artist Brad Goldberg. The cistern is constructed of Leuders Limestone and will generate power and aerate and recirculate runoff water. It is also designed to provide irrigation for the development.

As Arendt suggests, “conservation areas should be designed as part of larger continuous and integrated open space systems” (1999, 77). Connecting open space areas throughout the development through a system of trails and greenways minimizes fragmentation of the site and maximizes access to and

use of all areas (77). An example of how this was executed can be seen on the master plan of the Montgomery Farm property (figure 4.1) as well as on the plan of Hamilton Hills East (figure 4.2,) which connects to the larger greenways through landscape buffers, greenways and a trail system that links to the larger conservation areas throughout the development. As a result, the entire development contains a continuum of protected meadows, wildlife preserves and woodland gardens accessible through a network of trails that are integrated into the neighborhoods of Montgomery Farm.

#### *4.4.2.3 Tree Preservation through Harvesting and Transplantation*

In addition to preserving mature trees *in-situ*, Montgomery Farm implemented a third policy to further its preservation efforts – harvesting and transplanting trees throughout the site. The harvest and transplant program was established for two reasons:

- 1) the desire to create a conservation development, and therefore preserve the natural resources of the landscape, and
- 2) the costs associated with the tree ordinance set forth by the city of Allen, where the development is located.

In furtherance of this program, a tree farm was established at Montgomery Farm. The tree farm, which is still in effect, is used as a temporary holding site to harvest trees before they are relocated and planted in public areas throughout the site. The tree farm program was

ultimately less expensive than the mitigation costs the City would have imposed on the developer for removing trees. The program proved to be beneficial, however, for other reasons, irrespective of whether tree ordinances exist or not, such as:

- it allowed for the developer to plant a more mature landscape than could have been afforded or acquired through the nursery trade
- the growth that occurred during the holding period at the tree farm, when the trees awaited transplant, allowed for the developer to generate greater positive preservation credits from the city
- cultivating the trees at the tree farm enabled the developer to plant even more mature specimens than when the trees were harvested
- it exhibited a sustainable strategy that reused existing resources
- placing more mature trees in the landscape was believed to increase the value of the land and selling prices of the neighboring properties.



*Image by Rick Darke, courtesy of Montgomery Farm*

*Fig. 4.8 Tree Harvesting at Montgomery Farm*



*Image courtesy of Montgomery Farm*

*Fig. 4.9 Tree Harvesting at Montgomery Farm*



*Image courtesy of Montgomery Farm*

*Fig. 4.10 Tree Harvesting at Montgomery Farm*



*Image courtesy of Montgomery Farm*

*Fig. 4.11 Tree Harvesting at Montgomery Farm*

*Figs. 4.8-4.11 Tree Harvesting at Montgomery Farm*  
Large spades are used to remove and relocate mature trees throughout the development.



*Image courtesy of Montgomery Farm*

*Fig. 4.12 Tree Farm at Montgomery Farm*



*Image by Rick Darke, courtesy of Montgomery Farm*

*Fig. 4.13 Tree Farm at Montgomery Farm*

#### 4.5 Summary of Montgomery Farm Development

Montgomery Farms is a five hundred acre conservation development. The majority of the land was acquired by Montgomery in a series of transactions dating from the 1920s. It was foregone conclusion to Montgomery and his progeny that the property would be developed. The question as to when and how the property would be developed was largely decided by Montgomery's grandchildren, Williams and his siblings.

The conservation aspect of the development is evident not only in how the master plan was developed, but also in how the main access road leading to the property was aligned. The road was designed to reduce noise, automobile exhaust, and stormwater pollution through several innovative techniques.

The master plan for the property was developed by a cadre of land planners, architects and engineers working in conjunction with the developer. Each of the consultants was expected to walk the property to gain an understanding of the indigenous or existing flora, fauna, and topography. This is in marked contrast to the typical conventional development process in which consultants lack first-hand knowledge of a site's unique characteristics and instead work almost entirely with plats, drawings and photographs.

At the outset, the consultants at Montgomery Farm identified conservation areas based on ecological sensitivity and importance. In contrast, most conventional developers identify the developable land first and then set aside the undevelopable or undesirable properties as community open spaces.

The consultants designated which mature trees were to remain after the land was developed and purposefully created platted lots of different sizes to accommodate existing land elements and different price points. Common to all lots, regardless of size and cost, are proximity to the trail system connecting the different communities in the subdivision, access to common areas, and views of conservation areas.

The developer of Montgomery Farm established a tree farm and undertook transplanting numerous mature trees. This endeavor was undertaken to both minimize mitigation costs imposed by the tree ordinance in effect in the City Allen and to further the conservation of existing flora.

## CHAPTER 5

### PROVIDENCE

#### 5.1 The Developer

Founded by Donald and Phillip Huffines, Huffines Communities is a real estate development company based in Dallas, Texas. The company specializes in what it calls a “place making” approach to its development projects of master-planned communities and takes prides in creating residential communities that offer a lifestyle that goes beyond the actual home purchase.

The marketing strategy of Huffines Communities is to attract homebuyers through an all-inclusive approach that offers an array of social programming, amenities, and design style that encourage community involvement and center around an interactive lifestyle. To do this, the company takes a formulaic approach to focusing on a specific group of key factors -- special entries, amenities, master planning and layout, architectural styles, and social programming -- in each development, which are then re-interpreted or stylized to fit the personality of the individual communities.

While not specifically marketing individual developments as “conservation” areas (as does Montgomery Farm), the Huffines Communities company prides itself on an environmentally sensitive approach to development. It includes in this approach its practice of “saving and relocating trees, enhancing natural habitats and tributaries, creating neighborhood parks, and leaving large

open expanses of grasses”

([www.huffinescommunities.com/company\\_provile.aspx](http://www.huffinescommunities.com/company_provile.aspx), accessed 4-1-08).

It also boasts in its marketing literature of creating “pedestrian-friendly neighborhoods [that] offer master trail systems and adjoining retail and commercial services to serve the community and its residents” (*Id*).

## 5.2 The Development

Providence, one of Huffines Communities’ master-planned residential developments, is a 692 acre site, marketed by the company as a new urbanist community that features a “traditional neighborhood development” (“TND”) design that is reminiscent of a style akin to the stereotypical 1950’s American suburban neighborhood (Bruni, 3-17-08). Homes in the development are affordable, originally selling for under \$90,000 in 1999 and 2000, and starting prices in 2008 beginning in the \$130,000 range. Separated into various subdivisions, know as villages, the master plan of the community was designed internally with limited outside help.

Individual lots within the master-planned community were sold to and developed by two home builders: D.R. Horton and Vision Homes. Each was required to adhere to architectural guidelines set by Huffines Communities. The community consists of Cape-Cod and Craftsman-style homes with over 54 acres of land dedicated to of parks, lakes and open space. A total of 4,500 residents live in the Providence subdivision.

While the developer dedicated a large percentage of the development to parks and open space, the focus and design of the spaces is significantly different from Montgomery Farm. At Providence, the open spaces are more programmed, being more clearly dedicated to family-oriented recreation and social interaction among neighbors. By way of example, some of the open spaces at Providence are dedicated to water parks, playgrounds and a clubhouse reminiscent of an amusement park. Huffines' marketing literature refers to this pseudo-nostalgic if not altogether didactic approach to open space development as reflecting "traditional family values"

([http://www.providencetx.com/at\\_home\\_sub1.html](http://www.providencetx.com/at_home_sub1.html), accessed 4-1-08).

In developing the masterplan for Providence, Huffines sought to create a community that had a "small town feel" and took people "away from the exclusionary influences of the '90s cocooning...where nobody knew their neighbors" (Bruni, 3-17-08). This conforms with some of the tenets that new urbanists espouse for space and community planning. In comparison, Montgomery Farm does not seek to recreate a real or imaginary "small town" through programmed open spaces. It instead offers acres of trails, surrounded by native plants, habitats and parks that are intended to be unprogrammed, contemplative spaces.

Despite the differences in approaches between Huffines and Montgomery Farm, both developers have taken specific steps to preserve mature trees and

native habitats. Each developer has in its own way afforded residents of both communities the opportunity to connect with nature.

### 5.3 The Design Concept

The design concept for Providence began in 1999, when the ideas of “new urbanism” and “traditional new development” were gaining popularity among planners and developers. To the developers at Huffines, who embraced this vision, it meant applying the design principles of a small town village to the design of the community. For Elvio Bruni, Sr. Vice President of Huffines Communities, that meant “creating an interaction between public and private spaces” (Bruni, 3-17-08).

To encourage this type of interaction, Huffines implemented a number of design criteria to enhance the scale and comfort of the neighborhoods. Some of the design principles that were applied were:

- pulling houses closer together
- adding large, usable front porches to the architecture (not just for aesthetics)
- raising up the houses such that people standing at street level would have eye-to-eye contact with seated homeowners at porch level
- reducing fence heights to five feet from the typical six-foot height

- changing the scale and distances between streets, greenways, sidewalks and trees (Bruni 3-17-08).

By implementing these design concepts, Huffines hopes to differentiate the dynamics of the community and the perception of the surroundings from other subdivisions. As Bruni explains,

*[When] people feel comfortable about interacting within their neighborhoods, the communities stand together better. We wanted all those things for Providence and so it's not just the fact that there are trees out there. It's not just even the house design. It goes beyond that. It goes to the street lights, it goes to the mailboxes ... If you go to a traditional neighborhood in Dallas there's a 25 foot setback off of an 11 foot right-of-way. And the trees are always up near the house. They're at five feet back from the house, 10 feet back from the house. So when you drive down the street all you see is a concrete street, concrete curb, concrete sidewalk and somebody may landscape a little bit out there. While, when you drive through our communities, you'll notice that the streets and the street trees are interactive. So the street trees are always planted between the sidewalk and the curb. That creates two-fold deals. It creates shade for the street eventually and shade for the sidewalk. In Texas, if a sidewalk is shady, people will use the sidewalk and walk along the sidewalk, again, creating that interaction between public and private. It also gives the streetscape a much better streetscape because it breaks the eye up of that concrete. The houses being closer, now you see all that dynamic of house, porch, rail, landscaping, all within your eye as opposed to going to a normal Dallas neighborhood and you see that wide swath of about 75 feet of nothing. And that makes a big difference in the way our communities feel. So when you drive through one of our communities they feel so much better (Elvio Bruni 3-17-08).*

Planning of the development was executed in much the same way as Montgomery Farm, though the team consisted of mostly in-house employees, rather than a cadre of outside consultants. For the Creek Village, this meant going through 20 to 30 iterations of plans which began by outlining the conservation areas and inserting home sites throughout the rest of the area. As Bruni explained:

*We wanted to keep as many of the trees as possible for the look within the community and so that sort of like started with fingers or what was developable and worked the streets and houses to fit within there. Some of those houses got some short backyards and retaining walls to try to make them work (Elvio Bruni 3-17-08).*

#### 5.4 The Creek Village

Differentiating the Creek Village subdivision from the rest of the community are homes that are tucked between mature trees on winding streets. Backing into the creek that runs through the subdivision are many homes, making the area seem untouched, as if the landscape had grown around the development, rather than the reverse. To do this required extra cost and planning related to engineering the site and utility lines to manage the design and topography around the existing features. Because the Huffines “wanted that canopy and that tree cover to come close to the road,” they committed extra funds towards such things as creating a shear wall drainage structure, relocating utilities, and employing a professional arborist to protect and preserve mature trees in the subdivision (Bruni 3-17-08). As a result, the Creek area has a

completely different look and feel from the rest of the community, making it an ideal point of comparison for the impact of mature tree preservation on home values.

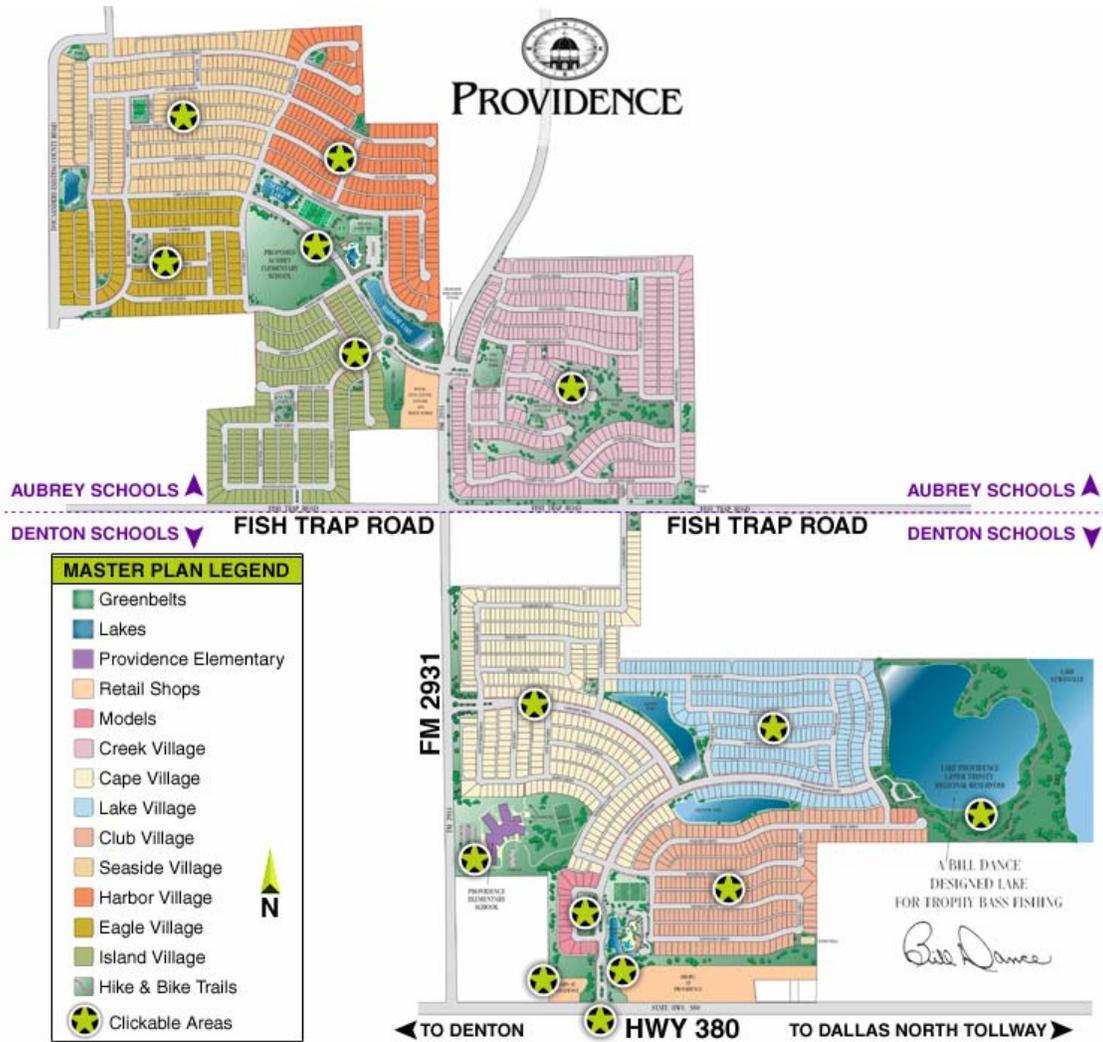


Fig. 5.1 Providence Master Plan

**Quick Facts**

**Cape Cod and Craftsman Style - Homes from the \$110s**

**Two Exciting Recreation Centers**

**Waterpark**

- ✓ Triple loop 35' tall waterslide
- ✓ 12' tall children's slide
- ✓ Jr. Olympic pool with racing lanes,
- ✓ Sunning decks and grotto
- ✓ Toddler pool
- ✓ Two shaded sand beaches



**Harbor Recreation Area**

- ✓ Four pools - adult pool, Jr. Olympic pool, two toddler pools
- ✓ Dancing water spray park
- ✓ Putting Green



**Providence Commons**

- ✓ Playground with jungle gyms and climbers
- ✓ Park areas for picnics or entertaining
- ✓ Barbecues, tables



**More Recreation**

- ✓ Baseball park
- ✓ Soccer field
- ✓ Full court basketball
- ✓ Tennis courts
- ✓ Putting green



**Amazing three-story clubhouse**

- ✓ Multi-level exercise facility
- ✓ Saunas, a weight room, and
- ✓ Locker and shower facilities
- ✓ 35' tall observation deck
- ✓ Large gathering/TV room with salt water aquarium
- ✓ A café sitting room
- ✓ Covered patio overlooking the pool area
- ✓ Planned second floor multi-purpose kids' play area and jazzercise area



**Lakes and more**

- ✓ Expansive 25-acre trophy fishing lake with boat ramp, fishing dock and surrounding trail
- ✓ Five beautiful large lakes, fountains
- ✓ 18 neighborhood pocket parks
- ✓ Extensive hike and bike trail system throughout the entire community
- ✓ Meditation areas and doggie parks



**Neighborhood Schools**

- ✓ Children learn in exceptional Denton and Aubrey schools
- ✓ Residents enjoy neighborhood Providence Elementary with grades K-5
- ✓ Nearby Navo Middle School now open
- ✓ Colleges and universities closeby



**Fig. 5.2 Providence Marketing Brochure Listing Site Amenities**

### 5.5 Summary of Providence Development

The Providence development is a master planned community located in Allen, Texas. The development is not a conservation development in the purist definition of the term, but is a development with many comparable attributes to Montgomery Farm.

In developing the property, the developer, Huffines Communities, attempted to keep as many mature trees as possible. It began the planning process by outlining the conservation areas to be preserved. It then decided which of the remaining land should be developed for residential construction.

The Providence development seeks to evoke some of the principles of new urbanism, creating a small town feel through programmed open spaces. The houses are clustered closer together and have lower fences heights than in conventional developments, an attempt to foster more interaction among residents.

The Creek Village, a subdivision within the Providence development, is distinguished from the remainder of the development by several characteristics. It has more mature trees than other parts of the development and has a creek which runs through the subdivision.

## CHAPTER 6

### ANALYSIS

#### 6.1 Tree Preservation Cost Analysis

Because land development codes vary from city to city it is difficult to compare costs related to tree ordinances that are faced by developers. For example, some codes are lenient, while others are strict. Also, for developments that are in newly formed cities or bordering on neighboring cities and therefore located in an Extended Territorial Jurisdiction (ETJ,) there may be no tree ordinances established or enforced.

For the cost analysis conducted at Montgomery Farm, tree preservation expenses were based on the local tree preservation ordinance enforced by the City of Allen Land Development Code. While the costs dictated by the City of Allen's code differ from other cities, assessing these costs can be used as a baseline for comparison with developments in other areas. Before assessing the costs, though, it is important to understand the Tree Preservation Code enforced by the City of Allen Land Development Code.

##### *6.1.1 The City of Allen Tree Ordinance*

Section 7.06, of the City of Allen Land Development Code, titled Tree Preservation, outlines the requirements of residents and developers for preserving and removing trees within the city limits. The City Of Allen uses a

credit system to calculate mitigation costs for developers who remove protected trees from the city. The calculation works in such a way that positive credits are awarded for trees that are preserved, and negative credits are allotted for trees that are removed. Also, by assigning a scale that awards or deducts different credit values based on specific thresholds of caliper inches, the city encourages the preservation of more mature trees.

Section 7.06.3 of the City of Allen Land Development Code outlines the calculation of tree credits which is summarized in the illustrations below:

- Trees 6 to 10 caliper inches = 1 credit for each caliper inch
- Trees 10.1 to 15 caliper inches = 2 credits for each caliper inch
- Trees Over 15 caliper inches = 3 credits for each caliper inch

*Fig. 6.1 City Of Allen Positive Credits For Tree Preservation*

For every protected tree that is preserved as part of a development, the owner shall receive tree credits according to the above chart

- Trees 6 to 10 caliper inches = 2 negative credits for each caliper inch
- Trees 10.1 to 15 caliper inches = 4 negative credits for each caliper inch

*Fig. 6.2 City Of Allen Negative Credits For Tree Loss*

For every protected tree removed, including fence row trees, the owner shall receive negative tree credits or shall be required to plant replacement trees according to the above chart.

- + Credits for preserved trees
- + Credits for healthy unprotected trees
- - Total healthy desirable unprotected trees removed
- + Credits for replacement trees planted
- - Negative Credits for protected trees removed

Figure 6.3 *City Of Allen Calculation Of Tree Credits*

Total tree credits are calculated using the equation in the above chart.

After the total number of tree credits has been calculated, the developer can quantify what action needs to be taken. If the total tree credits calculated is a positive number, then there is no obligation to replant trees in the City of Allen (Section 7.06.4.) However, if the total number of tree credits is a negative number, then the owner must enter into a Tree Mitigation Agreement with the City of Allen, specifying that the owner must plant or pay for protected trees to equal or exceed the tree credit number (Section 7.06.4.)

The Code also specifies that the minimum caliper for replacement trees is three inches and that “each replacement tree must survive in a full healthy state for at least three years” (Section 7.06.3.) It also states that “the owner shall replace any tree allowed as a credit if it dies or becomes unhealthy during the three-year period following planting” (Section 7.06.3.) Each negative credit is the equivalent to one caliper inch of replacement tree. Therefore, if a developer in

the city of Allen has 21 negative tree credits, then he must plant seven, three-inch caliper trees (21 divided by 3) and ensure that they live for three years after they are planted.

### *6.1.2 Cost Analysis of Montgomery Farm Tree Preservation Efforts*

As of the April 2008, Montgomery Farm had saved 5,368 caliper inches of trees and spent \$506,664 towards that effort (Rodgers, Appendix B). The mitigation cost enforced by the city would have been \$200 per caliper inch or \$1,073,630 (5,368 inches x \$200 per inch.) However, given that the cost that Montgomery Farm incurred to preserve these trees was \$506,664, the developer was able to save \$566,966 (\$1,073,630 - \$506,664.) In addition to the value these savings offer the developer, further, immeasurable benefits, can be attributed to the aesthetics of placing established, mature trees back into the development and the goodwill generated by preservation rather than mitigation.

## 6.2 Real Estate Analysis

As was described in chapter three, as part of this study, a real estate analysis was conducted at the Providence development to analyze whether any significant differences in real estate values exist between residential properties located on lots with mature trees over their treeless counterparts. The home value analysis was conducted by Douglas C. Phillips, a licensed real estate

appraiser in the state of Texas, who specializes in real estate appraisals of communities located in the northern suburbs of Dallas, Texas.

To conduct the analysis, Phillips used public data accessed through the Multiple Listing Service (MLS) database to review home sales records that occurred in Providence beginning March 1, 2007 through March 31, 2008. The analysis focused on resale homes to avoid any data skewed by homebuilder sales incentives or discrepancies in value caused by homebuyer perceptions of new versus previously owned homes.

The MLS sales data that Phillips reviewed revealed 109 total home sales for the entire Providence development between March first, 2007 and March 31, 2008. Of the 109 homes sold, 16 were located in the Creek Village, with the remaining 93 located throughout the rest of the development. The eligible home sales that could be analyzed were further reduced through a filtering process that eliminated any home sales that occurred under the duress of foreclosure, short sales and relocations. In order to keep the analysis unbiased, homes of unusually large size and new construction were also eliminated.

After filtering out non-comparable homes, the resale values of two homes in the Creek Village were compared to 10 homes throughout the rest of the development. The data illustrated an average sales price per square foot of \$94.58 in the Creek Village and \$92.64 in the rest of the development, which revealed a \$1.94 per square foot premium in the Creek Village, or a \$2,520 premium on an average 1,300 square foot house. Despite the premium in the

Creek Village, the small sample size and price difference are not large enough to remove skepticism from those who question the value that mature trees add to homes.

At first blush, the analysis of tree preservation and resale value as a measure of the economic benefits of conservation development leads to some unsettling conclusions. One of those conclusions, that homes located in subdivisions with more mature trees have a negligible increase in resale value over homes without mature trees, will likely bolster the argument that such developments do not lead to greater short or long term profits.

A more profound difficulty lies at the heart of determining whether greater appreciation of real estate values is achieved in conservation development. That difficulty is isolating a single element of differentiation between two communities, such as mature trees. Each developer tries to incorporate, or at least market, unique characteristics of its community. Some developers create new school districts solely for their subdivision, in hopes of attracting young families seeking refuge from less academically recognized school districts (Bright 12-12-07). Other developers opt to create programmed open spaces that reflect “family values” ([http://www.providencetx.com/at\\_home\\_sub1.html](http://www.providencetx.com/at_home_sub1.html), accessed 4-1-08). Still others, like Montgomery Farm, tout unprogrammed, conserved open areas as the main selling point for their community.

All of the characteristics that developers incorporate into their developments introduce additional variables that may influence real estate

values. It is difficult to isolate the incremental value associated with having a school district distinct unique to the subdivision. It is equally difficult to isolate the incremental value associated with programmed versus contemplative, unprogrammed open spaces. What is the incremental value associated with the subdivision being one-half mile closer to the main transportation artery? Absent developing two subdivisions side-by-side, each with the same developer, school district, demographic, house styles, and layout, but one with mature trees and the other denuded of native vegetation, a determination of any one factor on real estate values is difficult to calculate. Research has not uncovered such side-by-side subdivisions that would provide control over all but one of the variables affecting resale values.

Other issues complicate an already difficult task of teasing out the incremental value associated with mature trees for the myriad of other variables. Montgomery Farm is a new development and, at the same time, is introducing a relatively new development concept—conservation development—to the north Texas region. Viewing Montgomery Farm in isolation and without comparison to other subdivisions, it is impossible to determine at this stage whether the community will generate the price premiums it currently demands and if such premiums will be sustained.

Some scholars have noted the greater appreciation of real estate values in developments with open spaces (Arendt 1996, 12-13). Most of those studies are anecdotal. Many of those studies were conducted when few alternatives to

“cookie cutter” subdivisions existed, creating a novelty factor that may have also influenced resale values. With the many different types of subdivision development models competing for consumers’ attention, the novelty factor may have worn off or, at least worn thin. It is unclear whether the broadening of subdivision choices, ranging from traditional to new urbanist to conservation developments, will dampen the rapid appreciation these scholars have attributed to them, and, more particularly, preservation of mature trees.

Another factor influencing the housing market as a whole is the weakness of the residential real estate market at the time this research was conducted. This weakness, brought about by speculative lending practices, a collapse of the mortgage securitization market, low interest rates, and rampant development of new subdivisions, further increases the difficulty of teasing out the effect of mature trees on real estate appreciation. A conservation subdivision with mature trees may appear to experience great appreciation, but that appreciation may have been fueled by readily available capital and a speculative fever in the market. When the speculators are forced to sell quickly to cover their debt obligations, it may have a carry over effect on other properties in the same subdivision. The greater the number of distress sales in a subdivision, the more precipitous the decline in values, regardless of the merits of the initial development plan or incremental value of mature trees. A liquidity crisis does not necessarily take note of mature trees.

### 6.3 Summary of Analysis

Two different methods of valuing conservation development were analyzed. The savings Montgomery Farm realized by preserving mature trees was measured against the mitigation costs the City of Allen would have imposed had the trees been felled. The analysis indicates that Montgomery Farms realized a savings of over \$1.3 million by conserving mature trees.

The second method of valuing conservation development was to evaluate resale of houses located in conservation developments in contrast to houses located in conventional developments. Two subdivisions within the Providence development were selected; one subdivision having more mature trees and creek running through it, the other having far fewer mature trees. Resale values of homes within Montgomery Farm was not a reliable measure of incremental resale value due to the recency and ongoing nature of that development. After filtering out non-comparable homes, only a small sample remained for the two subdivisions. A comparison of the resale values indicated that homes in the conservation subdivision sell for \$1.94 per square foot more than in the conventional subdivision.

Many factors may have influenced the relatively small increase in resale value between the two subdivisions. The most significant and problematic factor is the difficulty in segregating the value associated with mature trees from the other characteristics that differentiate developments from one another. Conservation development is also not yet a term in the vernacular of north

Texans at the time of this research. A significant liquidity crisis at the time this research was conducted resulted in an abnormally large number of homes in the Providence subdivision being foreclosed, reducing the size of the sample used for the analysis. All of these factors point to the need for additional research of resale values and devising more sophisticated means of teasing out the value associated with preserving mature trees, only.

## CHAPTER 7

### CONCLUSION AND RECOMMENDATIONS

#### 7.1 Conclusion

The savings garnered through tree preservation proved positive for the Montgomery Farm development. However, despite these savings, little incentive to enter into such programs exists without the pressure of city ordinances which demand tree mitigation. For example, because Providence is located in its own municipality that is not governed by established ordinances, there were no restrictions or penalties governing tree mitigation in the development. Rather, it was due to the developer's own values that trees were preserved. While encouraging in this case, such actions are generally rare.

The appreciation of real estate values in conservation subdivisions does not paint a conclusive picture of whether mature trees add incremental value to resale values. Many factors may influence real estate values. Absent having the ability to isolate a single factor from the rest, the statistical data collected for this study do not support the notion that mature trees, alone, increase resale values other than in the most nominal sense. The inconclusive nature of the study of the affect of mature trees on resale values only further underscores the importance of enforced tree ordinances. As a result, the following conclusions can be made from the data generated by this study:

- Savings from tree preservation proved positive for Montgomery Farm

- Little incentive to preserve trees exists without city ordinances demanding tree mitigation
  - While the developers of Providence preserved trees on their own accord, such actions are rare
- The effects of mature trees, only, on real estate values is inconclusive
  - The difficulty in isolating a single factor and the data collected from this study do not support the hypothesis that mature trees increase resale values beyond a nominal amount
- The data from this study prove little incentive for developers or homebuyers to preserve or purchase properties with mature trees
- Enforced tree ordinances and further study are recommended to determine the effects of mature trees on real estate value

## 7.2 The Importance of Tree Ordinances

Despite studies cited which indicate otherwise, the data resulting from this investigation prove little incentive for developers or homebuyers to preserve or purchase properties with mature trees. For this reason, it is imperative that municipalities impose tree ordinances to ensure that trees are preserved and that the communities serve the public's needs.

Unfortunately, despite strong policies, some municipalities lack the resources or will to enforce the ordinances, leaving our communities denuded. For example, a recent editorial in the Dallas Morning News criticized the City of

Dallas for failing to enforce its tree ordinances and allowing developers to destroy the character of the City's neighborhoods. Such lackadaisical enforcement can lead to entrenched positions and, predictably, more opposition to future tree ordinances from developers. The opinions expressed in the recent editorial in the Dallas Morning News underscores the emotional aspect of enforcement of tree ordinances:

*Chainsaw-wielding developers have mowed down hundreds of trees, clearing the way for new homes. But the city has done relatively little to enforce its tree-mitigation ordinance.... At a minimum, the existing ordinance must be enforced... [and] city officials also should consider whether to expand efforts to preserve trees, rather than simply allow developers to replace mighty oaks with saplings...(Dallas Morning News, 4-2-08).*

### 7.3 Recommendations for Further Study

This research is a launching point from which to address questions regarding the value of mature trees. Questions remain regarding if and how tree preservation can create economic benefits for developers and homeowners. As a result, the following research questions are recommended for exploration and further study:

- Does designing around a site's existing features (mature trees and topography) reduce building costs and enhance profitability?
- Does tree preservation in conservation subdivision design enhance quality of life?

- What premiums are homebuyers willing to pay for property containing or abutting mature trees?
- What types of tree ordinances are most effective in ensuring tree preservation?
- What are the best practices from both economic and ecological perspectives for tree harvesting and preservation in North Central Texas?
- What are the impediments to tree preservation that cause developers to pursue traditional scrape and terrace techniques?

#### 7.4 The Value of the Study to Landscape Architecture

As designers responsible for shaping the environments in which we live, landscape architects are an influential force in creating a sense of place within our communities. The inconclusive results of this study make it even more imperative that landscape architects advocate for the benefits that mature trees provide, such as cleaning air, increasing water quality, reducing runoff, creating wildlife habitats, and defining spaces that create a sense of scale and make human habitation more enjoyable (Hoff, 2002 and University of Washington, 2006). For those employed in urban and residential design, this means providing a strong leadership over the design of our neighborhoods and communities. It also means creating the environment in which we experience our

surroundings. The question is, will we have a legacy of preservation or degradation?

APPENDIX A

INTERVIEW WITH PHILIP WILLIAMS

Subject: Montgomery Farm Development

Location: Allen, TX

Interviewee: Philip Williams, majority shareholder, president and director of Emerson Partners, Inc., and the managing general partner of Montgomery Farm

Date: 12-11-07

*MG (MG): Why did you choose to develop this site [Montgomery Farm Development]?*

Philip Williams: It's proximity to Central Expressway.

*MG: Ok. Is there any other aspect of that?*

Philip Williams: Everything really goes from that. The element – a portion of the property was owned by my family for years has more to do with my personal involvement, than my reasons for developing the property. If this property had been close to my father's home in deep east Texas, we wouldn't be developing. So, the proximity to Central Expressway in Collin County is really the reason that we chose to develop it. The full 700 acres that's impacted by our development – only 300 of that was contributed by the family to the partnership that is developing the community. So, there was a large investment by non-family members contributing cash to the partnership that was then used to buy land.

*MG: Was that mostly venture capital?*

Philip Williams: It's high net-worth individuals in what you would describe as private equity.

*MG: Have you taken a different approach with this property than you would with any other, because of your family's involvement and ownership of this land?*

Philip Williams: From a marketing perspective, we have packaged this as a family property and as a legacy property. We have taken advantage of the family's contribution of 100 acres of conservation land and the Connemara Conservancy certainly.

*MG: So, who was involved in the master planning of the development and what was the process involved in that?*

Philip Williams: Do you want the marketing answer or do you want the truth?

*MG: I want the truth. You can give me both, but let me know which is which.*

Philip Williams: The marketing answer is that my grandfather assembled several smaller farms into the family farm, which is known as Montgomery Farm back in the '20s '30s and '40s and his master plan was based on an agrarian approach and he created a horse farm here. So, the master plan of the property as a horse farm and as a real working farm is a version of land planning. And so, when I became aware in the '60s and the '70s of the fact that this property had other potential uses, I was working off of the baseline of the property had already been planned and had been subdivided for different uses.

*MG: So, you'd been thinking about this since the '60s and '70s, about developing this property?*

Philip Williams: Yeah. And it was as much my mother presenting it as a family project to do planning just like you would any other family project that everybody had their different roles. In the '70s it became more formalized in the sense that in college and in graduate business school, I began to use the property and the family's ownership of the property as grist for my own education mill. So, you had, I had, written financial plans and tax plans and estate plans for the property while I was in school. At the same time, my sister and my mother were pursuing the public art legacy.

*MG: So, had you thought about how you would incorporate the two when you were working through that?*

Philip Williams: It really is thinking we inherited from our mother. She was thinking about it.

*MG: So, is that the truth and the marketing?*

Philip Williams: To some extent it's the marketing story, but it's also very much the truth. So, I guess the best way to talk about it was that this was the family's history of the property before we created an investment partnership.

*MG: And when was that created?*

Philip Williams: The investment partnership was created in 2000.

*MG: That would be the way you became more serious about actually getting into the project itself? I don't want to say that you weren't serious before, but this is when you were really digging your heels in and starting up.*

Philip Williams: We brought the first outside cash to the property in 2001. Before then there was a significant amount of time spent and energy on the part of me and my company on the development. The best example is Bethany Drive. Bethany was conceived in '95 and '96 and was completed in 2002. As you can tell by just looking at the map of the property as the main transportation corridor, as the main piece of infrastructure for the property, it has had and will continue to have a significant impact on the value of the property long-term. We dedicated somewhere between 3½ to 4 times as much land as is normally required to build a six-lane divided thoroughfare. The formal dedication I think was in 2002 and it was at that stage that the commitment to the conservation development process really had it's first impact. That's what made it real to the outside world whether it was builders or it was residents or it was potential home buyers that Montgomery Farm was going to be something different.

*MG: Was that your intent with Bethany Drive, or did that this really made the point and statement that this was going to be something special and a different conservation development? Did you expect it to have the impact that it had or was that a benefit after the fact?*

Philip Williams: No, we expected it to. It was being green before people knew what being green means.

*MG: Everybody's talking about that now.*

Philip Williams: And so we had approached it and said we would like to take what is a significant amount of road and make it a different experience and do what we can to minimize the pollution of the road and we thought about the pollution of the road as being the impact on the five senses – what do you see, what do you smell, what do you taste, what do you hear, what do you feel about being on the road. And out of those came the natural results of cleaner water, cleaner air, and using less energy.

*MG: How does it use less energy?*

Philip Williams: There is less start and stop traffic.

*MG: Okay.*

Philip Williams: And so the cars use less fuel to travel that mile. The native grasses and landscaping on either side and in the median require much less frequent mowing, really only twice a year. So, there is a lot less energy used in the maintenance of the property. The lighting is about one-third of what is normal in a stretch of road like that, so it uses less electricity.

*MG: Do you have any literature on that? I have looked at this road for quite a few years now and I have always admired it. I've known that it's different, but I never heard this story that's aligned with it. So, I just find that really interesting. I didn't know how marketing that.*

Philip Williams: Another way to look at it is . . . it's very pretty deeply in the planning documents and the marketing pieces that go along with those

planning documents. So, I don't think there is a story of Bethany road. The greatest source of water pollution in the state of Texas is what is called non-point source pollution. That means that water pollution coming from something other than a specific cause or a specific source. One of the bigger polluters is cars. So, the little bit of rubber that's left on the road, the oil that drips off the bottom of a car, the other heavy metals that happen when we get a big rain event we can feel it because the road gets really slick all of a sudden. That's the heavy metals and other pollutants that have been separated from the road surface by that little bit of water. In general, as that gets washed into the storm sewers it gets then literally flushed through the storm sewer into our streams, rivers, and lakes. In Bethany Drive, the catchment basins, meaning the place where the storm sewer the water comes off of Bethany. Those catchment basins were oversized in order to allow that flood water to sit inside a concrete basin longer, meaning that the heavy metals would literally leach out of the water and settle in there so that the water that comes off Bethany as storm water is cleaner than it was when on . . .

*MG: . . . on Bethany. Okay. So you did some really good storm water management through the roads.*

Philip Williams: Yeah. And that reduces water pollution. We used a new set of criteria for the public lighting on the road. We used a set of criteria called "dark sky." In doing that we reduced both the number of lights as well as the type of lights on the road so that there was less light pollution at night. While

maintaining a level of adequate public safety we removed the sense of turning night into daylight that you get on a lot of the major roads.

*MG: Interesting.*

Philip Williams: By encasing the road in a set of berms it also reduced the sound and so for neighbors and people that are adjacent to the road it's a quieter road. And by not having any intersections, by having the turn-arounds in the road, that also reduces the number of starting and stopping and that also reduces the noise.

*MG: And also the need for traffic lights and things like that.*

Philip Williams: Yeah. And the, of course, behind the berms you don't see the cars.

*MG: Which makes it visually more attractive as well.*

Philip Williams: And visually less polluting. So those kinds of ideas were germinated and worked on in '95, '96, '97 with a financial plan being generated for the property in '98 and '99 where public funds were used to the extent that it would have cost to build an ordinary road and then the premium costs were picked up by our partnership.

*MG: Can we talk a little bit about the master planning of the development in terms of the residential aspects of it. I know you have a team of people working - there's Graham [Greene], Rick [Darke], Rosa [Finsley], Brad [Goldberg] and numerous others. Do you want to talk a little bit about how you assembled that team and how that process worked through the development.*

Philip Williams: We had originally engaged a firm by the name Wallace Roberts & Todd. In the industry they're known as WRT. They are headquartered in Philadelphia and have a satellite office here in Dallas. They are well known for being master plan architects, engineers, etc. What we got from them can best be described as cookie-cutter. Their main contribution was what I call an inventory of assets; an analysis of the topography, an analysis of the soils, an analysis of both surface water and subsurface water, an analysis of the vegetation, an inventory of the assets as they are here was the primary contribution. Then when it came to looking at the layout of the roads and the subdividing of the property we began to be aware of their shortcomings which were primarily a result of the perception of the property, what you were dealing with and it's the difference between being on the land and dealing with it in three dimensions and the turn of the seasons through the year versus sitting and looking at a two-dimensional flat map even though it may have notations for the elevations and topography, there's a much different feel. So, we had read of and seen the books by Randall Arendt and invited him to come visit the property, walk the property, and talk to us about what was possible.

*MG: What year was this when you first hired WRT and then . . .*

Philip Williams: WRT was first hired in '96.

*MG: And then when you invited Randall out?*

Philip Williams: That was in 2000.

*MG: You invited him to come and walk the property.*

Philip Williams: We invited him to come and talk about the concept of conservation development. The thing that impressed us was the very first thing that he insisted on doing was walking the property. And that became the litmus test for anybody associated with the project was the difference between dealing with it in the abstract on paper or images – two-dimensional representations of the property – versus someone who said let me put boots on the ground and see what's here.

*MG: Okay. So, what happened after that?*

Philip Williams: When we decided to hire Randall, we knew that we needed people that could interpret the broad brush approach that he would take. He was not here, which was a limitation, and you didn't have expertise in every area. So we began to try to understand where we needed expertise. We knew we needed civil engineering and we had worked with Halff & Associates in the planning of Bethany.

*MG: Okay.*

Philip Williams: We had worked with them in the '70s and '80s in doing some of the planning for the land conservancy, Connemara. We knew that we needed a local architect as much for aesthetics as a connection to what the reality is of dealing with homes and buildings on the ground. And that was

\_\_\_\_\_.

*MG: How did you . . .*

Philip Williams: Personal contact.

*MG: Just personal contact.*

Philip Williams: Yeah, we knew him. His firm, not himself, but his firm had done at least one renovation, if not two, of my parents' house.

*MG: Okay. And then Rosa and the rest of the group.*

Philip Williams: They came on in very similar ways. There is a story where there was a connection made for each one of the people, whether we had personal history with them or knew somebody that had personal history with them and through that were introduced to this place or in some way were told, wow, these guys are doing something cool you ought to go talk to them.

*MG: Okay. So, I guess the bigger question here is not necessarily how you met each individual person, but how you know you wanted a landscape architect and a civil engineer. I mean, you know that you need an architect and a civil engineer it sounds like. A landscape architect obviously because you respected the land and wanted to do the right things with the land. You also brought Rick Dark in which is kind of a unique area of expertise. I mean, you've got a lot of people involved in the land development. So, can you talk a little bit about that also.*

Philip Williams: The model for a development team is pretty standardized. It's like a football team. You know you need a center and a quarterback, left guard, right guard. So a development team you know you need the civil engineer, the architect, etc.

*MG: Those are a given.*

Philip Williams: A part of it was filling those roles and then part of it was an ad hoc, make it up as you go along decision that was as much who's available as perceiving a need. So, we perceived that we had a need for public art. That led us to Brad Goldberg, and a group of artists that had worked on shows in the land conversancy, to work on Bethany which led then again to a sense that we would be better off if we had artists who were concerned with public art at the farm in general. And so, as you look at that public art on the farm then we began to integrate those pieces of public art and the things that were necessary aspects of the development. You've got to have an entry into your major portions of development and so it is common sense and standard practice to make your entries a statement about the development, to reflect the area in some way. But is also typically an enhancement of what is already there. The concept of taking our main entries to the residential being the berm type on the southern side and then the big steel arbors structure on the northern side were a natural evolution of the development team knowing we needs to have entries. But our development team also has an artist on the team who says, wow, wait a minute why don't you have a piece of participatory art here in your landscape.

*MG: Right. Okay. So how was landscape architecture involved in the plans for your development? Can you talk about that in broad terms.*

Philip Williams: It really came from Graham Green, Oglesby Green, who has been from the beginning one of our key, we call them "keepers of our

conscience”; meaning stay true to what you said that you were going to do here. Graham is a very talented and very well educated architect. He has great skills and good background. At the same time he has a sense of humility that allowed him to say, guys you don’t want this place to be about the architecture. You want this place to be about the flora and fauna and the topography and the outside. It is clear from . . . you’ve been down to Bedside Manor . . .

*MG: Yeah.*

Philip Williams: . . . and this house as well, it’s clear that we spent a lot of time trying to bring the perception of the outside inside to what we’re doing. And then a lot of what we do is outside. So, we saw our role as creating a framework for a concept for the development and then individual businesses and individual homeowners are the ones that end up designing their own particular specific specs or plates on the property. And so, we have certain places where we get to put our imprint on the property to increase the \_\_\_\_\_ that conservation district, the greenways and the open space, the streetscapes. Those are places where we can have some impact. In doing all that and thinking about all of that and looking for a way to execute that, we also are very much aware of the fact that the market drives what is going to be perceived a valuable. So, you’re not likely to have \$5 million houses here. How do we take what in 1996-1998 was an average new home in Allen, Texas, at about \$185,000 to \$200,000. How do we take that and change it to where we are dealing with average new homes of  $\frac{3}{4}$  of a million dollars and up. Part of that was price inflation in the homes, but then

the other part of it was this concept of the framework. Giving people a place to put a house can be very much an expression of their own individual liberty. You've heard the expression "not in my backyard."

*MG: Right.*

Philip Williams: Well, it becomes my backyard because that's mine. I want it. I own it. I built it. I exercise all the rights and privileges of being the property owner. That's what makes America great is, we are all free to do what we want with our property.

*MG: Right*

Philip Williams: The more that you can provide people with both the perception and the actual aspect of being free to do what they want with their property, the more valuable it's going to become. The way to frame that is with landscaping. Because what you perceive as high-end architecture may not be what I perceive to be high-end architecture.

*MG: Right.*

Philip Williams: And frankly the higher end that you get the more expensive the buildings and the houses are, the less mainstream that they are actually going to be. Because people, particularly people that aren't necessarily educated in architecture, believe that an architectural statement is not necessarily to adhere to a classical form, to adhere to a classical prairie style or craftsman style or English tudor or French \_\_\_\_\_ chateau. Where those in and of themselves can be very high-end, very high value architecture, that's not

typically what the individual thinks is the high value architecture. For them it's not a matter of classical forms of architecture, but more a matter of personal style.

*MG: Right.*

Philip Williams: I have often wondered how these people that fancy up their houses with lights get along with their neighbors. Some of the house, particularly here in Dallas, you look at you think it must be bright as day in the neighbor's house because they turn this on. Part of it is the seasonal aspect of it. Those lights are supposed come on and go away. But the way that we have approached this is by saying, look if we have sufficient landscaping, if create and context where the landscape, the living landscape dominates, then the architecture by consequence is going to be subordinate to the living landscape.

*MG: Are you talking more about the newer developments that are to come than the existing. Because, the existing developments, the actual architecture, is pretty standard as far as what you . . . I hope I'm not offending you by saying that.*

Philip Williams: No, not at all. Actually . . .

*MG: Aside from the park, I think that's a little more . . . that's different because it's kind of a throwback to craftsman style.*

Philip Williams: That constitutes only 40% of the first round of houses. So, if you look at it, it wasn't half, it wasn't a majority of the new houses, but 40% was at the first step a significant change from the normal developments. If you

can project over a ten year, fifteen year growth of the number of trees that we put into the development up there, you'll see that most of that architecture is going fade into the background because of the concentration of the trees in the neighborhood.

*MG: Which we're going to get to. I know I'm talking a lot about the process and I do want to talk about that a little bit more. So, we're really talking about how landscape architecture became involved in the development and you mentioned how Graham really kind of brought that . . .* Philip Williams: As an ethic.

*MG: Yeah, as an ethic into the development. Okay. So now, on to natural features. How did, as a result of your desire to incorporate and focus on the natural form, mitigate against the focus on just the built forms in the landscape. How did those natural features actually affect the planning for the development.*

Philip Williams: We took them as a fixed feature of the property, rather than something to be moved around. We took it as something to be protected and served. And something to be enhanced development. I think that's probably the single greatest distinguishing or differentiating feature from our development versus other developments. It is very easy with the equipment that's available \_\_\_\_ to sculpt and create any kind of landscape that you're looking for. So, the fact that we said high ground, middle ground, creek bottom, central expressway versus thick woods to the far west and said those things are

our context and where the water flows is where the biggest plants will grow, including the biggest trees, so we'll protect and enhance those areas both to improve the water quality as well as the aesthetic of the property by having more and different landscaping.

*MG: Were these ideas about taking the landscape as it stood and making that the context and develop around that, was that . . .*

Philip Williams: Pretty radical at the time, but not so radical now. At the time it was very radical because in general you look at the maximum usability of the land area and what's left over becomes what you conserve or use as a open space or park land. We did it inside out. We made the bet based in part on personal ethics and personal experience as well as anecdotal experience as well as some research that we did. For example, there's a similar article by the Urban Land Institute, that we should be able to dig up for you, that was done sometime in the late '80s, early '90s that showed that 2/3 of the people that lived on golf courses don't play golf.

*MG: Right. I've seen some statistics in Randall's books.*

Philip Williams: And he got them from us.

*MG: Oh, okay.*

Philip Williams: So, a lot of it goes back to Urban Land Institute research. That's where we got a lot of the backup for what were ideas or concepts that we had but couldn't put them into articulated form for specific plans for the development of the property. We went and we looked for places where it had

been done before. We looked for places where similar ideas happened, but we didn't have the same features. For example, we treat our conservation district regarded as Connemara, the 145 acres of creek bottom land, much in the same way that a developer on a lake shore or a developer on the sea shore would treat it. The most valuable property is the property that fronts on it and the way that you make the property that is one step, two steps, three steps away from that central natural feature is through view sheds and pedestrian connectivity. Think about the way that you develop a beach. You space the house that are on the beach in such a way that people can have access to the beach between the houses and as you step back and up from the beach that you maintain view sheds so people can see. So you go from being beach front to ocean view.

*MG: Right, okay. Which is about a lot of the data that I read about. Like one of the things obviously my thesis is about is the value of preserved nature. There is a lot of real estate data that supports that people are closer to open spaces than mature landscapes will \_\_\_\_\_. So, that sound like that was the approach that you seeking to maximize.*

Philip Williams: The first and foremost value added piece for residential real estate is water. Second is open green space and third is transportation.

*MG: Okay. Did you do any specific financial analyses to support this approach that you were taking or was it really the research that you looked at your own anecdotal knowledge and things that you felt that would work.*

Philip Williams: Our development process had to deal with the three fundamental partners that you have in any real estate development. The first and most important partner is the federal government. How are you taxed? The second and critical to the use of the property is the local municipality because you have to abide whatever zoning or entitlement laws that they have. The third is the intermediate governmental bodies; that being the county and the state because they're the ones that determine the transportation infrastructure. So, the state and county could mandate that roads, railroad, other modes of transportation will be imposed on your property. So we had to look at it and say, what roads are going to be required by the state, by the county, and then what roads less so being required by the city and more so being desired by the city. A good example is that as Bethany goes down towards Alma it dead-ends. The comprehensive plan for west Allen had Bethany extending through where we call Hamilton Hills and going up and becoming a six-lane divided thoroughfare running north and south up to McDermott and beyond.

*MG: So, would that had been acquired through eminent domain?*

Philip Williams: Yes.

*MG: Okay.*

Philip Williams: The first thing that we had to do from a land planning perspective is to say, what is it that our partner wants? Well, our partner wants to take our conservation district and turn it into parks and ball fields and soccer fields and swimming pools and other public facilities. The second thing that our

partner wanted to do was to punch roads and streets through the property to create as an efficient traffic pattern as possible. It has been \_\_\_\_\_ at the state, county, and local municipality that the planning has all been done off of what Mr. Mason and Mr. Dixon did. Do you know what they're famous for?

*MG: No.*

Philip Williams: They worked for Thomas Jefferson. Have you ever heard of the Mason-Dixon line?

*MG: Oh, the Mason-Dixon line, yeah.*

Philip Williams: Do you know what that is?

*MG: Isn't that the state along the Mississippi. No, no . . . this is like eighth grade history.*

Philip Williams: It was the original east/west survey line that was established in Maryland. Historically it became the difference between the southern states and the northern states. Mr. Mason and Mr. Dixon laid down a 150 mile straight line regardless of the geographic or topographic or natural, so it went straight whether there was a river or a mountain or a swamp or hills or whatever, they did a dead straight line. And that's the line from which all survey lines in the United States are drawn from. So, you probably noticed in Texas, and this is much more so in the mid west, that everything is sectioned off. Have you heard that? Do you know what a section is? A section is a square mile. It is 640 acres. If you look at north Dallas and north Texas you'll notice that there is a north/south road every mile and there's an east/west road every mile. That's

because the maps were done in sections. A mile square, 640 acres, by definition is a section.

*MG: So that gives it the grid structure that we have on the development.*

Philip Williams: Right. And so the land planning that is done was done first and foremost off an ownership standpoint because the government had to impose a mapping system on the land. The next thing they had to impose was a transportation system. So in the 20<sup>th</sup> century we moved from being primarily water based transportation into being rail and road based. We entered into the 20<sup>th</sup> century having made a huge shift from water based transportation to rail based transportation. By the middle of the 20<sup>th</sup> century we had shifted from being rail based to being vehicular based. So, the great interstate system that was started in the '50s and still hasn't been finished, but really reached its heyday in the '60s and '70s was the natural progression of the government saying we need a transportation infrastructure. That's where Central Expressway came from. Do you know the story of Central Expressway?

*MG: No, I don't.*

Philip Williams: At the turn of the century we're fighting a war with Mexico. It was an offshoot of the Spanish American War. The general that was in charge of fighting that was General Pershing, the first guy in the United States to work on mechanized warfare. So, one of the first tanks with movable guns was called the Pershing tank. You may have heard of it. He was known as Black Jack Pershing. He is the man that took the United States military from

being primarily based on the horse to being mechanized, to being vehicles, tanks, etc. He came back and reported to I believe it was McKinley, may have been before that, that the southeastern and southwestern United States was vulnerable because there were no more south transportation corridors because the railroads ran primarily east and west and the north/south transportation was all done by water which meant that if an enemy captured your seaports of Brownsville, of Houston, or Corpus Christi, if they controlled the ingress and egress of that water traffic, then they shut off all the north/south trade. And as a consequence of that there was a decision made to build north/south roads. The first and biggest one was Central Expressway.

*MG: I didn't know that.*

Philip Williams: And that's how my grandfather found this property. He was a surveyor on the corps of engineers' crew that surveyed Central Expressway.

*MG: Really, wow.*

Philip Williams: And the placement of roads is always quasi-scientific and quasi-personal placement. The colonel that was in charge of the army Corps Of Engineers when the project was being designed, his home town was in Denison and so Dwight Eisenhower moved in with his mama and ran the Central Expressway project from his family home in Denison and if you look at a map, Central Expressway is a straight shot from Denison, Texas, down to San Antonio and the Mexican border.

*MG: Oh, my goodness.*

Philip Williams: One of his survey crew chiefs was my grandfather. So, he knew where Central Expressway was going to go. So, if you're going to buy land, where do you buy land?

*MG: Along the main transportation corridor.*

Philip Williams: Right.

*MG: Pretty smart.*

Philip Williams: So the idea of there being a master plan starts way back with the fundamental . . . what's the function of the government. The function of the government is to protect and to serve. Well, Central Expressway was built to protect because it was introduced as a military asset to begin with.

*MG: Interesting.*

Philip Williams: So, my grandfather was part of a broader master planning effort to produce that transportation corridor which then he looked at and said, I'm going to go out Central Expressway and I'm going to find where I can buy. . . These were all cotton farms and they had all pretty much wasted the soil through over farming of a single crop which that plus weather patterns led to the dust bowl of the '20s and '30s. And so when my grandfather bought it he came back in and carved out a lot of the topography that you see here. Go back and look at pictures of it at the time, this place was very flat. What he did was he created this natural rolling effect that you see as a soil conservation measure.

*MG: Really.*

Philip Williams: And a lot of the water as it goes down the property is a function of him controlling and directing the water and collecting it, much like what we're doing now with the system that comes out of the cistern. If you look at the pond that's there at the cistern, it was created to capture the water there so that we could use it. First of all, use it to control flooding and then second, use it to conserve to trap the water so that you can use it for irrigation, and third to clean. So that control, conserve, clean ethic of water is something that's inherent at Montgomery Farm and our master planning that has been in place since my grandfather first bought land out here.

*MG: So, I bet he would be really proud of you.*

Philip Williams: It's the other way around. I'm proud of him because of what he did.

*MG: That's pretty incredible.*

Philip Williams: And it's basic ethics. The definition of sustainability . . . do you know the definition of sustainability?

*MG: I guess I know what I think it is?*

Philip Williams: What do you think it is?

*MG: I think it's about maintaining the land so that it can maintain itself. So, creating an environment that will sustain itself.*

Philip Williams: It's to leave behind as much or more in resources as was there before you got there. So, it needs to be sustainable \_\_\_\_\_ as well as physically. Using water as an example, if you don't control the water it will flood

and wash your land away. If you don't conserve the water you're land will dry up and blow away. If you don't clean the water, the water will poison your land. So, in order to have sustainability in the development of your land you want to control, conserve, and clean your water. And that's an ethic that's been in place for as long as man has been building. And we're way off track from what we're doing.

*MG: Oh, I'm sorry.*

Philp: I want to tell you that I'm available, not today, for as much time as you need me whenever you need me.

*MG: I really appreciate it.*

Philip Williams: Because, what you're really writing about in the conservation is this concept of sustainability. How does the current generation, the current use of anything, but in this case land . . . how does it create more in the way of resources for the following generation than it took from the previous generation. That's the very definition of sustainability. People call it renewable. People call it reusable. Please call it recycling. People call it a lot of things. I don't know about global warming. But I do know that I'm for cleaner water, I'm for cleaner air, I'm for using less energy, and I'm for leaving behind more for the next generation than I brought to the table. Because that's what got me here in the first place. That ethical base is inherent in every bit of master planning that we do and that's what determines whether a team member contributes to the planning team or doesn't contribute to the planning team, they may not be able

to articulate it using the same set of words that I've used, but it is the essence of what we're doing and what we look for people to come to the table. You sit Rosa Finsley down and you ask her about it, hers is expressed all in plant life. How do you do it with plants? You sit Graham Greene down, it's all about the building. If you sit Randall Arendt down, etc. And it's only when you amalgamate all of those that you end up with the central thesis that you're talking about which is value enhancement.

*MG: Right. I should state that I'm kind of using this as a backdoor approach to get more developers interested in this type of sustainable development because I think if people see the numbers to support the benefit to society, if that's the way it gets them in, if they don't care about anything else, what good it does for the land, at least we'll do the right things for the wrong reasons, if not for the right reasons.*

Philip Williams: It's very easy. Okay. Go to Darling Home Builders, go to Highland Home Builders, go to Sanders Home Builders and say, I'm doing a research project. I need three of your subdivisions where you're building the same product at the same time and I want to compare price and the velocity of sales; how many sales that you had over a specified period of time. And you'll discover that the premium here is between 15% and 30%.

*MG: Wow. Okay.*

Philip Williams: And what I would do is not target Montgomery Farm because Misty can give you the data on Montgomery Farm. But go to Darling

Homes and say, I am interested in comparing your American classic architecture versus Highland's standard suburban architecture. How quickly they sell and how they sold per square foot. That will give you . . . I don't know if Darling's done it more than one other place . . . but I know they've done it in McKinney. That's one way to track what would be a standard subdivision versus a conservation subdivision at Montgomery Farm and you'll find that their premiums ran between 20% and 30%. For Sanders who is building the bigger homes down here, you'll find that ran between 15% and 20%. You'll find that for Highland it ran as high as 30%. That's where you could very easily and factually present a set of statistics that are comparative of the . . . There are a few factors that you would need to adjust for, Norton Elementary is one of the best elementary schools in the state. Bethany and its proximity to Central Expressway has something to do with it, the average household income in this zip code being as high as it is had something to do with it. There are other factors besides the development that had to do with the premium. But, you can find places where there are good schools, there is good transportation, and there is good development. Then you can compare what Highland did here versus someplace else. What Darling did her versus someplace else.

*MG: That's probably better thing to do than the MLS comps because everything else I would be comparing to would be pre-existing architecture of homes that aren't as current or have different things are going to muddy the waters.*

Philip Williams: Say you have resale value. Highland and Darling built in Castle Hills.

*MG: Okay, that'll be good to look at because that's a very good school district supposedly.*

Philip Williams: What the developer did there was he created \_\_\_\_\_

*MG: I guess he worked with Lewisville. He annexed out of Carrollton*

\_\_\_\_\_

Philip Williams: Just for anecdotal purposes, Gregg Davis who is our main lawyer. His firm is Thompson Knight. He bought in Castle Hills because of the contribution of the developer to the school system. Chris Bright was extremely innovative and creative in doing that. So, your own personal bias about this development versus his development it's a good comparison because what you can say is the comparative value add of conservation versus education. So there's a developer that put his time, energy, and money into enhancing educational opportunities. Even though it seems like it's otherwise, that's not the predominate factor in people's lives. So, he'll have people that will come and go from that development because of that educational piece, but it doesn't impact lives like the conservation district does through the whole spectrum.

*MG: Right. That's interesting. I haven't really thought about it that way. I do need to be careful about the way I approach him because I don't want it to appear as though I'm biased against what he's done.*

Philip Williams: I would walk in and say, I picked you because you were innovative in creating and pick this educational trust and the transfer fee to fund the educational trust to differentiate your development. And so, I picked your development because it is a high-end development. It's been very successful and because you have a differentiating factor. Let him sit back and brag to you about how he did that. Because he can be justified in his pride for doing something very different and in a way that truly did enhance the livability \_\_\_\_\_

*MG: They do appear to have a lot of open spaces, it's just the way they treated them is very different. It is much more controlled and manufactured and structured. They have all these playgrounds that have these \_\_\_\_\_ for children and it's very . . . It's not natural. It's manufactured. It's putting a \_\_\_\_\_ element that aren't necessarily natural features to kind of entertain children. That's kind of what I got out of it.*

Philip Williams: What's the distinguishing factor about their development? The educational \_\_\_\_\_.

*MG: Right. So that makes a lot of sense.*

Philip Williams: So who are they trying to attract?

*MG: Yeah, family with young kids.*

Philip Williams: Yeah. So of the value added differentiating factor can be, I don't know if you would want to get so complicated as to go find something that doesn't have anything, then you have the education, then you have the conservation, and you could say here is a developer that created his

distinguishing factor, went after a targeted audience and created a value added proposition relative to. . .

*MG: His niche, his target.*

Philip Williams: Yeah, his target. But it was just that, it was a niche. It wasn't broad based and it was very and will be limited as long as the population is growing and having kids.

*MG: Well, it's always going to be flipping. I mean, children are only children for so long and then what's the next stage of your life and what are you going to be doing in that development without young children.*

Philip Williams: If studied Garland you'll see that is by consequence a downscaling proposition because you count on properties to actually devalue over time.

*MG: In Garland you're saying.*

Philip Williams: Well, Garland is a good example. Garland started as a competition to Richardson.

*MG: Oh, really.*

Philip Williams: And because they didn't take the same approach to land planning and master planning that Richardson did, the average household income in Richardson versus the average household income in Garland is a factor of \_\_\_\_\_. The fastest growing segment of home buyers in the United States is single women.

*MG: Single women. I had no idea. Why is that?*

Philip Williams: Because it's a result of both the baby boom and the resulting of the baby boomers

*MG: Women being more educated now, waiting longer to get married and have families and so on.*

Philip Williams: Right and the disparity between the number of men and the number of women. There are more women in our population than men. In 1800 the life expectancy of women in the United States was 25 years. In 1900 it had actually dropped to 20 years. In 1950 it was 50 years. Now it's 78 years. What's the difference? The difference is antibiotics and birth control. However it is that you describe it, you'll find any anthropological study will show that there is a predominance of female births in every society and it's because from an evolutionary standpoint you needed more females than males to expand or to maintain the population. The male is reproductive for a longer stretch of a time than a female and doesn't have to take that 9-10 month break to have a child. It's a societal thing. As a proportionate of the population, there are more females now than at any time in the history of the United States. That is boosted by the fact that education and earning levels have changed dramatically even in the past 20 years.

*MG: That's interesting. Are you seeing those statistics reflected in the buyers of the homes in your development?*

Philip Williams: No, because the home in the development right now designed for families. If you can get the town homes at Connemara Crossing and the other.

*MG: You'll see more of that.*

Philip Williams: Yeah, you'll see more of that.

*MG: I know we're short on time. I wanted to let you know what else I'd like to know so that we can meet up again or maybe you can have this information gathered for me.*

Philip Williams: The best way to do this is to stay in touch with Audrey and Misty and figure out what days I'm going to be here at the Farm in the later afternoon. I don't know if this is convenient for you.

*MG: This is fine. Whatever works for you, I will meet you anywhere you want. Because I so appreciate this, I really do. By the way, I'm going to let you know when I'm presenting to the committee. So, if you would like to come.*

Philip Williams: Oh, yeah. I would love to. I think probably the most valuable thing that came out of this was how you're going to approach Chris Bright at Castle Hills and then concept of wait a minute, I've got a built-in statistical data base of Highland and Darling and Sanders homes that I can compare in the two subdivisions that are probably much more statistically valid than taking a broader. . .

*MG: Right, I really appreciate that because I hadn't thought about that and wasn't quite sure how it was going to work out knowing that we've got new homes and older homes and it's just not a fair comp.*

Philip Williams: Well, we'll just continue to brainstorm it. You'll come out of your conversations with Chris Bright with other ideas.

*MG: Some of the things that I just wanted to learn about and some of this I think she'll have the data for. I'll communicate with them about this, but in terms of getting maybe some spread sheets about the costs incurred from either time or money in terms of preserving or removing natural features on the site. That could be tree removal mitigation, engineering, or grading, things like that. And the grading stuff might be more relevant to the home builders than to you. And then I want to know what the design fees were for the master plan if you have that. And then the successes and failures of the development which is more like your opinions so maybe you can think about that and we can talk about it later. I wanted to know also how much of the development is devoted to open space.*

Philip Williams: 50%.

*MG: Okay. So that's an easy one. So those were the kind of things . . . should I follow up with Audrey. I may have additional questions that pop up as I'm writing this, but I'll just be in touch with Audrey.*

Philip Williams: Yeah. I'm trying to think . . . there was recently some historical reporting done about the planning fees. We do, we have them broken down.

*MG: I've written about 20 pages so far of just my literature review for my thesis and as part of that I wrote how I wanted to do my analysis. And I made this really involved plan which I'm not sure is going to work because it's more dependent on the data you have and that Chris can provide for me. I wanted to do a cost analysis perhaps a true mitigation cost versus replacement.*

Philip Williams: The only reason I'm pursuing . . . no, I think it's my brother from New Zealand and I wanted to. . .

*MG: Do you want to give him a call. We can follow-up another time.*

Philip Williams: I don't know his number.

*MG: Oh, no.*

Philip Williams: This is Phillip. Hang on.

APPENDIX B

CORRESPONDENCE WITH AUDREY BEARD AND STEVE RODGERS

<b>Subject:</b>	Request for MF Data for Thesis Research
<b>Date:</b>	Thu, 17 Jan 2008 15:22:55 -0600
<b>From:</b>	"Beard, Audrey" <abeard@emersonpartners.com>
<b>To:</b>	<a href="mailto:gerstle@sbcglobal.net">gerstle@sbcglobal.net</a>

Melissa, here is the information you have requested.

We have harvested 3,455 caliper inches of trees from our development to date.

We spent \$506,664 harvesting the trees to date.

If the trees are destroyed, the mitigation fee is \$200 an inch or you must replace the same number of caliper inches either at your development or city park etc.

The value of the trees that are saved and then placed back into the development should be calculated by what it would cost to purchase, install and guarantee a tree for 3 years which would be very close to \$150-200 per inch.

The real value is in the mature and established trees that are harvested.

Please let me know if you have any additional questions.

Audrey

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**From:** MG [mailto:[gerstle@sbcglobal.net](mailto:gerstle@sbcglobal.net) ]  
**Sent:** Monday, January 07, 2008 11:46 AM  
**To:** Beard, Audrey  
**Subject:** Request for MF Data for Thesis Research

Hi Audrey,  
Hope you enjoyed the holidays and had a Happy New Year. P and I met shortly before Christmas and I wanted to follow up with you to obtain some data he said you could help me with for my thesis.

I was wondering if you would send me data outlining costs incurred and/or saved relating to tree preservation?

I am particularly interested in the costs related to trees with regard to movement (digging and transplantation) versus mitigation costs for trees that were not saved on the site.

If this is unclear, or I'm not stating this correctly, let me know and I'll give you a call to clarify.

Thanks so much for your help,  
Melissa  
214.677.6456  
[gerstle@sbcglobal.net](mailto:gerstle@sbcglobal.net)

On Apr 11, 2008, at 11:43 AM, "Rodgers, Steve" <[SRodgers@emersonpartners.com](mailto:SRodgers@emersonpartners.com)> wrote:

Melissa,

In reviewing your numbers below, it appears that you have only included one of our two "keeps" in your caliper inch total. Based on the total inventory, we have salvaged 5,368 caliper inches. Using this number, here are my calculations:

1,073,630 Mitigation Costs Avoided (5,368 x \$200)  
506,664 Costs incurred  
566,966 Total Savings

I hope this helps.

Steve

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**From:** Melissa Gerstle [<mailto:gerstle@sbcglobal.net>]  
**Sent:** Wednesday, April 09, 2008 4:56 PM  
**To:** Rodgers, Steve  
**Subject:** Urgent: MF Tree Preservation Cost Analysis (Thesis Questions)

Hi Steve,  
Philip recommended I contact you.

I am a week away from defending my thesis for a masters degree in landscape architecture.

My thesis includes an analysis of the cost savings reaped from Montgomery Farm's tree preservation and transplant efforts. However, I believe the data I've been working with is not correct. I only have data which tells me that MF:

- was able to save 3,455 caliper inches (as of January 2008)
- mitigation costs would have been \$200 per caliper inch (or \$691,000)
- and that MF spent \$506,664 towards preserving the 3,455 caliper inches of trees.

Per this calculation, I can only come up with a cost savings of \$184,336 which I believe is highly under-valuing your efforts.

Would you please be able to share data regarding these efforts, specifically,:

- Inventory of Trees + wholesale values
- Tree mitigation bank #s
- Anything else that is pertinent to calculating MF's costs and savings related to this effort.

I appreciate your giving me a call at your earliest convenience to discuss.

Thanks so much,

Melissa Gerstle  
T: 214.677.6456  
E: [gerstle@sbcglobal.net](mailto:gerstle@sbcglobal.net)

APPENDIX C

CITY OF ALLEN TREE ORDINANCE

## **Section 7.06. Tree Preservation. –**

### **Section 7.06.1. Applicability.**

This section applies to all trees in the City, except trees on single family lots and duplex lots which have received a final inspection.

### **Section 7.06.2. Tree Removal Permits.**

No person, directly or indirectly, may cut down, destroy, remove or effectively destroy through damaging, any tree within the City without first obtaining a Tree Removal Permit, as provided in this section.

1. Damaged Trees. The City must issue a Tree Removal Permit for a Protected Tree, if the Owner requests a Tree Removal Permit and the Protected Tree is:

- injured, dying, diseased or infested with harmful insects to the extent that it is not likely to survive; or
- is in danger of falling, interfering with utility service or creates an unsafe vision clearance; or
- in any manner creates a hazardous or dangerous condition so as to endanger the public health, welfare or safety; or
- an Arborist certifies that one or more of the foregoing conditions exist; and
- the City inspects the Tree and is satisfied that the foregoing conditions are met.

2. Dangerous Conditions. If the Owner determines that an emergency

situation exists that requires the immediate removal of a tree to protect the safety of persons or property, then the Owner may remove the tree only to the extent necessary to eliminate the dangerous situation without a Tree Removal Permit. However, the Owner must immediately apply for a Tree Removal Permit. Removal of a tree under this section shall require the Owner to comply with the mitigation requirements of this Section.

3. Denial of an application for Tree Removal Permit or any application of this section may be appealed to the Board of Adjustment.
4. The trees to be removed pursuant to a Tree Removal Permit shall be completely removed from the site within 90 days after the date on the Tree Removal Permit. The Tree Removal Permit may be extended one time for an additional 30 days. If the work is not completed within the time limit, then a new Tree Removal Permit must be applied for and issued before the work can continue.

**Section 7.06.3. Calculation of Tree Credits.**

1. Credits for Tree Preservation.
  - a. For every Protected Tree that is preserved as part of a development, the Owner shall receive Tree Credits, according to the following chart.
    - 6 to 10 caliper inches, 1 credit for each caliper inch

- 10.1 to 15 caliper inches, 2 credits for each caliper inch
  - Over 15 caliper inches, 3 credits for each caliper inch
- b. The City may approve a healthy Unprotected Tree over 12 caliper inches for Tree Credits if the tree is located outside the floodplain.

7.19

2. Negative Credits for Tree Loss.

- a. For every protected tree removed, including fence row trees, the owner shall receive negative tree credits or shall be required to plant replacement trees as follows:

- Trees 6 to 10 caliper inches, 2 negative credits for each caliper inch
- Trees 10.1 to 15 caliper inches, 4 negative credits for each caliper

- b. For any healthy, unprotected tree over 12 caliper inches located outside the floodplain, the owner shall receive negative tree credits calculated at one-half of the caliper inches for such tree if the city determines that the tree should be preserved.

3. Credits for Replacement Trees.

- a. Trees 15.1 to 24 caliper inches shall require the replanting of replacement trees equal to two (2) inches for each caliper inch removed. Replacement trees shall be not less than three (3) caliper

inches. This requirement shall be in addition to the requirements of Section 7.05 et seq. Landscaping Requirements.

- b. Trees over 24 caliper inches shall require the replanting of Replacement Trees equal to three (3) inches for each caliper inch removed. Replacement trees shall be not less than three (3) caliper inches. This requirement shall be in addition to the requirements of Section 7.05 et seq. Landscaping Requirements.
- c. Provided that the trees are of a species identified as Overstory Trees in Appendix C and approved by the Urban Forester, Trees planted as part of the landscape buffer planting and parking lot landscaping shall qualify as Replacement Trees.
- d. Each Replacement Tree allowed as a credit must survive in a full healthy state for at least three years. The Owner shall replace any tree allowed as a Credit if it dies or becomes unhealthy during the three-year period following planting. This obligation shall be evidenced in the Tree Mitigation Agreement between the Owner and the city.

Ordinance 2593-2-07

#### 4. Calculation.

The Owner's total Tree Credits shall be calculated in accordance with the following: Total Tree Credits for Protected Trees preserved, plus Total Tree Credits for healthy Unprotected Trees preserved,

less Total healthy desirable Unprotected Trees removed; plus Total Tree Credits for Replacement Trees planted, less Total negative Tree Credits for Protected Trees removed.

**Section 7.06.4. Replacement of Trees.**

1. If the total Tree Credits is a positive number, then there is no obligation to replant Trees under Section 7.06, except as otherwise provided.
2. If the total Tree Credits is a negative number, Owner must enter into a Tree Mitigation Agreement with the City specifying the obligations of the Owner prior to issuance of a Certificate of Occupancy or at the time public improvements are accepted by the City for maintenance, including:

Supp. No. 1 (1939-5-01)

7.20

- a. The Owner must plant Protected Trees to equal or exceed the Tree Credit number.
- b. The City may allow the Owner to plant the Replacement Trees within public parks and rights-of-way selected by the city.
- c. The Owner may elect to defer the planting of the required Replacement Trees through the escrow of funds to cover the City's cost of planting the Replacement Trees at a later time based on the cost per caliper inch for planting a Tree with a one year replacement guarantee as established in Appendix B.

3. City approval of a Tree Loss Mitigation Plan shall constitute a Tree Mitigation Agreement between the City and the Owner concerning the Owner's obligation to plant replacement trees or to pay money in lieu of replacement.
4. Replacement of trees shall be in accordance with the approved Tree Loss Mitigation Plan approved by the City. In approving the Tree Loss Mitigation Plan, the City shall consider the species, growing characteristics, root systems, soil conditions and proposed location of replacement trees, as well as other mitigation efforts including, but not limited to, the realignment of rights-of-way or relocation of utilities, which minimize tree loss.
5. The minimum caliper for Replacement Trees is three inches (3").
6. All Replacement Trees shall be planted in accordance with the American Association of Nurserymen, Inc. (AAN) Standard: American Standard for Nursery Stock (ANSI Z60.1, latest edition).
7. City shall permit payment in-lieu of planting Replacement Trees only in the following circumstances:
  - a. The tract is too small to allow on-site replacement; or
  - b. The City declines to allow the planting of Replacement Trees in City parks or public rights-of-way; or
  - c. There is no suitable location for the planting of Replacement Trees. A suitable location is one provided with adequate irrigation, proper soils

and drainage, and other conditions requisite for the survival of Replacement Trees.

**Section 7.06.5. Guidelines for Tree Protection.**

The Owner shall adhere to the following tree protection measures on all building sites:

1. Prior to construction or land development, all Protected Trees shall be clearly marked;
2. A protective fence shall be erected around each Protected Tree or group of Protected Trees at least beyond the drip line of such Tree;
3. During construction, no access is permitted within the protective fence for any purpose, except cleaning trash that has entered the area;
4. No attachments or wires of any kind, other than those of a protective nature and approved by the Parks & Recreation Department, may be attached to any Protected Tree;

Any grade changes, retaining walls, tree wells or other construction activity within ten feet of the drip line of a Protected Tree shall require approval of the City.

**Section 7.06.6. Fence Row Tree Preservation.**

Supp. No. 1 (1939-5-01) 7.21

1. The Owner shall preserve all Fence Row Trees in a residential development by providing a 15-foot protected area centered seven and one-half foot on each side of the centerline of the Fence Row Trees, except that

Fence Row Trees may be removed and mitigated if approved by the City. Proposed fence row trees removed or mitigated must be identified on any plan presented to the City for approval.

2. The Owner shall preserve all Fence Row Trees in non-residential developments by providing a 15-foot protected area centered seven and one-half foot on each side of the centerline of the Fence Row Trees, unless the Planning & Zoning Commission determines that the location of the Fence Row Trees in the non-residential development is such that the property cannot be developed because of the Fence Row Trees.
3. Except as provided below, the Owner shall not remove Fence Row Trees within the protected area for the purpose of installing utility lines, digging trenches (including irrigation trenches), pouring alley paving, or constructing, erecting or placing any structures. Fence Row Trees may only be removed to provide access to an existing alley on the other side of the Fence Row. However, these Fence Row Trees shall accrue negative Tree Credits as part of the development.
4. The Chief Building Official or his designee shall approve all residential fences proposed to be located in the protected area.

**Section 7.06.7. Special Provisions for Agriculture/Open Space Property.**

This section applies to real property having an Agriculture-Open Space zoning district classification, or having an agricultural exemption for taxation purposes.

1. There is no requirement that the Owner comply with the mitigation provisions of this Code at the time of the tree removal. However, the property is still subject to the development requirements at such time as development occurs and the Trees removed shall be counted as part of the Tree Credits. The Owner must provide a notice in the real property records acknowledging the obligation to mitigate the Tree removal.
2. No Tree Removal Permit may be issued under this section of the Code for any trees that are Fence Row Trees or are Historic Trees.

**Section 7.06.8. Historic Tree Preservation.**

No Tree Removal Permit may be issued for a Historic Tree unless the Owner establishes that preserving the Historic Tree constitutes an unreasonable financial hardship on the Owner. Appeals from this determination shall be to the Board of Adjustment.

**Section 7.06.9 Enforcement**

The Urban Forester shall be authorized to approve Tree Loss Mitigation Plans and to enforce other provisions of this section. The Urban Forester shall be an employee of the City and certified as an arborist by the International Society of Arboriculture (ISA) or registered as a Landscape Architect by the Texas Board of Architectural Examiners.

Ordinance No. 2425-7-05

APPENDIX D

RESUME OF DOUGLAS C. PHILLIPS

**DOUGLAS CLAY PHILLIPS**  
**520 Central Parkway East, Suite 116 λ Plano, Texas λ 75074**  
**972.516.0700 λ fax 972.516.0703**

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**FORMAL EDUCATION:**

Southwest Texas State University  
San Marcos, Texas  
Graduated 1990 with B.B.A. in Business Marketing

**REAL ESTATE EDUCATION:**

λ Appraisal Institute Courses:  
λ Appraisal Principles  
λ Basic Valuation Procedures  
λ Residential Case Studies  
λ Standards of Professional Practice - Part A  
λ Standards of Professional Practice - Part B

**MEMBERSHIP  
AND LICENSES:**

State Certified Real Estate Appraiser  
TALCB Certification # TX-1325331-R  
Trainee License issued April 8, 2002  
State License issued February 18, 1993 State

Certification originally issued July 19, 1993

**PROFESSIONAL EXPERIENCE:**

**June 1996 - Present**

**D.C. PHILLIPS AND ASSOCIATES, INC.**  
*Owner/Real Estate Appraiser*  
*Plano, Texas*

Provide full residential appraisal services and consultation. Responsibilities include daily contact with clients, such as mortgage brokers, banks, and individuals who are in need of appraisal services. Establish values on residential properties. Act as sole liaison between financial institutions and their clients. Areas of specialization include luxury and new home properties throughout the Dallas/Fort Worth metroplex.

**July 1993 - June 1996**

**EDGAR APPRAISAL SERVICES, INC.**  
*Real Estate Appraiser*  
*Dallas, Texas*

Provided full residential appraisal services and consultation. Responsibilities included daily contact with clients, such as mortgage brokers, banks, and individuals who are in need of appraisal services. Established values on residential properties. Acted as sole liaison between financial institutions and their clients. Areas of specialization included luxury and new home properties throughout the Dallas/Fort Worth metroplex.

**March 1992 - July 1993**

**NEUGENT AND LIGHT, INC.**  
*Real Estate Appraiser*  
*Dallas, Texas*

Provided appraisals and consultation on residential properties, including single-family residences, luxury estates, condominiums, vacant land, and small income producing improvements. Responsibilities were similar in nature to above position with Edgar Appraisal Services.

APPENDIX E

INTERVIEW WITH ELVIO BRUNI

Subject: Providence Development

Location: Providence, TX

Interviewee: Elvio Bruni, Sr. Vice President, Huffines Communities.

Responsible for the design and installation of all landscaping and mitigation, the design and construction of expansive clubhouses, recreational facilities, parks, lakes and greenspace, builder architecture and designs. He works on behalf of Huffines Communities with designers, engineers, architects, subcontractors and vendors.

Date: 3-17-08

*Melissa Gerstle (MG): I've got interview questions, but let me give you some background. I've told you a little bit about the research that I'm doing. I'm trying to prove how preservation of mature landscapes, particularly trees, enhances real estate values.. So I want to learn a little background about the sites and get into more of the costs and things that you've had to do to develop the site. Doug Phillips is helping me some from an appraisal perspective for the actual data gathering and collection. I've been focusing on Montgomery Farm which is a conservation development in Allen, Texas, but because it's in its infancy stages it's really tough for Doug or any appraiser to do any kind of real analysis of the sales and things like that on that site. So we were hoping that Providence would be a good research site for us to get that kind of data and then we can extrapolate and apply it to the other site. Doug suggested that I look at*

*Providence and Savannah, but it occurred to me that Providence seemed a little bit more special in terms of the mature trees that abound and the way the development is tucked in between those mature trees and the creek.*

Elvio Bruni: Providence probably is a little better. Savannah had two main treed areas where the creeks were and those are pretty much left in their natural state, very little impact to them. We don't have any lots really going into them. There were some scrub trees. It was basically cotton and peanut fields. You didn't have a lot of mature trees as we discussed on the phone. The farmers pretty much take down most of the mature trees wherever they can plant and what is left is normally creek bottoms and wetlands that they can't do much with. That was in Savannah's case. In Providence's case it was a little different. It wasn't a farm. It was a ranch. It was a 440 acre horse ranch. So he left a lot of the mature trees on his ranch and just took down what was necessary to build his structures.

*MG: Was this property purchased by Huffines or was it owned by . . .*

Elvio Bruni: It's by limited partnership. It was originally owned by Providence, L.P., I believe. It is now CHS Providence, but it was a limited partnership that bought the tract of which Huffines is a partner in.

*MG: So, why did you choose to develop that site?*

Elvio Bruni: There were a couple of reasons. One was we wanted to create something that was a little different in the metroplex and we had to go

outside of any city limits to be able to create the architectural look and to create a district to be able to create the club houses in the amenity package. It's very difficult to do new urbanism. At the time it was 1999-2000. New urbanism was not an accepted practice back then. TND style homes with shorter front setbacks and big front porches and high siding product was not acceptable to cities. So we had to go outside the cities' jurisdictions to be able to create the district and the style of homes that we wanted and the closest one was up in Denton County.

*MG: Is the jurisdiction there Denton County?*

Elvio Bruni: Denton County. Since then Little Elm has expanded their ETJ line and the city corporate limits. We have agreements with Little Elm, Prosper, and with Crossroads that they will not annex our districts.

*MG: They will not. So, you're going to be in Denton school district.*

Elvio Bruni: We are in Denton school districts in the lower half of Providence. North of Fish Trap Road is Aubrey Independent School District.

*MG: That's the road that splits . . .*

Elvio Bruni: That's correct. If you look on the map here, this is Providence right here. This is Fish Trap Road and it splits the development.

*MG: The two school districts are separated by Fish Trap Road.*

Elvio Bruni: Providence too has grown. When it was originally bought it was only going to be 941 homes. It was very successful. We sold 350 in the first year, so we bought an additional 90 acres north of Fish Trap which had a lot

of the woods and creeks in it and then we bought west of 2931 which was another 200 and something acres which is where the total of the community stands now.

*MG: What's the total acreage then?*

Elvio Bruni: Right around 600 developable acres.

*MG: When you look at the development.*

Elvio Bruni: Yes, it's the green dot to the left.

*MG: Then there's Fish Trap Road.*

Elvio Bruni: That's the blue one.

*MG: On this side of the road it kind of looks, when I was driving through there, there's a lot of natural areas through here, then it kind of stops when you hit this road. Did you guys pull out a lot of vegetation there or was it like that.*

Elvio Bruni: Most of the trees, again, that were in what we call the Creek Village were along the ravines and the natural waterways.

*MG: That's on the other side of Fish Trap.*

Elvio Bruni: The north side of Fish Trap Road. South of Fish Trap Road there was very little in the way of natural vegetation. Again, that was the horse ranch and a lot of mature post oak trees which is what you see out there, that they had gated off so the cattle and horses couldn't run into them and chew on them and things like that. But they were sporadic throughout the neighborhood. You didn't see much in the way . . . obviously, horses and trees don't necessarily go together. So they left the big mature post oaks and pretty much the rest of it

was just mowed down all the time. They had some live oaks around the house that was there, which we saved and transplanted. That's what you saw down the parking lot where we built the . . .

*MG: It kind of looks like, and I'm trying to orient myself . . . Fish Trap Road runs east/west. So running north/south it looks like there's an old fence row of trees that kind of stops off right before the development.*

Elvio Bruni: It's an out parcel. On the west side of the road going to Fish Trap and across right along that fence line, that's an out parcel we do not own.

*MG: So who was involved in the master planning of the development?*

Elvio Bruni: Well, the Huffines group planned it along with Pettit & Associates who are our engineers.

*MG: Any landscape architects or urban developers?*

Elvio Bruni: We used a couple. We are the developers.

*MG: I mean urban planners.*

Elvio Bruni: No, not in Providence's case. That one was done basically in-house. We have Tom Pritchard who works with us. He's a landscape architect and we worked with TBG. They're land planners and landscape architects and they did a couple of drawings on it. But a lot of it was Donald and Phillip's vision.

*MG: And they're the Huffines?*

Elvio Bruni: They're the Huffines.

*MG: Did they lay out . . .*

Elvio Bruni: Well, Veridian is a little different. Veridian is using Peter Calthorpe

out of California.

*MG: So for Providence . . .*

Elvio Bruni: It was really in-house here and Pettit & Associates.

*MG: Now did that change as you guys went to different sections or did you pretty much keep the same group involved?*

Elvio Bruni: No, we kept the same group pretty much involved. Providence was, especially when we got back into the Creek Village. It was a little easier because the ravines we knew we weren't going to touch. They're deep ravines. They're heavily wooded. We wanted to keep as many of the trees as possible for the look within the community and so that sort of like started with fingers or what was developable and worked the streets and houses to fit within there. Some of those houses got some short backyards and retaining walls to try to make them work.

*MG: But it's neat that they're so close to the natural areas. Do those properties get a premium?*

Elvio Bruni: They do. Almost all those lots that back up to the creeks and the ravines with the trees get a premium. We find trees are one of the number one things people will pay a premium for. If it's a single tree, it's a single tract, it doesn't look very good in the front yard, they're not. But if it's a creek or

a natural wooded area, trees and lakes . . . lakes are probably the number one thing people will pay for.

*MG: So did natural features, such topography, tree canopy, aquifers, drainage systems, or habitat, affect the plan for this development.*

Elvio Bruni: We started with the natural ravine areas, but with the other things that you mentioned you still have to be able to put drainage systems in. They've still got to be able to drain. For example, if you went north, I think it's on Bridgeport, you'll notice that you cross the ravine with one of the roads. It's ravine on both sides of the road. Donald spent extra money to put that in. The engineer's first drawing showed that about a hundred feet of trees on both sides of that road were wiped out because normally you take a 3 to 1 slope with a earthen embankment and you put a box culvert down in the bottom of the creek to handle the flows. Donald didn't want to do that because it would have wiped out so many trees. So he spent extra money to create a shear wall drainage structure through there so that all the impact on the trees was mitigated. I think we lost two trees in that stretch putting that road across because of the amount he was willing to spend. But, he wanted that canopy and that tree cover to come close to the road. So, you have to plan on all of them. You have to plan how you're going to get drainage into the situation; how you're going to handle topography with retaining walls. You also have to plan on how all your utilities are going to go. It's easy to save a tree in a front yard. You go, okay, I'm going to miss it with the house slab and I'm going to miss it with the driveway and

everything's fine. But, if it's a front entry house, you've still got water to get up there, you've still have sewer to get up there, you've got electric, phone, cable, and gas. So you've got six trenches to go from the street to the front of the house. Now, we spent extra money in Providence's case putting alleys in. In all our community dry utilities are in the rear. So that helped us in cases where we had trees along the Creek Village because we were able to push a lot of the utilities outside of the tree areas.

*MG: Are those alleys backing into . . .*

Elvio Bruni: They're not backing . . . they're front entry on the other side, but by doing the dry utilities in the alleys, we put the water and sewer in the street. That way it gave us a more right-of-way to put the dry utilities on the front entry homes in front and we didn't have to worry about trying to push houses back farther to get the utilities in. It was planning all those different things to be able to shorten the lot up to a point where we could use those features and not have to build retaining walls or fill everything in. But you still have to take all those utilities into consideration and that's the hardest thing when you have groups of trees in the front of the lots, especially the smaller you get on the lot. Codes require so much separation between the water and sewer and all the dry utilities and everything else. It's real hard to save a tree in the front of the yard on a fifty foot lot. And then, with everything being . . . we knew from an overall look, again, the main bulk of the community is not wooded. So you have to put in irrigation systems and you have to put in controls to keep

everything alive. That's what keeps the values up. So, when you add the irrigation system in, it's extremely difficult that these guys with trenches don't cut the tree roots. They'll cut it on a grid pattern and then cut all four sides of the tree roots. Certain trees are people friendly. Post oaks are not. Post oaks are a real bear to keep alive. We went to the added expense . . . there is a doctor, I'll have to get his name. He's a professor in Denton who created a formula specifically for the oak family that he went out soil injected all those trees to root stimulate. It's my understand, and I'm limited, but a post oak tree has feeder roots and they're all within the surface of the ground, 6 inches to a foot down in the ground. But as the tree grows and the feeder roots expand they don't feed in the old section of the root. They feed in all the new sections of the root. So when you come in and cut the root you've in essence cut its life blood off. So his special formula was to reintroduce new growth closer to the tree trunk so that it would create feeders, again, closer to the trunk itself. We spent a lot of money with him to go out there and inject for the first two or three years all those trees that we can't save at the entrance. We lost four maybe since we put the roads in.

*MG: Out of how many?*

Elvio Bruni: There's probably 35 or 40 out there. They're impacted by alleys or ditches, the drainage swells. So we're keeping our fingers crossed. The drought two years ago hurt a lot of them pretty hard. We spent a lot of money trying to make sure we save as many as possible.

*MG: Before we move on. You said you decided to go with a different style of bridge and the shear wall and drainage and all that kind of stuff to save more trees. Any idea of the difference in cost ?*

Elvio Bruni: About \$100,000.

*MG: \$100,000 extra to go with the new. Other than the aesthetic benefit to the neighborhood, is there any way to directly correlate an additional value to the neighborhood or is that just something you wanted to do?*

Elvio Bruni: It's hard to say that every lot was worth x amount of dollars more because of what it is. But then when you drive in there . . . I can tell you that the Creek Village is one of the most popular one. People love driving to the Creek Village because it has a whole different feel to it. It's a softer feel. The houses don't seem as close together, even though they are. The streets don't seem as wide, even though they are. I mean, there's no differences as to the specs, but the community's feel within that village is a lot different.

*MG: What kind of premium are those homes taking over the rest of the community?*

Elvio Bruni: They'll range anywhere from \$3,000 to \$5,000; a little more sometimes if it's on a real special lot up against a creek. In fact, in one of the sections we deepened the lots and extra 20 or 30 feet and didn't put an alley in to keep a swath of trees through them so that in the backyards they would have trees.

*MG: And are those taking a higher premium?*

Elvio Bruni: They are.

*MG: Okay, you've made the lot deeper to allow the savings of the tree. You've purchased the land in the entirety of the development. Does it cost you extra technically speaking to give a deeper lot to save the trees or is that just strictly lets make these lines a little bit longer so we can save these trees.*

Elvio Bruni: Everything is net land. So if we had done it over the whole community, yeah you'd give up a lot of lots to do that. In this case because of the fingers of the creeks, that we couldn't touch - didn't want to touch, we didn't have to give up any lots to be able to create the extra depth to it. What it gave up was the fact that it was going to be a rear loaded house and therefore keep all the cars off the street – you wouldn't see garage doors. Aesthetically, keeping the garage doors in the back gives you a prettier streetscape. But the savings in trees outweighed that fact and we wanted to save all those trees.

DP: I'm trying to make correlations with price and value and that kind of stuff. I'm just trying to figure out is there really an extra cost incorporated in moving the house back.

Elvio Bruni: In most conditions yes because you're going to get less lots per acre on the piece of property you're looking at developing. So, if you add a whole wooded area of 100 acres and you decide to make lots extra deep, yeah you probably give up 10-15% of your usable land and so yes you get less lots.

*MG: You went through a lot of lengths to save a lot of trees, did you face any ordinances from the City of Denton.*

Elvio Bruni: We're not in the city.

*MG: Oh, you're not in the City of Denton.*

Elvio Bruni: We're in the county.

*MG: What city are you actually in?*

Elvio Bruni: We're not in a city.

*MG: You're in an ETJ?*

Elvio Bruni: We're not in an ETJ. We're not in anything. That's why we're able to do what we did with the setbacks and everything else. We were in Denton County and Denton County only. We created the first water supply districts to handle the water, sewer, paving, drainage, trash collection, and inspections and all that.

*MG: So, it's its own municipality.*

Elvio Bruni: In essence yes. It's a governmental entity created by the state legislation. Actually it was created by Denton County Commissioners court and ratified by the attorney general.

*MG: So, if I were writing a letter to someone over there, what would the city be?*

Elvio Bruni: There is no city.

*MG: So, what do you write?*

Elvio Bruni: What you write is Providence, Texas, Providence Village, or Savannah, Texas.

*MG: Okay.*

Elvio Bruni: But if you were writing to the water, sewer, paving, drainage, trash collection, or fire departments, you would write to Fresh Water Supply District.

*MG: Okay.*

Elvio Bruni: They are the governmental entity. If you're writing on something for a lot, color of a house, dead tree, you would probably write to the HOA.

*MG: There are a couple of questions I have and I'm trying to think where I want to start with this. Do you have a record of costs that were incurred from saving the natural features on the site or a comparative between this development versus another where maybe you didn't do this?*

Elvio Bruni: I can tell you for example on the front entranceway when you first pull in. Those trees in the median weren't there. There was just a straight . . .

*MG: Now, you're talking about the entrance on Fish Trap Road?*

Elvio Bruni: Right off 380, the main entranceway when you come in and cross that little bridge and there's all those post oaks that were in the center median. That originally was not in the proposal. When we got out to the site and staked it, Don had us go back and re-engineer it to save those trees. Quantifying, probably \$30,000 in engineering to save it. Plus extra in drainage and everything else because you want a boulevard on both sides and you had to

run extra storm sewer to do it. We lost a few of those trees that we tried to save. In fact, we went back in and replanted some very large red oaks that we purchased to replace the big post oaks that we lost. Initially we had four large post oaks that we saved in there. So that was thousands of dollars worth of added expenditures right at the very beginning after the plans were already done. We did the same thing in the Creek Village. It goes around a couple of trees some of which made things very difficult. One big we lost. But all that adds cost. You can't do a slip form machine when you're pouring the concrete and there that's added costs that they figure into it. So, it is more engineering, more storm sewer, a little more labor cost for the paving. I can tell you it was probably tens of thousands, almost hundreds of thousands of dollars to reallocate and redo things to save trees. But the look of it is important.

*MG: So how do you justify that in terms of when you're selling properties there? How do you make it work from a profitability perspective?.*

Elvio Bruni: You make it work internally. You just say that if the community looks better and feels better you will sell more houses. You can't justify that I'm going to charge maybe \$5,000 more a lot because of it. But if you increase your sales pace tremendously, you pick that up in just increased sales pace.

*MG: Have you seen that?*

Elvio Bruni: Yeah. When we first opened up you had a couple of communities that were . . . Paloma Creek was down the road and it opened up

maybe six months after we did and our sales pace has always out performed Paloma.

DP: Your sales pace out there in Providence is outpacing a lot of builders over the entire metroplex.

Elvio Bruni: Savannah especially.

DP: I'm basing this on what Terry's told me about some recent performance. . .

MG: Can we look at that data Doug?

DP: I don't know. That's something that he would have to agree to share and I would have to what I could do about . . .

Elvio Bruni: We tell people Savannah right now is out selling . . . we'll sell 250 with two builders. In Providence we'll sell probably 100 homes next year with is just 1 ½ builders.

DP: Terry told me you guys sold and not you specifically, but with the different builders now I think is what Terry's familiar with, about 40 homes last month or the month before.

Elvio Bruni: In Savannah, yes. In Providence we sold about 25 homes in the last 2 months, 2½ months.

MG: It sounds very good because looking at the market now, especially when you're talking the lower end in terms of costs. The housing market is not doing so well.

Elvio Bruni: In Dallas it's doing better than the rest of the country, but it's still off.

MG: I know we haven't softened as much as say Florida and California.

Elvio Bruni: Phoenix, Vegas, all the one that had seen double digit appreciation for so long.

MG: Right.

DP: I . . . with a builder who has, lets say just for the sake of argument, 20-25 different developments in this metroplex and they didn't sell 40 homes between all of them. That's where I'm basing those numbers on.

MG: Good.

Elvio Bruni: Our sales have held strong. We've definitely softened as has the rest of the real estate market], but both Providence and Savannah are stronger than the rest of the metroplex. Traditionally over time we've sold on average 300 a year in Providence. And that's just with 2 builders. You can go to some of the larger master planned communities that may boast bigger sales, but they will also have 12-24 builders and just the sheer number of builders that you're going to get is going to increase your sales. We did it initially because we spent all that money because we think the post oaks added a lot to the community.

*MG: When you look at Providence and Savannah they look a lot different from other communities not just because of the trees, but because of*

*the architecture. Can you tell me a little bit about how that evolved and why you decided to go in that direction? How do you describe those homes?*

Elvio Bruni: Don and Phillip did a lot of research, and have for a number of years, on different styles and different practices across the country. So back in 1999 when we were starting to design the communities, new urbanism and what they call TND (traditional new development) designs were starting to catch on and get a little more popularity. In all the research we've done people have said that they want to get away from the exclusionary influences of the '90s, the cocooning, I don't know if you're too young . . . where nobody knew their neighbors, back to the small town feel and all that. Well, that's what new urbanism is and that's what traditional neighborhood design is. It's creating an interaction between public and private spaces. That means you've got to pull the houses closer. That means you have to put things like front porches on the house so that people will use the front porch to sit out. It can't be a decorative front porch. When we first did it, we told the builders they had to build an 8 foot porch. They were not happy about that because traditionally in Texas you put a little 2x4 foot porch and it gives you the look and that's it. Well, we said you can't use a 4 foot porch. You can't sit there, you can't interact. We also said you've got to raise the houses up. It's human nature that no one who is sitting down likes to talk to someone who is standing up. It's psychologically not comfortable. So we tried to make it so all the porches were above the public area so that if you're walking on the street the people who are sitting down still feel

comfortable. So you're pulling all that public and private together to create this interaction. We also took the fencing down. I don't know if anybody noticed it, but if you walk up to the fences they're only 5 foot tall.

MG: I did notice that.

Elvio Bruni: Most people don't until they walk up to it. Six foot fences are a delusion of privacy. Most people buy 2-story houses. Well, if you're in the second story of the house, you can look into anybody's neighbor's yard, so what's it going to give you. Five foot creates a place where people can interact and I can look at my neighbor eye to eye. Therefore, you know your neighbor more, you're probably going to look out for your neighbor more in which case values stay better, prices stay better, crime stays down. It's that whole interaction again. People feel comfortable about interacting within their neighborhoods, the communities stand together better. We wanted all those things for Providence and so it's not just the fact that there are trees out there. It's not just even the house design. It goes beyond that. It goes to the street lights, it goes to the mailboxes. You don't see any brick mail boxes out there. They don't dominate the streetscape. The placement of the trees is very important. If you go to a traditional neighborhood in Dallas there's a 25 foot setback off of an 11 foot right-of-way. And the trees are always up near the house. They're at 5 feet back from the house, 10 feet back from the house. So when you drive down the street all you see is a concrete street, concrete curb, concrete sidewalk and somebody may landscape a little bit out there. While

when you drive through our communities you'll notice that the streets and the street trees are interactive. So the street trees are always planted between the sidewalk and the curb. That creates two-fold deals. It creates shade for the street eventually and shade for the sidewalk. In Texas, if a sidewalk is shady, people will use the sidewalk and walk along the sidewalk, again, creating that interaction between public and private. It also gives the streetscape a much better streetscape because it breaks the eye up of that concrete. The houses being closer, now you see all that dynamic of house, porch, rail, landscaping, all within your eye as opposed to going to a normal Dallas neighborhood and you see that wide swath of about 75 feet of nothing. And that makes a big difference in the way our communities feel. So when you drive through one of our communities they feel so much better.

*MG: Have you read anything by Randall Arendt? Are you familiar with him?*

Elvio Bruni: I've heard the name.

*MG: This is his mantra, what you're speaking of. He's actually on the development team at Montgomery Farm.*

Elvio Bruni: Very much so. It's Calthorpe, Andrés Duany. Those are the two gurus of new urbanism. I was just at a seminar in Florida at Seaside. It was all the architects. It's Jeffrey Moeun, its Mary Ann Cusato, these are all new urbanist architects, so it's not just the streets and the landscaping. It's also the styles of the homes. All that is part of new urbanism .

*MG: I always think of new urbanism though as more of the interaction between mixed use developments and residential suburban developments. Have you guys done any kind of mixed use? At Providence there's no real retail or any kind of thing that's going in there.*

Elvio Bruni: Some small retail out at the corner. There's a little more in Savannah. We have about 30 acres of retail. There will be a town center located on that one. There will be retail shops and there's a medical going in and some restaurants. But it's not an intricate planning of part of Savannah. We looked at that. It was a real battle internally about whether to create a true new urbanism in Savannah and put a town center in the center and then branch out from all that. But at the time Savannah was out in the middle of a very much green field.

*MG: Getting the retailers in there would have been difficult.*

Elvio Bruni: It would have been impossible. Now it's easy to go out there and say well there are 5,000 home sites out there. Of course it would have worked. But at the time 380 was a two-lane blacktop road that was beat up. There was maybe . . . Denton County had a very small population. I hate to even quote what it is, but there was nobody along that corridor.

*MG: So, where did the people shop and do their errands?*

Elvio Bruni: Now it's not that hard because 423 is pretty much developed so there is a Kroger's, a Lowe's, a Wal-Mart.

*MG: So they've got retail.*

Elvio Bruni: That's 2½ miles from Savannah. In Providence's case it is probably 6-7 miles. It's a little farther. When they first opened up that was one of the top things. There was a little convenience store down the road. They did a lot of business. Again it was a price sensitive market. When we opened Providence they were at \$89.9. So people were used to driving a little farther to get a value that was as much as they could get at Providence.

*MG: And now the homes are going for what?*

Elvio Bruni: I would say our average sales price at Providence is now in the \$160,000's. We've got some that are pushing \$270,000-\$280,000 right around the lakes and the creeks.

*MG: Can you tell me about your design process? You've mentioned who the key players were. I imagine a development like Veridian [another Huffines development] there's a very specific process that you go through especially when you work with someone like Peter Calthorpe and a whole design team. What was your process for designing the Providence development?*

Elvio Bruni: Again new urbanism was at its infancy in Dallas. It hadn't been heard of, so we didn't have a lot of resources to draw from. Don and Phillip and myself and Steve, who was our engineer in-house, would sit down with the engineer. We would land plan the communities. Savannah we must have gone through 20-30 versions; Providence probably about the same number of sketches. We would sit around a table.

*MG: A collaborative process?*

Elvio Bruni: A collaborative process. That's the best way that there is to create something. Once we got a land layout the way we wanted then we started talking about the different tenets. How to make the streetscape better? We didn't want to do brick. We wanted to do something a little different, a little brighter colors so that lead us to the Hardi plank and CEmplank. We were meeting with builders that were willing to build that kind of a product.

*MG: So you guys were actually the builders?*

Elvio Bruni: We specified what type of products we would allow within the community.

*MG: So did you have an architect design some kind of guidelines.*

Elvio Bruni: That would be me.

*MG: Are you an architect?*

Elvio Bruni: No I am not. I've worked with architects for a lot of years so I sat down and got some basic formats that had done design guidelines and recreated them and adapted them for what we wanted to do. We looked at everything from the siding. Then I would work with the builders, architects to say we want a Craftsman style house. We want a Cape Cod style house or wanted the tenets or wanted the features of those houses. You go to someone like Mary Ann or Jeffrey or some of the other architects and we probably missed by quite a bit. I will admit we did. It was our first blush back 7-8 years ago. We were learning a lot from them. Mary Ann's explaining that there is . . . and a lot of people miss it. They think a column is a column is a column. You can put a

round column that's oversized for the house that doesn't work and it's not scaled properly. Whereas if you did a coffered or chamfered column it would actually feel and look better because of its scale. In Viridian we're actually going to sit down with a lot of those people, Mary Ann Cusato who is big in new urbanism. She's going to create the pattern book and work with our pattern book guy to give those kinds of details. This is how you build a corner. This is how you build a column. This is how you build an eave. We didn't have that in Providence.

*MG: But you're talking about a much lower price point.*

Elvio Bruni: That's correct.

*MG: I think for the price point it looks pretty good.*

Elvio Bruni: It does. We worked real hard with the builders. The builders worked with us because it was their deal to come up with the vinyl fence.

*MG: The vinyl fence thing. Why the white vinyl fence?*

Elvio Bruni: For two reasons. One is, we originally started looking at cedar and we don't like cedar fences for two reasons. One is, after about a year they look terrible. After about three years they start rotting and falling apart. Donald was very strong about this. He says, I don't want to create a community that 20 years from now when I take my kids through or my kids take their kids through, they go well you don't want to look at that because my granddad did it and it doesn't look very good. He wanted them to be able to drive through and say this looks as good today as it did 20 years ago. Wood fences just aren't

going to get you to that point. We started looking at alternatives. Wrought iron was too expensive for that price range home and there is a maintenance issue with wrought iron fence. I have one. They rust out and they rust out a lot, unless you painted them every year. We looked at metal and we looked at ceramic, we look at wood, we looked at masonry, all of which really didn't fit the bill. Then someone showed us this vinyl product. At the time they only had white.

*MG: Yeah. I hope you'll move to a new color.*

Elvio Bruni: I've just looked at a taupe.

*MG: Something that will blend more with the landscape. Just my own personal opinion.*

Elvio Bruni: I understand that, but you've got to remember when you look at Providence a lot of the trim features are white. For a Cape Cod style home, for that look, the white fence works very well.

*MG: For the front yard. But when you're backing into a creek that's all you see.*

Elvio Bruni: That's correct.

*MG: And you're detracting from the wood. I'm just giving you my professional/personal.*

Elvio Bruni: They didn't have the products at the time. And now they're starting to come up with ones that wood grained. They're starting to come up with ones that are in darker colors. As with anything in America there's got to be a start and it gets accepted, it moves on from there. The white vinyl fence was a

big sticking point for a lot of people. They didn't want to go because it's twice as much money as a wood fence.

*MG: Oh really. It's more expensive.*

Elvio Bruni: Oh yes, it's more expensive. We wanted that look because it's long term. You drive through Providence. That community, those houses are 7 years old.

*MG: They look great.*

Elvio Bruni: They don't look 7 years old. I can take you to some new communities that have wood fences.

*MG: And they're all falling apart.*

Elvio Bruni: They're falling apart, the irrigation system – you can see the arches of the irrigation system.

*MG: The staining is faded, etc.*

Elvio Bruni: Trust me, Don and Phillip they've been after me to get different colors. The white is stark and understandably so, it's stark. A lot of people like it. A lot of the homeowners now like the white fence.

*MG: Because it looks clean?*

Elvio Bruni: It does.

*MG: We talked about incremental costs of preservation. Do you have an actual cost of what it cost to put this together? I mean like your master plan, to plan everything. No one seems to have anything like that, but I figure it doesn't hurt to ask.*

Elvio Bruni: I can tell you that our lots cost more than anybody else in the proximity. A lot of times our smaller lots cost about the same as their next size up. So, for example, our 40's cost almost as much as the next door neighbor's 50's. Because of the things we do. Some of it is the alleys.

*MG: When you say 40's you're saying . . .*

Elvio Bruni: 40 foot wide lot versus a 50 foot wide lot. Some of it is because of the alleys. They cost anywhere from \$1,200 to \$1,500 maybe a little more per lot to put an alley in. Some of it is the amenities that we put in. Some of it is the fact that we have the white fences and the landscaping. Our landscaping requirement is a little higher. So, I can tell you we're substantially higher than the guys next door.

*MG: I guess you're getting a premium for these from when you sell them to the . . .*

Elvio Bruni: Our lot prices are higher. We sell them to the builder.

*MG: You sell it to the builder, and the builder sells it to the customer, to the homeowner?*

Elvio Bruni: Even with the higher lot price, our sales are equivalent to everybody else. There is a definitive price that the buyer in their mind will pay for the look and feel of a community. Now, you're going to get a Heartland buyer that says I want the biggest square footage that I can get for the lowest price I can get. We don't get them. We don't build a box in a box on a 50 foot lot. And that's okay. We actually tell people that Providence and Savannah are not for

you. If you don't want to live in a community that the HOA makes you pull the weeds out of your bed and keeps them from having cars parked up on blocks, then go away. You look at our front entry stuff. We always hated snout garages. Do know what a snout garage is?

*MG: Snout house, yeah.*

Elvio Bruni: Go through ours. Even on our front entry we forced the builders – forced is a bad word, maybe – requested and they complied that the garage doors be pushed back behind the front elevation of the house, either behind the porch or behind whatever the entry door was. On a front entry house you cannot have a single garage door. So there's no double garage doors out there. Every one of them is a single. So it's one and one. There's trim around the doors and there's coffered trim around the doors. All that was done to soften that garage look. So when you drive through our community versus that snout community it's distinctly different. But it means you engineer the house differently because it pushes that garage back into the main body of the house.

*MG: It's important. Driving through there it's so much more pleasant than a typical community. Also, for a price point like that it's a lot more pleasant than what you would see anywhere else at that price point. I'm with you on that. So what would you say are the successes and failures of this development, looking back.*

Elvio Bruni: Well, obviously the recognition among the buyers has been a great success. We've seen from our standpoint both monetarily, we've seen great sales. Obviously that's what as developers we try to do.

*MG: That's the goal.*

Elvio Bruni: We can take city officials out there. We've had developers from Australia, from New Zealand, from Oklahoma, from California, from the east coast drive through our communities and come to Dallas to see our communities. So we've got a lot of recognition within the industry as being something that is unique and special. We think long term we've given something to the homeowners. When you watch the videos [on our website] and I don't know if you've had a chance to go and scan through the website.

*MG: I have seen some of them.*

Elvio Bruni: We're not paying those people to say that. Those people love living in those communities. They are very passionate about their communities, more so than any other community I've been associated with. That means that we've done a good job because they love what we've done. And that's the ultimate compliment.

*MG: I don't know if it's quantifiable or not, but what percentage of the people you talk to say that the big influence or factor for them was the neighborhood amenities, not the trees, but the water parks and the pools. What kind of value does that put on a neighborhood?*

Elvio Bruni: We do a survey with every homebuyer that comes down to our orientation for our homeowners association. We don't ask about trees. We ask about builder. We ask about the amenities, social programming. We have about eight questions we ask. We did it to prove to our builders that if you sell the community and the people love the community the house is secondary to them. They're going to find a house that they like. I can say probably 90% of our buyers say the lifestyle and the amenities are their number one reasons for buying in the community. The builder falls way down on the list. That's why you buy in Providence and Savannah. You want the lifestyle.

*MG: I could totally see that driving through there. There are families everywhere, children, people walking, dog parks which is a unique element as well.*

Elvio Bruni: Part of it is the programming too. There are a lot of developers that will go out there and take a lot of the tenets and put them in place and then still not get the community feel the way we do. We spend a lot of money in subsidizing HOA fees. We have large events. Our 4<sup>th</sup> of July party which has fireworks that rivals Frisco or Allen or any of the big cities, will have 4,000-5,000 people come to it. I mean it's an all day event. There are bands. The social committee gets together and has games throughout the day. There are baseball tournaments. It goes from 9:00-10:00 in the morning with a fun run all the way up to 10:00 at night.

*MG: So you guys are still very active and involved in this community.*

*How long is that going to last?*

Elvio Bruni: Until we sell the last lot.

*MG: So when that goes away does the HOA service take over?*

Elvio Bruni: We already have them in place and we put in an advisory board which is made up of homeowners that were showing how to run an association. They make a lot of the decisions now. We had two resident board members that we put in place because we wanted the residents to be actively involved in the decision making of their community. One of the other things we did was to make sure the dues were put at where they needed to be ultimately. Now, we are seeing CPI increases like everybody else. But we didn't start subsidizing the dues at \$100 a year and then say well when you take over it's got to go up to \$600. We started at \$600 a year.

*MG: So who's going to subsidize it when you're out?*

Elvio Bruni: There won't be any. For all the homeowners, it will be cash flow equal.

*MG: What percentage of the community is open space or park space or what portion in terms of acres or percentage either one?*

Elvio Bruni: I don't. I'll have to go back and look at it. But I would probably guess 30% is open space.

*MG: That would be considered technically as a conservation development.*

Elvio Bruni: With all the lakes that we've got out there with all the parks. One of the things if you drive through, we're big on parks. Every village has multiple parks.

*MG: I've noticed that. How is that planned to be maintained in the long term? Is a portion of HOA fees or sales prices going into some kind of trust?*

Elvio Bruni: Both ways. The HOA dues go into paying for the maintenance. We put our subsidies, which is unusual and I'll toot our own horn, that most developers don't. We put away reserves. We put about \$100,000 a year away for reserves for them. So when we turn this place over they'll have about ½ million dollars in reserves. So if anything happens, like you have to replaster the pool or put a new roof on the clubhouse, they don't have to go out for a special assessment. They will have the monies there to do all those things.

*MG: But they're going to have to manage that and maintain it.*

Elvio Bruni: They have to manage it and maintain it, yes. Now, the district which is still in place – the lakes, the drainage systems, all those channels – that, the district will take care of.

*MG: So that's considered . . .*

Elvio Bruni: a separate entity.

*MG: Is that like an easement?*

Elvio Bruni: It's owned by the district.

*MG: That's the public space.*

Elvio Bruni: That's part of the public space. They also have the road systems which is part of the other public space. The lakes and all that will be maintained by the district. All the drainage channels are maintained by the district.

*MG: And that's Denton County.*

Elvio Bruni: No, that's the fresh water supply district. That's our district. They have a tax and that tax is used to fund bonds and one of the things that they do is operation and maintenance.

*MG: Finally, what about school districts? You created new schools in this community.*

Elvio Bruni: We worked with both the Denton ISD and the Aubrey ISD to build new schools. Obviously you can create everything really well but for a first time new home community, children are a big factor and we also anticipated having new schools within Providence and Savannah so we worked with the Denton ISD to create that. We gave them the land. We put in a lot of the infrastructure. We helped fund some of their cable needs, bringing in the fiber optics and things like that and worked with them to create the school. We also worked with them architecturally. We said we want a specific look and it has to have the front porch on it and it has to have this and they were very generous and worked with us on it. I think we've created a prototype for them now.

*MG: In terms of a long term community, do you see this as people living here through a lifetime or is this considered sort of a starter home community?*

Elvio Bruni: We have people of all age groups living throughout here. We have people that are grandparents that moved out there to be with their kids. We have kids that have asked their sisters and other family members to come and live there because they enjoy the community so much. We don't see it as just a first time homebuyer, where you live there for three years and then you move. We have people that bought this specifically to live there the rest of their lives. They're older couples with no children but their kids come over. They know they've got grandkids and I talked to one couple and they could have bought in a retirement community and when the grandkids came over there was nobody their age to play. Here they enjoy seeing kids around and when the grandkids come to play they have somebody that they can go play with, that's in their age group. I don't understand the whole idea of being 55 and older and wanting to be with just old people.

*MG: Yeah. I don't understand that concept. But I was just curious if this is attracting a certain age group and then once the kids are out of elementary school if they're moving on to the next thing.*

Elvio Bruni: I mean, we are a younger community, Providence especially. There's got to be 600-700 kids in that community, so it's a first time young families and they move on and move up. They get better jobs and make more money. They buy a bigger house type of deal. But we've had people that have lived for 6-7 years now, since when it opened. So, if you look at our sales, one of the things we're really thankful for and proud of is that I think Providence

has almost 1,500 almost 1,600 homeowners now living in the homes that have sold. Last month we had 52 homes for sale which is like less than 4%. That is including foreclosures and everything else.

*MG: That's pretty small.*

Elvio Bruni: That's really low for the surrounding areas. So, people are not moving out of Providence. They are staying where they are.

*MG: Good. Thank you. I really appreciate your time and you sharing this. I will send you a copy of my thesis when it's done and an invitation if you would like to attend my defense you're more than welcome to. That's not mandatory.*

DP: I've got a couple of more questions. North of Fish Trap is Aubrey schools.

Elvio Bruni: Correct.

DP: And then that section that you guys have pushed in towards the west on the other side of the road, that is also Aubrey schools.

Elvio Bruni: Correct.

DP: South of Fish Trap is Denton schools. Is there any perceived difference in the value or the land cost or did you guys charge different for the different schools districts. There's no perception difference.

Elvio Bruni: There's no perception difference. Aubrey is a very good school district. It's a smaller school district so they don't have quite the size and funds that Denton does.

DP: Sometimes they fare better, the smaller districts do in the small environment.

Elvio Bruni: They are recognized. Their schools are highly recognized. Providence elementary is the only exemplary rated school in Denton ISD, only because Savannah hasn't been there long enough yet. Providence is the only one in their whole district that is. I think Aubrey is highly recognized so their not quite exemplary, but they're highly recognized. So both are very good school districts.

MG: But from what I'm looking at, the Denton side has the Creek Village.

Elvio Bruni: Aubrey has the Creek Village, north of Fish Trap Road.

DP: Is there a big difference in the cost of a typical lot in Creek Village or south of Fish Trap as compared to the new section? The reason I'm asking is that it seems to me, you can set me straight if I'm not assuming correct, the section that is west of the road and north of Fish Trap was more barren when you started.

Elvio Bruni: It was.

DP: So you probably saved some money compared to trying to save the big trees in the other sections. It's been a little bit easier for you to roll in there and develop that.

Elvio Bruni: But it was offset by a higher land price.

DP: Right. You had to pay more at a later date which factors into the time to begin with. Let's compare Savannah and Providence for a second. Savannah didn't have a lot of the native stuff that you're trying to save, but you guys spent a lot of money planting like those palm trees and things like that. Did that compare similarly to the money you spent on saving trees in the other section.

Elvio Bruni: I would say that Savannah was probably a little more money. I mean we spent on Magnolia Blvd. a lot of money.

DP: I drove past that and it was like wow, look at that.

Elvio Bruni: Yeah. We spent millions in landscaping on the main drive in Savannah. Not that we haven't spent a lot in Providence.

MG: But you're putting in trees that are not necessarily native and that's more difficult and very mature ones that are costly.

Elvio Bruni: Yeah, the mature ones are. The palm trees were interesting.

DP: I didn't know you could move a tree that big. Those were crazy looking when I first drove by and that.

Elvio Bruni: They were unique and every body talked about them and said we were crazy. I was up in the Aubrey school district meeting and the board was giving me a little grief – only idiots would plant palm trees in Texas. I looked at them and said so you're telling me that all your neighbors and you were talking about it. They go yeah. I said so in other words all your neighbors

are talking about us. That's why we do things and he looked at me and goes you know you're right. Everybody's talking it as something different and unique maybe. We're crazy, but you're talking about the community.

DP: Every one of them wanted to see, whether they thought you were crazy or not, but man I can't wait until that really takes hold and starts looking like palm trees. And that's exactly my thought. Crazy was one of the first words that came into my mind. Like who would have done that, but it's really going to look cool when it's finished. The average home prices in Savannah are a little higher than Providence. Is that correct?

Elvio Bruni: About \$20,000-\$25,000 a home.

DP: Now is that due to builders wanting to charge more for bigger lots or larger square footages or is there . . .

Elvio Bruni: A little bit of both. The lot sizes go from 40 to 55, so we're about 5 foot higher which meant the lot prices were a little more expensive. The home sizes are a little more. Obviously we add brick into the mix in Savannah that we don't have in Providence and that adds some price to it. The amenities that we put in were a lot more, a lot higher.

DP: In Savannah.

Elvio Bruni: Yeah.

DP: Meaning, what amenities?

Elvio Bruni: The club house is 23,000 square feet versus 8,000.

DP: I didn't realize there was that much different.

Elvio Bruni: Yeah, it's a huge difference between the club house in Providence and the club house in Savannah. Providence has two club houses. I think they total about 10,000 square feet. Savannah's with the balconies are 23,000.

MG: Were you trying to make development higher end than the other?

Elvio Bruni: Yeah, it was done on purpose. We knew that given both TND neighborhoods we had to differentiate somehow between Providence and Savannah. We tell people that Providence was more of the small town feel. When you drive through its really home town native type of feel and when you drive into Savannah you really get the country club, the resort feel. They were done specifically to create that difference. Because we knew Savannah was going to be \$20,000 to \$30,000 higher. So it was all done with a plan.

DP: Was there a significant difference in the cost of the lots to the builders as you sold them to eliminate the difference in lot size on a per square foot basis?

Elvio Bruni: Not much.

DP: So it's pretty similar.

MG: So do you have a higher profit margin in one versus the other then.

Elvio Bruni: Profit is based on timing. I mean there are two ways of measuring profit. There is profit as in total dollars and then there's profit as in IRR and they vary. Providence has been very successful because it sold so quickly. Savannah has been very successful because it's a little more

expensive. We were happy with both communities and both IRR's even given today's dollars you know with what's happening out there.

MG: IRR's?

Elvio Bruni: Internal rate of return. It just depends on how you want to measure it.

MG: Is there any data that you need that you're not going to be able to get from public records that maybe Elvio can provide if he's so willing that we should request now.

DP: As an appraiser what I'm trying to do is help her compare this lot selling for this versus this and we're trying to come up with a discernable reason why the difference in values are, but there are so many facets. When she first came to me she was talking this neighborhood that's not even built yet and trying to figure that out was impossible. So, I thought you've got Savannah and Providence and they're right down the road from each other and for all intents and purposes are about the same except for one has a lot more trees and one was planted. I thought that would be a good place to start. I'm trying to figure out if there's a way we could look at the difference in the land sales.

Elvio Bruni: The problem with taking those communities is that they are so different in all the amenities and everything else. That's what is going to give you your toughest deal. When you try to isolate one piece of it it's really, really difficult. I'm trying to think if there are other communities.

DP: I'm thinking if it can't take place between Savannah and Providence, I'm not sure if it could take anywhere.

Elvio Bruni: Texas is tough because of that. You get down into the Highland Park and everything else, is it the mature trees that you see around it or is it the fact that it's inside the loop.

MG: Or the school district.

DP: I understand. Or the high paying jobs in downtown and the trees.

MG: Maybe the other thing is we can compare two portions within Providence. One where you've got . . .

Elvio Bruni: I think it would be a little easier if you take the west side of 2931 versus the east side of the Creek Village. It's probably going to be a better deal if you took what was selling in both of those.

DP: And we can adjust for timing as far as value.

Elvio Bruni: But that you're going to get from the builders. I'm only giving you lot deals.

DP: And based on what the builders . . . what I'm really concerned with because we're talking about trees and development here and not what the builders do after they've bought the lot, what I would like to look at is what the land sales are in the new section versus the other section or maybe not new and old, but barren versus when you went in and saved the trees.

Elvio Bruni: But then I'm going to be tough because of timing and when it was done. I mean we opened the Creek Village 2½ years ago which was in

the height of the market. So look at that and then go well we sold 70 a year versus 40 last year.

DP: And you got lot \_\_\_\_\_ because of trees.

MG: So we're better off looking at home sales than developer sales. I don't know what you call that but when you sell lot to a . . .

Elvio Bruni: Lot to a builder. I don't think that's going to give you the number because it's going to be . . .

DP: There's just too many factors.

MG: Okay.

Elvio Bruni: I think you're better off taking the same square footage. Take the Creek Village and see what lots sold, houses sold in the Creek Village. And then take it and compare it to what was done maybe at a 50 foot lot front entry for Paloma Creek.

DP: Yeah, we can do that.

Elvio Bruni: That way you're taking a 50 front entry with a ravine and creek with trees versus a 50 front entry on a bald prairie.

DP: Yeah. We could move from development to the eventual value of the house.

MG: Paloma Creek? That's another developer.

Elvio Bruni: That's the one right down the road. It's right between Savannah and Providence.

DP: Yeah. It's pretty barren. They've got some greenbelt areas in the back. But they're not comparable other than the fact that they're right next to each other. The amenities are completely different. I honestly don't know how Paloma Creek is selling. They're selling a more standard house that people are used to seeing, the brick, the standard size lots. They don't have the cool neighborhood amenities. They don't have the trees.

Elvio Bruni: But that's that Hartland buyer I talked about.

MG: So we could either look at that or we could look at a section of . . .

Elvio Bruni: You could look at Providence West and Providence East. They're selling some houses still. You can look at the re-sells. There are re-sells in both places and see what they're asking.

DP: Are the Creek Village area versus the up front section and just discount the difference between Denton and Aubrey schools and just look at the little area out north of Fish Trap versus south of Fish Trap. Just look at the two and see how they compare. Because there is a portion south of Fish Trap that really doesn't have anything but just houses, more typical lots versus the trees up north. Once again that doesn't apply to development.

MG: But I can take that out of my thesis all together.

DP: Let's do that then.

MG: It just seems like the more people I talk to, everybody says you can't do this.

DP: It seemed like a simple project from the start.

MG: So I can what I'm trying to prove. We'll just focus on resell.

Elvio Bruni: But the bottom line is and I can tell you from a developer standpoint that if trees didn't matter, then we wouldn't have what we see in areas like Highland Park and I can tell you I've built in Pennsylvania and you look at the photos from the 40's, the 50's, 60's, 70's, 80's, and 90's and you'll see that. Anytime we built a house we planted trees and after 50 years those neighborhoods were selling for more than any other neighborhood because they had mature trees. So, if it didn't matter people wouldn't build them. People wouldn't pay for them. It does matter. That's why nurseries and all these people make a fortune selling trees and everything else because there is this intrinsic need and sense of place when trees are involved.

*MG: And there's a definite difference when you're moving into a neighborhood that it's already there when you've got the maturity versus places in Carrollton where you could put two little twigs in the front lawn and you know you'll never live in this house long enough to even see maturity and the canopy.*

Elvio Bruni: Well, I can tell you in my neighborhood. I live in El Dorado in McKinney.

MG: I know El Dorado. That was another area I was thinking of.

Elvio Bruni: And I live in the forest creek section which is the one that had all the native trees left in it. The house prices in my neighborhood and the lot prices in my neighborhood were \$20,000 to \$30,000 more than they were comparably in another part of the deal. You see that in the prices of the houses.

Most of the houses in my neighborhood are ½ million dollars and up, whereas right down the road there's a lot less.

MG: Where they're doing all the new development? So maybe that's another place that we should look at. Part of that is because of what's available it looked like. In the newer areas they didn't even have the opportunity.

Elvio Bruni: No, they don't. But they could buy a re-sell.

MG: But to look at something that's older in a mature area versus something that's brand new.

Elvio Bruni: You can go back in time. From a standpoint of looking at dollars and cents, you can back and look at what a comparable lot in the Forest Ridge where I live that was back in 1995 and 1996, and compare it to a Stonebridge Ranch lot that was a bald prairie because Stonebridge was a field and say Forest Ridge for the same deal was selling for \$30,000 higher in 1995.

MG: But the difference is that El Dorado is not a gated. . . well, Stonebridge is not gated

Elvio Bruni: Stonebridge is not a gated community.

MG: But I mean, they've got all those amenities with the beach.

Elvio Bruni: El Dorado has a country club and a golf course. They don't have a pool complex. I mean, you could take some of that out, but you can see what house prices and lot prices You might be able to go back and pull some of the old records for lot prices.

DP: They've changed the MLS system since then so a lot of the data was lost. A long time ago we used to use books.

Elvio Bruni: But you can go back and look at the tax records though. And you can go back and look at what it was appraised at when the developer had it, so it will give you a kind of feel.

DP: Yeah. That's another tool. We can try that.

MG: Okay.

Elvio Bruni: That might get you a little closer.

MG: I didn't realize that we could compare Stonebridge with El Dorado. I didn't realize that they had the same deal going on there.

Elvio Bruni: It's not quite the same. I mean obviously Stonebridge is 5,000 areas and has a lot more in the way of amenities. They have two golf courses, but you had adjoined golf courses.

MG: There are amenities in each so we can kind of look at that. Thank you. You've been so helpful. We really appreciate your time.

Elvio Bruni: My pleasure.

APPENDIX F

INTERVIEW WITH CHRIS BRIGHT

Subject: Castle Hills Development

Location: Dallas, TX

Interviewee: Chris Bright, president of the Bright Companies and the Castle Hills Development Corporation, a master-planned community in Lewisville, Texas.

Date: 12-12-07

*MG (MG): I have a list of questions. The goal is really for me to understand why you developed the site and how you developed it. Specifically how landscape architecture played a role in the developing process. I'm just trying to go through this so that we can hit on the major points.*

Chris Bright : Okay.

*MG: I don't know if you have any information on costs for any fees and things that you went through for the developing process with regard to the land development, like earth movement, tree removal, mitigation costs and things like that. If you would be able to share any of that data with me?*

Chris Bright: We kind of work off an acreage cost.

*MG: Okay. Is there anyway that I could get access to that data so that I can analyze it?*

Chris Bright: Yeah. Let me look and see what we have.

*MG: Maybe after the fact I can e-mail you and we can gather it that way. So, why don't you start by telling me why you chose to develop the site that you did.*

Chris Bright: It was a family farm, so it was something we had been contemplating for 25 years.

*MG: Okay. So you had already planned for this for about 20-25 years?*

Chris Bright: We started working on it probably in 1980.

*MG: 1980? Okay. And then who was involved in the master planning of the development?*

Chris Bright: John Kricensky out of California and Halff & Associates.

*MG: Halff & Associates. Is John Kricensky an individual?*

Chris Bright: Uh-huh. It's a single man shop.

*MG: Okay. Can you spell his name for me.*

Chris Bright: K-r-i-c-e-n-s-k-y.

*MG: Okay, and Halff & Associates. Did you employ any other people on the team to plan out the development, like landscape architects or . . .*

Chris Bright: No. We hired them by phase. I mean, for the most part, other than the first phase we just done design build on most of the landscape stuff.

*MG: Okay.*

Chris Bright: So, in other words we made the landscape architecture be under the umbrella of the contractors.

*MG: Oh, okay. So the others were hired by the developer. Like, whoever is building the homes there, if it was Darling or . . .*

Chris Bright: No. I'm talking about from the standpoint, if I hired \_\_\_\_\_ environmental to design the greenbelt. They would hire the landscape architect and submit plans and so the landscape architect would be basically under the umbrella of the general contractor.

*MG: How many different general contractors did you use?*

Chris Bright: A bunch.

*MG: So how does that really work? When you hire a general contractor do you sell off that piece of land and then they . . .*

Chris Bright: No. We develop lots, we're hiring a contractor for paving, a contractor for utilities.

*MG: Okay. So they're subcontracting out the landscape design.*

Chris Bright: Well, no. I mean we would hire the landscape installer as a direct deal and then he might have subs underneath him. But we would hire a company to do the landscape.

*MG: So, you would hire it?*

Chris Bright: Yes.

*MG: Okay, I thought you were saying it was hired by the general contractor.*

Chris Bright: No, I said the landscape architect would be hired by that, so in other words, I hire the contractor and say I want you to improve this 10 acre park.

*MG: Okay.*

Chris Bright: Okay. Now, I want you to submit plans to me and what your plan is and a budget for it. And then they would hire the landscape architect under them.

*MG: And that would be as part of their budget, their general budget.*

Chris Bright: Yes.

*MG: So did you have a master plan for what you wanted in those parks when you were hiring the general contractors?*

Chris Bright: We might give them some program elements, but for the most part we were looking for some conceptual ideas from the \_\_\_\_\_.

*MG: Okay.*

Chris Bright: I'm not a huge fan of landscape architects. Their drawings are usually not very accurate.

*MG: Really.*

Chris Bright: They don't match up very well with the civil drawings.

*MG: Okay.*

Chris Bright: So, from that standpoint it's better if I have them under somebody else's umbrella or else I end up with construction conflicts because

the drawings are not accurate and they don't match street grades, they don't match grades.

*MG: Okay, interesting.*

Chris Bright: We used a landscape architect in the first phase, SWA.

*MG: SWA. Were you not happy with the work?*

Chris Bright: I was not happy with them.

*MG: Not happy, okay. Because typically what I've seen in the past is that they will work from the drawings that come from the civil engineer.*

Chris Bright: They did, but what they produced was not accurate.

*MG: Really, okay. That's fair. So then you put that under the general so you didn't have to worry about inaccuracies and things like that.*

Chris Bright: Right.

*MG: So what about . . . because your development is really unique, it's a terrific spot. You've got lots of parks. You have a lot of open spaces and things that are dedicated to . . . I mean, I've read a little bit on your development in terms of its focus on schools and the school fund that you have to support the local schools. So it seems like that when I look that with the parks it seems like that niche audience is a focus.*

Chris Bright: It is.

*MG: Like the parks played a key role maybe.*

Chris Bright: Yeah. We believe that the way people get to know each other in a new home community is by meeting each other either through the

schools or the open spaces. So we wanted then open spaces to be inviting and attractive to the residents because we feel like that's kind of the glue that holds the community together.

*MG: That's right. So did you have a plan knowing, like where you wanted parks or how many parks you wanted or how much space?*

Chris Bright: No specifically. Obviously we used as much as possible, areas that we can't develop anyway. I mean, they either have flood plain aspects to them. But we also used as a planning rule that we wanted a park within walking distance of every home and since we're from Texas we defined walking distance as 3 blocks or less.

*MG: Wow.*

Chris Bright: So when we used the planning envelopes that was the general instructions that were given to the area.

*MG: Okay, so those were the instructions. So do you know what percentage of the space is dedicated to parks and open.*

Chris Bright: I know we have about 40 parks.

*MG: Okay. I can look at a plan.*

Chris Bright: They vary in size from an acre to 10 acres.

*MG: Really. I have a friend who lives over there, so I've spent a little bit of time . . .*

Chris Bright: Oh, do you?

*MG: Yeah. When you look at the development what do you think were the successes and failures? Is there any thing that you would do differently or things you would definitely repeat?*

Chris Bright: I think the playgrounds and the parks are something we would definitely repeat. I mean whenever I look at anything, I've never seen anything that I didn't think I couldn't have done better on. I tell people on a scale of 1 to 10 I'll give myself a 4. That's about . . .

*MG: Just a 4?*

Chris Bright: Yeah. Things that I think we should have done. I mean we probably should have planned the irrigation systems a little bit better to manage the water costs. I wish we would have tied some of those together better.

*MG: Speaking of that, sustainability and green development is such a big word these day, had you considered any of that in this development or would you do more of that in the next possibly?*

Chris Bright: I mean you do what people will pay for. Up until recently even though when you talk about the green stuff people would say they wanted it, but they wouldn't pay you ten cents extra for it. As energy costs go up in particular, there is a bigger focus on that. We are developing a mixed use community that has both residential, commercial, retail uses within in and the context behind which we design that is so that you really can live, play within the environment of the community itself which is in our minds is going to reduce energy cost and energy use over time.

*MG: What development is this or where is this? Is this within Castle Hills? Oh, that's the new phase that's coming in now?*

Chris Bright: Castle Hills is 2,500 acres. We've basically developed about 1,200 acres. So, most of what will be developed in the future is more of the commercial and retail uses.

*MG: Okay. Can you tell me a little bit about what your goal is for the development in terms of attracting families and people.*

Chris Bright: We wanted a particular demographic home owner because we thought it made our commercial land worth more money. So we wanted an upper end neighborhood. When I look at an upper end neighborhood what I believe is value and the people perceive in upper end neighborhoods first is always education.

*MG: Right. That seems like something you definitely accomplished.*

Chris Bright: So that was a big focus. And then we wanted green space as much as possible because people like green space and the ability to walk, exercise, get out and around and meet their neighbors. And third, we felt like people wanted a development that was harking back to an earlier time and by that we can't do exactly what you see in smaller towns, but we kind of design the community, particularly the portion that is there right now, around somewhat what I call a town center concept, which basically you put some shopping, a community center, the lake, all of that is kind of our town square in our minds. So it's kind of the heart of the community and what we try to draw people to in

those areas and if we feel like if we can draw people into those areas that we will create a sense of community and a sense of private ownership which will help long term values.

*MG: Right. So do you see that all 3 of these were goals to enhance long-term values for the property owners?*

Chris Bright: Yes.

*MG: Okay. One of the things that is really interesting from a landscape perspective is the uniqueness of the landscape in Castle Hills where you developed this property. It's not like typical Dallas landscape. It's not flat prairie. There's a lot of hills, a lot of trees and things like that.*

Chris Bright: And we chose to maintain those. Most developers, where you can get more density if you go ahead and flatten those out and less building challenges, but we felt like the character of the land was part of what the sales benefit was and so to the extent possible we tried to maintain the topography of the site and required the builders to deal with the grades in their house designs rather than us flatten everything out for houses.

*MG: That was what I was interested in. Is there any data you think that I can get about how that was accomplished or what kind of land movement occurred on the site to, what was necessary . .*

Chris Bright: We had to move a lot of dirt.

*MG: Right, regardless.*

Chris Bright: The biggest thing that affects you is street grade. I mean you're limited in most cities to a 6% street grade, maybe an 8%. That means that if you've got a hill I'm either having to cut some of the hill off or add to the hill to match that street grade or else my lots are too high in the air or underneath the street. We move a lot of dirt. Even though we're not trying to flatten things out we move a lot of dirt. I'd say in the first phase which was 271 lots we probably moved 400,000 yards of dirt.

*MG: Wow. That's a lot of dirt. When you drive through there it's my impression that most of the homes are kind of on the hills or in the hills and then the roads are kind of cut between that. So was that a way minimize the dirt movement.*

Chris Bright: Yeah, I mean it minimizes it to some extent, but even though what you're seeing there isn't what the hills looked like when we started.

*MG: Right.*

Chris Bright: Okay. They've been reformed. We tried to maintain the hills, but the actual configuration of the hills may have changed and may not. They may be longer and a bigger top on it, but we still maintained the grade.

*MG: Right. Okay. Was that mostly Halff & Associates that would have been working.*

Chris Bright: They did in the first phase. After that we used a firm called TRC & Associates.

*MG: Would it be okay for me to contact anyone over at Halff or TRC & Associates?*

Chris Bright: Yeah. Halff is, I mean they stopped working on the project in '96.

*MG: Oh, really, okay.*

Chris Bright: Since then it's been TRC.

*MG: Okay. Is there a contact over there?*

Chris Bright: Hal Jones.

*MG: Are they here in Dallas?*

Chris Bright: Uh-huh.

*MG: If I talk to him I'll mention that you said that was okay. Is that alright? And then he can check with you if he wants to double check. I'm not familiar with all the regulations . . . Now, you're annexed out of Carrollton and into Lewisville, is that right?*

Chris Bright: We're not actually in either city. We're in the ETJ of each city.

*MG: So you're in the ETJ of both cities.*

Chris Bright: Of Lewisville.

*MG: Okay. So were there any types of tree ordinances or things like that in terms of removal or mitigation costs?*

Chris Bright: No.

*MG: None whatsoever. Okay. So that's pretty good. Do you know how much tree cover may have been kept versus removal?*

Chris Bright: You know, the biggest part of it mesquite, so we save what we can. When you're changing grades you lose trees.

*MG: Right, it's inevitable.*

Chris Bright: It's inevitable. I mean we transplanted I think . . .

*MG: Oh, you did do transplanting.*

Chris Bright: . . . 525 trees in the first phase where we took them out of the flood plain areas and stuff like that. Then we have our parkway tree planting program where we require that trees be planted in the parkways. We had to negotiate with the city to get that done because that typically interfered with water or sewer lines, so we had to re-route water and sewer lines to avoid creating conflicts with the tree planting program.

*MG: I noticed on the sign it said that trees are 30 feet on center, more or less.*

Chris Bright: Typically.

*MG: Was that your doing, deciding that was what you wanted?*

Chris Bright: Yeah, I mean, Texas is hot and so if you want people to be outside you need to provide shade. So, we wanted . . . the most beautiful cities I see or beautiful areas I see are ones with tree lined parkways.

*MG: Right.*

Chris Bright: We can't obviously create that from day 1, but we can create the potential for that existing over a 25 year period and that was what we wanted to do. We even today \_\_\_\_\_. I go out on the parkway trees, because homeowners don't always do a great job of maintaining those. I mean, in the last 2 years we've gone out and pruned those up so that if we get the energy growing up rather than out so that we can get that canopy feel over the streets. I actually do that as early January. I've been doing it for the last 2 January's to help enhance that view.

*MG: That's terrific. It is so lacking in so many other newer communities, because not everyone really thinks about that.*

Chris Bright: Most of us, I mean, the advantage that you have in the mixed use long-term planned community is that I'm going to be there for a long time. Most developers are there for 3 years, 4 years and they're gone. So they have a different view of the long term nature of it and long term to a lot of developers is 4 years.

*MG: Right. So your commitment to staying involved in this community is that because you have a long term plan for developing it or because it is the family property or of the above.*

Chris Bright: I think all of those things are and plus we plan on maintaining ownership in a lot of the vertical structures in the commercial areas over time. We are focused on the long term view.

*MG: Right. Let me ask you something in terms of long term, the value proposition that you have there, from what I know it seems like the strongest value proposition for a family moving in is the school district. Would you agree with that before I go on?*

Chris Bright: I think location.

*MG: Location. Because of proximity to . . .*

Chris Bright: Yeah. I mean, you can get anywhere in Dallas from Castle Hills about as fast as you can anywhere else because 121, we're 4 miles from 35, 4 miles from the toll road, about 3 miles north of 190, 121 bisects the property. East/west access is a problem in Dallas, so to the extent you have east/west access points I think that enhances your value and we have 121 east/west access, Parker Road, Hebron Parkway, all which affect the property.

*MG: Okay, location and let's say education also. Do think there is going to be a lot of turnover as a result of the education system, because once kids grow up do think that people are going to say okay, well, what's the benefit to living here anymore or . . .*

Chris Bright: Well, in the way we structured the school foundation deal you really don't pay anything for doing it. The only time you pay is when you leave the community. And so I kind of removed your motivation.

*MG: Right. That's true. That makes sense. Does that evade Robin Hood laws then? Evade is not the right word, but that's not effected by Robin Hood because it's all private property funds.*

Chris Bright: That's correct.

*MG: Okay. I live in Highland Park school district so I know a lot of private funds to in so that's how our district kind of works. I thought it might be the same type . . .*

Chris Bright: Obviously Robin Hood and the affect of Robin Hood was a factor in making us think of this little foundation.

*MG: Right. I think I've covered everything. Am I doing better on time, a little better. Do you think I could follow-up maybe with someone over here to get some cost data? Would that be okay?*

Chris Bright: Let me talk to Vicki about it because she has more of that. I mean, I've got it all back from the first phase.

*MG: Oh, that would be terrific.*

Chris Bright: But it changes over time. I mean, I would say today we look at it costing us about \$85,000 an acre to develop.

*MG: Okay.*

Chris Bright: That's roads, water, street, and sewer. It doesn't really count the amenity areas as much. You know, we spent about \$1.7 million on the park up there in what we call Enchanted Hill.

*MG: Enchanted Hill, yeah.*

Chris Bright: I steal ideas from movies. I stole that from Notting Hill.

*MG: Oh, I love that movie.*

Chris Bright: Do you remember that part where they climbed into the interior park?

*MG: Oh yeah, over the gate there.*

Chris Bright: That portion of the movie is where I got the concept of that linear park that goes behind all of those lots in the area so that every lot either backs to the golf course or to the interior park. I'm out of time.

*MG: Alright.*

Chris Bright: I don't mind following up if you have some follow-up questions you want to do just over the phone and stuff like that.

*MG: That would be great.*

Chris Bright: You know, Castle Hills was designed in our minds as I say very similar to . . . I grew up in the Park Cities so I took a lot of planning elements out of there. What I generally say is that the job of the developer is to make sure that he hasn't created barriers that prevent the homeowners from becoming a neighborhood. That's one of the reasons why, for instance, you see very few interior walls at Castle Hills. You don't perceive a big difference between living on Lakeside than you do living on \_\_\_\_\_. I mean, it's one community. If you wall it off then I think you create separation and I don't know that I think there's a lot demographically different about somebody living in a \$250,000 home from the \$2 million home.

*MG: Right.*

Chris Bright: Probably have similar educational backgrounds, similar knowledge, similar life experiences. The only difference is one makes more money than the other so, I mean, there's not really any reason that you should separate them or make one set of kids feel excluded or not participate in the overall \_\_\_\_\_. We were very focused on that at the very beginning. We wanted people to perceive that they lived in Castle Hills, not that they lived in some section of Castle Hills.

*MG: There is one gated community though, right?*

Chris Bright: There's actually 2 now. I mean there will be 2.

*MG: What sparked that?*

Chris Bright: We still need to make our commercial work I need that very elite upper end neighborhood. Then the other portion of it was done primarily because it is a product that is targeted more to empty nesters.

*MG: Okay.*

Chris Bright: And they want some protection from the kids.

*MG: Okay. So are you going to be putting some high end retail in there then to cater to that community?*

Chris Bright: We're getting ready to start on the next phase \_\_\_\_\_ village shops and we have plaza area and that is a million dollar area too \_\_\_\_\_. I don't remember if I have a plan of it. Yeah, there's one right there.

*MG: On the board?*

(parties moved away from recorder)

*MG: So, before I leave can I . . . are there general contractors that I can talk to?*

Chris Bright: The one we use primarily I'd say today is a company called Utz Environmental.

*MG: Utz Environmental? Okay.*

Chris Bright: They're out of Austin, but they have a Dallas operation also. And Chris Utz is the guy that's probably the lead \_\_\_\_\_ to talk to.

*MG: Okay. So he and Hal Jones at TRC are the primary contacts that I should talk to?*

Chris Bright: On those issues.

*MG: On those issues and then the other contact was John Kricensky.*

Chris Bright: He's out of Mill Valley, California.

*MG: Okay. I should be able to find them on the web.*

Chris Bright: He's a one man office. He hand draws. He doesn't machine draw. I had to have Halff to convert his conceptual drawings into CAD so that I could actually build it.

*MG: So, is he an urban planner or what is his . . .*

Chris Bright: He worked with a firm called Peckham & Young in their Dallas office and decided he just kind of wanted to do his own thing. The first time I walked the property together, after were we having a beer afterwards, and I said okay, now what does a land planner do. He said, well, to me looking at a topographical map is like reading a book.

*MG: Oh.*

Chris Bright: Okay, I think I've heard enough, because I can't see that.

*MG: Yeah. that doesn't sound very exciting to me, to be honest.*

Chris Bright: I told John when I hired him, I said your job is to represent the people who will eventually live in this community. My job is to figure out how to pay for it and how to get the \_\_\_\_\_ that I need. So, your job is to represent the homeowners.

*MG: Okay.*

Chris Bright: He would argue with me about things. But I want somebody in this room who is representing the people who will ultimately live in it.

*MG: That's a noble cause, I mean, an important one. That's going to determine if they're going to buy or not.*

Chris Bright: The intent is more focused on long term value than what I can get today.

*MG: So did you have some specific dollar numbers in mind that you needed to meet. For example, you were saying the last phase was \$85,000 per acre to develop. So you knew you needed to maybe hit that number.*

Chris Bright: Yeah. You do economics. They're always different. I mean, on the other deal the guys in the office talk about \_\_\_\_\_ because if I go out there and I don't like the way it looks I'm going to make them change it. At the end of the day, whether you spent \$150,00 or whether you spent \$300,000 probably didn't make a big difference on a project this size.

*MG: Right.*

Chris Bright: In the overall economics. If you get a better value and create more long term value by spending the \$300,000 then you probably do.

*MG: Right. I will contact Vicki then, if that's okay?*

Chris Bright: Not a problem.

*MG: I really appreciate your time.*

Chris Bright: I'm sorry about the misunderstanding\_\_\_\_

*MG: That's fine. I appreciate it, thank you so much.*

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## BIOGRAPHICAL INFORMATION

Melissa Gerstle, SASLA, is a graduate student in landscape architecture at the University of Texas at Arlington. She holds a Bachelor of Business Administration from the Ross School of Business at the University of Michigan, Ann Arbor. As an intern with Rosa Finsley, ASLA, she has worked on projects ranging in size from single family residential estates to 600+ acre developments, including the Montgomery Farm development studied in this paper. While working with Ms. Finsley, Melissa expanded her knowledge of native plant materials, the selection and placement of stone in creating naturalistic landscapes and the design of conservation developments. Before deciding to change careers, Melissa worked for almost 10 years in the field of marketing. Throughout her marketing career, she developed an expertise in Direct to Consumer Marketing where she was responsible for creative and strategic marketing campaigns and brand development. She has given lectures and presentations at various conferences and at the Texas A&M School of Business. She also served as Vice-Chair of a product advisory board for Teradata, a subsidiary of NCR corporation. She plans to continue to work with Ms. Finsley, following graduation.