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Identifying the Feasibility for Multifamily Infill Development in Central East Austin

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Identifying the Feasibility for Multifamily Infill Development in Central East Austin

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Dedication

This report is dedicated to Chris, Jana, and Andy Villemez for their unwavering support in my all of my goals, successes and, most importantly, my defeats.

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Abstract

Identifying the Feasibility for Multifamily Infill Development in Central East Austin

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The University of Texas at Austin, 2012

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This report discusses the feasibility of multifamily development through the use of undeveloped or underutilized parcels of land in the central east core of downtown Austin. Included in the discussion is the history of the market area, tools the City of Austin is using to promote infill development, the housing development process, financing of infill housing projects in Austin, a supply and demand analysis of the current market, and site selection theory and application. The author found that there is significant quantitative demand for a multifamily product in this market area and this report may act as a general guide to the process of bringing a multifamily product to market.

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Research Question

The main question this report presents is the inquiry of feasibility for multifamily development through the use of underutilized land supply in Central East Austin. What is the present and projected demand for multifamily within the market area and in the city of Austin as a whole? What is the city doing to promote infill development to meet the demand for multifamily living? What are the necessary steps in the development process for a project to be feasible, including financing? Is this area able to capture the demand for multifamily development? What kind of product would the market support? What are potential sites deemed as infill to meet the demand for multifamily housing in this area in the future?

Introduction

In the course of the last two decades, Austin has seen an incredible influx in population and an increased demand in service levels including, and possibly most importantly, housing. As the city plans for the next 30, the positives and negatives of this growth are clearly outlined. The mitigation of these problems is yet to be seen; however, identifying the issues ahead is a vital step to proceed. This report will investigate a few of the problems the city will face in the coming decades with respect to housing, as well provide quantitative proof there is demand for affordable, multifamily housing in underutilized and historically controversial part of Austin.

As Austin has grown and prospered from its attraction as a creative, livable, vibrant, active, and affordable city, certain parts have been left behind. Generally speaking, downtown development has historically been pushed westward and southward, while the east side has been somewhat forgotten from a social service level standpoint. Recent efforts have seen improvements in pocket areas thanks to neighborhood planning efforts, but the potential for social, economic and physical enhancements are still very real. As the area develops, land prices have risen, displacing much of the original population and causingunwanted development from the neighborhood's perspective. While this paints a dark picture of the area, the fact is that the east side is thriving economically, yet some argue that the area is facing a social and political equity deficit with every new development that ensues. As stated, housing of current and future residents is a main issue of the dynamics occurring on the east side and this report is aimed at addressing that need through the redevelopment of vacant or underutilized land through infill development.

In the planning realm of Austin, there has been increased support for infill development on many levels. Infill development is a powerful strategy for revitalizing a city's blighted areas as well as reusing existing land stock for new improvements rather than Greenland development. The desire for infill development is related to many smart growth and new urbanist planning principles. Urban infill housing usually is of a higher density which uses less of the decreasing land supply than suburban development. Along with revitalizing communities, infill aims to boost economic development, develop affordable housing in accordance with local demand, preserve and enhance neighborhoods, provide transportation choices and connectivity with walkable neighborhoods, reduce reliance on the automobile, reduce public cost through the alleviation of sprawl, and make use of existing infrastructure[1]. The Congress for New Urbanism puts forward infill development approaches through stimulating infill and rehabilitation activity as an objective and gives stimulation objective recourses through:

1. Adjusting minimum lot-size and setback requirements in order to reflect traditional small lot neighborhoods.
2. Expediting the development review for projects with New Urbanist design standards.
3. Changing parking requirements to reduce or eliminate on-site parking to allow demand to be met by on-street, shared, or remote parking.
4. Revising building codes to allow for older buildings to not be held to quite the same scrutiny so redevelopment is more feasible for developers.[2]

[1] Oregon Department of Transportation 1999, 2-10.
[2] Barnet 2004. 33.

The need and increased interest for infill development also lies in environmental concerns due to population increases leading to a vehicle dependency and suburban sprawl. In 1983, the average US commuting distance to work was less than nine miles; but by 2001, the distanced stretched to 12 miles.[3] Currently that number has increased to an average of 16 miles. [4] There is presently more of a market for walkability and developers are starting to focus on downtown mixed-use and transit-oriented products.[5] With the increases in fossil fuels and affordability of urban areas now becoming competitive with suburban areas, developers have taken to the idea of redevelopment in response to market demand.

Consumers, developers and cities alike benefit from the promotion of infill development. The adaptive reuse of properties increases the city's tax base to local governments and provides renewal to inner city neighborhoods. The afore mentioned objectives of smart growth and new urbanism in promoting walkability, having more of a positive effect on the environment, and providing services near transit all benefit the city as a whole. If infrastructure is already in place, it can be a very sustainable and efficient use of the city's tax dollars to promote it. Developers have found that infill is a positive route to take for similar reasons. Despite the fact that infill has the potential to be a riskier investment, they have seen marginal return in comparison to greenfield development in suburban areas. Infill projects have the potential to lend themselves to complex design problems and invite innovative solutions that can bring on recognition that successfully and rapidly markets the development firm to a national audience. According to Richard Haughey with the Urban Land Institute, "Infill development is seen

[3] Bergstrom 2009, 26.
[4] Langer 2012, N.p.
[5] Bergstrom 2009.

as part of the solution – not part of the problem – which is why political support for such projects is increasing in strength."[6]

The development of vacant and underutilized land within a city's boundaries can create more efficient land use, utilize existing infrastructure, preserve or create open-spaces, reduce the cost of public services and mitigate the disorderly development that so characterizes urban growth.[7] This strategy is a powerful and effective tool for cities and developers alike to strategically assist in returning a blighted community back to a livable and vibrant condition. With current economic and environmental conditions, it is in the best interest of all parties to execute and promote infill development that is correctly implemented. Policies to encourage more infill are encouraged to promote more efficient use of land and existing infrastructure, preservation and allocation of open-space, reduce cost of public services, reform of economic and social conditions, as well as to alleviate the general landscape of disorderly built form.[8]

With a rise in population, Austin has sought and is further seeking to densify itself within the urban core in previous and present planning processes. Multifamily housing as a typology is ideally suited to infill development. By locating residences closer to a city's core, multifamily housing development can reduce commute times and encourage development of retail, entertainment, and recreational amenities. While the multifamily, renter approach at capturing the housing needs of the demographic Austin employees, city wide prices have seen a massive spike while the supply has stalled because of national and world markets' lending power handcuffed from the recession. However, as recessionary pressures decrease, and funding becomes more readily

[6] Haughey 2001. 4-5.
[7] Ellman 1997, 6.
[8] Ellman 1997, i.

available, this report aims to show that central east Austin is a viable asset and can be a target for public and private investment.

REPORT ORGANIZATION

To understand why central east Austin is a viable asset, it must be understood where the area has been before it can be directed where to go. This report will begin with a brief history of the area leading up to current conditions and explain further why there is a need for infill development as well as affordable multifamily housing.

The theory and application of infill development will also be investigated in this report so that it may be critically applied to development in central east Austin. Through understanding city efforts in conjunction with the objective of this report, it can be assessed how to successfully conceptualize and deliver a multifamily project in the market of central east Austin. Barriers to promoting infill development will be investigated to the conditions of central east Austin. Constraints to the physicality of existing land such as steep slopes or wetlands can make development a challenge. The size, width or shape of a parcel may make it difficult to meet regulations or approach the current market. Regulations such as exaction fees can deter developers from developing on land that is already expensive. Many infill properties lie in inner city or industrial areas that require a large investment of environmental cleanup and push developers to find cheaper options to create communities on the fringe. Neighborhood opposition can arise out of fears that the development will deter from neighborhood character.[9] Low income populations can also be weary of infill development due to the possibility of gentrification in the area which could displace existing communities as previously mentioned.[10]

9 Municipal Research & Services Center of Washington 1997, N.p.

10 PolicyLink. 2012, N.p.

Incentives for infill development are necessary to overcome these barriers. There are many different approaches and models to incentivize this kind of development which the author will discuss and apply. Infill development overlay districts can be implemented to directly approach areas to promote this kind of development. Projects placed in this district can enjoy an expedited regulatory process for fast track delivery. Because many cities base their zoning on the Euclidean model, uses and typologies of buildings are segregated. A mixed use zoning approach applied to an infill overlay district can promote higher densities and attract a diverse investment base. Locating these districts around transit oriented areas has also proven to be a successful strategy to provide a centralization of jobs, housing, recreation, cultural amenities and retail.[11] This report will attempt to perform an investigative look at how Austin is incentivizing infill development and how the barriers can be overcome in the future for developers.

A look at the housing development process will give context into what a dynamic endeavor it is as well as being necessary to understand the challenges and decisions developers have to make in each facet of the process. It will also give further context into what market feasibility is and where it takes place within the overall context of building a multifamily project. Included in the housing development process is a look at the process for financing one of these projects in its respected stage of the process. An inquiry will be made into the drivers for investment to produce infill housing including, but not limited to challenges, opportunities, and risks private developers and investors view in embarking on East Austin infill development.

[11] American Planning Association 2009, 179.

The report will include a multifamily market feasibility analysis consisting of historical and projected occupancy, absorption, new construction, and rental rates coupled with demographic information to determine market demand in the study area. Data will be acquired through work the author has done at Capitol Market Research, a real estate and land economics firm in Austin, Texas as well as the US Census and Travis County Appraisal District data. This market analysis primarily addresses the market issues of obtainable rents, occupancy and absorption and will have to be combined with cost estimates to establish the financial feasibility of individual projects.

The general methodology is as follows: establishing an employment projection for the Austin MSA which will facilitate the derivation of new apartment demand for the city as a whole. The submarket, or primary market area, will then be physically defined on a census tract level. Multifamily unit demand will then be calculated using an established capture rate based on historical growth of the market area versus the Austin MSA from 2010 Census data. A description of the primary market area income distribution will be calculated in order to determine the primary market area multifamily demand forecast by housing cost. This is important to understand in order to determine what demographic the future demand for housing will encompass.

The next step in the market analysis is looking at the primary market area's current market conditions. This will first be done for the Austin MSA as a whole and then again narrowed to the primary market area. Included in this study are current and historical rents, occupancy, change in number of units, and absorption. An inventory of the sample set of multifamily sites will be provided with historical rents and occupancy. Historic rents will then be compared to the MSA as a whole. To understand the target market and target product for an multifamily development, an inventory of existing projects will be analyzed with regard to their tenant profile, unit mix, and amenities.

Finally, the site selection for infill will be discussed. Theory and application will lead the author to understand what attributes a successful infill development might possess and apply them directly to selected parcels. This will direct information to further research and data acquisition from Travis County Appraisal District which can then offer the developer a starting point for pro forma assumptions and predevelopment feasibility.

Chapter 1: A Brief History of Central East Austin

In any development endeavor, the social, political, and economic perspectives of the area are necessary to understand before and during the process of conceptualizing the project. This chapter will give a brief overview of these factors to facilitate understanding of feasibility of a multifamily project in the area.

Racism has been a part of Austin since the inception of the city in the 1830's. At the end of the 19th century, segregation between Caucasian and African-American population was a major influence in shaping American cities and Austin was no exception. In the comprehensive plan of Austin which was adopted in 1928, provisions in the plan allocated East Austin as the "Negro District."[12] Despite the legal constraints of forcibly relocating African Americans to the area, diverting city services was a tactic the city used to enact their plan.

Confronted with major challenges, the African-American community in East Austin was resilient and successfully developed a vibrant and self-sufficient community. From the inception of the 1928 plan to 1950, the African-American population had increased from 3,500 to nearly 15,000.[13] Other indicators of this strong and spirited community include the creation of over 30 churches, 2 colleges, and nearly 150 small businesses. [14] During the period of 1900-1950 the Mexican American base in the area grew substantially as well. Even though the Mexican-American population did not experience direct and institutional racism, the community established themselves concretely in the area north of Riverside Drive and south of East 11th Street. In 2002, population growth was mapped through the City of Austin's Planning Department to

[12] Mathon 2005, 2.
[13] Mathon 2005, 3.
[14] Mathon 2005, 3.

show the distribution of races from 1990-2000. Those maps are presented in the subsequent pages.

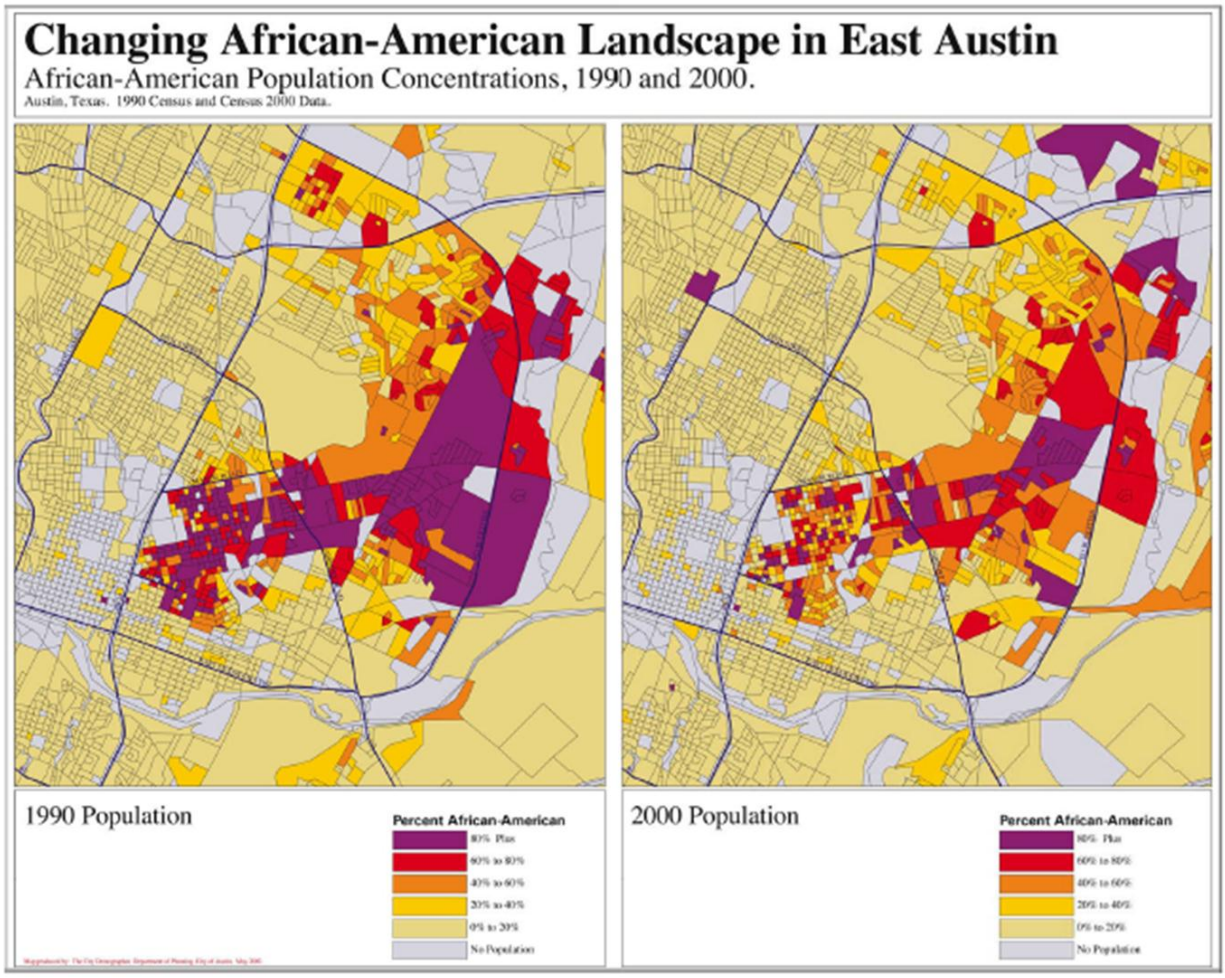

Figure 1: Changing African-American Landscape in East Austin.[15]

[15] Created by City of Austin Demographer, May 2002.

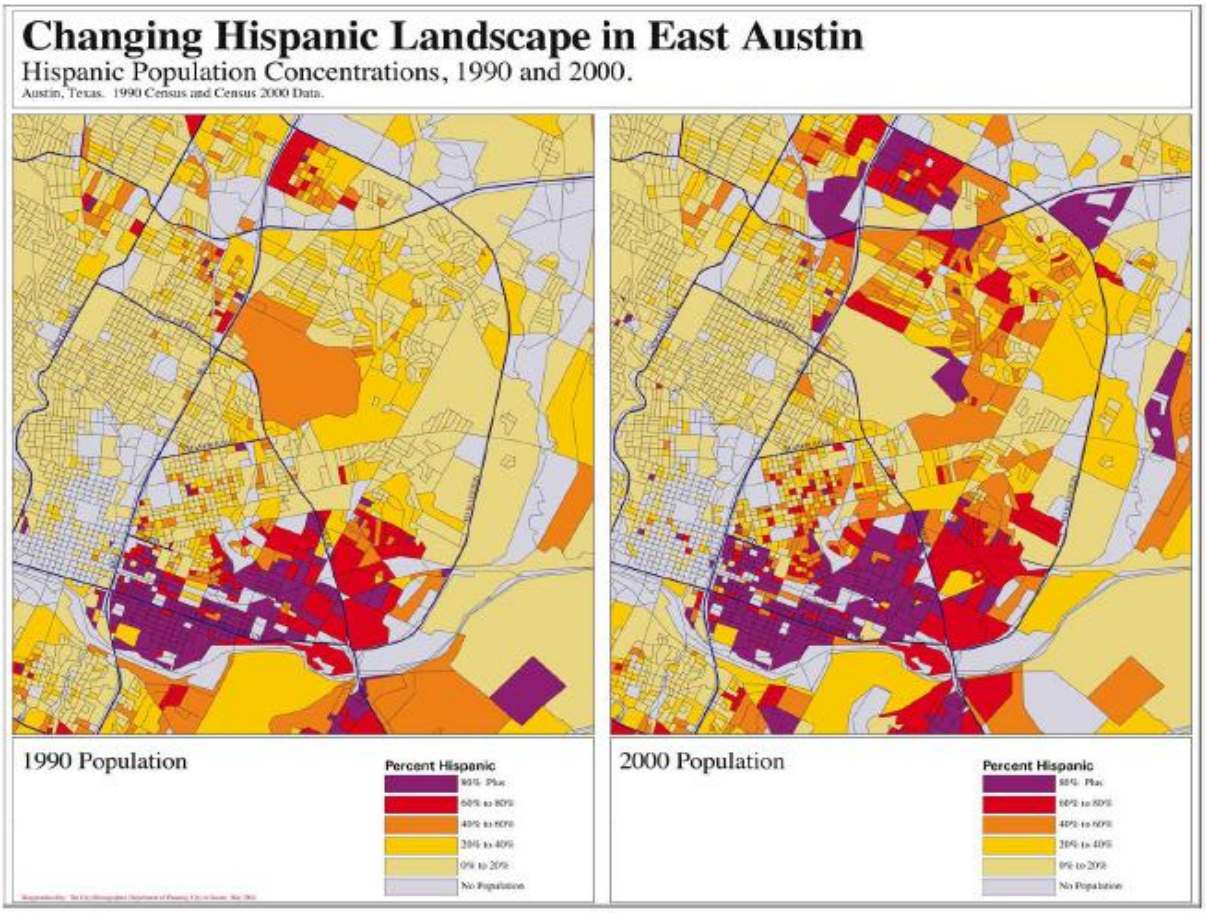

Figure 2: Changing Hispanic Landscape in East Austin.[16]

[16] Created by City of Austin Demographer, May 2002.

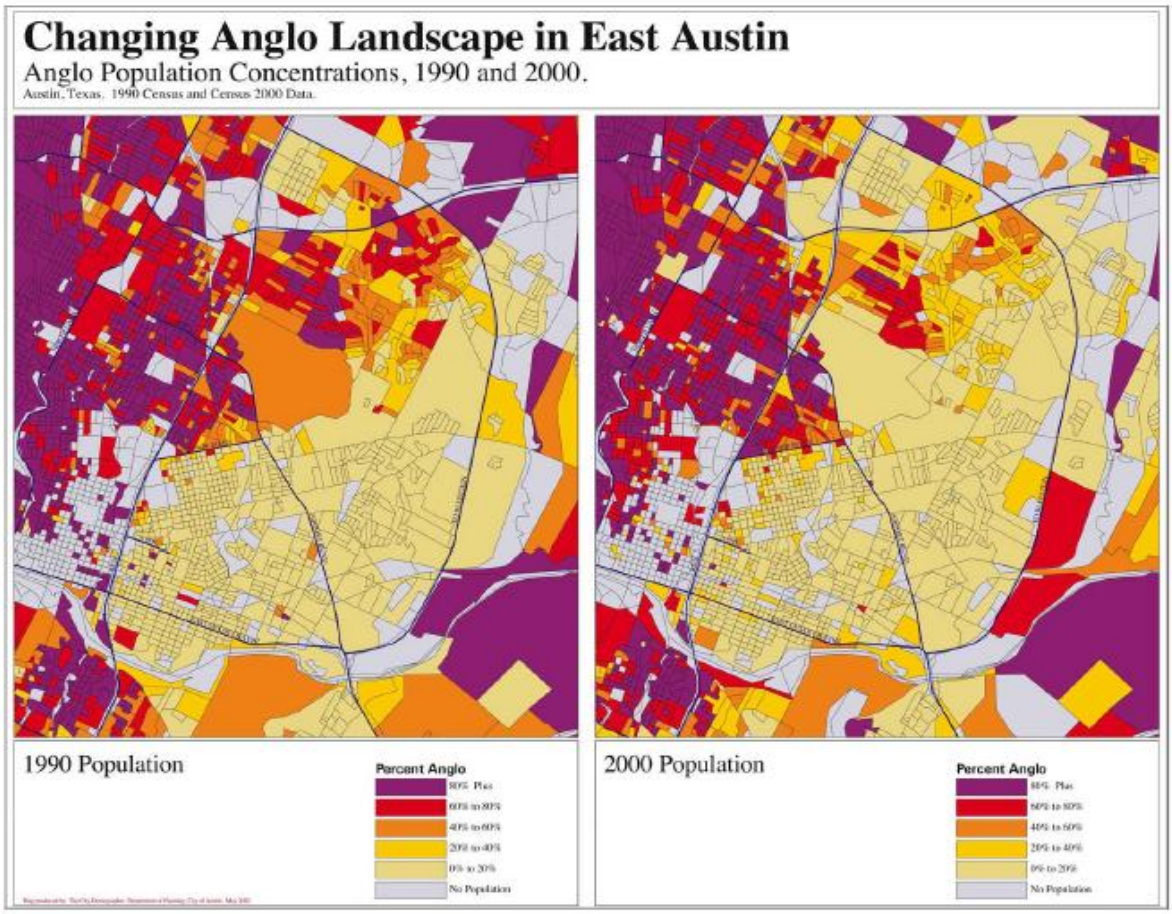

Figure 3: Changing Anglo Landscape in East Austin.[17]

[17] Created by City of Austin Demographer, May 2002.

As the country and regulatory powers embraced urban renewal in the 1960s, East Austin was no exception to the demolition of "blighted" neighborhoods around the urban core. Despite the efforts to revitalize areas through knocking down existing infrastructure and improvements, the main effect on the community was the displacement and destruction of African American and Mexican American neighborhoods. Areas considered "blighted" were knocked down to provide an outlet for developers within and external to Austin to construct new commercial and residential development. This provided an outlet for the University of Texas to expand its campus, including the baseball, softball, and football stadiums. Even with the major effort by the city to clear the blighted areas, the Urban Renewal projects implemented made little progress towards economically strengthening the area.[18] Demolition was eventually halted after a citizen law suit was enacted, forcing the city to refrain from further urban renewal practices.

The next major development that further segregated the area from the urban core was the expansion of IH-35 by the City of Austin and the Texas Department of Transportation (TXDOT). This physical barrier between the segregated halves of Austin marked a line of socio and economic classes that is still prevalent today. It was not until the 1970s that African-American and Mexican-American citizens had an official, albeit inequitable, voice in politics.

More recently, the area has seen a drastic change in business location and new development. Without debate, the area is gentrifying due to the area most consider the last frontier for new downtown construction. Its proximity to downtown is one of the most appealing features to developers who are trying to deliver new products to meet

[18] Osborne 2012, N.p.

the demand for apartment, condo, and single family living. Typical of gentrifying urban areas, East Austin has grown local and regional attention as the hip and lively area that attracts young professionals, graduate students, artists and musicians. The relatively affordable cost of living, which will be illustrated later in the feasibility analysis, coupled with the bohemian atmosphere and urban amenities attract this "hipster" culture Generation Y has become known for.

The upcoming challenges for the east side of Austin lie largely in how to develop and redevelop the area while mitigating gentrification. Some of the biggest problems facing residents are increased property values and property taxes; however, the City of Austin claims the property tax has not increased drastically in years. As the city property tax rate only increased 2 cents per $100 of value from since last year, this is still substantial to existing property owners.[19] While no one denies that the gentrification is a real issue now, the fact of the matter is that the east side is prime for responsible development and can continue to be a major cultural and economic asset to the city while also being a benchmark case in social and physical preservation if executed properly by the city. Part of this preservation can be facilitated by regulatory mechanisms on the part of the city that control the physical environment. The promotion of infill development based on Smart Growth principles is one such mechanism and will be further investigated in Chapter 2.

[19] Osborne 2012, N.p.

Chapter 2: Infill Development as a Goal for the City of Austin

GOALS OF THE IMAGINE AUSTIN PLAN

This chapter will focus on the goals that the city has with regard for infill development and its approach at incentivizing the production of affordable housing through infill as addressed in the ongoing process of the Imagine Austin comprehensive planning process. Recently, the city of Austin has undertaken the task of rewriting its comprehensive plan to manage the influx of growth it has seen over the past 20 years and accommodate the expected growth in the decades to come. The core principles include:

1. Grow as a compact, connected city.
2. Integrate nature into the city.
3. Provide paths to prosperity for all.
4. Develop as an affordable and healthy community.
5. Sustainably manage water and other environmental resources.
6. Think creatively and practice civic creativity.

From these core principles, the one most applicable to this report is the first. The city is hoping to focus on "redevelopment and infill within the city's developed areas." It claims that favoring this type of growth will provide a balance of expansion and counter the historical model of sprawling, low density development. According to the plan, this condensed model of growth will also "enhance human connections, innovation, and urban vibrancy" in order to "connect people to homes, jobs, schools, and other destinations with a more complete transportation that is affordable to build, operate, and maintain."

The city of Austin has made it a major goal in the upcoming comprehensive plan to promote infill development for the purpose of compact and sustainable development. To provide an idea of the importance the city has placed while drafting the proposed comprehensive plan, the word infill is mentioned 22 times in the new plan. A summary of the goal can be found on page 9 in chapter one of the drafted plan. The plan states:

> Austin's long-term sustainability requires a fresh focus on redevelopment and infill within the city's developed areas. Favoring compact growth provides a balance to earlier decades of sprawling, low-density development. More compact growth contains costs by capitalizing on the land and infrastructure already in place. It also enhances human connections, innovation, and urban vibrancy. Creating a more compact and efficient city is critical to our ability to connect people to homes, jobs, schools, and other destinations with a more complete transportation system that is affordable to build, operate, and maintain.[20]

The city's goals for the promotion of infill development are closely tied with affordability in all factors of life, namely housing. Infill development offers the opportunity to provide compact, urban amenities that the young population of Austin demands. As the subsequent feasibility and current comprehensive draft plan states, the central core of Austin is largely a renter city. Because of the large number of college and university students, recent graduates, in-migration of young people looking for work, and critical workforce, there is a slower-growing household income. As the demand to live in Austin has increased, so has the cost to live here which translates to demand for housing products other than single family detached homes. The Plan

[20] Imagine Austin Draft Plan, Pg. 19.

addresses this need and seeks infill development to meet that demand, as seen in the quote below:

> Infill development and redevelopment along major roadways will be needed to meet the growing demand for higher-density, closer-in affordable housing. Creating harmonious transitions between adjacent neighborhoods is an important component of the development process.[21]

With regard to land use, the plan states that there is a trend of increasing infill development yet infill development in the urban core is lagging behind Greenfield development on land with lower cost associated with.[22] It also illustrates that single family and open space constitutes the largest percentage of developed area in the city and ETJ. In addition, the percentage classified as undeveloped and large-lot single-family has decreased from 2003-2010. The city's land inventory is presented below:

[21] Imagine Austin Draft Plan, Pg. 30.
[22] Imagine Austin Draft Plan, Pg. 31.

Land Use in Austin and the ETJ (2003 - 2010)

Use	Acres in 2003	Acres in 2010	Percent Change	Percentage of Total Land Area in 2003	Percentage of Total Land Area in 2010
Single-Family	61,703	69,011	11%	15%	17%
Multi-Family	9,013	10,777	16%	2%	3%
Mobile Homes	6,478	7,000	7%	2%	2%
Residential Subtotal	77,194	86,788	11%	19%	22%
Commercial	8,031	10,317	22%	2%	3%
Office	6,174	6,618	7%	2%	2%
Industrial	9,662	13,624	29%	2%	3%
Mixed-Use	n/a	102	n/a	0%	0%
Commercial Subtotal	23,868	30,660	22%	6%	8%
Civic	9,496	10,994	14%	2%	3%
Utilities	6,117	2,766	-121%	2%	1%
Open Space	55,104	69,292	20%	14%	17%
Resource Extraction	5,419	6,687	19%	1%	2%
Institutional/Utility Subtotal	76,136	89,739	15%	19%	22%
Transportation	4,770	5,533	14%	1%	1%
Streets and Roads	32,224	44,254	27%	8%	11%
Transportation Subtotal	36,994	49,788	26%	9%	12%
TOTAL DEVELOPED AREA	214,192	256,975	17%	53%	64%
Undeveloped	145,437	118,679	-23%	36%	29%
Large-Lot Single-Family	31,836	17,782	-79%	8%	4%
TOTAL UNDEVELOPED AREA	177,273	136,462	44%	44%	44%
Water	10,521	10,137	-4%	3%	3%
TOTAL AREA	401,985	403,574	0.40%	100%	100%

Figure 4: Land Use in Austin and the ETJ[23]

CURRENT POLICIES AND MECHANISMS FOR PROMOTING INFILL

In order to develop a comprehensive growth plan for the city, growth scenarios were developed to guide the process of adopting the plan using sustainability indicators.

[23] Source: City of Austin

Within these map scenarios which are the product of immense public involvement, there are many mentions of promoting infill development for the sake of creating complete communities. A variety of infill projects are desired, particularly for housing as seen from the quote below:

> Infill development can occur as redevelopment of obsolete office, retail, or residential sites or as new development on vacant land within largely developed areas. The type of infill housing will vary with site locations, small-area plans, and development regulations and include single-family houses, duplexes, secondary apartments, townhouses, row houses, and smaller-scaled apartments. New commercial, office, larger apartments, and institutional uses such as schools and churches, may also be located in areas outside of centers and corridors.[24]

Smart Growth and Desired Development Zones

As Austin plans for the promotion of continued and new infill development, it is important to analyze the current policies and mechanisms in place that promote private investment in this urban development model. Austin's Smart Growth Policy, SMART Housing program, and Vertical Mixed Use ordinance will be briefly discussed to understand the City of Austin's main tools in promoting infill development. While these all have the potential to be related in the course of a development project, it is important to analyze them separately and highlight their zones of overlap.

Smart Growth is an urban policy framework which was conceived out of the desire to combat urban sprawl due to its multitude of issues. Austin's Smart Growth Policy aims to develop its city responsibly and combat sprawl through the following ideals: mixed land uses, compact building, diverse housing stock, promotion of

[24] Imagine Austin Draft Plan, Pg. 95

walkability, distinct communities, preservation of open spaces, capacity retention and development in existing communities, multiple transportation choices, fair and predictable development regulations, and community collaboration. Smart Growth promotes economic development and jobs, strong neighborhoods with a range of housing choices, and healthy communities. [25]

Within these policy ideals, the way the City of Austin targets areas of enforcement of Smart Growth is through the appointment of Desired Development Zones. Growth is encouraged in the Desired Development Zone which also detracts development from environmentally sensitive areas. Private investment to develop is incentivized through fee reductions and utility reimbursements. Further attention will be paid to these in the discussion on the City of Austin's SMART Housing initiative. Within the DDZ, the city further promotes these ideals through proposed Smart Growth Mixed-Use Corridors and Proposed Rail Corridors.

Zoning within Mixed-Use Corridors largely determines the type of development the city is trying to promote in the designated areas. In accordance with Smart Growth ideals, mixed use designation is the main zoning designation to promote infill. The City of Austin allows and encourages the development of mixed use projects. The City's goals with regard to promoting development in these zones is directly in line with the promotion of infill as evidenced in the quote below from the City's design standards:

> The mixed use provisions define the uses of land and the siting and character of the improvements and structures allowed on the land in a manner that encourages a balanced and sustainable mix of uses. They promote an efficient pedestrian-access network that connects the nonresidential and residential uses and transit facilities. Redevelopment of underutilized parcels and infill

[25] Lewis 2007, 5.

development of vacant parcels should foster pedestrian-oriented residential and mixed use development."[26]

Mixed use development integrates two or more land uses, such as residential and commercial, with a strong pedestrian orientation. Requirements and standards for mixed use development appear in various places throughout the Austin City Code.

Mixed Use Combining Districts

There are two districts that are reserved for mixed use development which are Mixed Use Combining Districts and Vertical Mixed Use Overlay Districts. Mixed use development is also permitted in other zoning districts but these are the two primary outlets for zoning areas for mixed uses. Inherent in these districts is the fact that uses may be combined either vertically in the same building, horizontally though out multiple buildings, or a combination of both. VMU permitted uses come by way of two building types: Vertical Mixed Use Buildings and Neighborhood Mixed Use Buildings.[27]

Mixed Use Combining Districts allows office, retail, commercial, and residential uses to be combined into a single building. They are designated as a Mixed Use base District with the acronym MU and may be combined with other base districts including neighborhood office, limited office, general office, neighborhood commercial, community commercial, general commercial services and liquor sales. Of equal importance are the permitted uses which include vertical mixed se buildings, commercial uses which are already permitted in base district, civic uses permitted in the base district, townhouse residential, multifamily residential, single-family residential,

[26] City of Austin 2001, 66.
[27] City of Austin 2001, 67.

small lot single family attached residential, small lot single-family residential, two family residential, duplex residential, group residential, and 3 classes of group homes. All base districts and permitted uses are subject to the City of Austin design standards stated in the design code.[28]

Vertical Mixed Use Overlay Districts

Vertical Mixed Use Overlay Districts (VMU) allow development of vertical mixed use buildings and are established within each zoning district for all sites within the designated corridors. VMU Overlay Districts that fall within an area with a Neighborhood plan are subject to the uses provided within the Neighborhood Plan. Any alternatives not laid out in the plan are subject to a Neighborhood Plan Amendment which is required to pass by a vote by the board of the respective Neighborhood Planning Association. Uses within a Vertical Mixed Use Overlay district include uses that are allowed within the base district and vertical mixed use buildings. VMU buildings are allowed in MU combining districts and VMU overlay districts as well as other base districts with a conditional use permit. [29]

As previously mentioned, the zoning framework that is in place to promote Smart Growth as well as infill development requires programs to incentivize private investment and development in these areas. One such program is the City of Austin's SMART Housing program. Implemented in 2001, SMART Housing stands for Safe, Mixed-Income, Accessible, Reasonably priced, and Transit oriented. SMART Housing is designed to stimulate creation of reasonably priced homes that meet the standards of Austin Energy's Green Building program. The 11 year old program encompasses eight categories:, emergency shelters, transitional housing, public housing and assisted

[28] City of Austin 2001. 69.
[29] City of Austin 2001. 71.

housing to rental housing, housing homeless services, owner-occupied housing and first-time homebuyer.

SMART Housing

Developers who apply for SMART Housing receive expedited review of zoning variance requests, site plans, subdivision plats, and building permit applications. These can be extremely beneficial due to the fact that many of the financial issues developers face stem from hold ups in these processes. The investment strategy on the part of The City of Austin is to offer developers incentives by way of a single point of contact to advocate through the development process. In addition, SMART Housing provides builders who reserve a minimum of 10% of their housing units for families earning 80% or below the median family income fee waivers of up to $2,000 per lot as well as faster development reviews.

The SMART Housing review process also provides developers, both for and non-profit information about any possibly unforeseen issues before substantial money has been spent on acquisition or design.[30] The City also verifies the property in question is outside the flood pain or in other brownfield sites before a zoning change request is processed which is separate from the typical zoning change requests. Applications for SMART Housing are processed by The Neighborhood Housing and Community Development Office as well as other City reviewers to make sure the development is targeting the correct income market. In order to have expedited review, developers must meet with neighborhood associations and successfully gain support as well as listen to any concerns the neighborhood may have with the proposed development or

[30] The Reporter 2000, N.p.

zoning change. Major issues are addressed and meetings regarding these discussions are addressed before the expedited review process may begin.

Multifamily SMART Housing projects undergo a review that includes accessibility requirements as well as review of the building and site plans by a third party separate from NCHD. Plans are also reviewed by Austin Energy in order to make sure that the development meets Green Building standards.[31] In the feasibility assessment of developing a multifamily project, all of these considerations are analyzed by the developer and are included in the predevelopment process. A comprehensive look at the housing development process will be further investigated in the subsequent chapter.

[31] The Reporter 2000, N.p.

Chapter 3: The Housing Development Process

From market rate luxury condos to permanent supportive housing, there are pieces of the game that are fundamentally the same. The process of land development for the purpose of building multifamily housing occurs broadly in four phases: concept, predevelopment, construction, and operations. Within each phase there are multiple steps involved that happen sequentially in the order provided or outside of this order. The following section will outline each of the phases, the steps involved in each, and the potential parties involved in each.

CONCEPT AND PREDEVELOPMENT

The concept phase is where the development entity begins with an idea by addressing a need or determining a market and reachable profit point through the construction of a commercial property. The conceptual process allows the developer to define the factors and constraints of the project including the typology, target market, scale and location. Members of the development team are considered in this phase including, but not limited to, legal, architectural, engineering, consulting and construction management. This phase also includes identifying sources of potential funding and strategically considering how the funding will be acquired and administered. Inherent in this phase is developing an understanding for the community and what is expected in the process from a public standpoint. Analyzing sites and their surface constraints is also an important factor in this phase, as it will be analyzed in greater detail in subsequent stages.

Following the concept phase is predevelopment. In this stage the developer determines the process necessary to begin construction and bringing concept to built form. The predevelopment stage is the riskiest stage in the process for two reasons.

First any positive cash flow from rents is not accessible in the near future (i.e. 1-2 years). The longer the timeframe is until the stream of income is received, the riskier the investment. Secondly, the probability that any project in the predevelopment stage is completed and occupied is much smaller than projects in more advanced stages. In this stage, debt financing is nearly impossible for the developer to acquire debt financing without more collateral than the site provides.[32]

Again, the aspects of this phase can occur at a direction that is fundamentally different than the order the author provides. Part of this phase, and a large section of this report attempts to accomplish, is a market study of the current economic conditions of the housing needs required by a specific community. This categorical cost is typically absorbed in the pro forma via the consulting and soft costs. In some cases, market analysis can be done internally but due to the sensitivity of the local conditions of real estate markets, there is a strategically beneficial aspect of hiring a local consultant who is familiar with the historical and present market conditions.

Site Control

One of the most important aspects of the predevelopment phase is obtaining site control. Site control is the process of obtaining an enforceable right to use a parcel of land. To develop a piece of land, it is essential to make sure that there are no other owners or legal interests in the property. It must be given formally and legally in wrote form, usually through a deed, lease or easement and if not done properly can potentially slow down the process substantially. Site control can be obtained in a number of ways, typically through 'option to buy' or 'agreement of sale' clauses in the

[32] Miles, Berens, Eppli 2007, 167.

purchase contract, but also through quitclaim deeds, warranty deeds, leases, easements, permits or licenses.

A quitclaim deed is a deed that releases a person's interest in a property without stating the nature of the person's interest or rights, and with no warranties of ownership.[33] The owner's title, interest and claim on the property are transferred implicitly and explicitly. The interest is effectively transferred whether the property owner is aware of them or not but there is no guarantee of title to the grantee. A warrantee deed usually is the document that transfers title and guarantees the title has no liens or is clouded. A clouded title could mean that title is defective through an existing mortgage claim, judgment, mechanic's lien or tax lien. The grantee may hold the grantor liable for these after a warranty deed is executed by both parties.[34] Special and general warranty deeds are the two types of documents. A special warranty deed conveys title and interest while also pledging that there are no defects on the title and protecting the grantee against any claims against the title. It also guarantees that the grantor has not done anything to mar the title in the time that he has held it. A general warrantee deed is different from a special warranty deed in that there isn't the guarantee of clear title, but if there is a cloud on it, the grantee may hold the grantor liable.

Environmental Assessment and Due Diligence

Another part of the predevelopment process that is essential in navigating the regulation process as well as overall feasibility is the conduction of environmental assessments and due diligence. There has been a constant increase in the level of due diligence required from developers to ensure confidence in their project's ideology and

[33] Investopedia 2012, N.p. http://www.investopedia.com/terms/q/quitclaimdeed.asp
[34] Legal Dictionary 2012. N.p.

completion. In a study done by real estate investment expert Stephen Roulac, it was found that due diligence requirements were much more stringent in tough market conditions than in more optimistic and speculative times. “The changes in due diligence activities within institutional investing firms from 1987 to 1993 were profound, tilting the emphasis to thoroughness, caution and conservatism, reflecting therefore both more time and more detailed work by higher level professionals.”[35]

Roulac also found a more intensive scrutiny in due diligence documentation on the part of the developer. “The survey showed dramatically more rigorous due diligence practices in 1993 than in 1987. Not only were standards in 1993 more stringent for underwriting loans, but so were requirements for documenting the effort. Some 88.3% of the respondents said that ‘‘more’’ or ‘‘much more’’ documentation was required in 1993 than in 1987. Although this enhanced documentation emphasis is partly attributable to greater market sophistication and a concern for future litigation, the differences reflect how relative attitudes about market outlook influence risk attitudes and therefore the degree of scrutiny applied to a particular investment.”[36]

In more recent times, the development industry has also seen an intensification in scrutiny from the environmental due diligence required to execute a project and pass through the regulatory necessities on the public side. The growth in both scope and stringency of analysis is in response to the global concerns for energy consumption and impact the built form has on our natural landscape. Such regulations give confidence to the public and powers that be that the developer has done more than “simply ensure that their property does not violate any environmental laws. Such laws apply to the contamination of the environment by hazardous or toxic materials, wetlands protection,

[35] Roulac 2000, 392.
[36] Roulac 2000, 392.

endangered species, and more."[37] Congress passed the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or Superfund Act).[38] Starting November 1st, 2006 all commercial real estate transactions were subject to new federal regulations establishing environmental due diligence standards under the CERCLA.[39] Under the new federal regulation a Phase 1 Environmental Site Assessment is mandatory to be eligible for CERCLA defenses in property acquisition.

Other changes include the fact that the Phase 1 assessment must be executed by a federally certified environment professional under the United States Environmental Protection's standards. In addition, the scope of the investigation has increased substantially. The investigation includes interviews with past and present owners, operators and occupants of the property; reviews of historical sources of information: searches for recorded environmental cleanup liens; review of federal, state, tribal and local government records: and visual inspections of property and adjoining properties. Additionally the assessment includes any specialized knowledge the developer may have about the property, any commonly known or easily obtainable information about the property and whether the purchase price of the property is at the fair market value of it if it weren't contaminated.[40] These new stringent procedures can be costly for the developer but are important to follow in order to navigate through the regulatory process to provide necessary entities confidence that the developer is properly considering the environment before embarking on a project.

Within the due diligence process is the task of determining zoning and land use. Any discrepancies with the zoning and proposed project will have to be taken through

[37] Franklin 2000, 458-459.
[38] Franklin 2000, 458-459.
[39] Sedina and Tangri 2011, 14.
[40] Sedina and Tangri 2011, 15.

the rezoning process which can sometimes be costly, long and political. This is one of the key risks that developers take in the predevelopment stage, as the costs of doing so are usually covered with front end capital before any equity considerations are met. Also during this process, the architectural plans move from schematic design to construction documents and details are discussed and finalized. Bid documents are prepared for contractors and subcontractors. The bidding process determines which contractor will do that actual construction on the site and usually hires the skilled subcontractors to work on individual trades like plumbing, HVAC, framing, etc.

A management plan is then developed. Choosing an entity to manage the housing complex can be a large decision, as much of the marketing and lease up will be in their hands. The operational responsibilities will fall under their control. At this phase it is also imperative to finalize pro forma assumptions and make sure sufficient cash flow to maintain operations.

CONSTRUCTION

During this phase, the actual building of the housing development takes place. This is one of the most dynamic phases, as all entities are continuously working together to make sure the project is delivered on time and within the budgetary constraints. The management of construction is typically done by a third party construction manager, architectural team, or engineer. All financial and operational planning are completed during this phase along with finalizing site work and preparing the site for actual construction. Marketing and lease up is initiated to ensure and facilitate stabilization and cash flows upon completion of construction. Hiring and identifying management also takes place during construction. Furthermore, continued permitting and working

with the city to monitor construction occurs to make sure proper measures have been taken for the building' safety and occupancy.

DOCUMENTATION AND DUE DILIGENCE

Construction is typically managed by a contractor or architect but can also be executed by a consulting company with experience in multiple facets of the process. Regardless, construction is a very dynamic process and is one where much of the risk is encountered relative to the rest of the development process. A management system that implements sound communication will mitigate this risk substantially during the process and a project manager who understands the system and its flaws and makes adjustments accordingly. The following outlines some of the major issues that a project manager can encounter within his development team and how to mitigate some of the miscommunications that could arise during the process.

Construction industry sources suggest that 85% of a Project Manager's time is spent on communication, 70% of the documentation is paper based and 50% of all construction projects involve litigation.[41] As previously mentioned, development projects involve numerous stakeholders with diverse backgrounds and working habits. Furthermore, each has their own way of communicating their ideas regarding how the project should commence to one another. A goal to decrease the litigious atmosphere of multi-party construction is to improve all forms of communication among the players involved during, before and after the project is completed.

To avoid conflict and delays, rigid documentation during the construction phase should be executed. The documentation process is a demanding task that requires a good grasp on the project and each stage necessary to bring it to completion.

[41] Wierzbicki and Uzdavinis 2011, 1-8.

Furthermore, it is imperative to make sure correct internal and external documentation is completed to a level of standard that allows for stakeholders to understand the work that was done and the proper allocation of responsibilities as such. Typically this kind of acute documentation is seen by some as a delay in the construction process; however, the time it takes to properly document process steps and task management is mitigated by the potential delay a miscommunication could cause.

Clearly design and construction teams will benefit from a plan of communication and methods of employing different communication tools and will ultimately help the developer or project manager in the long run. Tools that design professionals employ to document and communicate their work aid in the construction process as well as the management of the project. These documents that are used to communicate changes, standards, and requirements within the construction process are vital for completion and clear communication. They include, but are not limited to submittals, requests for information daily reports, change orders, and punch lists.

Submittals and shop drawings provide vendors and contractors interpretation of the plans and are crucial for communicating the details of the design and construction. Tracking submittals is an demanding task that can have serious implications on the project budget and schedule. Processing delays the submittal and rendering an approval status may delay the release for fabrication of an equipment item which ultimately will delay its delivery and implementation into the project.[42]

The RFI, or Request for Information, is a valuable tool used by contractors, subcontractors and vendors to communicate with the architect or engineer during the construction process. The RFI can pass through many different hands before it finds the

[42] Wierzbicki and Uzdavinis 2011, 1-8.

desk of the person with the answer. The problem with this form of communication is the time lapse from initiation to solution. This lineage of handlers of information can delay on site decisions that could potentially streamline productivity if there was a direct form of communication in place. Expedition of tasks is important in order for the project to maintain momentum and stay on track.

Daily reports and change orders are also vital in the communication between office and site. It's extremely important for daily activities to be noted and to be objectively filed to show the progress on projects for future reference. Each of the entities at work produces a daily report and they may not be compared for months or even years after the projects are completed. To reduce liability, it is in everyone's interest to communicate daily activities in a concise and detailed manner. Change orders facilitate process communication as the project proceeds but have limitations and challenges of their own. The tracking of the changes are typically communicated via spread sheet that is transposed by numerous parties. Inefficiencies can result because of duplication of effort and potential for errors is large.[43] A management system of change order implementation and tracking would benefit all stakeholders for an efficient construction process.

Communication issues can surface at the end of the project as well as during with regard to punch list and finish out. Punch lists are typically created during the progress of a building and when it is finally ready to be finished out, there can be an issue of choosing which punch list is the most updated. Managing a working punch list through network communication would alleviate some of this pressure at the end of a

[43] Wierzbicki and Uzdavinis 2011, 1-8.

project and allow for the completion of the project to finish in a timely and efficient manner.

Following the completion of construction, a certification of occupancy is issued by the city and there is usually a ceremony involved with all stakeholders. Support staff and management begin operations and further lease up.

OPERATIONS

Once the final product is delivered and the entire project has been realized, tenants move in and the management entity begins the long range management plan developed in the construction and predevelopment phases. During this phase, the closing on permanent financing is also executed and a long term mortgage takes over. Further details of financing will be discussed in a later section of this report. Services and amenities are provided to the tenants during this phase, including supportive services, if the project includes them. Maintenance and management of the units becomes the sole focus as well as enforcing lease compliance and rent collection.

Chapter 4: Financing Housing Projects

PREDEVELOPMENT FINANCING

This section aims to give a brief overview at the process of financing an infill multi-unit housing project, what decisions the project manager or developer might face when selecting lenders, and the timing for each phase of financing. An overview of the City of Austin's sources for predevelopment funding assistance will also be provided. Identifying the applicable amount and nature of financing is essential to realizing a successful project that is delivered on time and functions properly in the operations phase.

Real estate finance typically occurs in a number of financial arrangements. They include predevelopment financing, short-term construction financing, interim financing, and permanent financing.[44] Types of investors, in a broad sense, are lenders and equity investors. The stage of financing is correlative to the stage in which the development happens to be in. The risk involved with each phase is also correlative to the risk involved with the type and amount of financing, as well as the ability to obtain it. Typically the risk is the greatest up front and diminishes throughout the process. This is also correlative to the cost of financing, as higher interest rates and rates of return decrease as the project commences. Lenders are primarily concerned with two risks with which the developer has to adhere to appeasing: loss of loan principle and non-payment of debt service. [45]

While traditional lenders are interested in the maturity of their liabilities with assets, equity investors are more concerned with cash flow, value appreciation, and benefit of tax shelters which becomes apparent in their amount of risk they are willing

[44] Miles, Berens, Eppli, and Weiss 2007, 167.
[45] Miles, Berens, Eppli, and Weiss 2007, 167.

to take as well as the amount of return expected. Typically equity investors look for projects with higher risks and demand higher rate of returns for investments.

Predevelopment funding can come from a number of sources. Financing site control can come in many forms and can, at times, be the most difficult type of financing to acquire in the development process. Commercial banks, REIT's, and traditional financial service companies are the main targets for financing site control in commercial development. Life insurance and mortgage companies will provide site control financing in the hopes of becoming the construction and permanent lender but these entities usually hold higher penalties if they are not selected as such.[46]

Savings and Loans, banks, and other lenders will provide recourse loans to the developer but this is a highly risky venture, as the developer's personal assets act as total collateral for the loan. If the project is unsuccessful or the cash flows are not high enough to cover the debt service, the developer will be forced to turn over his or her own collateral. Three options in contracts of land acquisition and site control financing will be discussed at length: purchase money mortgage, land purchase options, and ground leases.

Financing Land Acquisition for Site Control

The first option is financing through the landowner. Typically this is called a purchase money mortgage which provides 70-90 percent of the sales price and the developers offers up the remainder in equity capital. If the developer meets specific conditions and required payments over a certain time, the deed is then transferred. Due to the nature of this transaction it can be an attractive option to the seller as it allows him or her to defer income taxes from the deal. This can also be an attractive deal from

[46] Miles, Berens, Eppli, and Weiss 2007, 168.

the buyer's end, as the developer only has to bring 10-30 percent of site cost to the table.[47]

Traditionally there is also a subordination clause associated with purchase money mortgages that enables a second-lien holder against the property. Through allowing a financial institution to have position with first-lien rights, the seller is allowing the developer to obtain construction financing more easily. Construction lenders typically require they have first lien so that they will be guaranteed to receive all property liquidation proceeds until the payment of the construction loan is completely paid. Seller financing can be a very good scenario for a developer lacking up front capital due to the leverage of using borrowed funds to accelerate the developments. Also, there is an inherent confidence in the seller with the possibility of the development of their land and provides a higher level of leverage for the developer.

Sales and Options in Contracts

The second type of financing discussed for site control is the land purchase option. There are a number of different land purchase options that will be briefly discussed including: straight option, escalating option, purchase price variant of escalating option, rolling option, lease and re-lease option, and declining balance option. There are quite a few good reasons a developer may wish to employ a lease with option to purchase. This option is frequently used to "disguise" a straight sale where traditional forms of financing are heavily taxed.[48]

In a land purchase option, there is an agreement in place whereby the developer pays the landowner a small retainer to give first right to purchase the land and it is taken off the market so that the developer has exclusive rights to buy. This retainer is

[47] Miles, Berens, Eppli, and Weiss 2007, 167.
[48] Bumenthal and Harrison 1954, 839.

typically 1-10% of the market price of the land value and can be either in a large up front sum or absorbed into the debt service payments over time. It is also typical for the landowner to receive a bonus if the land goes through the process of development preparation to fit the uses of the developer's vision successfully.

Land purchase options are also beneficial to the developer in that the process can continue as the site is under option. If the process is completed successfully, construction begins and the product is realized. If the process runs into issues, the developer can simply walk away from the option and only be out his nonrefundable retainer and whatever legal fees were necessary to make the contract. It is a comparatively low risk approach of controlling the project site before attempting to accommodate proper land use or acquiring further resources. [49]

Within the sales contract is the option contract which includes the requirements for the land to be transferred from buyer to seller, i.e. exercising the option. Other considerations within the contract include how the option will be terminated or extended, the purchase and option price, the developer's right to access the land during option, and the owner's responsibility and ability to cooperate during option. No option contract is the same. Contracts may differ drastically based on the type and terms of option contract.

Some of the different varieties of option contracts include straight option, escalating option, purchase price variant of an escalating option, rolling option, lease and re-lease option, and declining balance option. A straight option is where the landowner sells the land during to a developer during a set period for a specific price. The basic idea with a straight lease option, and aspects of the subsequent options, is to

[49] Miles, Berens, Eppli, and Weiss 2007, 169.

control the property so that you can sublease it to a tenant buyer for positive cash flow and eventually sell it for a profit. Benefits for investors or buyers in straight options included minimal expenses and risk, no closing or holding costs, and there is no long term commitment, with both parties being able to walk away at a certain time with little value lost.

An escalating option is where additional nonrefundable payments are required over time to keep the option open. While this may seem unfortunate for the buyer's perspective, it can be an effective tool in keeping a piece of highly competitive land on the market as well as an incentive to keep the process going as quickly and effectively as possible. It is beneficial from the seller's point of view for the obvious fee structure but also can escalate correlative to the value of land and position the developer is within the development process.

Purchase price variant of an escalating option advances this concept by further delineating when and by how much escalating costs will be. This can also be in the form of a penalty to the purchaser as it is commonly seen in clauses which determine a fee if the option is extended after a certain period of time. Purchase price variant of an escalating option are also typically employed if the value of land increases through variances, conditional uses, or zoning changes.

Rolling options are where a buyer may purchase more than one pieces of land at a future date and are typically seen in deals with real estate transactions where the tracts are larger in size or number. There is commonly a fee associated with extending the option as seen in purchase price variant of an escalating option as escalating option but the buyer still retains the right to extend. Rolling options mitigate risk to developers or buyers by allowing them to not fully commit to purchasing the land until they have demand for a product on a piece of land. While this is beneficial for suburban lot

development, it is also beneficial for urban infill. The reason for extensions may differ but there are still delays in both that would find an option to delay purchase beneficial.[50]

A lease and re-lease option gives the buyer the option to lease and use the land for a certain period of time and then either purchase the land wholly or re-lease to the same status as before for a different term. Finally, a declining balance option is one which a smaller portion of the option payment is applied to the purchase price as the option period continues, thus incentivizing the developer to exercise the option prematurely.[51] Many times the amount paid for site control is minimal and the amount due is almost the entirety of the land price. The vendor has almost as much interest in the land after as before the sale and his or her security of site control may depend on the proper use of the land and the preservation of its value. A typical land contract gives the vendee right of possession but only monetary equity in title, not legal. This process may be expedited through a declining balance option.[52]

The last type of site acquisition discussed is in the form of a ground lease. A ground lease is defined as a long-term lease of unimproved land or previously developed property that requires the tenant to construct new improvements. Ground leases differ from typical commercial leases and are highly complex. The complexity is intensified by the long-term nature of the lease and need to predict events far in the future.[53] A ground lease usually is a lease of unimproved or previously undeveloped property which the tenant razes existing improvements to develop the land. Terms usually run no less than 30 years and anywhere from 50-99 years. The tenant or new

50 Investopedia 2012, N.p. http://www.investopedia.com/terms/r/rolling-option.asp#axzz1pZoecbpB.
51 Miles, Berens, Eppli, and Weiss 2007, 169.
52 Goddard 1932, 10.
53 Main 2002, 17.

developer legally owns the improvement that has been built during the lease and has the obligation to pay all expenses of the property except the mortgage on the land owner's fee interest, as well as income taxes owed by the land owner.[54]

There are many reasons for a developer may choose a ground lease for site control. The developer (tenant) is not faced with large up-front capital required to control the property through a purchase agreement which frees up credit to construct. Secondly, the improvements are depreciable and the land is not which benefits the developer regarding tax deductions. Thirdly, the owner may not be willing to sell the land and this option allows for the development to be realized without many of the hassles of owning the land. Frequently, an owner of property is unwilling to sell because her tax basis in the property is nominal, so that a sale would generate a substantial taxable gain. The Internal Revenue Code, including the estate tax provisions, may encourage holding commercial real estate until death in order to obtain a basis step-up. Many large and notable projects have employed ground leases such as the Empire State Building.[55]

There are also major downfalls to a ground lease from the developer's point of view. The complex nature of the terms of the ground lease and the power the landlord holds in owning the land makes it hard for the developer to navigate through the development process. The developer needs the landowner's permission in permitting, financing, insurance, leasing, and sale and may require approval of design, operations, subleasing, and use change.[56] A properly structured ground lease will allow the tenant's

[54] Main 2002, 1.
[55] Main 2002, 1
[56] Whalen 2012, 3.

equity in the project to be financed, sold and otherwise dealt with independently of the fee ownership of the land.[57]

CONSTRUCTION AND PERMANENT FINANCING

Construction lenders are traditionally commercial banks. Banks continue to loan for construction but alternatives are available from Savings and Loans, credit and finance companies, life insurance policies, and other non-bank lenders. In the search for a construction loan, which falls between the soft costs of predevelopment and the permanent mortgage, local and regional banks are typical lenders for small and medium sized projects. Large, well-capitalized development companies may use national banks and consortium of banks or even their own equity to finance construction.[58]

In order to receive a construction loan, the lender analyzes the developer's creditworthiness which is directly tied to the collateral value based on the cash flow the developer expects at completion of the project, including lease up at stabilization (90-95% occupied). Most construction loans are structured at an adjustable rate, typically with a 2-4 year term. Oftentimes, this term extends 6-18 months after the project is completed and income is stabilized. Rates on all short term loans issued by banks, construction loans included, are tied to the money market and other short-term interest rates.

As of 2006, 44% of the cumulative debt investment outstanding in commercial real estate is owned by commercial banks, while Savings and Loans comprised 7% of the overall debt market.[59] The reason for this is the fact that banks are typically the local and regional institutions familiar with the local commercial lending atmosphere and

[57] Whalen 2012, 7.
[58] Miles, Berens, Eppli, and Weiss 2007, 170.
[59] Miles, Berens, Eppli, and Weiss 2007, 170.

have ties to mortgage conduits and loan participation networks.[60] Depending on market conditions and bank's risk assessment, construction loans usually range from 0.5 to 2 percentage points above the prime rate but may be as much as 6 points over the prime rate. As of March 2012, the prime rate was 3.25%.[61] After construction and lease up are completed the developer then acquires a permanent loan, or sells the development to a third party to pay for the principle and accrued interest of the construction loan.

Permanent loans are based on the income stream and are primarily sourced through life insurance companies with commercial banks having a limited role.[62] Permanent loans are issued after the building is fully occupied and income has stabilized but arrangements can be made before even seeking a construction loan. In order for a developer to take out a permanent loan, there are six obligations on the part of the developer and his team. First, a Certificate of Occupancy must be obtained from the city stating that the building is up to code and must be acquired before any tenants occupy the building. Second, cash flow must be stabilized in conjunction with occupancy. In other words, 90-95% of the units must be occupied and paying rent.

Third, the minimum debt service coverage ratio must be successfully met. The debt coverage ratio is what the bank uses to determine creditworthiness for the loan and ideally should be above 1, in the range of 1.2 to 1.6. Next, a maximum loan-to-value ratio must be calculated and applied to the property value, typically 70-85% of the property value. This is also another way of analyzing the loan to collateral amount. Fifth, the developer must acquire lien waivers which state that the subcontractors on the project have been fully paid and will not claim any liens on the property that states that

[60] Miles, Berens, Eppli, and Weiss 2007, 171.
[61] Bankrate. 2012, N.p. http://www.bankrate.com/rates/interest-rates/prime-rate.aspx
[62] Miles, Berens, Eppli, and Weiss 2007, 172

they haven't. Finally, permanent lenders require the loan be funded in a funding window, or a specific time period.

FINANCING INFILL DEVELOPMENT IN AUSTIN

In the following section, an inquiry is made about how to finance infill development specifically. What are the challenges in finding funding? What public entities finance infill? Where do sources of funds come from? What are lenders attitudes towards infill projects? What instills confidence in lenders to embark on financing an infill project? What are local sources in Austin? This section aims to find answers to the inquiries above.

CHALLENGES

Financing infill can be challenging. There are typically high development costs, lack of experience on the part of the developer, a lack of good market research for the product, environmental risks, and a lack of comparable products for appraisal. Because of these reasons, lenders are hesitant to embark on projects with higher risk factors until a developer proves competence in delivering such unique products. Developers pay a premium for capital and the complex nature of the financing makes each project's financial structure unique, further driving up risk. Because most lenders specialize in one or two types of real estate development, they tend to avoid mixed-use projects which may conflict with their successful track record. Furthermore, lenders are hesitant due to the fact that an exit strategy for mixed use projects is hard to determine.[63]

[63] Suchman 2002, 18.

SOURCES

Private Financing Sources

Infill development may be financed by a number of different entities. From the private debt financing side, those entities largely remain the same as those mentioned in the previous section. Due to the complex nature of mixed use infill projects, public-private partnerships are often the route developers seek to finance a project. Syndication, or a group of equity investors who form a legal business entity, is also a viable option for finding equity.

Public Financing Sources

Public funds made available to finance infill projects come from numerous sources. Three of the most common sources from the federal level are Community Development Block Grants, New Market Tax Credits, and HOME funding. Started in 1974, the CDBG program is one the US Housing and Urban Developments longest and most successful programs. It provides annual grants to 1209 different local and state government entities for financial allocation.[64]

Community Development Block Grants

The CDBG program attempts to work with communities to tackle the issue of affordable and decent housing. Allocation is divided between "non-entitlement" and "entitlement" communities based on their size and various needs. Entitlement communities include central cities of MSAs and metropolitan cities over 50,000

[64] Hud.gov 2012, N.p. Accessed Feb. 15, 2012. http://portal.hud.gov/hudportal/HUD?src=/program_offices/comm_planning/communitydevelopment/programs.

residents as well as urban counties with a population of over 200,000 while "non-entitlement" communities comprise the remainder of target communities.[65]

Program areas include Entitlement Communities which allocates annual grants to larger cities while State Administered CDBGs award grants to smaller units of local governments. The Section 108 Loan Guarantee Program also allows smaller communities to apply for funding. The Neighborhood Stabilization Program provides grants to communities where foreclosures have negatively impacted the area. Infill development is also targeted through the Brownfields Economic Development Initiative which, in conjunction with the Section 108 program.

New Market Tax Credits

New Market Tax Credits originated from a program through the US Department of Treasury's Community Development Financial Institutions Fund (CDFI Fund). It was created in 2000 by Congress in order to stimulate new or further investment into businesses and real estate development in low-income communities by incentivizing individual and corporate investors to create projects based on a Federal income tax credit for equity investments in Community Development Entities (CDEs). According to the CDFI Fund's informational and application website, the credits total 39 percent of the original investment and are claimed over a seven year period. Since the program's initiation, there have been a total of 664 awards totaling $33 billion.

To qualify for a New Market Tax Credit, the organization must be a domestic corporation or partnership at the time of the application, determine a primary goal of

[65] Hud.gov 2012, N.p. Accessed Feb. 15, 2012. http://portal.hud.gov/hudportal/HUD?src=/program_offices/comm_planning/communitydevelopment/programs

providing investment capital for low income communities, and provide continued accountability to those residents through a board of directors or advisory board.[66]

HOME Funding

HOME funds are also awarded annually by HUD to States and local governments to fund a wide range of undertakings in conjunction with non-profit organizations that build, acquire, and/or revitalize affordable housing for rent or unit ownership as well as providing direct rental aid to low income populations. It is the largest Federal block grant to State and localities that is explicitly used for creating affordable housing for low-income households. The dynamic program allows allocating entities to use the funds for grants, direct loans at low interest rates, loan guarantees or other credit enhancement programs, rental assistance, or security deposits.[67]

All states are eligible for at least 3 million dollars in HOME funds while local jurisdictions are eligible for at least $500,000. The program also allows for jurisdictions that do not qualify for direct federal allocation to apply jointly with other jurisdictions as a "legally binding consortium" in order to qualify or jurisdictions may apply directly through their respected state. [68]

The eligible use of funds include providing assistance to home purchasers, rehabilitation financing assistance to homeowners and new homebuyers, development or rehabilitation of housing for rent or homeownership or "other reasonable and necessary expenses related to the development of non-luxury housing" including razing

[66] CDFIfund.gov. 2012, N.p.Accessed March 20, 2012. http://cdfifund.gov/what_we_do/programs_id.asp?programID=5
[67] Hud.gov. 2012, N.p. Accessed February 19, 2012. http://www.hud.gov/offices/cpd/affordablehousing/programs/home/
[68] Hud.gov. 2012, N.p. Accessed February 19, 2012. http://www.hud.gov/offices/cpd/affordablehousing/programs/home/

existing dilapidated improvements, relocation expenses, and site acquisition or improvement.[69]

The City of Austin allocates financing for potential infill housing projects through its department of Neighborhood Housing and Community Development. Community Housing Development Organizations (CHDOs) can apply for funding through Housing Developer Assistance programs (HDAs). HDAs offer assistance to both non-profit and for-profit developers to create affordable housing, whether the project consists of home ownership or rental units.

The most influential aspect of the Housing Developer Assistance Programs is the provision of gap financing to developers to create affordable housing projects. The source of these funds comes from CDBGs and funds from HOME. The programs are also financed through the 55 million dollar General Obligation Bonds that the city passed in 2006. Other incentives for developers to build affordable housing that are indirect financing mechanisms include fee waivers, out of cycle application processing, density and height bonuses, and building a percentage of a market rate to be affordable under income restrictions set by the city.

[69] Hud.gov. 2012, N.p. Accessed February 19, 2012. http://www.hud.gov/offices/cpd/affordablehousing/programs/home/

Chapter 5: Central East Austin Multifamily Market Analysis

As we have seen in the previous chapter, real estate market analysis is a vital piece of the process for any concept of a project to be realized. It forms the basis for the assumptions that are made about the future value of a real estate development.[70] The tool of market analysis is very crucial to minimizing and controlling risk when embarking on a project. Proper data and research is essential to providing the developer with inputs for cash flow analysis. Market analysis in any spectrum of business is very much a process. It illustrates the point at which consumer demand meets product supply by giving producers an indication of what the needs and desires of the market participants are and what the existing market selection encompasses.

Supply and demand analysis is only part of the entire feasibility process. The analysis sets up assumptions for the rest of the study. It begins to answer the question "will the project succeed in solving a problem while interfacing with the land and with the community?"[71] While this type of feasibility may find answers to the economic constraints on a particular market, there are other considerations that require further study, such as the physical restrictions on the land, political and social restrictions to development, and financial analysis. As stated by real estate legend James Graaskemp, "A real estate project is 'feasibly when the real estate analyst determines that there is a reasonable likelihood of satisfying explicit objectives when a selected course of action is tested for fit to a context of specific constraints."[72]

As users of real estate development products require a specific type of space in a specific location, both the supply and demand aspects of the market are segmented.

[70] Miles, Berens, Eppli, and Weiss 2007, 415.
[71] Graaskemp 2001, 515.
[72] Graaskemp 2001, 515.

Market segmentation is the process of identifying and analyzing submarkets for a larger group of property markets.[73] Real estate markets are segmented in order to decipher different products for different spatial needs. As these types of products are subdivided by type, they can also be further divided into similar characteristics such as shared amenities, price, and geographical location. They are both location and type specific and space markets tend to be local rather than national or regional.[74] This also causes rent prices to differ based on location and type.

METHODOLOGY

To determine market feasibility for new multifamily unit construction in the subject area, a macro analysis of Austin MSA demand will be conducted through data acquired from Moody's.com and Capitol Market Research projections. New multifamily demand is based on assumptions of population increase, employment increase, household size, and new renter households in the area.

Following a macro analysis on the MSA level, the submarket will be defined by way of US Census boundaries. To accurately depict the demand for multi-family units in a submarket area, the regional demand must be disaggregated to the submarket level, which the market definition aims to accomplish. The area must be small enough to understand local products and trends as well as the area's association and implication to regional trends.

Using the submarket definition, the multifamily unit demand will be calculated based on population forecasts from the Texas State Data Center February 2009, Scenario 1.0. A market capture rate will be determined from comparing MSA growth to submarket area growth. Following tenure split and household size information derived

[73] Miles, Berens, Eppli, and Weiss 2007, 416.
[74] Geltner and Miller 2000, 4.

from Census data, the submarket's new multifamily demand will be forecasted and analyzed.

To provide an economic "snapshot" of the area, it is important to understand trends in household income distribution. Household income distribution, share of income, and share of increase from 2000-2010 will be calculated in order to understand submarket pricing assumptions of new market demand. US Census data and 2010 American Community Survey data are the primary sources of information for this section of the report.

Finally, based on the assumption that households spend 30% of their income on housing, a multifamily demand forecast by income category will be analyzed. The forecast will be considered using income distributions as a share of MSA median family income. This will complete the demand analysis of the feasibility piece of this report.

Similar to the demand part of the report, the supply aspect of the feasibility will include a macro analysis of the Austin MSA and its respective market conditions and development trends. Historical and current trends will be analyzed and discussed to understand number of units, occupied units, the addition of new units, absorption and rents.

Using the submarket boundary areas to target Central East Austin, the report will then illustrate the current and historical conditions of the submarket. Historical and current trends will be analyzed from a period of 2004-2011 to show number of units, occupied units, new unit construction, absorption and rents. Existing inventory will be analyzed to show each individual project under review with historical occupancy and rents in comparison to the Austin market as a whole.

To understand consumer preferences and product type, an amenity and tenant profile will be produced using interview data from Capitol Market Research. This could

be used in conjunction with consumer studies to find gaps in demand and is important to feasibility to show current conditions of product type as well as the type of populous occupying the projects.

AUSTIN EMPLOYMENT GROWTH

Historically, the employment growth in Austin has been fickle over the last few decades. This can be attributed to national and international trends that affect the local economy, the latest recession included. The labor market saw continued growth in the mid 1990's due to the internet boom but slowed in 1996 and 1997. Regaining momentum with extreme growth in the three year period between 1998 and 2000, the market stagnated in correlation with the dot com bust of 2001. Following the failure of the speculative measures of the internet bubble, the Austin MSA saw negative job growth from 2002-2003. As the economy recovered, 14,400 jobs were added in 2004 and the overall growth rate increased consistently for the subsequent four years, the height of which was the addition of 34,100 jobs in 2007. As the national housing crisis came to a head in early 2008, there was speculation that Austin would be unaffected by the negative effects of national and statewide trends.[75]

The credit crunch finally saw local implications in late 2008 and 2009 as new development was curtailed by the lack of access to national and international credit markets. New job creation decreased to -16,078 in 2009. Recovering slightly in 2010 the market added 9,001 jobs in 2010. According to Moodys.com and Capitol Market Research's forecast, the Austin MSA has recently seen an increase of 9,200 jobs as of

[75] National Economic Trends 2012, 3.

July 2011 and forecasts increasing job creation at an average rate of 2.25% over the next decade. The entire forecast can be seen in Table 1.

Table (1)

Historical & Projected Employment Growth

Austin MSA

Year	Total Wage & Salary Emp.	Annual Change	Percent Change
1990	390,600	...	...
1991	402,800	12,200	3.12%
1992	424,200	21,400	5.31%
1993	453,600	29,400	6.93%
1994	484,400	30,800	6.79%
1995	516,500	32,100	6.63%
1996	540,900	24,400	4.72%
1997	566,300	25,400	4.70%
1998	600,700	34,400	6.07%
1999	635,400	34,700	5.78%
2000	672,700	37,300	5.87%
2001	674,100	1,400	0.21%
2002	658,400	-15,700	-2.33%
2003	653,000	-5,400	-0.82%
2004	667,400	14,400	2.21%
2005	692,200	24,800	3.72%
2006	723,200	31,000	4.48%
2007	757,300	34,100	4.72%
2008	777,300	20,000	2.64%
2009	761,222	-16,078	-2.07%
2010	770,223	9,001	1.18%
2011	785,863	15,640	2.03%
2012	804,250	18,387	2.34%
2013	822,353	18,103	2.25%
2014	840,828	18,475	2.25%
2015	859,738	18,910	2.25%
2016	879,093	19,355	2.25%
2017	898,903	19,810	2.25%
2018	919,180	20,277	2.26%
2019	939,936	20,756	2.26%
2020	961,181	21,245	2.26%

Source: Texas Workforce Commission, Annual Average Wage & Salary Employment, Adjusted Annual Average, 1990-2010
Forecasted employment increase based upon forecast obtained from Economy.com in July 2011

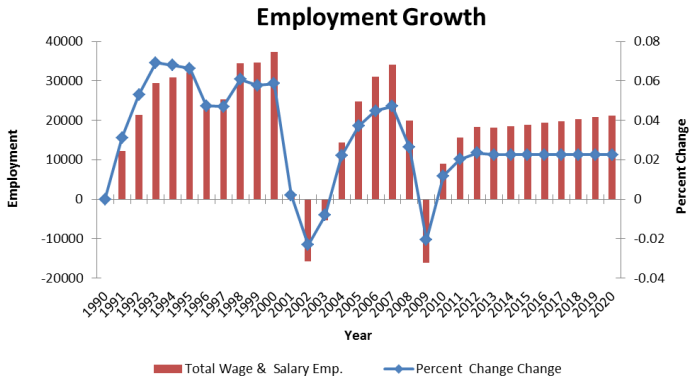

Table 1: Austin Employment Growth[76]

[76] Source: Capitol Market Research.

AUSTIN MULTIFAMILY DEMAND

The increase in population is directly related to the access of jobs in the area and Austin has been fortunate due to its large tech firm presence and creative sector job base to see this effect firsthand. Austin has outperformed national and state trends in employment. As of January 2012 the unemployment rate in Austin fell from 6.6% to 6.3% in November 2011. Statewide rates have been around 7.8%while the national rate stands at 8.5% as of January 2012.[77]

The following table presents data of forecasted demand of new rental units that the MSA will need to keep up with the demand driven by the employment forecasted. New multifamily demand is represented as 91.7% of the total rental unit demand due to the fact that rental housing consists of different building typologies. In this forecast, the population to employment ratio has been held constant at 0.518 and household size is assumed to remain constant at 2.67 based on the American Community Survey 2005-2007 data. The owner demand of 58.2% is based on 2000 tenure split.

[77] Austin Business Journal 2012, N.p.

Housing Demand
Austin MSA

Year	Employment Increase	Population Increase	Household Size	New Households	Renter	MF Demand
2011	15,640	30,193	2.67	11,308	4,727	4,207
2012	18,387	35,496	2.67	13,295	5,557	4,946
2013	18,103	34,948	2.67	13,089	5,471	4,869
2014	18,475	35,667	2.67	13,358	5,584	4,970
2015	18,910	36,505	2.67	13,672	5,715	5,086
2016	19,355	37,364	2.67	13,994	5,850	5,206
2017	19,810	38,244	2.67	14,324	5,987	5,329
2018	20,277	39,145	2.67	14,661	6,128	5,454
2019	20,756	40,069	2.67	15,007	6,273	5,583
2020	21,245	41,014	2.67	15,361	6,421	5,715

Table 2: Housing Demand for Austin MSA[78]

CENTRAL EAST AUSTIN MARKET DEFINITION

To accurately represent the conditions of the market for multifamily development and adequately represent the demand for new units, regional demand must be disaggregated to the respected market level. Often in feasibility studies this is done at the neighborhood or small market areas. In order to capture the demand of regional trends, the submarket must be large enough to consider these regional trends but small enough to offer a snapshot of the local conditions.

The submarket designation must also be considerate of local image and market perceptions. This can be somewhat difficult because one submarket can blend with another without clear geographical barriers. For the purpose of this report, the submarket for product inventory is defined as the area east of I-35, north of Cesar Chavez, south of Highway 290 and west of highway 183. With respect to delineating a submarket boundary in order to capture the proper demand based on local conditions of local in migration to the east Austin area, the process must be done with regard to

[78] Source: Capitol Market Research.

relevant and obtainable information. In order to capture the proper demand based on local conditions of local in migration to the east Austin area the author has expanded north and west in determining demand. This area consists of Austin zip codes 78702, 78721, 78722, 78723, and 78752. A map of the zip code boundaries can be found on the subsequent page.

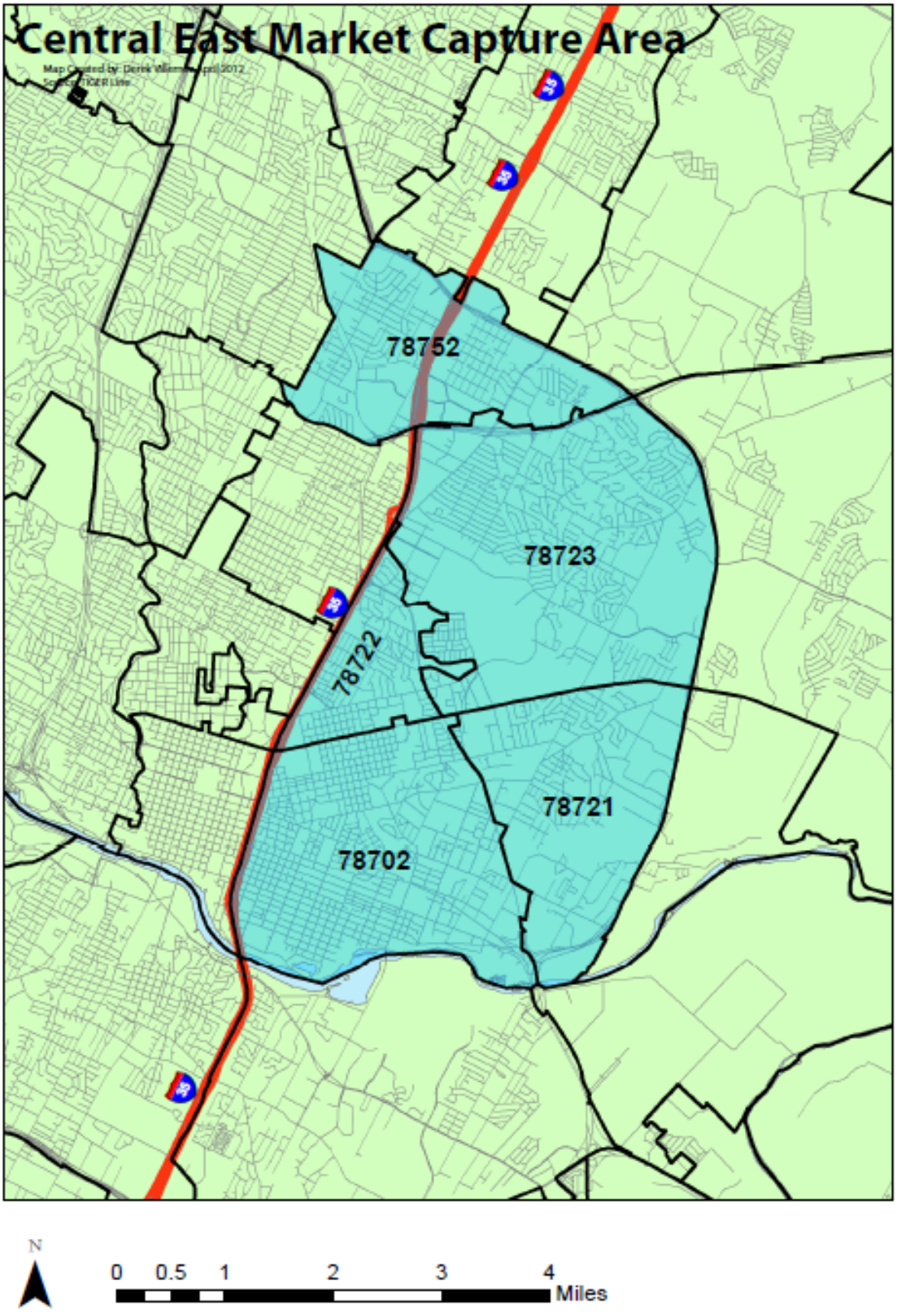

Figure 4: Central East Austin Market Capture areas

CENTRAL EAST AUSTIN MULTIFAMILY UNIT DEMAND

To properly understand the demand for multifamily units, the area growth must first be realized and compared to the overall population growth to form a capture rate, or rate of submarket growth divided by overall MSA growth. This was done using 1990 and 2000 Census data and is provided in the table below.

Market Area vs. Austin MSA Population Comparison

1990 MSA	2000 MSA	Real Growth	% Growth
781,572	1,249,763	468,191	59.90%

1990 Market Area	2000 Market Area	Real Growth	% Growth
22,972	30,110	7,138	31.07%

Capture Rate
3.16%

Table 3: Capture area vs. Austin MSA Population Comparison[79]

The capture rate is then applied to the forecasted MSA growth to derive the forecasted new market area population. Household size is calculated using the most recent data from population and household calculations. The derivation and shift in household size is shown in the following tables.

1990 Zip Codes	Population	Pop in HH	Total Households	Household Size	Number of Owners	Number of Renters	% Owner	% Renter
78702	21,432	21,432	6,961	3.08	3136	3,825	44.7%	54.5%
78721	9,091	9,091	2,803	3.24	1,604	1,199	57.6%	43.0%
78722	5,588	5,588	2,458	2.27	1,151	1307	46.8%	53.1%
78723	22,972	22,972	8,806	2.61	4286	4520	47.7%	50.3%
78752	13,311	13,311	5,777	2.30	1,414	4363	24.4%	75.3%
Total / Avg.	72,394	72,394	26,805	2.70	11,591	15,214	43.2%	56.8%

[79] Source: 1990 and 2000 U.S. Census, SF-1 Dataset.

Table 4: 1990 Market Area Population and Housing Profile[80]

2000 Zip Codes	Population	Pop in HH	Total Households	Household Size	Number of Owners	Number of Renters	% Owner	% Renter
78702	22,534	21,990	7,242	3.11	3,419	3,823	47.2%	52.8%
78721	10,124	10,024	3,099	3.27	1,792	1,307	57.8%	42.2%
78722	6,385	6,153	2,886	2.21	1,297	1,589	44.9%	55.1%
78723	30,110	29,900	10,430	2.89	4,612	5,818	44.2%	55.8%
78752	18,030	17,790	6,862	2.63	1,800	5,062	26.2%	73.8%
Total / Avg.	87,183	85,857	30,519	2.86	12,920	17,599	42.3%	57.7%

Table 5: 2000 Market AreaPopulation and Housing Profile[81]

When analyzing the data presented, it can be seen that the market area has shown an increase in all areas of population and household growth, which has been stated as one of the largest demand for new housing. Population has increased a total of 14,789 persons while the populations in households and total households have increased by 13,463 and 3,714, respectively. Average household size has trended upward from 2.70 to 2.86 over the course of the subsequent decade. Number of renters has increased by 2,385 as well as number of owners by 1,329. However, the percent renter has increased in the area by .9%, which is also a positive trend when determining demand for multifamily units.

Based on the historical demographic and housing data, trends the capture rate can then be applied to forecasted population growth to get anticipated population for the market area. This then drives the demand for new households based on the average household size. Forecasted population data was obtained from the Texas State Data Center and is presented in the table below.

[80] Source: 1990 and 2000 U.S. Census, SF-1 Dataset.

[81] Source: 1990 and 2000 U.S. Census, SF-1 Dataset.

Texas State Data Center
2008 Projections (February 2009)
Scenario 1.0

Year	Population	Population Growth
2000	1,249,763	…
2001	1,299,205	49,442
2002	1,348,646	49,442
2003	1,398,088	49,442
2004	1,447,529	49,442
2005	1,496,971	49,442
2006	1,554,480	57,509
2007	1,611,990	57,509
2008	1,669,499	57,509
2009	1,727,009	57,509
2010	1,784,518	57,509
2011	1,850,685	66,167
2012	1,916,852	66,167
2013	1,983,019	66,167
2014	2,049,186	66,167
2015	2,115,353	66,167
2016	2,191,378	76,025
2017	2,267,402	76,025
2018	2,343,427	76,025
2019	2,419,451	76,025
2020	2,495,476	76,025

Table 6: Austin MSA Population Projection[82]

The 2000 tenure split is then applied to recent building permit data acquired from the Texas Real Estate Center at Texas A&M. Multifamily (permits to build over 5 dwelling units) and permits to construct 2-4 dwelling unit permits are aggregated and compared to provide a link to construction trends in the Austin MSA in determining how many dwelling units will be built to fit the multifamily product. Building permit data is presented below.

82 Source: Texas State Data Center

2-4 Dwelling Units					5+ Dwelling Units				
Date	Number of Dwelling Units		Average Value per Dwelling Unit		Date	Number of Dwelling Units		Average Value per Dwelling Unit	
	Units	Percent Change	Value ($)	Percent Change		Units	Percent Change	Value ($)	Percent Change
2000	780	126.7	57,100	-14.6	2000	8,064	2.7	41,000	0.7
2001	354	-54.6	50,600	-11.4	2001	8,345	3.5	36,800	-10.2
2002	590	66.7	55,000	8.7	2002	5,570	-33.3	38,500	4.6
2003	715	21.2	54,400	-1.1	2003	2,499	-55.1	54,500	41.6
2004	600	-16.1	64,700	18.9	2004	3,106	24.3	56,700	4
2005	634	5.7	85,700	32.5	2005	5,261	69.4	53,300	-6
2006	1,082	70.7	96,900	13.1	2006	7,399	40.6	66,500	24.8
2007	881	-18.6	80,300	-17.1	2007	6,902	-6.7	101,600	52.8
2008	270	-69.4	118,400	47.4	2008	3,812	-44.8	123,800	21.9
2009	31	-88.5	90,400	-23.6	2009	2,049	-46.2	84,600	-31.7
2010	296	854.8	111,100	22.9	2010	2,290	11.8	79,900	-5.6
2011	81	-265%	83,963		2011	3944	41.9%	66,225	-20.6%
2012	10	150	132,500	-3.6	2012	835	-372%	53,600	-23.6%
Total Permits	6,324				Total Permits	60,076			

Total Permits
66,400 Permits
90.5% Multifamily

Table 7: City of Austin Building Permits.[83]

Final demand for the market area can then be calculated from the subsequent data. The findings are presented below:

Multi-Family Unit Demand
East Central Market Area

Year	Forecasted MSA Population Growth	Capture Rate	New Population	Household Size	New HH	% Renter	% Multifamily	Multifamily Demand
2012	66,167	3.16%	2,090	2.86	731	57.7%	91.5%	386
2013	66,167	3.16%	2,090	2.86	731	57.7%	91.5%	386
2014	66,167	3.16%	2,090	2.87	728	57.7%	91.5%	384
2015	66,167	3.16%	2,090	2.87	728	57.7%	91.5%	384
2016	76,025	3.16%	2,401	2.87	837	57.7%	91.5%	442
2017	76,025	3.16%	2,401	2.88	834	57.7%	91.5%	440

Table 8: Multifamily Unit Demand for East Central Market Area.[84]

[83] Source: Texas Real Estate Center at Texas A&M.

Within the east central market area as previously defined, there is quantitative demand at an average of 404 units a year with an average growth in demand of 2.5% over the term of 5 years. To understand the demand based on affordability, income data was collected for the five zip codes. Using U.S. Census income data, the income groups were segmented to show the number of cases of segmented income based on the median household income and further segmented based on percent median household income of $74,90085, established by the Federal Financial Institutions Exam Council, a wing of the US Department of Housing and Urban Development. The segmented household cases and the change in income distribution are shown below:

2000 Zip Code	1	2	3	4	5	6	7	8	9	Total
78702	1,777	769	1,265	1,235	974	784	241	112	132	7,289
78721	557	317	570	497	466	478	167	28	67	3,104
78722	320	249	405	407	452	605	176	117	99	2,830
78723	1,098	838	1,658	1,735	1,912	2,093	726	245	208	10,513
78752	910	535	1,351	1,108	1,147	1,103	373	114	95	6,736
Total	4,662	2,708	5,249	4,982	4,951	5,063	1,687	616	601	30,519

1990 Zip Code	1	2	3	4	5	6	7	8	9	Total
78702	2,844	1,040	1,556	763	475	225	38	7	13	6,961
78721	921	352	759	359	245	144	18	0	5	2,803
78722	598	415	438	397	335	192	55	15	13	2,458
78723	1,767	877	1,828	1,366	1,426	1,161	305	42	34	8,806
78752	1,605	878	1,468	922	428	322	96	30	28	5,777
Total	7,735	3,562	6,049	3,807	2,909	2,044	512	94	93	26,805

Segmentation Key	
1	Less than $10,000
2	$10,000 to $14,000
3	$15,000 to 24,999
4	$25,000 to $34,999
5	$35,000 to $49,000
6	$50,000 to $74,000
7	$75,000 to $99,999
8	$100,000 to $124,999
9	$125,000 or more

Table 9: Capture Market Income Distribution and Segmentation Key.[86]

[84] Source: Texas State Data Center.

[85] HUD.gov 2012. 1. Accessed March 20, 2012. http://www.ffiec.gov/hmda/pdf/msa11inc.pdf.

[86] Source: American Community Survey.

Change in Income Distribution
East Central Market Area, 1989-1999

Income Category	1989 Households	Share	1999 Households	Share	1989-1999 Increase	Share of Increase
Less than 50% MHI	10,753	40.1%	12,343	40.4%	1,590	42.8%
50-60% MHI	1,804	6.7%	2,453	8.0%	648	17.5%
60-80% MHI	3,445	12.9%	4,178	13.7%	733	19.7%
80-100% MHI	2,666	9.9%	3,271	10.7%	605	16.3%
100-120% MHI	2,168	8.1%	2,117	6.9%	(51)	-1.4%
More than 120% MHI	5,968	22.3%	6,157	20.2%	189	5.1%
Total	26,805	100.0%	30,519	100.0%	3,714	100.0%
Primary Market Area MHI	$18,543		$30,115		$11,571	
Austin MSA MHI	$28,747		$48,950		$20,203	

Table 10: Change in Income Distribution for East Central Market Area, 1989-1999.[87]

The market share of households within the market area has seen an increase in every segment of income below 100% MHI. 100-120% MHI and over 120% MHI have seen a decrease in number of households; however the share of households earning more than 120% income has increased by 5.1%. Thus, it can be inferred early in the data analysis that the potential multifamily product type to be delivered to a target market would probably not demand a luxury or higher end model.

To analyze demand based on affordability for the submarket area, a comparison of demand segmented to the market area's income data. The table below shows segmented demand with regards to the market area's ability to rent at different monthly intervals. The table below shows the demand with the assumption that 30% of household income on housing and are segmented as such with regard to the area's income.

[87] Source: 1990 US Census; American Community Survey.

Multi-Family Demand by Housing Cost
East Central Market Area

Year	Less than $916	$916 to $1,100	$1,100 to $1,466	$1,466 to $1,833	$1,833 to $2,199	More than $2,199	Total
2012	139	51	69	53	15	59	386
2013	139	51	69	53	15	59	386
2014	138	51	69	53	15	58	384
2015	138	51	69	53	14	58	384
2016	158	59	80	62	16	66	442
2017	158	59	80	61	16	66	440

Table 11: Multi-Family Demand by Housing Cost

MULTIFAMILY TRENDS IN THE AUSTIN MSA

The majority of Austin's multifamily products lie near major employers, the university areas, and large centers of activity, namely the downtown area. This can be seen in the areas surrounding the University of Texas, St. Edwards University, various Austin Community College locations, the Dell and IBM campuses, and Seton Hospital. Recently, Austin's downtown area has seen a lack of rental units but since 2009, four different communities were built to lessen the gap between demand and supply.

After the internet boon in the 1990s, construction of multifamily began to pick up as the economy grew. According to Capitol Market Research's data, 1991 was the benchmark year when 148 units were built as 220 were absorbed. Citywide rents sat at $.57 per square foot and the occupancy was a moderately healthy 93.7%. Through 1996, the absorption and average rent per square foot accelerated greatly. New unit completions topped off the decade at 6,405 units in 1996. That number was trumped in 2001 at 8,472 new units. Occupancy in the 1990's peaked in 1994 at 97.4% and reached 98.2% mid-year 2000. Rents continued to grow through the nineties and at year end of 1999 they stood at $.98 per square foot, growing over 37% for the decade.

The market carried its momentum into the new decade as the occupancy was unchanged at 97.6%, 5,923 units were added and 5,773 units were absorbed. The first part of the 2000s experienced declining rent prices and relatively slower new unit construction. For the first time in many years, new unit construction dramatically exceeded absorption and the market dipped radically as occupancy went from 97.6% in December of 2000 to 90.0% in 2001.

At the start of late 2003, new construction began to slow and demand regained momentum. Continued positive absorption was seen from 2004-2007 however in 2008 the occupancy decreased over 5 points from 2007. At year end in 2010 the market occupancy rate rose another 4.4% to 94.8% with net rental rates, including concessions, increasing $0.05 to $0.98 per square foot from 2009. At year's end of 2011, Capitol Market Research's inventory of 147,648 total multifamily rental units showed an increase of $0.07 per square foot to bring the average rent to $1.05. 48,271 total apartment units have been completed in 187 complexes which include 3,225 units in 12 communities developed in 2010 alone. At the end of December 2011, three new communities delivered 522 units last year.

Furthermore, in 2004, unit demand outweighed new unit completion by 1,979 units and was trumped again in 2005 by 4,424. This deficit in new unit construction has permitted the existing units to be absorbed by the market and for the first time since 2000, net rental rates went up to $0.82 per square feet. In conjunction, occupancy increased to 92.7%. As rents and occupancy continued to increase, December 2007 reported rents at $0.96 per square foot. New unit completions were reported at 3,416 as 6,562 units were absorbed in 2007. As the market downturn hit in 2008, the relationship between new unit construction and absorption inverted dramatically. 8,404 units were delivered to the market as only 1,526 units were absorbed. The situation

improved slightly in 2009 as 9,025 units were delivered ad 6,750 were absorbed. The market showed drastic improvement in 2010 as a staggering 8,773 units were absorbed while only 2,906 units were delivered. As unit availability diminished in 2011, absorption decelerated to 2,245 and only 546 units were added to the market. Rents have responded to the decrease in absorption and new unit construction and went from $0.98 per square foot to $1.05 per square foot at year end 2011.

Historical data showing occupancy, average rent, new unit completions, and absorption from 1991 through December 2011 are shown on the following table. The data is taken from Capitol Market Research's semi-annual survey of communities with over 50 units in the Austin area.

Citywide Apartment Summary

December 1991 - December 2011

Date	Total Units	Occupied Units	Percent Occupied	New Units Added	Calculated Absorption	Rent per Sq. Ft.
1991	61,113	57,266	93.7%	148	220	$0.57
1992	61,118	58,448	95.6%	348	1,160	$0.64
1993	63,074	61,174	97.0%	594	1,229	$0.71
1994	66,379	64,662	97.4%	2,178	2,212	$0.75
1995	69,324	67,101	96.8%	3,010	3,098	$0.79
1996	77,019	71,452	92.8%	7,384	3,882	$0.81
1997	81,382	77,270	94.9%	4,770	5,697	$0.82
1998	86,428	83,683	96.8%	4,778	5,929	$0.86
1999	89,699	87,531	97.6%	2,499	3,643	$0.91
2000	96,114	93,786	97.6%	5,923	5,773	$0.98
2001	105,162	94,651	90.0%	9,351	1,368	$0.94
2002	113,380	99,794	88.0%	8,432	4,925	$0.86
2003	120,169	107,290	89.3%	4,912	5,828	$0.81
2004	122,323	111,786	91.4%	2,262	4,133	$0.81
2005	124,325	117,389	94.4%	1,819	6,243	$0.85
2006	126,842	120,304	94.8%	2,993	2,356	$0.91
2007	128,900	124,558	96.6%	3,416	5,562	$0.96
2008	137,005	125,284	91.4%	8,404	1,526	$0.97
2009	145,734	131,686	90.4%	9,025	6,750	$0.93
2010	147,045	139,361	94.8%	2,906	8,773	$0.98
2011	147,648	141,614	95.9%	546	2,245	$1.05

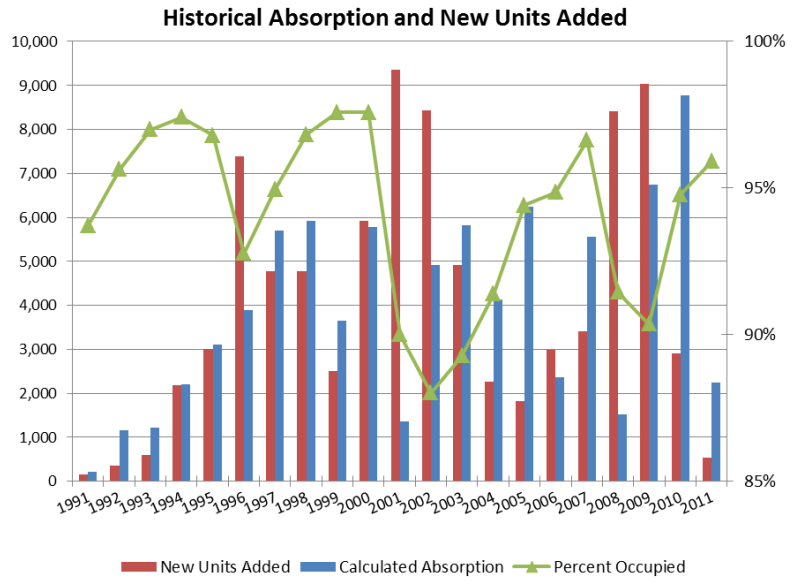

Table 12: City-Wide Apartment Summary[88]

[88] Source: Capitol Market Research.

CENTRAL EAST AUSTIN APARTMENT MARKET CONDITIONS

Using data collected from Capitol Market Research's December 2011 semi-annual survey, a collection of 35 apartment communities consisting of 5,802 units were evaluated in the supply side of this feasibility report. An analysis of the historical trends of the Central East Austin market area's occupancy, rents, and annual absorption shows that the market area has responded to overall trends in the Austin market; however, the rents have been historically lower than the larger market. Over the past seven years, the submarket area has added 1,514 units to the market area. Rents have grown at an average rate of 4.71% while experiencing an average absorption per year of 236 units.

Occupancy has been volatile over the past seven years. After dropping from 86.6% in 2004 to 72.0% in 2005, the market saw consistent absorption with few new completions which aided the recovery in occupancy to 92.9% and 95.8% in 2006 and 2007, respectfully. The market peaked in 2007 at 95.8% but saw a drastic decrease over the next two years, as it bottomed out at 89.4% As 363 units were absorbed in 2010 while 151 were added, the market tightened up in 2011, bringing the December 2011 occupancy to 92.4%. A table with the full historical snap shot is illustrated below.

Central East Market Area Historical Occupancy
2004-2011

Year	Number of Units	Units Occupied	Occupancy Rate	Rent per Sq. Ft.	Units Added	Annual Absorption
2004	4,337	3,757	86.6%	$0.67	…	…
2005	4,337	4,071	72.0%	$0.72	0	314
2006	4,737	4,403	92.9%	$0.74	400	332
2007	4,737	4,536	95.8%	$0.78	0	133
2008	5,255	4,594	87.4%	$0.83	518	58
2009	5,700	4,731	83.0%	$0.86	445	137
2010	5,700	5,094	89.4%	$0.88	0	363
2011	5,851	5,408	92.4%	$0.94	151	314

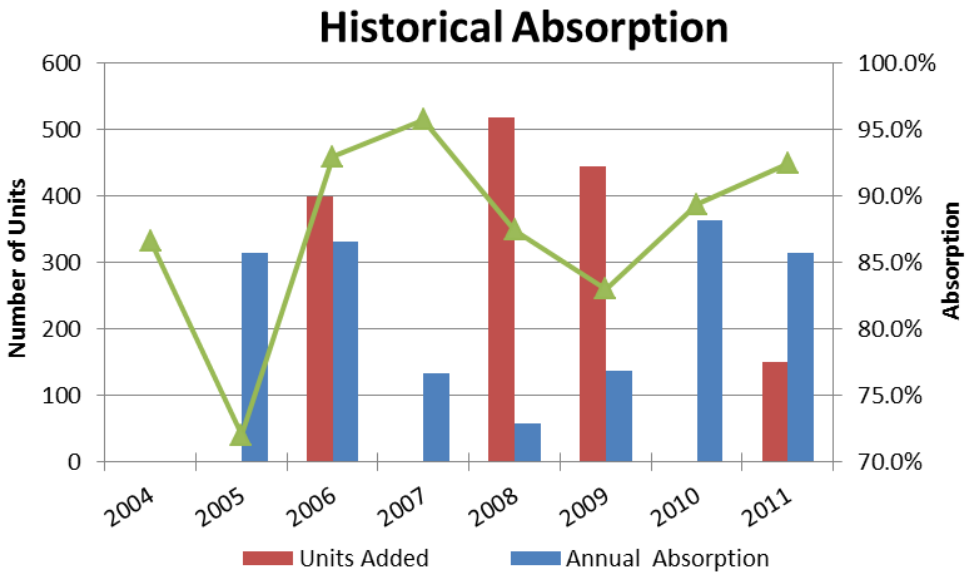

Table 13: Central East Market Area Historical Occupancy[89]

Rents have continued to climb in conjunction with the overall market trends and have actually outperformed the overall market in average growth rates over the past 7 years. Rents have increased a total of $0.27 over the term. The largest jump was seen most recently as rents jumped from $0.88 per square foot in 2010 to $0.94 per square

[89] Source: Capitol Market Research.

foot in December of 2011. Austin rents have shown an average departure of $0.13 per square foot and saw the largest margin in 2007 as the difference between Austin and Central East Austin rents reached $0.18. This differential retracted in 2009 to $0.07 per square foot possibly due to the delivery of a higher end product in the Mosaic at Mueller. The graph and table below shows the relationship of rents between the submarket and market area.

Austin Market to Submarket Comparison

Year	Central East	Central East % Change	Austin	Austin % Change	Differential
2004	$0.67		$0.81		$0.14
2005	$0.72	6.94%	$0.85	4.71%	$0.13
2006	$0.74	2.70%	$0.91	6.59%	$0.17
2007	$0.78	5.13%	$0.96	5.21%	$0.18
2008	$0.83	6.02%	$0.97	1.03%	$0.14
2009	$0.86	3.49%	$0.93	-4.30%	$0.07
2010	$0.88	2.27%	$0.98	5.10%	$0.10
2011	$0.94	6.38%	$1.05	6.67%	$0.11
Averages		4.71%		3.57%	$0.13

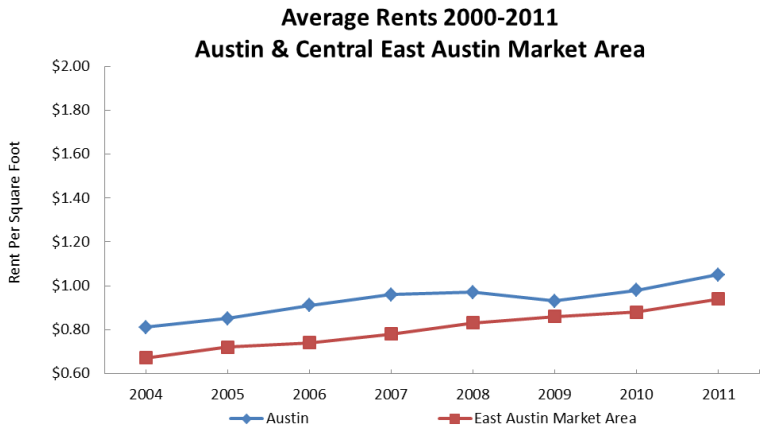

Table 14: Austin and Central East Austin Market Rent Comparison[90]

[90] Source: Capitol Market Research

The market outlook is promising for new construction to break ground and take advantage of the consistent absorption the market area has experienced as of late. Despite fluctuating occupancy, rents have continued to increase in the past 7 years. As the quality of products has increased with the completion of the Mosaic at Mueller and M Station, the rents are expected to increase accordingly. In order to provide direction as to the quality of the products that may potentially come to market with this information in mind, an analysis of existing properties and their respected amenities and unit types will be assessed with regard to the entire submarket area.

Provided below is a table that shows the total units and their respective dates of completion. As the table illustrates, there has been an increase in construction in the last decade, however almost 60% of the market area's multifamily housing stock is over 20 years old. Total inventory with respected unit mixes are provided in Table 16. A location map is provided in Figure 5.

Year Built	Number of Communities	Number of Units	Market Share
Before 1960	1	100	2%
1961-1970	6	771	13%
1971-1980	9	1,011	17%
1981-1990	8	1,505	26%
1991-2000	3	426	7%
2001-2012	8	1,989	34%
Total	35	5,802	100%

Table 15: Units in Market Area by Date of Completion[91]

[91] Source: Capitol Market Research.

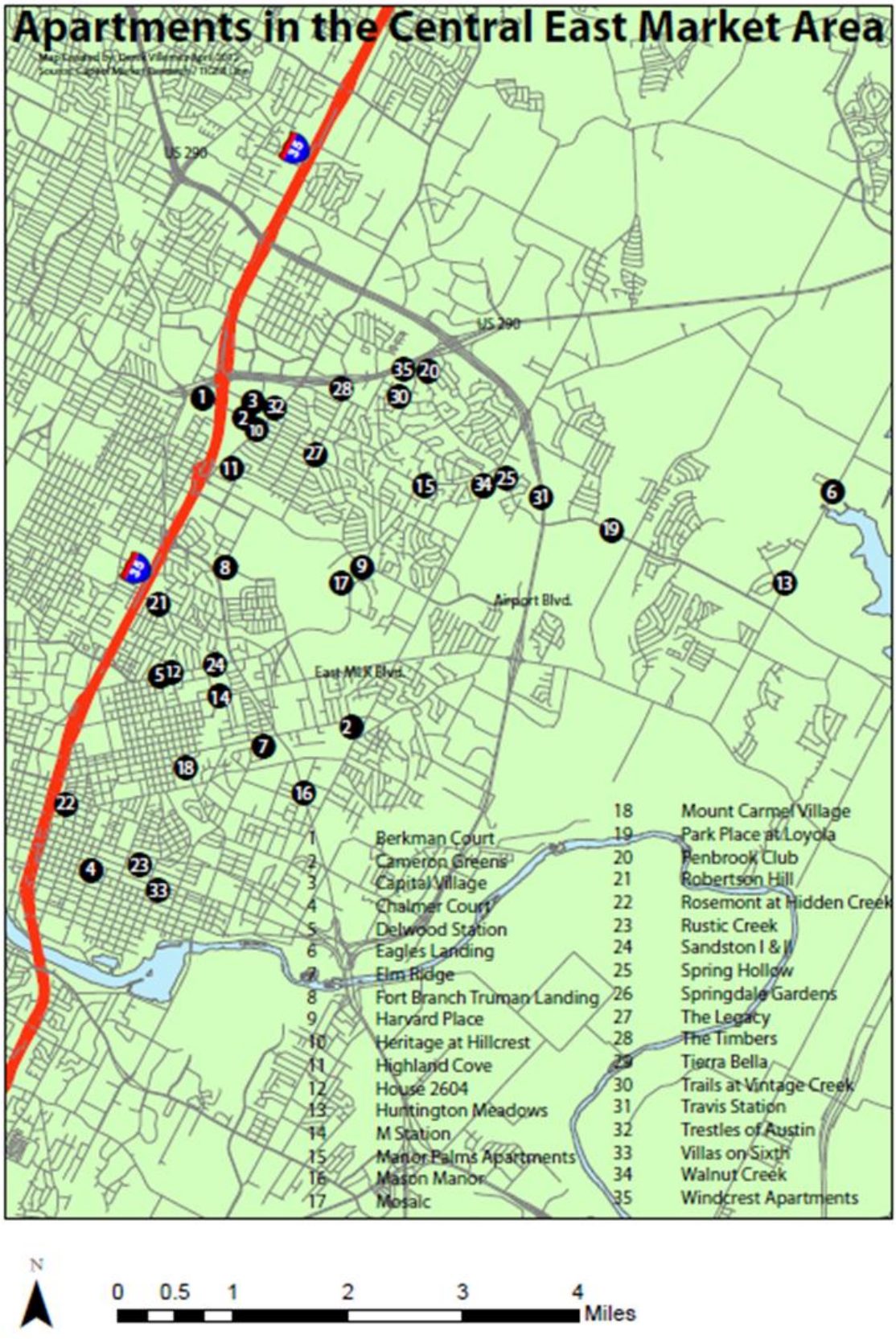

Figure 5: Market Area Apartment Locator Map

Total Units By Type
Comparable Properties

Map No.	YOC	Project	Total Units	Eff.	1/1	2/1	2/1.5	2/2	3/2	3/2.5	3/3	3+ Bdrm
1	1976	Berkman Court	40	0	18	22	0	0	0	0	0	0
2	1969	Cameron Greens	181	0	111	34	0	36	0	0	0	0
3	1970	Capital Village	245	12	128	29	10	58	8	0	0	0
4	1983	Chalmer Court	158	0	82	48	0	0	18	0	0	10
5	1973	Delwood Station	74	0	62	12	0	0	0	0	0	0
6	2004	Eagles Landing	240	0	48	0	0	128	64	0	0	0
7	1970	Elm Ridge	130	0	68	48	0	0	14	0	0	0
8	2002	Fort Branch Truman Landing	250	0	0	0	0	148	102	0	0	0
9	1967	Harvard Place	58	0	11	0	34	8	5	0	0	0
10	1969	Heritage at Hillcrest	286	0	64	103	0	118	0	1	0	0
11	1989	Highland Cove	88	0	32	0	0	56	0	0	0	0
12	1964	House 2604	60	0	32	28	0	0	0	0	0	0
13	1998	Huntington Meadows	200	0	20	0	0	24	76	0	0	80
14	2011	M Station	150	0	32	0	0	60	58	0	0	0
15	1994	Manor Palms Apartments	122	0	53	0	0	69	0	0	0	0
16	1966	Mason Manor	128	0	32	44	0	0	52	0	0	0
17	2009	Mosaic	397	0	149	45	0	176	27	0	0	0
18	1971	Mount Carmel Village	72	0	26	26	0	0	17	0	0	3
19	2008	Park Place at Loyola	252	0	56	0	0	108	88	0	0	0
20	1985	Penbrook Club	164	58	50	24	0	32	0	0	0	0
21	2008	Robertson Hill	290	0	184	0	0	106	0	0	0	0
22	2006	Rosemont at Hidden Creek	250	0	64	0	0	100	86	0	0	0
23	1972	Rustic Creek	54	0	39	0	0	15	0	0	0	0
24	1985	Sandston I & II	90	0	74	16	0	0	0	0	0	0
25	1984	Spring Hollow	100	0	100	0	0	0	0	0	0	0
26	1955	Springdale Gardens	100	0	20	36	0	44	0	0	0	0
27	1970	The Legacy	98	0	24	44	30	0	0	0	0	0
28	1998	The Timbers	104	0	0	0	0	56	32	0	0	16
29	1984	Tierra Bella	205	0	60	37	40	68	0	0	0	0
30	1973	Trails at Vintage Creek	200	0	40	0	0	60	100	0	0	0
31	1986	Travis Station	304	48	152	0	0	104	0	0	0	0
32	1984	Trestles of Austin	396	0	252	0	0	144	0	0	0	0
33	2006	Villas on Sixth	160	0	46	0	0	66	48	0	0	0
34	1972	Walnut Creek	98	0	36	44	0	0	18	0	0	0
35	1967	Windcrest Apartments	58	0	10	10	38	0	0	0	0	0
Total			5,802	118	2,175	650	152	1,784	813	1	0	109
% of Market			100.0%	2.0%	37.5%	11.2%	2.6%	30.7%	14.0%	0.0%	0.0%	1.9%

Table 16: Total Units by Type[92]

As the table illustrates, the unit type with the greatest market share are units with 1 bedroom and one bath, capturing 37.5% of the market share. Second to 1/1 units is 2/2 units at 30.7%. Out of the total 5,802 units analyzed in the market area, the largest community is the Mosaic at Mueller. The newest is Foundation Communities M

[92] Source: Capitol Market Research.

Station which brought 150 units to market last year. This information will be influential in the summary and conclusions chapter when discussing what product type would be favorable to come to market. In conjunction with unit type, an amenity profile is illustrated below:

Project Amenities
East Austin Market Area

Map #	Project	YOC	Club House	Pool	Hot Tub	Laundry Room	Sport Court	Workout Room	Covered Parking
1	Berkman Court	1976		x		x			
2	Cameron Greens	1969		x		x			x
3	Capital Village	1970	x	x		x			
4	Chalmer Court	1983				x			
5	Delwood Station	1973		x		x			
6	Eagles Landing	2004							
7	Elm Ridge	1970				x			
8	Fort Branch Truman Landing	2002	x	x	x				
9	Harvard Place	1967		x		x			
10	Heritage at Hillcrest	1969	x	x		x			
11	Highland Cove	1989	x	x				x	
12	House 2604	1964	x	x		x			
13	Huntington Meadows	1998	x	x		x	x	x	x
14	M Station	2011				x	x		
15	Manor Palms Apartments	1994							
16	Mason Manor	1966				x			
17	Mosaic	2009		x				x	x
18	Mount Carmel Village	1971				x			
19	Park Place at Loyola	2008	x	x		x		x	
20	Penbrook Club	1985	x	x					
21	Robertson Hill	2008	x	x				x	
22	Rosemont at Hidden Creek	2006	x	x		x		x	x
23	Rustic Creek	1972							
24	Sandston I & II	1985	x						
25	Spring Hollow	1984		x					
26	Springdale Gardens	1955	x	x	x	x		x	
27	The Legacy	1970		x		x			
28	The Timbers	1998		x		x			
29	Tierra Bella	1984		x	x		x		
30	Trails at Vintage Creek	1973							
31	Travis Station	1986							
32	Trestles of Austin	1984	x	x	x	x			x
33	Villas on Sixth	2006	x	x		x		x	
34	Walnut Creek	1972							
35	Windcrest Apartments	1967		x		x			

Table 17: Central East Austin Market Area Project Amenities[93]

[93] Source: Capitol Market Research.

As the table illustrates, many of these complexes have laundry and pool facilities while only a select few has covered parking, workout facilities, and sport courts. With this in mind, bringing a product to the market with modern and creative amenities may prove to be a competitive advantage for leas up when choosing aspects of the product in the concept phase.

To determine obtainable market rents and potential unit mix of a hypothetical new multifamily product, a rent and unit matrix was established to show the market averages for comparable projects. The criteria for comparable products were as follows:

- Over 100 units.
- Built in the last 10 years.
- Premium amenities relative to the market area.

As evidenced in the matrices below, average unit size for 1/1, 2/2, and 3/2 are 788, 1111, and 1206 square feet, respectively. Average Unit Rents are $823, $1469, and $1272 and average per square foot rents are $1.41, $1.30, and $1.02.

Comparable Rates Sorted by Unit Size
One Bedroom Units

Project	Sq. Ft.	Average Unit Rent	Rent Per Sq. Ft
Mosaic	605	$1,168	$1.93
Robertson Hill	670	$670	$1.96
Mosaic	689	$1,328	$1.93
M Station	712	$637	$0.89
Robertson Hill	740	$740	$1.91
Rosemont at Hidden Creek	750	$649	$0.87
Villas on Sixth	756	$657	$0.87
Robertson Hill	778	$778	$1.81
Park Place at Loyola	786	$649	$0.83
Robertson Hill	823	$823	$1.72
Eagles Landing	835	$595	$0.71
Mosaic	837	$1,305	$1.56
Robertson Hill	871	$871	$1.71
Robertson Hill	1001	$1,001	$1.63
Fort Branch Truman Landing	…	…	…
Average	788	$823	$1.41

*Fort Branch Truman Landing has no 1 BR units

Table 18: Comparable Rents Sorted by Unit Size for One Bedroom Units[94]

[94] Source: Capitol Market Research.

Comparable Rates Sorted by Unit Size
Two Bedroom Units

Project	Sq. Ft.	Average Unit Rent	Rent Per Sq. Ft
Eagles Landing	702	$1,087	$1.55
Park Place at Loyola	786	$649	$0.83
Fort Branch Truman Landing	881	$887	$1.01
Villas on Sixth	917	$775	$0.85
Rosemont at Hidden Creek	950	$775	$0.82
Mosaic	973	$1,524	$1.57
M Station	975	$772	$0.79
Mosaic	1034	$1,449	$1.40
Mosaic	1035	$1,578	$1.52
Mosaic	1056	$1,724	$1.63
Mosaic	1158	$1,641	$1.42
Robertson Hill	1206	$1,785	$1.48
Mosaic	1223	$1,597	$1.31
Robertson Hill	1273	$2,025	$1.59
Robertson Hill	1335	$1,837	$1.38
Mosaic	1339	$1,538	$1.15
Robertson Hill	1373	$2,090	$1.52
Robertson Hill	1777	$2,705	$1.52
Average	1111	$1,469	$1.30

Table 19: Comparable Rents Sorted by Unit Size for Two Bedroom Units[95]

[95] Source: Capitol Market Research.

Comparable Rates Sorted by Unit Size
Three Bedroom Units

Project	Sq. Ft.	Average Unit Rent	Rent Per Sq. Ft
Fort Branch Truman Landing	1089	$898	$0.82
Eagles Landing	1227	$789	$0.64
M Station	1200	$856	$0.71
Mosaic	1027	$1,624	$1.58
Mosaic	1634	$2,520	$1.54
Mosaic	1421	$2,252	$1.58
Park Place at Loyola	1106	$765	$0.69
Robertson Hill*	…	…	…
Rosemont at Hidden Creek	1100	$884	$0.80
Villas on Sixth	1049	$858	$0.82
Average	1206	$1,272	$1.02

*Robertson Hill has no 3 bedroom units

Table 20: Comparable Rents Sorted by Unit Size for Three Bedroom Units[96]

[96] Source: Capitol Market Research.

Chapter 6: Site Selection for Infill Development

This chapter will review the theory and application of selecting a site for infill development of a multifamily housing product. Developers' site selection processes are all different, but there are some fundamental aspects of choosing a site that all development teams focus on. This chapter will look at common approaches to selecting infill with regard to considering the location, lot size, political and environmental constraints including zoning, and land cost.

It may seem obvious but developers must be familiar with a site before they embark on the process of acquiring and developing it. This is particularly true for infill sites. Vacant or underutilized parcels of land are vacant and underutilized for a reason. Proper due diligence to understand why a particular piece of land is vacant will benefit the developer in the long run. As with any other type of site selection process the main concerns and perceptions include frontage, access, vegetation, slope grade, soil type and condition, utilities, and drainage. Due to the fact that urban infill sites typically exist in a previously developed area of a city, they are more likely to contain city easements, old utility lines, abandoned streets, historical or archaeological features, foundation, debris or previous structures, or exist in an awkward position with incompatible land uses.

Local developers who are familiar with the physical, economic, and social climate of their city have the advantage of observing potential infill sites through windshield surveys. They also have the advantage of being able to understand the site's history and previous land uses as well as the changes in market dynamics an outsider may not be privy to. A good rule of thumb for filtering out options is to look at parcels of land that is

ripe for densification.[97] Parcels zoned for single family or low density that are adjacent to hire density development are ripe for infill.

Cities are solid sources in assisting developers in choosing sites for infill. As previously discussed, areas that have been marked as Desired Development Zones with VMU designation are indicators to developers that the city desires infill in these locations. The chance of the city aiding the developer is much larger than outside the zone. Other sources for entities with excess land inventories include schools, churches, hospitals and universities. These typically are located in an urban setting around other amenities that may be consistent with an infill project's goals.

Computer technology has also come a long way in the recent past in aiding developers with site selection. Geographical Information Systems (GIS) has the capability of creating large mapping databases that can include parcel-based land information to help developers and planners discover potential infill sites. Land monitoring with parcel-level GIS can apply all the information that is known with regard to the site and provide a glimpse of potential unrealized development.

Other considerations that infill developers may consider when selecting a site is adaptive reuse of an existing building. Most likely, the zoning is already in place, but the building is in need of an upgrade, either in the structure, finish out, exterior aesthetic, or all of the above. Regeneration of an existing building can spawn other revitalization efforts as well as provide a natural outlet to make the building systems more sustainable. This can also be a trigger for marketing considerations, as the historical character of the building can be tied with new uses. One such example is the Southside on Lamar project in Dallas, Texas. What was once a Sears-Roebuck distribution factory

[97] Suchman 2001, 46.

and warehouse became a large mixed-use multifamily project on the outskirts of downtown Dallas.

There is hardly a criterion for lot size when considering an infill project. Small lots in high density urban areas can be built vertically to capture the desired units and uses. Developers may realize different benefits from projects of all sizes. Large projects have the ability to change the image and existing market while smaller projects have the ability to explicitly address a market demand. Overall, the main criteria for lot size are the programmatic elements of the development and how much space will be needed to produce that program.

Parking is also an aspect of infill that has the potential to be an issue. Despite the ideological approach to walkability that infill presents, parking is a necessary evil. Typically, 1.75 spaces per unit is standard, but the requirements could include more spaces if there is a higher ratio for larger units and lower if there is access to public transportation.[98] Often times land designated for parking is more than the building area and is tied directly to zoning. This competing relationship with regard to land can lead to innovative strategies of vertically integrating parking within the development or providing cluster parking space around the development through partnerships with surrounding projects.

Political and environmental regulations play a large role in determining whether a particular infill site is feasible or not. The more political support a developer can muster for a project, the more feasible it will be. Common political and environmental constraints have been previously discussed but many times the main issue is zoning for a desired use on the part of the developer. The potential for a city to deny a zoning

[98] Rittenhouse 2005, 38.

request can be mitigated through the developer's cooperation with the city's goals for development. In the case of the City of Austin, developing in a DDZ where there is already zoning in place for mixed use development will likely be much easier than picking a site that does not have an agreeable land use.

Cooperation with the community is also vital. The political climate is different for each community. Austin is no different. Due to the large power that is handed down from the city to neighborhood planning groups in Austin, harboring positive relationships with the leaders of the groups is a necessity. Many citizens will have opinion about infill projects largely due to the fact that infill projects typically occur in areas with large populations. It is important for the developer to invest oneself early and often in the political climate of neighborhood development and foster positive relationships with all parties involved, including the city. Despite extreme efforts of due diligence, the developer can still fall short in finding the existing regulatory rules and regulations. Having multiple contacts with the city is vital in the success of navigating the regulatory process.

Finally, with regard to site selection, one of the essential variables in determining a site lies in the cost to acquire the land. To a great extent, the land cost determines the project density.[99] The cost of land has to be low enough to capture the acquisition cost through sales or rent a price which then is calculated with soft and hard costs to determine financial feasibility. Typically land costs are 15-20 percent of a projects selling price.[100]

In cities such as Austin where housing demand is healthy and prices are accelerating, the more attention the area is receiving from the development

[99] Suchman 2001, 48.
[100] Suchman 2001, 48.

community, the faster the prices rise. Infill inventory may become limited and land owners may be increasingly reluctant to hold onto their property and sell at a later date to maximize profit. This can be one of the largest barriers to infill development production. In weaker housing markets, developers cannot pay for high priced land and still make a profit. Often times the price of land in the downtown core is high due to the fact that the allowable density is too high and the zoning change process is required. A solution to obtaining lower priced land is to form a joint partnership with the existing land owner. A speculative measure of acquiring land in transitional areas where there is less competition is also a solution. This enables the developer to create the market within the demand they forecast.

With the knowledge of the theory and application of site selection for infill development, potential sites have been analyzed by the author in the subsequent matrix provided. Zoning, land cost, location, and potential regulatory constraints are shown.

Potential Sites for Multifamily Infill Development
in Central East Austin Market

Address	Privately Owned or COA Owned	Parcel Size (acres)	Land Value	Improvement Value	Total Value	Zoning	Zoning Change Required	Neighborhood Plan Amendment Required
1212 Chicon + 1807 E12th St.	Private	0.176	$23,037	$22,767	$45,804	CS-NP-MU	No	No
1301 + 1301.5 Chicon St.	Private	0.179	$74,367	$149,135	$223,502	CS-MU-V-CO-NP	No	No
1305 + 1309 Chicon St.	Private	0.537	$168,403	$8,922	$177,325	GR-MU-V-CO-NP	No	No
2110 E 22nd St.	Private	0.258	$100,000	Vacant	$100,000	SF-3-NP	Yes	Yes
2002 Poquito St.	Private	0.227	$125,000	Vacant	$125,000	SF-3-NP	Yes	Yes
2004 East 7th St.	Private	0.136	$148,475	Vacant	$148,475	CS-CO-MU-NP	No	No
1606 E 6th St.	Private	0.143	$155,250	Vacant	$155,250	TOD-NP	No	No

Source: City of Austin GIS, TCAD

Table 21: Potential Site Matrix[101]

[101] Source: City of Austin; Travis County Appraisal District.

Chapter 7: Summary and Conclusions

This document has investigated the feasibility for multifamily infill development in the area of Central East Austin. A brief look at the history of the submarket gives a contextual look at the development patterns that have led to the built environment as well as the social and political tensions that may be encountered when developing a multifamily product in the area. This context is also vital when determining the target market for a new product. Because the area has become an attractive haven for artists, musicians, and upward Gen-X and Gen-Y'ers due to its location and amenities, Central East Austin has seen a steady but gradual increase in property values. As gentrification is now a reality in the area, further mitigating tools are expected to be implemented by the city which may be a benefit to some development entities while more regulations may deter other entities from entering the market.

Through various policies and planning processes, the City of Austin has made it clear that compact development through infill is a priority in the future. In directing development to the urban core, the city's plan to incentivize the development and redevelopment of underutilized parcels in the downtown area will promote sustainability and innovative urban design.

The complexity of the housing development process is one that is seen in simply attempting to describe it. While the process is a dynamic and challenging one, it also has the potential to be a rewarding and fruitful endeavor. Possibly one of the biggest challenges in the current economic climate is obtaining financing for new projects. As the international credit markets recover from the global recession, innovative financing techniques will have to be sought to bring a project to fruition if equity is not readily available.

With the methodology used in this report, it was found that there is a demand for multifamily units in the market area. Price points and suggestions for product type and unit mix based on the market area were evaluated for potential build out as well as a site matrix with potential sites determined from the theory of infill site selection. With the large influx in population over the last twenty years, and the forecasted growth to come, Central East Austin is a prime location to capture a part growth for affordable multi-family development.

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