

Multifamily Site Development – Bishop Arts District, Dallas, TX

by

Justin L Rice

B.A., Finance and Real Estate, 2005

Texas Tech University

**Submitted to the Program in Real Estate Development in Conjunction with the Center for Real Estate
in Partial Fulfillment of the Requirements for the Degree of Master of Science in Real Estate
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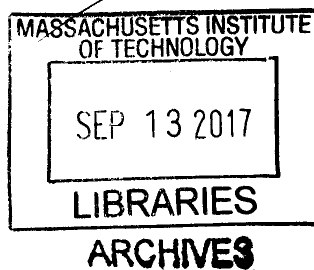

Signature redacted


John Kennedy
Lecturer, MIT Center for Real Estate
Thesis Supervisor

Accepted by


Signature redacted


Albert Saiz
Director: MIT Center for Real Estate



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ABSTRACT

This thesis explores the development potential and land value of a vacant parcel of land listed for sale in Dallas, TX. Further, this thesis proposes three different multifamily rental site plan designs for the parcel in an effort to maximize the value of both the development and the land. The site is located just two blocks from Dallas' popular Bishop Arts retail district. This area has seen a renaissance and has become a desirable location to live over the last several years for residents who might not have considered the location previously.

The development potential of the site is restricted by its zoning designation, which does not allow for mixed-use developments, its height restrictions, its parking requirements and its lack of scale – the site is quite small and rectangular. The zoning of this and the surrounding parcels aims to create an urban residential area that is walkable and pedestrian friendly, reducing traffic overall. Pedestrian permeability and the character of the Bishop Arts District should be considered in the design.

Seen through the lens of a real estate developer evaluating a business opportunity, this document is formatted in sections focusing on the economic and real estate potential of the city of Dallas, the Bishop Arts area and the parcel itself, the parcel's zoning and parking issues, alternative design schematics for the parcel, and prevailing financial metrics of Dallas, Bishop Arts and the multifamily sector as they relate to each design's projected financial performance. This thesis concludes with a determination of the ultimate land value as dictated by the most financially successful site plan.

Thesis Supervisor: John Kennedy
Title: Lecturer, MIT Center for Real Estate

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~Justin

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Multifamily Site Development – Bishop Arts District, Dallas, TX

Chapter 1 – Introduction

This thesis will explore the feasibility of developing a parcel of land at 737 N. Zang in Dallas, TX. I will explore development plans sized 15-40 units, as I am comfortable self-managing an asset of this size. My personal business plan is to self-manage my investments and I intend this thesis to reflect my professional intentions. More than other real estate asset types, I feel a connection with multifamily – people’s lives occur in these spaces. Although many would argue that we are reaching a point of saturation in the multifamily space, I still believe it to be one of the least volatile types of real estate when targeting the appropriate renter pool. With my background in and the research into multifamily I feel I can develop a business plan that will differentiate the service I provide from both a social aspect and financial aspect.

A developer can use both financials and creativity to create phenomenal spaces which speak to target renters. Building to the level of fit out and quality (controlling cost) while still providing the aesthetics and “feel” that is appropriate for the area and target renters is key, in my assessment. This site begs for a development that is appropriately scaled to the neighborhood, creates community and mirrors the charm that keeps Bishop Arts teeming with visitors daily. Given that this will be a new development in a desirable area, I hypothesize that the rental price point will be fairly high. Surrounding developments have achieved these rents.

I found the 12,714 square foot parcel of land located at 737 N. Zang in Dallas, TX listed for sale on LoopNet for \$1,017,000 in May of 2017.¹ As of mid-July, the price was adjusted to \$889,980. The seller is primarily a single-family home builder who began the process of developing a multifamily

¹ <https://loopnet.com>, accessed 5/30/17.

building on the site. The current owner (owner) has already commissioned architectural plans and engaged with the city regarding permitting and met with neighborhood groups for approval of the proposed plan, but has decided to sell the parcel rather than develop. He provided me with enough of his already commissioned architectural and financial material to explore the feasibility of his existing plans for the site. Should the current plan prove problematic, I will explore at least two alternative plans within the scope of rentable multifamily units. I will not consider the potential of condominiums for sale, as I do not intend to engage in that business in the future.

The site is 2 blocks from the heart of Dallas' Bishop Arts District.² There is no question that the location is attractive. The question is: what is the appropriate multifamily design for the site and what is the actual residual land value as justified by levered cash flows? Once the challenges of the site are overcome and a suitable multifamily development plan is produced, there is still the additional possibility that the owner's price expectations for the lot are not financially feasible as dictated by my assumptions and designs.

Chapter 2 – Site Analysis

A) City Context

a) History

Dallas was established in 1841 near the Trinity River and became a bustling center of trade by the end of the 19th Century as a major stop along rail routes.³ The growth continued as Dallas found itself at the crossroads of major highways and as a central location for the nation as a whole.

² <https://maps.google.com>, accessed 5/30/17.

³ "Dallas," <https://en.wikipedia.org/wiki/Dallas>, accessed 6/17/17.

b) Infrastructure

Accessibility is key to Dallas' success. 48.9 million visitors flock to the metroplex annually with 24.9 million people visiting Dallas, specifically.⁴ The area is served by Dallas/Fort Worth International Airport, the 3rd busiest airport in the world (aircraft movements), and Dallas Love Field, providing a combined 2,200 plus flights daily.⁵ Investment in infrastructure and transit draws businesses and residents to the area. Dallas has invested \$7 billion dollars in a 93 mile light rail system.⁶ With more than \$4.2 billion dollars' worth of highway projects either very recently completed or under construction, there is legislative and planning fervor to keep up with the hundreds of new residents relocating to the DFW/north Texas area daily.⁷ In an effort to balance the "concrete jungle" nature of Dallas with the green that provides balance for residents, the "Trinity River Project", begun in the early 2000's, will result in a 10,000 acre nature district – nearly 12 times the size of New York's Central Park. \$609 million has already been spent and a current 285 acres under development alone will cost \$250 million.⁸ It is this investment in commuting and travel and lifestyle that is just part of the draw for residents and companies which drive the growth in DFW.

⁴ "Dallas Stats and Fun Facts," <http://www.visitdallas.com/about/dallas-fun-facts.html>, accessed 6/17/17.

⁵; "Dallas/Fort Worth International Airport," https://en.wikipedia.org/wiki/Dallas/Fort_Worth_International_Airport, accessed 6/17/17.

⁶ Kim Cella, "Dallas Making Tracks with \$7 Billion in Investment Along Rail," Citizens For Modern Transit: Making Transit a Priority for the Region, 11/21/16, <http://cmt-stl.org/dallas-transit-making-tracks-with-7-billion-in-investment-along-rail>, accessed 6/23/17.

⁷ Brian New, "Top 5 Biggest Road Construction Projects in DFW," CBS, 11/1/2016, <http://dfw.cbslocal.com/2016/11/01/top-5-biggest-road-construction-projects-in-dfw/>, accessed 6/27/17.

⁸ Leanna Garfield, "Dallas is Getting a \$600 Urban Park that's More Than 11 Times as Large as Central Park," Business Insider, 12/22/16, <http://www.businessinsider.com/dallas-trinity-river-park-project-2016-12/#spanning-285-acres-the-harold-simmons-park-will-be-a-part-of-dallas-10000-acre-nature-district-1>, accessed 6/27/17.

c) Population

The Dallas-Fort Worth metroplex ranks as the fourth largest metropolitan area with a population of 7,246,231 as of July 1, 2016.⁹ This represents an increase of over 800,000 people from the official 2010 United States Census count. 2016 saw DFW take the top spot in the US for year-over-year population growth.¹⁰ Dallas is the most populous city in the 12 county DFW metroplex and is the 9th largest city in the United States, behind two other Texas cities – Houston and San Antonio.¹¹ As of July 1, 2016, Dallas' population had increased to 1,317,929 from the 2010 census figure of 1,197,816. The city has an impressive land area of 385.8 square miles.¹²

d) Construction and Real Estate Environment

Houston, New York City and Dallas-Fort Worth (DFW) lead the nation in housing permits issued when analyzing the years 2010 – 2016. Issuing 316,639, 283,814 and 273,853 respectively over the seven years, the three MSAs comprise 13.5% of US permitting approvals, far outpacing other major metro areas.¹³ Bolstered by a business-friendly climate and government that encourages growth, Texas is the nation's economic growth leader in terms of construction of new and/or expanded corporate facilities. Further, Houston and Dallas make up 70% of the state's economic development.¹⁴ In 2016, the DFW metroplex accounted for nearly 10% of

⁹ "Dallas," <https://en.wikipedia.org/wiki/Dallas>, accessed 6/17/17.

¹⁰ Ibid.

¹¹ Ibid.

¹² Ibid.

¹³ Scott Beyer, "Houston, Dallas and New York City: America's Great 3-Way Housing Supply Race," *Forbes*, 3/20/17, <https://www.forbes.com/sites/scottbeyer/2017/03/20/houston-dallas-new-york-city-americas-great-3-way-housing-supply-race/#4910b67baf10>, accessed 6/15/17.

¹⁴ Scott Beyer, "Dallas and Houston: Centers for Economic Development," *Forbes*, 6/26/16, <https://www.forbes.com/sites/scottbeyer/2016/07/26/dallas-and-houston-centers-for-economic-development/2/#6b5d9d047ed5>; W. Scott Bailey, "Dallas Helps Texas Rank High in Economic Development Game," *Dallas Business Journal*, 3/2/16, <http://www.bizjournals.com/dallas/news/2016/03/02/dallas-helps-texas-rank-high-in-economic.html>, accessed 6/15/17.

apartment units under construction.¹⁵ Dallas is the most active market in terms of 2017 apartment construction behind only New York City. The first quarter shows 50,588 units under construction in the DFW area. 30,000 of these are expected to reach completion by the end of 2017. 30% of the units under construction are located in the northern suburbs of Frisco, Allen/McKinney and Richardson (while the core of Dallas' metro area accounts for an additional 11% of the 50,000+ units under construction).¹⁶ In fact, Frisco, McKinney and Richardson rank 1st, 2nd and 3rd, respectively, in *Wallet Hub's* study of the nation's top 300 real estate markets. Five of the top 10 were north Dallas suburbs (Allen and Plano in addition to the top 3 listed above).¹⁷ This is not unexpected as these areas are the sites of many corporate headquarters or planned corporate relocations from other states with higher costs such as California.

e) The Economy as Related to Corporate Growth

Texas, DFW in particular, is determined to maintain its national standing in terms of being a corporate hub and growth leader. Along with six other states, Texas has no state income tax. The land use regulation, permitting and zoning procedures, labor governance and business permitting are less onerous than many other dense metro areas. When compared to the nine other most populous US cities in the top ten, two others of which are also located in Texas, Texas cities' costs of living as a percentage of income are enticing to potential new residents – especially Dallas.¹⁸ For example, median home prices in Dallas are more than \$40,000 less than

¹⁵ Steve Brown, "D-FW Apartment Building Booms With More Than 50,000 Units on the Way," Dallas News, 6/28/16, <https://www.dallasnews.com/business/business/2016/06/28/d-fw-apartment-building-booms-50000-units-way>, accessed 6/27/17.

¹⁶ Scott Beyer, "Dallas-Fort Worth Shows America's Evolving Multi-family Housing Market," Forbes, 3/4/17, <https://www.forbes.com/sites/scottbeyer/2017/04/30/dallas-fort-worth-shows-americas-evolving-multi-family-housing-market/#1ae9dbd716ba>, accessed 6/15/17.

¹⁷ Richie Bernardo, "2016's Best Real Estate Markets," 6/30/17, <https://wallethub.com/edu/best-real-estate-markets/14889/>, accessed 6/20/17.

¹⁸ Scott Beyer, "Dallas and Houston: Centers for Economic Development," Forbes, 6/26/16, <https://www.forbes.com/sites/scottbeyer/2016/07/26/dallas-and-houston-centers-for-economic-development/2/#6b5d9d047ed5>, accessed 6/27/17.

the national median price of \$187,000.¹⁹ The other side of the argument for economic attractiveness are corporate subsidies. While this is not an uncommon practice for a state, the ROI to a state or city is important, as the effects of corporate relocations are long lasting in terms of economic boosts, housing, culture and corporate investment in the communities. Texas ranks ninth in state offered subsidies with over 4,300 subsidies granted since 2007 at a cumulative \$6.5 billion.²⁰ The city of Plano is a good study in effectiveness of these policies. Between 2006 and 2015, Plano agreed to \$45 million in incentives, attracting 113 companies which created 28,000 jobs with average salaries of \$78,000. Additionally, those companies invested \$1.7 billion in capital improvements for new campuses or improving/expanding existing structures. Other northern Dallas suburbs have entered or are negotiating similar incentives with expected positive net economic results of their own.²¹

f) Demand and Opportunity

The above points, of course, explain the incredible demand and new permitting for housing. While much of this activity is occurring in Dallas' northern suburbs and downtown core, these areas are not the only areas presenting development opportunities. South Dallas' Bishop Arts District is an ideal location for those who do not wish to live in suburbia and want to avoid the hustle and bustle of downtown, yet be proximately close to major highways and public transit, including the Dallas Area Rapid Transit (DART) Rail system which runs all the way to those northern employment hubs and edge cities.²²

¹⁹ "Cost of Living Index for Select US Cities," infoplease, <https://www.infoplease.com/business-finance/us-economy-and-federal-budget/cost-living-index-selected-us-cities1>

²⁰ Beyer, "Dallas and Houston: Centers for Economic Development," 6/27/17.

²¹ Bill Hethcock, "When States Compete for Headquarters, Texas Usually Wins. Here's Why.," Dallas Business Journal, 7/24/15, <http://www.bizjournals.com/dallas/print-edition/2015/07/24/when-states-compete-for-headquarters-texas-usually.html>, accessed 6/27/17.

²² <https://www.dart.org/riding/dartrail.asp>, accessed 6/23/17.

B) Neighborhood Context

a) History

The Zang site is located in the Bishop Arts District which is south of the downtown Dallas core. The district was defined decades ago by the independently owned and operated retailers and small businesses which called Bishop Arts home. Access to the area via trolley, the concentration of the shops and the walkable “small town” romance of the area made it a destination. As anchor retailers moved or went out of business, buses replaced the trolleys, and demographics shifted, Bishop Arts began declining in the 1960s and became a blighted area.²³

In the mid-1980s, a Dallas real estate developer recognized and reimagined the potential of Bishop Arts and invested in the area’s real estate, setting the stage for the district’s renaissance. The romance and appeal is back, as the area has seen an incredible revitalization over the last two decades.²⁴ I believe this is due to more than its proximity to downtown or simple gentrification. This district has decades’ worth of character that cannot be recreated in a new development. I cannot state it better than the neighborhood website itself – “The Bishop Arts District is a neighborhood rich in history, and was the site of Dallas' busiest trolley stop in the 1930s. Since the area's revitalization, the Bishop Arts District has been featured in the New York Times, USA Today and The Daily Beast for its small-town feel, hidden-gem appeal, and close-knit community.”²⁵

b) Population

Discussing the demographics and population of Bishop Arts is an exercise full of blurred lines. Bishop Arts is technically in North Oak Cliff, a borough of Dallas which would be Texas’

²³ “Bishop Arts District, Dallas,” https://en.wikipedia.org/wiki/Bishop_Arts_District,_Dallas, accessed 7/18/17.

²⁴ Ibid.

²⁵ <https://bishopartsdistrict.com>, accessed 7/14/17.

sixth largest city with a population of 290,365.²⁶ The Zang site simultaneously abuts the affluent neighborhoods Kessler Park and Stevens Park to the west while offering a view to the east of households in much lower income brackets.

Oak Cliff feels completely separate from Dallas due to the natural boundary of the Trinity River, although multiple bridges crisscross the Trinity at what seems an absurd frequency. It is hard to believe that one is closer to downtown Dallas in areas of Oak Cliff than one would be in the wealthy enclaves of University Park. The Zang site is in an area that could not possibly be a better case study of “gentrification.” Being so and economically diverse, the area’s demographics are best depicted by distance from the site (I do not believe that a racial breakdown of the population is necessary for the purposes of my thesis.) The following table illustrates the interaction of the district with the population at large in terms of employees and residents and shows my potential renter pool.

	1 Mile Radius	5 Mile Radius	3 Mile Radius
5 Year Projected Growth	3.0%	5.9%	6.9%
2015 Total Population: Adult	14,955	102,395	274,237
2015 Households	7,123	42,914	128,951
2015 Total Daytime Population	25,771	266,822	574,181
2015 Total Employees	14,085	183,305	365,820
2015 Total Population: Median Age	31	32	32
2015 Total Population: Adult Median Age	41	41	41
% 2015 Total population: 20 to 24 years	8.14%	8.58%	8.54%
% 2015 Total population: 25 to 29 years	8.79%	9.79%	10.57%
% 2015 Total population: 30 to 34 years	8.57%	8.91%	9.08%
% 2015 Total population: 35 to 39 years	7.56%	7.38%	7.19%

²⁶ “Oak Cliff,” https://en.wikipedia.org/wiki/Oak_Cliff; “List of Cities in Texas by Population,” https://en.wikipedia.org/wiki/List_of_cities_in_Texas_by_population, accessed 7/18/17.

% 2015 Total population: 40 to 44 years	7.33%	7.04%	6.71%
2015 Housing Units	8,017	41,243	121,520
2015 Occupied Housing Units	7,436	38,243	110,882
2015 Owner Occupied Housing Units	2,369	19,162	47,325
2015 Renter Occupied Housing Units	5,067	19,081	63,557
2015 Vacant Housings Units	581	3,000	10,638
2015 Household Income: Median	\$39,708	\$40,966	\$41,179
2015 Household Income: Average	\$64,882	\$59,147	\$61,878
% 2015 Household income: \$40,000 to \$44,999	4.98%	5.83%	5.08%
% 2015 Household income: \$45,000 to \$49,999	4.83%	4.44%	4.31%
% 2015 Household income: \$50,000 to \$59,999	7.97%	8.47%	8.55%
% 2015 Household income: \$60,000 to \$74,999	7.02%	8.41%	8.02%
% 2015 Household income: \$75,000 to \$99,999	7.58%	9.62%	9.16%

Figure 1: 2015 Demographic Information Relative to Distance from the Zang Site²⁷

Considering that renters dedicate, on average 21.4%, of their income to rent, the household earnings of my target renters will be roughly \$72,000 – 98,000.²⁸ Considering the population growth in terms of residents and employees and given that 21.4 is a national number and an average, I am not concerned about the ability to capture those renters. Additionally, my target renter’s age ranges from late 20s to mid-40s, given the area’s trends.

c) Real Estate Environment

The Oak Cliff area boasts many multifamily developments that are either planned, under construction or recently completed. There is no shortage of competition; however, little of it is truly walkable to Bishop Arts. I have only identified two developments under construction within

²⁷ <http://loopnet.com>, accessed 7/18/17.

²⁸ “DFW Berkadia Multifamily Forecast Review,” https://assets.recenter.tamu.edu/Documents/MktResearch/DFW_Multifamily_Berkadia_Forecast_Review.pdf, accessed 7/18/17.

comparable walkability to the Zang site – Bishop Arts Station and Magnolia at Zang. They are within two blocks of the Zang site and comprised of over 240 residential units plus retail space.²⁹

Comparable rent amounts are proving difficult to ascertain as the competition ranges from repurposed warehouses, to rehabilitated multifamily vintage stock from the 60s, 70s and 80s, to new construction. Additionally, many of the surrounding communities include amenities such as fitness centers or swimming pools while the Zang site is not large enough for such components. Disregarding differences in amenities, I have identified 2045 units within 9 properties that were built after 2010 and have a similar fit out to what I propose for the Zang site while searching online.

d) Transit

Dallas' free streetcar trolleys now link Uptown, McKinney Street and downtown to Bishop Arts. The Metro D-Link also now services Bishop Arts. The parcel under consideration is 547 feet from the 6th Street Streetcar Stop and 400 feet from the bus stop at Canty and Beckley serving both the blue and purple lines, both of which serve the surrounding area south of I30 and lead to downtown Dallas.³⁰ The streetcar route connects with the Dallas Area Rapid Transit D-Link station at the southern edge of Downtown. The connecting 93 miles of lightrail carry passengers to the northern suburbs and to the DFW mid cities.³¹

Dallas transit is dominated by automobile traffic. The site is less than 1 mile from I35 which runs north and south and 1.2 miles from I30 which runs east and west.³² I hesitate to include fewer than 10 parking spots because of the city's dependence upon vehicles, although I do hope

²⁹ <http://www.liveatmagnolia.com/homes/magnolia-on-zang/>; <http://shopcompanies.com/properties/bishop-arts-station>, accessed 7/16/17.

³⁰ <https://maps.google.com>, accessed 6/23/17.

³¹ <https://www.dart.org>, accessed 6/23/17.

³² <https://maps.google.com>, accessed 6/23/17.

to attract renters who work downtown or even further north and will use public transit. The following graphics illustrate the convenient access to transit that renters will enjoy from at the site.



Figure 2: Proximate Context of Streetcar Line Including the 6th Street & Bishop Arts Stops (Graphic Provided by Owner)

Further, the local lines connect to the great Dallas Area Rapid Transit system.



Figure 3: Neighborhood Context of Streetcar Line and Connection to Downtown Dallas (Graphic Provided by Owner)

C) The Site

a) Choosing a Site

There was never a question as to which market I would explore for this thesis. Having previously lived in Dallas, I am familiar with the city and it is a very attractive real estate market for the various reasons discussed above. The point of this study is to gain practical experience in

exploring development options and to be as realistic as possible. My personal business plan is to hold real estate long term. This requires that I be open to living in the market I choose to study as I also plan on self-managing the project. I am comfortable managing communities of forty units or less – I needed to keep this scale in mind when exploring sites. Further, my preference is to avoid taking on an equity partner. I will attempt to structure the equity component utilizing junior debt. That being said, I would only have the ability to contribute a maximum amount of \$XX.00 to the project personally, so some pieces of land were simply out of my price range. I explored 7-10 parcels of land listed for sale in east Dallas and Oak Cliff (which includes Bishop Arts.)

I was attracted to the Zang site due to its location and the evolving nature of the neighborhood. The challenges imposed by the size of the lot and the need for parking make for interesting problems to solve. The fact that the owner was willing to share his existing plans for the site made the parcel the clear front runner, because this defined another challenge for me: To propose a completely different design. There is nothing wrong with the owner's plans, but I wanted to challenge myself to further represent the sense of approachability and community that defines Bishop Arts.

b) The Surroundings

Located at the intersection of Canty Street and Zang Boulevard in Dallas' Bishop Arts District, the site is about two miles from downtown Dallas. It is a two-block walk from an abundance of local retailers. Up and down and across Zang Boulevard, one will find new high-end multifamily developments, multifamily rentals on the lower end of the income spectrum, the Methodist Dallas Medical Center, churches and small businesses, including mechanic shops, restaurants and high-end retail. The sheer amount of retail in the area is a major contributor to the resurgence of the area and the demand for living space within walking distance of the shops. It

is a cornucopia of activity and the epitome of an area undergoing great change. The number of independent and interesting retail destination within the few square blocks that make up Bishop Arts is impressive as shown by the following table.

Bishop Street Market	Indigo	M'antiques	Dirt Flowers	Fete-ish
Dude, Sweet Chocolate	Epiphany Boutique	Epiphany for Men	Cretia's Bakery & Bake Shop	Dallas Grilled Cheese Co.
House of Dirt	Skin & Body Solutions Spa	Small Planet E-Bikes	Zoomos Pop-Up Shop	Neighborhood Cellar
Kristen Lee Boutique	Oak Cliff Bicycle Company	Ginger Fox Gallery	The Laughing Willow	Greek Café & Bakery
Strut	Simply Austin	Green Pet	The Wild Detective	303 Grill
Bishop Cider Co.	Bocce Italian Kitchen	Hunky's Hamburgers	Saints & Sinners Tattoo	Lockhart Smoke House
Pho 88	Hattie's	Gloria's	Eno's Pizza Tavern	Emporium Pies
We Are 1976	Boulevardier	Bolsa	Cigar Art	Ten Bells Tacos
Lucia	Oddfellows	Tillman's Roadhouse	Veracruz Café	Opportunity Market
Zen Sushi	Design on a Nickel	Home on Bishop	Espumoso	Studio 410
Ya-Ya Foot Spa	West Davis Dental	Salon Olines	Esoterica Salon	D&J Nails
Brass Tacks Barbershop	Oak Cliff Social Club	Alchemy Salon	Jen Mauldin Gallery	Whitehall Exchange
The Local Oak	Stock & Barrel	Pier 247	Society	El Jordan Café
Maria's Closet	Chan Thai	Café Brazil	Bolsa Mercado	Sync Yoga
Good Space	C. Senior	Perdue Equities	{neighborhood}	Anytime Fitness

Figure 2: 75 Neighborhood Businesses Identified on BishopArtsDistrict.com³³

c) Site Details

At just 78x163 feet (12,714 sq ft), the Zang site is not a huge lot. Its corner location off of a major area street such as Zang Boulevard makes it ideal for multifamily development. It abuts a single family home to the west and south and sits across Canty Street from a large single story office building. The following graphics provide both context at both a neighborhood and greater metro level.

³³ <https://bishopartsdistrict.com>, accessed 7/18/17.



Figure 4: Neighborhood Context and Proximity of the Site to Bishop Arts Retail (Provided by Fields of Faith Ministries)



Figure 5: Proximity of the Site to Major Highways & the Entirety of the Bishop Arts District (Provided by Fields Faith Ministries)



Figure 6: Westward View of the Eastern Edge of the Site from Zang Boulevard



Figure 7: Eastward View Along Canty Street Toward Zang Boulevard from the Bordering Single Family Home



Figure 8: Single Family Home Abutting the Western Edge of the Site



Figure 9: Single Family Home Abutting the Southern Edge of the Site



Figure 10: Office Property Located Across Canty (Large Gated Parking Lot Not Pictured)



Figure 11: View of the Trolley Stop Located 547 Feet North of the Site on Zang Boulevard.

d) Site Conditions

A soil test was performed and the results were made available to me by the current owner. The ground surface is a gently sloping terrain with several feet of elevation changes. This is an existing positive feature of the site in terms of water drainage and the geotechnical engineers advise maintaining this slope. No excess groundwater was found. The soil is a mixture brown/tan/orange clay with calcareous particle and gravel with clay/clayey sand with high to very high plasticity characteristics. Considering the profile of this soil/rock mixture, there is potential for shrinking and swelling up to five inches as the weather changes. Because of this, it is the engineer's recommendation to avoid a shallow foundation system and construct a drilled pier foundation. However, two alternative solutions were provided to modify the soil profile. The modifications will reduce the swell potential and allow for a floor slab on-grade or shallow foundation if floor slab or foundation movements of one inch are tolerable.³⁴

Chapter 3 – Zoning

The parcel is Zoned WR-3 and Located in PD 486, Subdistrict B, tract 4.³⁵ This site is designated as a "Walkable Urban Residential," form-based district, zoned by the City of Dallas in Sec. 51A-13.301 to be specifically of a "low intensity."³⁶ The zoning is meant to encourage designs that allow for walkability, thereby reducing traffic. The uses for this parcel are limited to residential – for apartments, townhomes or manor houses as seen in the following graphic.³⁷

³⁴ Engineering report provided by the owner, 12,6/15.

³⁵ City of Dallas GIS Services, <https://gis.dallascityhall.com/zoningweb/>, accessed 6/15/17.

³⁶ *Dallas Development Code*, "Chapter 51A, Article XII: Form Districts, 3-1" 2017, <http://www.dallascityattorney.com/51A/article13.pdf>, accessed 6/15/17.

³⁷ *Ibid*, 3-7.

	Mixed Use Shopfront	Single-Story Shopfront	General Commercial	Apartment	Townhouse Stacked	Townhouse	Manor House	Single-Family House	Civic Building	Open Space Lot
District	Mu	Ss	Gc	Apt	Ts	Th	Mh	Sf	Civ	O
Walkable Urban Mixed Use (WMU)										
Low (WMU-3, WMU-5)	■	■	■	■	■	■	■		■	■
Medium (WMU-8, WMU-12)	■		■	■	■	■			■	■
High (WMU-20, WMU-40)	■		■	■					■	■
Walkable Urban Residential (WR)										
Low (WR-3, WR-5)				■	■	■	■		■	■
Medium (WR-8, WR-12)				■	■	■			■	■
High (WR-20, WR-40)				■					■	■
Residential Transition (RTN)						■	■	■	■	■
Shopfront (-SH) Overlay over any WMU or WR district	■	■							■	■

Figure 12: Development Types by District³⁸

The current owner met with and obtained approval for his designs from the neighborhood review board. The owner conveyed to me that the board’s greatest concern was that no retail or commercial uses be present. I surmise that the board will be even more pleased with a design that furthers the walkability and low-intensity feel of the site.

The maximum height for the lot is 50’ beginning at the frontage along Zang Boulevard (eastern edge.) The parcel is subject to a Residential Proximity Slope (RPS) of 1:3, which dictates that the allowable height is reduced by one foot for every 3 feet that one moves westwardly through the lot. The edge abutting the single-family home on the western boundary will be subject to a maximum height of 26 feet. The WR-3 designation is an overlay zoning on R-7.5, which does allow for 35-foot height maximums.³⁹ So there is the potential to seek a height variance on the western edge and it appears as though the current owner planned on doing so. The western edge is subject to a required 10 foot setback from the single-family home while the northern (Canty Street), eastern (Zang Boulevard) and

³⁸ Ibid.
³⁹ Ibid, 3-5.

southern edges require a 5 foot setback. 8-foot sidewalks are required and already exist.⁴⁰ The following graphics are applicable to the site.

Intensity	District	Height in Stories (max)	Height in Feet (max)
LOW	RTN	2½	35
	WMU-3, WR-3	3½	50
	WMU-5, WR-5	5	80
MEDIUM	WMU-8, WR-8	8	125
	WMU-12, WR-12	12	180
HIGH	WMU-20, WR-20	20	300
	WMU-40, WR-40	40	600

Figure 13: Maximum District Height⁴¹



Figure 14: Character Examples Applicable to Apartments within WR-3 Districts⁴²

⁴⁰ Ibid, 3-24.

⁴¹ Ibid, 3-3.

⁴² Ibid, 3-23.

Chapter 4 – Parking

Currently, the site plan and costs are highly driven by the parking requirements to include 1.15 spaces for every one-bedroom and 1.65 spaces for every two-bedroom apartment.⁴³ Underground parking is cost prohibitive on such a small lot with onerous height restrictions. The owner's 19-unit plan devotes nearly the entire first floor to 15 parking spaces. With 19 one-bedroom units planned, there are 20.75 parking spots required. With six two-bedroom and eight one-bedroom units, my 14-unit proposal required 19.1 parking spots and I am providing 14 spots. My 18-unit proposal requires 23.7 spots and I am providing 11 on-site spots. I will seek parking reductions for the remaining spots – after all, this is meant to be a walkable area per the city's designation.

Although I have not been apprised as to how the current owner intended to obtain parking reductions, there are reductions available in the Dallas Development Code. Section (c)(2) of Chapter 51A-13.403, "Parking Reductions" states that the "building official may approve a five percent reduction in the number of required parking spaces for uses with a main entrance within a 600-foot walking distance of an improved bus or trolley transit stop providing both shade and seating. This reduction will be granted only where a rail transit station is not available."⁴⁴ The Zang Site is within this prescribed distance of both a bus and trolley stop. Additionally, Section (g)(2) states that "a parking reduction of two percent will be granted where a higher level of pedestrian amenity is provided in accordance with Section 51A-13.501(f), 'Pedestrian Amenities.'" The pedestrian amenities required include such items as benches, trash receptacles and bike racks every 300 feet, exterior lighting every 75 feet, pedestrian access through the site (which is already in the designs) and a majority of the façade being comprised of

⁴³ Ibid, 4-3.

⁴⁴ Ibid, 4-4.

brick (which is also the case).⁴⁵ These requirements are already part of the design or not overly costly and will benefit the residents. The reductions allowed under (c)(2) and (g) stipulate that the reductions are not to exceed 50% of overall parking requirements.⁴⁶

Even more helpful are the Special Parking Regulations laid forth in Sec. 51A-13.404 provide alternatives to “standard parking design” and state that special parking may account for 100% of required parking onsite. Section (e)(1) states that “a parking space located on a public street may be included in the calculation of parking requirements if it is adjacent to the building site where the use is located.”⁴⁷ There are 260 feet of street parking adjacent to the site which would provide upwards of 13 on-street parking spots for residents. Between the reductions for a location near transit, providing pedestrian amenities and on-street special parking, the reclaimed living and outdoor space that would have otherwise gone to parking will go far to improve the profitability and livability of what would otherwise be a site plan heavily driven by parking requirements on a small parcel.

Chapter 5 –Proposals

The site’s location in Bishop Arts and next to single-family homes calls for a development that is pedestrian friendly and does not feel like a large complex. In order to determine the optimal plan for the site, I will look at the feasibility of the current owner’s 19-unit plan for the site and introduce two alternative designs.

The 19-unit plan is one massive structure that dominates nearly the entirety of the site. The two designs I propose break the complex into either two or three separate buildings. Each building is either a two or three story walkup with no need for elevator access. The breaking up of building masses allow foot traffic to flow through the site’s outdoor green spaces. Corridor spaces have been reduced as much

⁴⁵ Ibid, 5-3.

⁴⁶ Ibid, 4-4.

⁴⁷ Ibid, 4-7;4-8.

as possible overall and single-loaded corridors or walkways overlooking interior courtyards, a design prevalent in the area which can be a poor use of space and money, have been banished to the design wastelands of yesteryear.

A) 19-Unit Site Plan

The existing proposal is a 3-level rectangular design which features 19 one-bedroom units (each approximately 645 square feet) but provides no pedestrian permeability through the site and is overwhelmed by a ground-level parking garage which encompasses nearly the entire site footprint, with the exception of three ground-level units accessed from the garage. As these three units are not separated from the garage by a hallway, the desirability may be reduced due to noise. The second and third levels house 16 units which are accessed by interior single-loaded walkways that overlook the garage below. Constructing hundreds of feet of walkway to service only 16 units seems to not be the best use of construction funds and will also eat up valuable capital expenditure funds in the future. Perhaps the walkways can be eliminated and parking can be reconfigured.

The exterior of the 19-unit plan might be more suitable for a downtown or denser urban location than Bishop Arts. Because of its impermeability, it seems more akin to a fortress meant to separate the residents and the outside world. The exterior is reminiscent of large institutional apartment complex developments' designs meant for housing residents en masse. Bishop Arts is a welcoming and inclusionary district and is anything but institutional. Furthermore, this is a small development which would perhaps be better served by intentionally looking and feeling like a small and inviting group of homes with residents in mind.

It seems that the intention of the 19-unit design is to provide high-end interior finish outs. I agree that this is necessary to achieve the rents needed to support the cost of the land with a maximum of only 3 stories allowed and to compete with surrounding apartment communities in this

price range. This includes gourmet kitchens with granite, high-end stainless-steel appliances and fixtures, stackable washers and dryers, and roomy closets. One can gain a sense of the design from the following images.

a. 19-unit elevations and floor plans

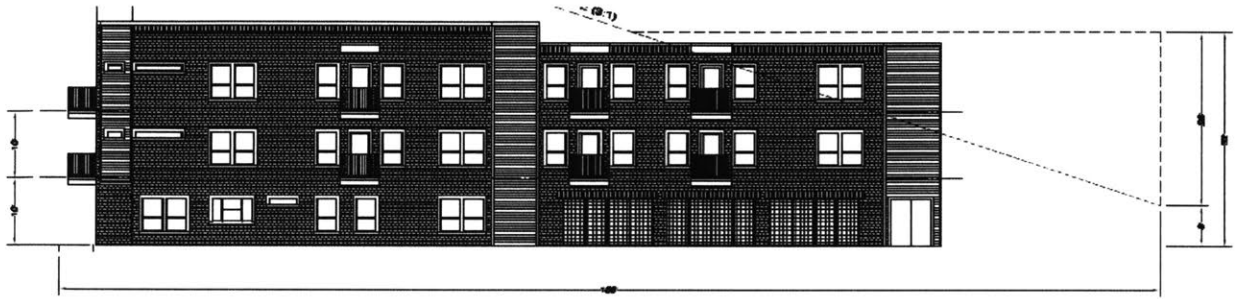


Figure 15: Elevation Looking South from Canty Street (Graphic Provided by Owner)



Figure 16: Elevation Looking West from Zang (Graphic Provided by Owner)

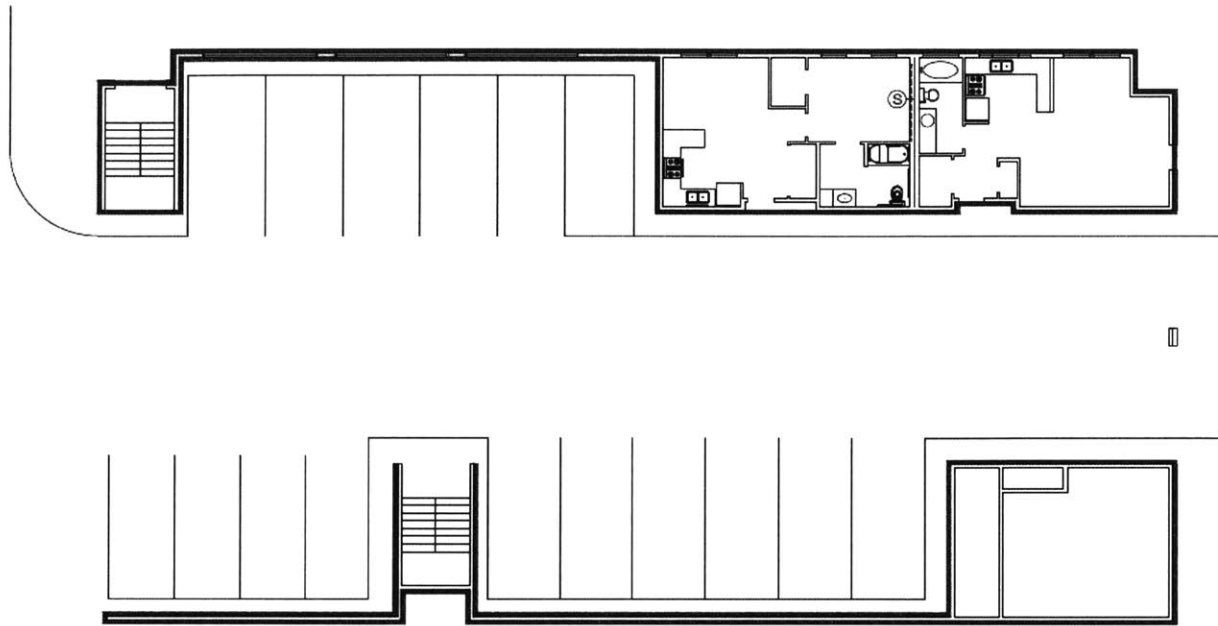


Figure 17: 1st Floor Plan – 3 One Bedroom Units and 15 Parking Spots (Graphic Provided by Owner)

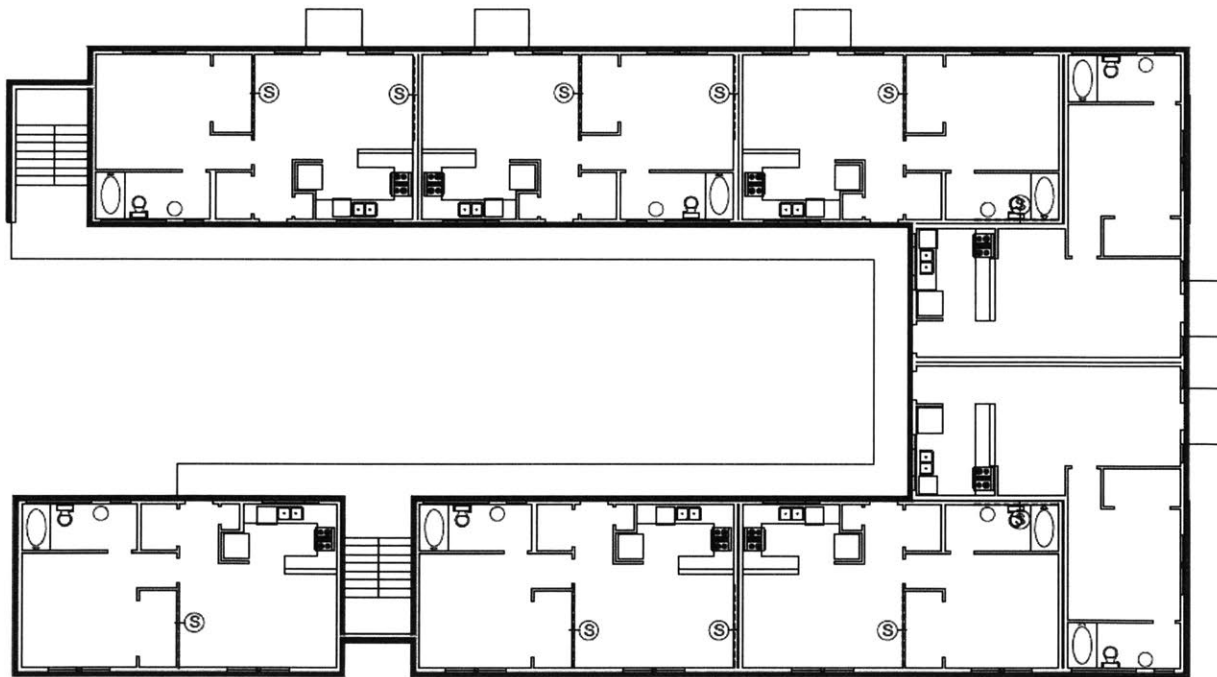


Figure 18: 2nd Floor Plan – 8 One Bedroom Units (Graphic Provided by Owner)

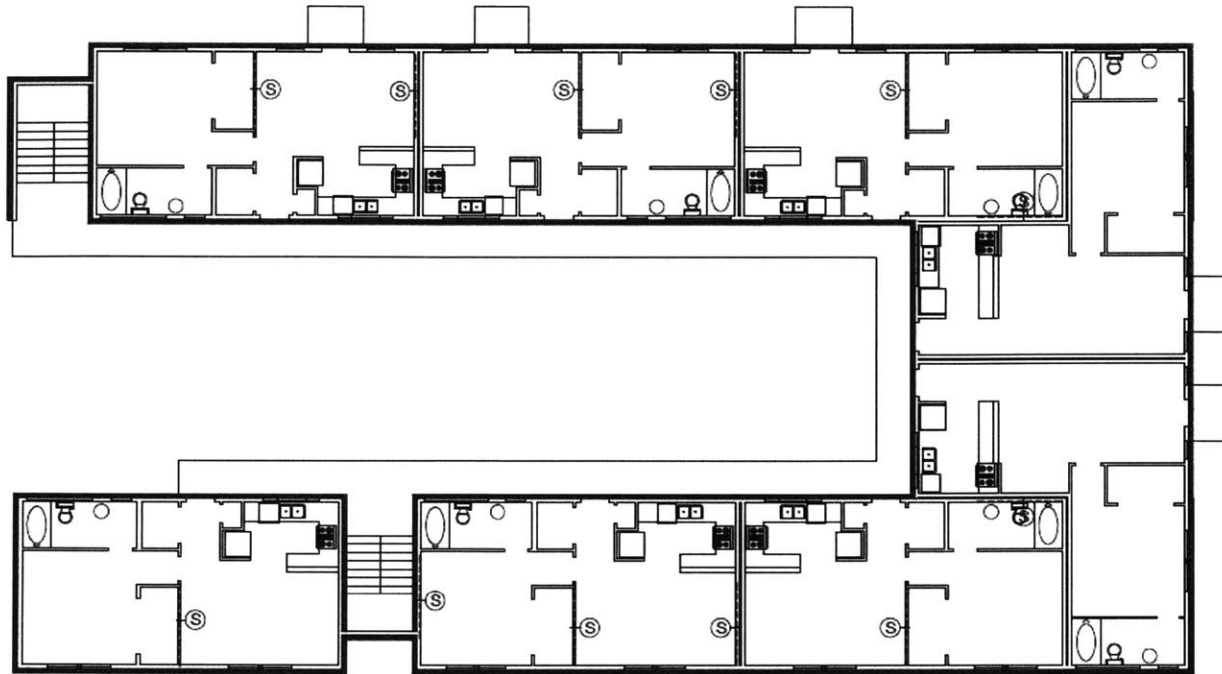


Figure 19: 3rd Floor Plan – 8 One Bedroom Units (Graphic Provided by Owner)

B) ALTERNATIVE 14-UNIT PLAN

The 14-unit design features six two-bedroom units, eight one-bedroom units, four private parking garages, ten uncovered parking spots and four rentable bike lockers or small storage spaces. Additionally, as called for by the city in designating this a walkable residential zone, the site is permeable for pedestrians and puts every square foot not dedicated to living space to work as enjoyable green space. The access points to each home are designed to be reached without traipsing through wasteful corridor spaces.

The structures themselves will be wood framed with traditional brick veneer, appealing to the character of the area and scaled to not be intrusive or imposing. The building fronting Zang Boulevard is a three-story walkup while the interior building is two stories with one-bedroom apartments above garage. I believe that pedestrians walking to the Bishop Arts retail area or walking their pets will be more comfortable interacting with a walkable and open space as opposed to

dodging cars pouring out of a gated parking garage. The interior fit out will be similar to that of the 19-unit design. The smaller scale and permeability is evident in the following illustration.

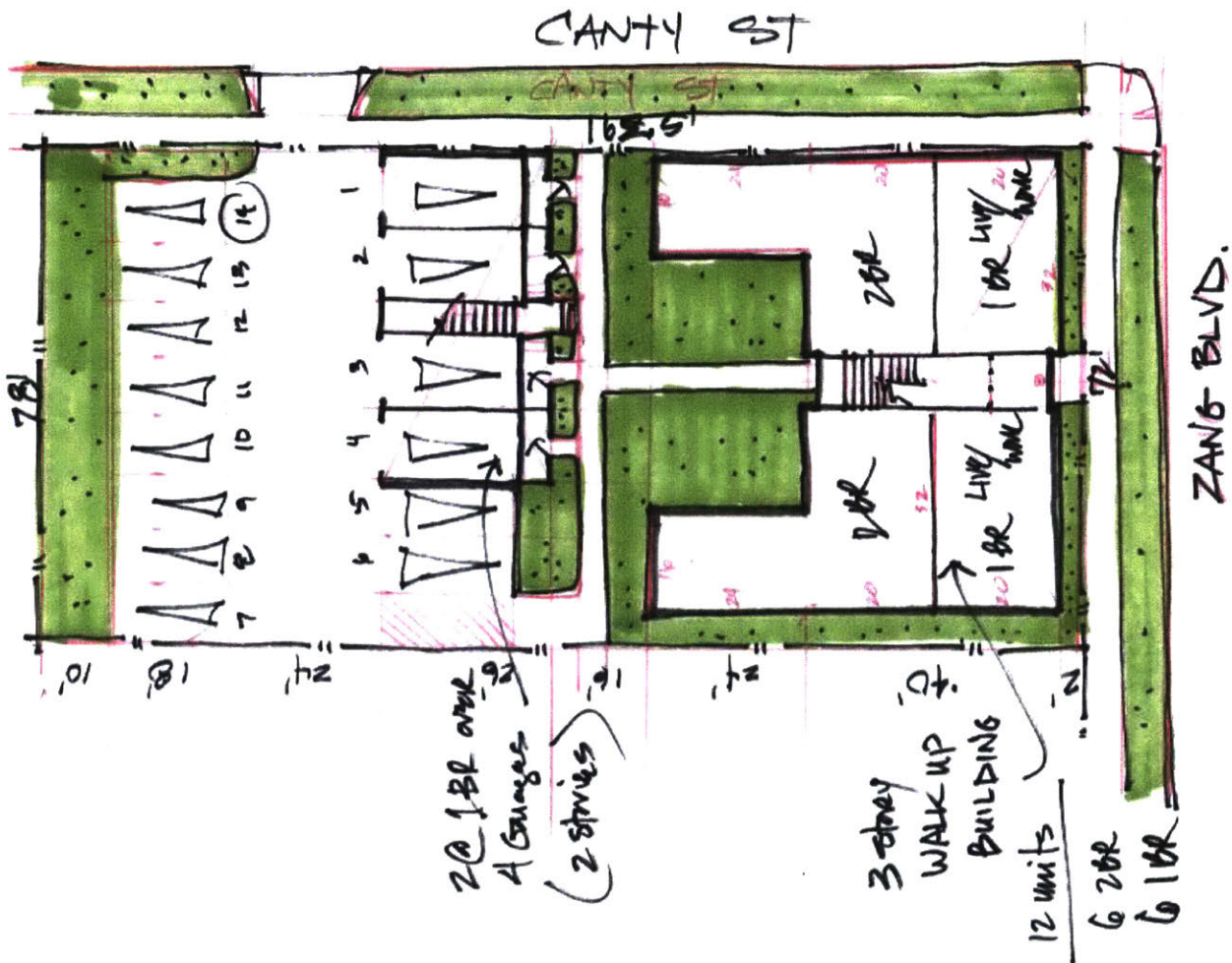


Figure 20: 14 Unit Site Plan - 8 One Bedrooms, 6 Two Bedrooms, 4 Garages, 4 Storage Units & 10 Parking Spaces

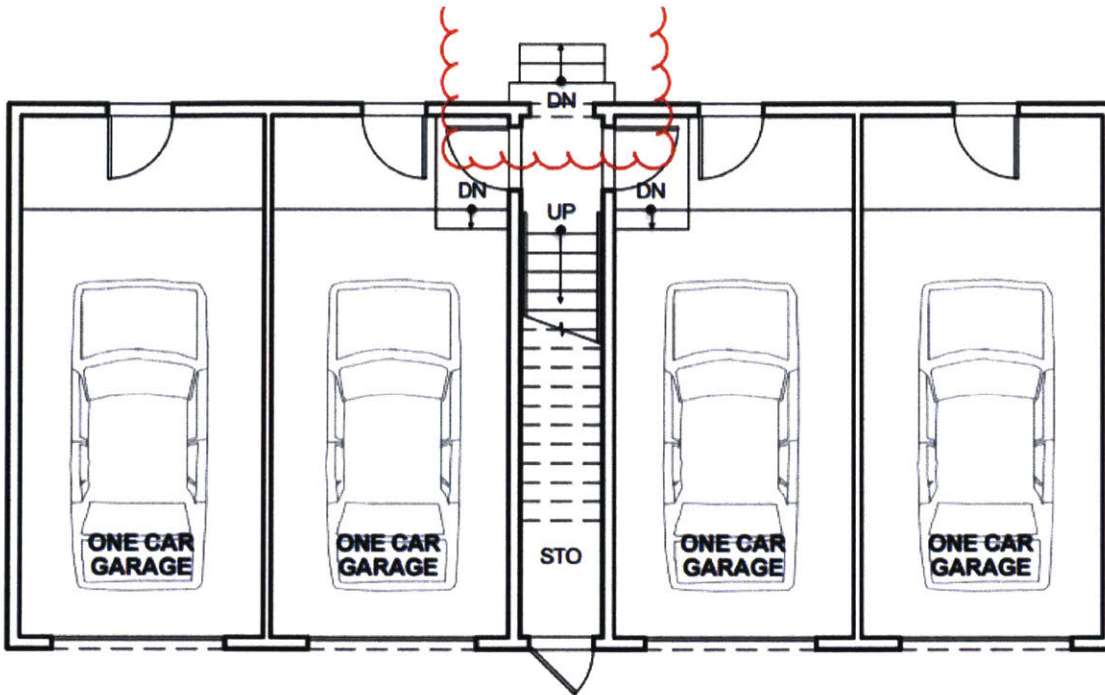


Figure 21: Garage Detail for the 14 and 18 Unit Plans (1 Bedroom Units Located Above)⁴⁸

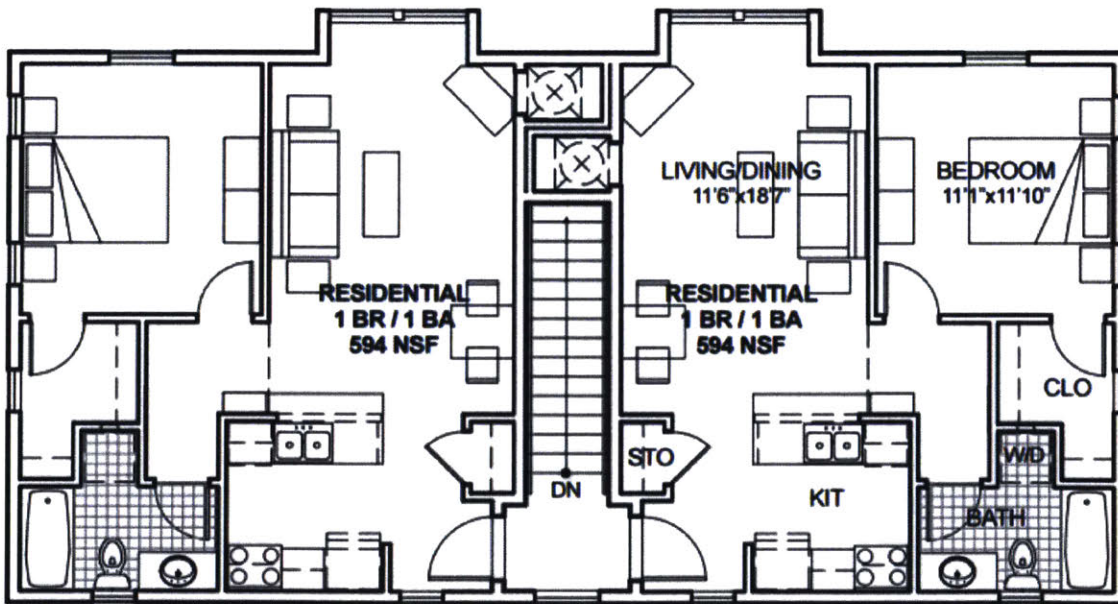


Figure 22: Sample 1 Bedroom Units for the 14 and 18 Unit Plans (Located Above Private Garages) *Actual SF Will Range 600-640⁴⁹

⁴⁸ Contributed by R. John Anderson, <http://www.andersonkim.com/r-john-anderson/>.

⁴⁹ Ibid.

C) ALTERNATIVE 18-UNIT PLAN

The 18-unit plan I propose offers six two-bedroom and 12 one-bedroom units, eight private parking garages, three uncovered parking spots, and four rentable bike lockers or storage rooms. The structural and finishing details are similar to the 14-unit plan. However, in this program the middle structure and the building fronting Zang Boulevard are both three stories. A third building has been added to the rear of the lot. It houses four ground-level garages with two one-bedroom apartments tucked above. If a roof cannot be designed at a light enough slope to come in under the max height, a small zoning variance will be sought. Not only does this plan provide two more rentable units, but the rent roll also benefits from four additional garage rentals. I opted not to include four additional storage rooms with the garages as the placement at the rear (western) edge of the lot is awkward with only a five-foot buffer to the adjacent lot.

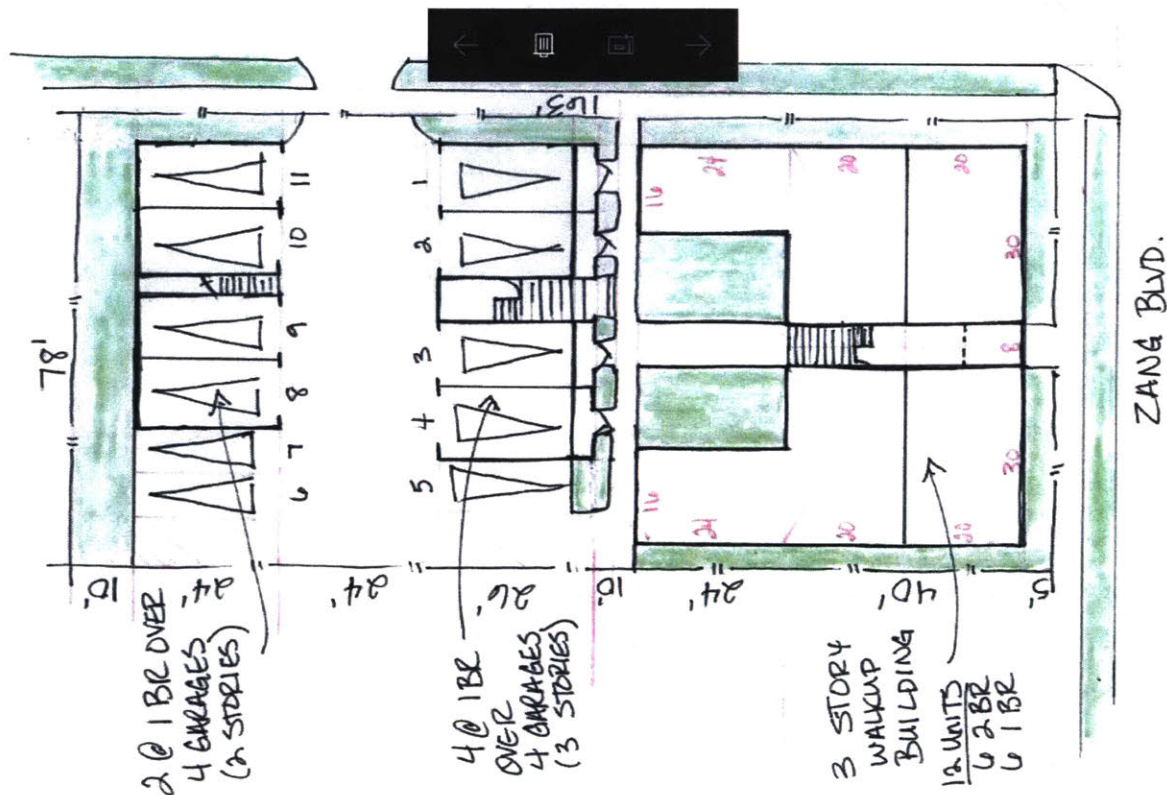


Figure 23: 18 Unit Site Plan - 12 One Bedrooms, 6 Two Bedrooms, 8 Garages, 4 Storage Units & 3 Parking Spaces

Chapter 6 – Financials

I am evaluating the financial feasibility of the site through multiple site configurations and 10-year discounted cash flow models. I will determine the residual land value based on the property before tax cash flow (PBTCF) and net present value (NPV) figures.

As far as construction is concerned, a simple assumption is made that construction begins at the beginning of year one and is complete by the end of year one. Three months are allowed for lease up and stabilization in year two. During the construction period, the project is financed by an interest only construction loan. At the end of year two, the development's stabilized market value is determined by dividing year three's projected Net Operating Income (NOI) by an appropriate capitalization rate (Cap Rate.) A permanent loan is then obtained according to the stabilized market value and the construction loan is retired.

The property is presumed to operate according to assumptions outlined in Section C below with a sale occurring at the end of year ten. To determine the sales price or market value, year 11's projected NOI is divided by a long-term cap rate, which is different from the near-term cap rate used to value for refinancing purposes in year two. At this point, land costs should not be a consideration, as that is the variable under analysis. The only expense item contributing to NOI that could be affected by land costs is ad valorem tax. In order to account for this expense in year one without skewing the calculations by including any land cost estimates, the ad valorem tax is computed on market value of improvements only (hard and soft construction costs.) Since construction is ongoing in year one, the appropriate tax rate is applied to 50% of the improvement value. Beginning in year two, for purposes of land value calculation, the appropriate tax rate is applied to 100% of construction costs and grown at the overall expense growth rate.

To determine land value, Cash Flows from Operations (PBTCF) including a reversion in year ten, are discounted back to year zero. This is effectively the present value (PV) of the development or building (they are one in the same at this point), excluding land, at time zero. The projected construction costs at time zero are then subtracted from the time zero PV of the building. This is the value of the land.

This process is repeated for all site development proposals. Provided one approves of the site plan and agrees with the assumptions, this should be the maximum possible price payable for the parcel as justified by the property cash flows.

This process disregards the methods by which a developer will obtain equity and construct a capital stack. In theory, the developer's ability to provide equity in the most profitable manner should not affect the value of the land to the current owner. Any outsized returns resulting from the financial savvy of the developer are profit for that developer. In a competitive bid situation for the land, a creative financing structure may allow a buyer to pay more for the land; however, financing structures are not a topic addressed in this study.

A) Sales Trends

With such a great population influx, investor appetite for multifamily investments has been strong and demand from renters has also been attractive from an owner's perspective. Within the DFW metroplex, 2016 vacancies sat at 4.6% with an expected 20 basis point increase to 4.8% in 2017 due to the addition of new supply. 2016 saw apartment rental growth rate over 2015 of 4.5% and the 2017 growth rate is forecast at 4% over 2015 – the decrease is due again to new online supply.⁵⁰ A decrease of any sort must be viewed through a lens which takes into account that the prior years' multifamily activity was phenomenal for investors. Absorption surpassed deliveries of

⁵⁰ "DFW Berkadia Multifamily Forecast Review," https://assets.recenter.tamu.edu/Documents/MktResearch/DFW_Multifamily_Berkadia_Forecast_Review.pdf.

new units in 2015, even with a 3% increase in supply over 2014.⁵¹ This drove vacancies down by 80 basis points over 2014 rates.⁵² 2014 had been the first year that multifamily completions surpassed absorptions since 2009, following an absorption escalation of 25.3% in 2013.⁵³ These strong metrics are supported by solid job growth – 4.1% in 2014, 2.7% in 2015, 3.1% in 2016 with expectations for another 3.1% expansion in 2017.⁵⁴ One must keep in mind inflation when considering these figures. Average inflation for 2016 was 1.26%.⁵⁵

Institutional grade multifamily properties are priced between \$160,000 and \$200,000 per unit on average. Capitalization rates (Cap rates) are steady at 4-5% in the institutional multifamily space for core assets in core locations. However, there is also great appetite for DFW’s enormous stock of 1960s – 1980s inventory. In fact, when searching for sale multifamily listings in the DFW area, the vast majority one will encounter is of vintage stock. There is very little new construction for sale which could be categorized as boutique or small development, although one can find vacant parcels that lie within the path of revitalization (or of the less popular term, “gentrification.”) 1960s stock ranges from \$40,000 - \$60,000 per unit, unimproved. The 1970s and 1980s inventory fetches \$10,000 - \$20,000 more per unit than the 1960s. Non-core assets, which can be viewed as generally non-institutional given the risk appetite and attraction to core of institutional money, command cap rates on average nationally ranging from 5.8-6.1%. It is widely reported and discussed in this dissertation that Dallas’ real estate market is stronger than many other major national markets. Upon discussion of my development and given the appetite for multifamily, I was advised by an Associate Director at HFF that the maximum near-term cap rate should be 6%. This individual also

⁵¹ Ibid.

⁵² Ibid.

⁵³ Ibid.

⁵⁴ Ibid.

⁵⁵ “What is the Current Inflation Rate?”

https://www.inflationdata.com/inflation/inflation_rate/currentinflation.asp, accessed 7/16/17.

conveyed that positions subordinate to the construction or permanent loan, such as mezzanine debt, preferred equity or junior debt are rarely underwritten above 16% in this multifamily real estate environment.⁵⁶ This sentiment was also echoed by a director at a prominent investment firm with experience in real estate finance and investments who wishes to remain anonymous. Although smaller in scale than many of the institutional projects in Dallas, I will expect to see the costs of my development fall in line with new build institutional per unit prices, due to my site's phenomenal location and intended Class A product quality; however, I should not expect institutional level cap rates.⁵⁷

Regarding the long-term cap rate used for the year ten reversion, it will be assumed to increase as the Dallas markets and multifamily sector in general are quite popular with investors right now. This is not sustainable. From my experience and anecdotally, I am aware that Class A multifamily is reaching a point of saturation with current supply and scheduled completions. In searching for sites for this evaluation, I am also personally aware that cap rates in Dallas range from 4% - 12%, depending upon quality and location, of course. As nobody can accurately predict future rates, an average of 8% (a rate more akin to a class B development) will be used as a terminal cap rate. Further, in year ten, this asset will be outdated and require capital improvements to maintain its standing as a class A development. Therefore, even if cap rates were to remain at their current levels, this development would not command a class A rate in the market.

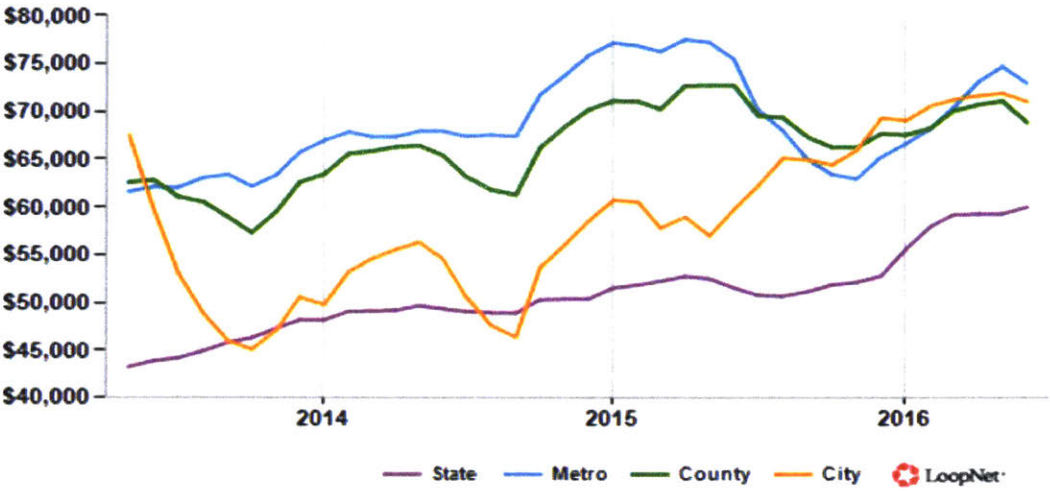
⁵⁶ <https://www.linkedin.com/in/jose-carrazana-657a443/>.

⁵⁷ "DFW Berkadia Multifamily Forecast Review,"

https://assets.recenter.tamu.edu/Documents/MktResearch/DFW_Multifamily_Berkadia_Forecast_Review.pdf; US Class A Multifamily Cap Rates, JLL Research, 2017, accessed 7/14/17.

In determining cap rates, it is helpful to view investment appetite, demand for units and units available for sale in the Dallas area. The following visuals provide insight into these metrics.

Asking Prices Multifamily for Sale Dallas, TX (\$/Unit)



	Jun 16	vs. 3 mo. prior	Y-O-Y
State	\$59,954.17	+1.3%	+16.3%
Metro	\$72,901.70	+3.7%	-3.4%
County	\$68,788.75	-1.8%	-5.4%
City	\$70,975.36	-0.3%	+18.6%

Figure 24: Dallas Multifamily Property Asking Price Index⁵⁸

⁵⁸ www.loopnet.com, accessed 7/14/17.

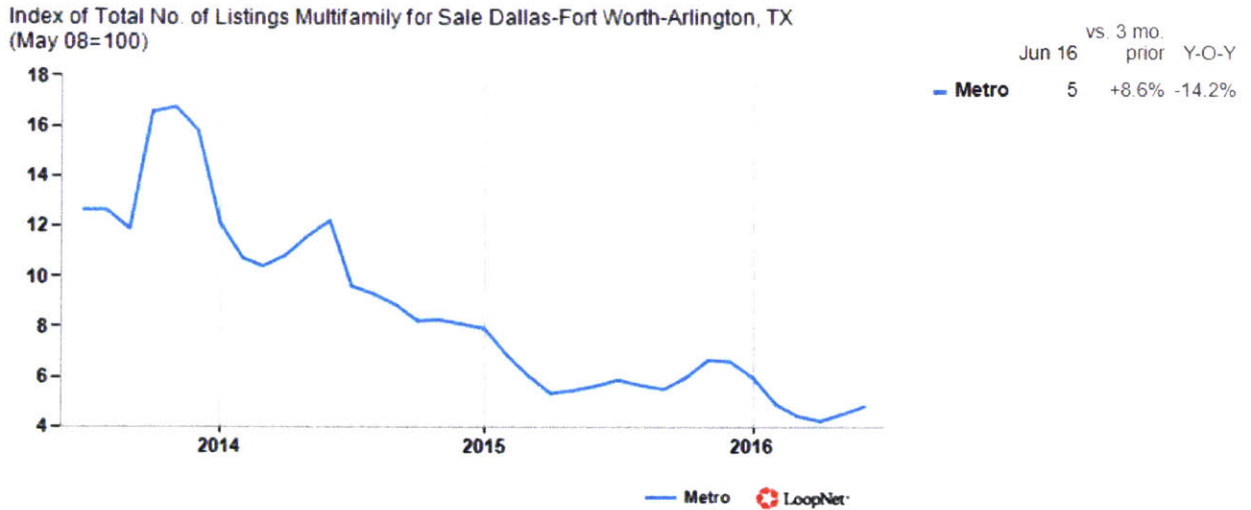


Figure 25: DFW Multifamily Property No. of Units for Sale - Sales Trends⁵⁹

B) Other Financial Data Points

Capital expenditures (CapEx) of a one-time nature are on average 10-20%⁶⁰ of net operating income. This is a wide range and not inconsequential amount of money when translated to the bottom line net cash flow. A main determinant of where in this range a property's CapEx figures may fall is age. A younger building will tend to need to devote less capital to improvements outside of regular operating expenses. Additionally, these figures were derived from NCREIF Index properties of an institutional nature. Their CapEx contributions may be larger than average and may reflect renovations and rehabilitations of properties. It could be argued that a new non-institutional property's CapEx would trend towards the lower end of that range. CapEx is also presented as a per unit expense ranging from \$900 to \$1400 per unit in the first 10 years of a property's life.⁶¹ When compared to a calculation of 10% of NOI, the results are quite similar. The following visual is helpful in understanding how CapEx changes throughout a real estate asset's life cycle.

⁵⁹ Ibid.

⁶⁰ David Geltner, et al., "Commercial Real Estate Analysis and Investments," (OnCourse Learning, 2013), 239.

⁶¹ David Geltner, PhD. and Sheharyar Bhokari, PhD, "Commercial Buildings Capital Consumption in the United States," 2015, MIT Center for Real Estate, 47.

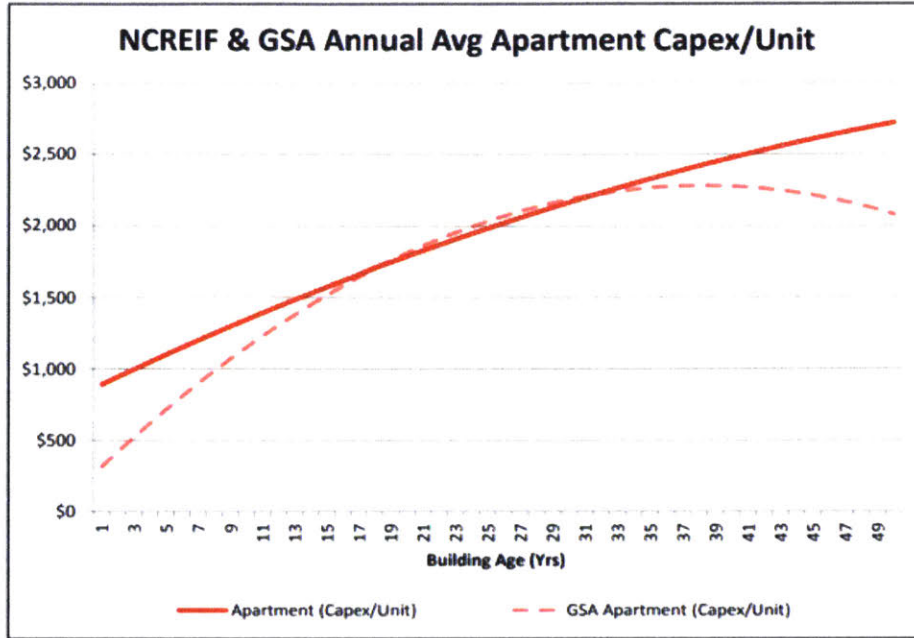


Figure 26: Average CapEx/Unit Related to the Age of the Structure⁶²

C) Financial Assumptions Used

Upon consideration of the above data points, the following metrics are applied in the evaluation of the feasibility of the three different site plans:

- a) Rental growth rate = 3% growth rate (conservative figure) – 1.5% inflation = 1.5%
- b) Expense growth rate = inflation = 1.5%
- c) Vacancy rate = 5%
 - a. Year 1 vacancy assumed at 30% to represent 3 months of lease up activity (3/12 = 25%) + assumed 5% regular annual vacancy.
- d) CapEx = 10% of NOI
 - a. Realistically, I would not expect this level of CapEx required in the first few years of operations as this is new construction. This level of CapEx does have a great impact on performance and a more aggressive or less conservative investor might adjust this calculation to a lower level within the first five years.

⁶² Ibid.

e) Management Fee – 3%

- a. I will self-manage the property. A national research survey shows that individually metered properties are managed at rate of 2.7% of PGI.⁶³ This includes institutional properties. Non-institutional investments may be higher.

f) Utilities – 2.4%

- a. A national research survey shows that individually metered properties are managed at rate of 2.4% of PGI.⁶⁴

g) Refinance Capitalization Rate – 6%

h) Terminal Capitalization Rate – 8%

i) Construction Loan –

- a. I received two quotes from two different Dallas based lenders who wished to remain anonymous.
- i. 70% Loan to Cost at an interest rate of 3.9% + the 30 day Libor rate. This quote allows for total leverage up to 90%.
- ii. 80% Loan to Cost at a current interest rate of 7.95 This quote also allows for total leverage up to 90%.

j) Permanent Loan –

- a. I received a Freddie Mac quote from a lender who will remain anonymous.
- i. 80% loan to value at an interest rate of 4.23% fixed for 10 years and amortized over 30 years.

⁶³ “2016 NAA Survey of Operating Income & Expenses in Rental Apartment Communities,” National Apartment Association, <https://www.naahq.org/news-publications/units/august-2016/article/2016-naa-survey-operating-income-expenses-rental>, accessed 7/14/17.

⁶⁴ Ibid.

1. In order to remain conservative, as I endeavor to be in this study, I will assume a rate of 5%.
 - k) Selling Costs – 1.5% (determined by using anecdotal industry norms.)
 - l) Insurance - \$349.00 per door (property and liability commercial package) + \$750.00 (property-level umbrella coverage)
 - a. This rate was quoted to me by a Dallas area insurance professional. There would typically be an additional \$350.00 per door charge due to extra liability if there were a pool. Additionally, the umbrella coverage could be more expensive if the development included a park or playground for children.⁶⁵
 - m) Ad Valorum Tax – 2.719289%
 - a. The separate components of this rate were pulled directly from the parcel's most current 2016 tax statement with payment due by July 31, 2017. The current market value of the land is \$175,500. I will assume the market value of the land moving forward to be the purchase price and the market value of improvements to the land to be the subtotal of hard and soft construction costs.⁶⁶
 - i. Dallas County - .243100%
 - ii. Hospital District - .279400%
 - iii. College District - .122933%
 - iv. School Equality - .009271%
 - v. Dallas ISD – 1.282085%
 - vi. Dallas City - .782500%

⁶⁵ www.linkedin.com/in/stgraves.

⁶⁶ www.dallasact.com.

n) Rental Rates – Based upon an evaluation of comparable properties. Data was gathered online and by calling the leasing offices of each property.⁶⁷ The comparables are of similar interior fit out. The fact that my proposed development will not feature community amenities such as a pool or fitness center is of slight concern. However, I am personally and anecdotally aware that many renters avoid the large institutional apartment complexes where such amenities are likely to be found as the increased unit and resident density of those complexes can be unappealing. There are those who will value the fact that this is a small boutique development that encourages neighbors to bond, is pedestrian friendly and features private garages. I have not found another development in the area of comparable age and quality offering private garages. The garages will be a differentiating factor. In determining appropriateness of rental amounts, some of those who avoid institutional level density will be agnostic to community amenities. Additionally, I will use a terminal cap rate that is higher than that of an institutional development, where such community amenities are likely to be found. Therefore, the final valuation will reflect a discount for those missing amenities as compared to comparable units.

Apartments	Square Footages			Average Rent/Unit			Average Rent/SF		
	Studio	1 Bedroom	2 Bedroom	Studio	1 Bedroom	2 Bedroom	Studio	1 Bedroom	2 Bedroom
Zang Triangle	576	696	1167	\$1,139.00	\$1,299.00	\$1,649.00	\$1.98	\$1.87	\$1.41
Bell Bishop Arts	563	651	1127	\$1,330.00	\$1,385.00	\$1,817.50	\$2.36	\$2.13	\$1.61
Magnolia at Bishop Arts	500	610	1095	\$999.00	\$1,174.00	\$1,735.00	\$2.00	\$1.92	\$1.58
Pike West Commerce	576	644	1088	\$1,317.00	\$1,221.50	\$1,706.50	\$2.29	\$1.90	\$1.57
Sylvan Thirty Apartments	592	695	1084	\$1,182.00	\$1,346.00	\$1,759.50	\$2.00	\$1.94	\$1.62
Alta Yorktown	NA	744	1163	NA	\$1,320.00	\$1,712.50	NA	\$1.77	\$1.47
Alexan West Dallas	540	676	1030	\$1,170.00	\$1,435.00	\$1,904.00	\$2.17	\$2.12	\$1.85
Oaks Trinity	NA	644	1110	NA	\$1,202.50	\$1,665.00	NA	\$1.87	\$1.50
Austin Trinity Green	504	756	1008	\$1,287.50	\$1,631.50	\$1,813.50	\$2.55	\$2.16	\$1.80

Figure 27: Comparable Rental Units and Pricing Upon Which My Rental Rates Are Based⁶⁸

Unit Details	Monthly Rent/Unit	Monthly Rent/SF
1 Bed/1 Bath (600 SF)	\$1300.00	\$2.17
1 Bed/1 Bath (624 SF)	\$1400.00	\$2.24

⁶⁷ www.apartments.com, accessed 7/15/17.

⁶⁸ Ibid.

1 Bed/1 Bath (640 SF)	\$1400.00	\$2.19
2 Bed/2 Bath (984 SF)	\$1700.00	\$1.73
Private Garage (264 SF)	\$120.00	\$.45
Bike Locker/Storage (40 SF)	\$40.00	\$.83

Figure 28: Proposed Rental Rates for All Proposals

My research into comparable units has also revealed that private garages are a rarity in the area. I am conservatively pricing monthly garage rentals at \$120.00 and bike locker/storage rentals at \$40.00 per month. It is quite possible that the garages could fetch higher prices considering the following parking information I collected from comparable properties.

Apartments	Parking		Storage Price
	Type	Amount	
Zang Triangle	Unassigned Spot	\$35.00	\$30.00
Bell Bishop Arts	Unassigned Spot	\$125.00	
Magnolia at Bishop Arts	Assigned Spot	\$125.00	\$50.00
Pike West Commerce			
Sylvan Thirty Apartments	Unassigned Spot	\$100.00	
Alta Yorktown			
Alexan West Dallas	Assigned Spot	\$100.00	
Oaks Trinity	Assigned Spot	\$125.00	
Austin Trinity Green	Assigned Spot	\$125.00	

- o) Construction Costs – adapted from estimates by a knowledgeable national architect/developer and a Texas construction professional.⁶⁹
 - a. Hard costs per conditioned square foot - \$115.00
 - b. Hard costs per unconditioned square foot - \$60.00
 - c. Hard costs for landscape and hardscape - \$8.00
 - d. Soft costs per square foot - \$18.00
 - i. Development fee – 3% of hard and soft costs
 - ii. Architecture fee – 6% of hard costs
 - iii. Civil engineer - \$5000.00
 - iv. Structural Engineer - \$5000.00

⁶⁹ <https://www.linkedin.com/in/nicholas-j-foran/>; <http://www.andersonkim.com/r-john-anderson/>.

v. MEP - \$5000.00

vi. Construction management fee – 2% of hard and soft costs

Model Hard Cost Estimate Template - R. John Anderson April 2017

Set a Target price Per SF and check the likely cost per trade.

Percentage of costs based upon NAHB National Averages

Note Fire Protection is not included in the percentage breakdown and should be addressed sep:

\$115 =Target Budget per SF

Scope (Using the NAHB Cost Breakdown Structure)	% allocation of Construction Cost per SF	Subtotal	per SF per Target	Cost per SF with local trade input	Notes
I. General Conditions and Superintendent	4.0%	4.0%	\$4.60	\$4.40	Assumes a finished serviced lot with no off-site improvements required
II. Permits and Site Work		5.5%	\$6.33	\$6.05	
A. Plan Check and Building Permit Fees	0.5%				Assumes initial Plan set with repeat fees
B. Impact Fees	1.0%				
C. Water & Sewer Fees and Taps	1.5%				Fire sprinklers w/one dedicated water tap
D. Architecture & Engineering	1.5%				
E. Erosion Control, SWWP	1.0%				Assumed less than 5,000 SF total disturbance w/ siltfence or waddles. Check disturbance amount, greater than 5,000 SF install drywell
III. Foundations		9.0%	\$10.35	\$9.90	
A. Excavation, Foundations, Concrete, Retaining Walls, and Backfill	9.0%				Slab ground floor, sanded and sealed concrete
IV. Framing and Trusses		17.1%	\$19.67	\$18.81	
A. Framing (including Roof)	15.0%				10' Ground Floor Plate w/ 9' 2nd Floor.
B. Trusses if not in above	1.0%				
C. Sheathing	0.4%				
D. General metals	0.4%				
E. Other	0.3%				
V. Exterior Finishes		13.5%	\$15.53	\$14.85	
A. Exterior Wall Finishes	4.5%				Hardie Lap Siding and Trim
B. Roofing	4.0%				Composition Roofing
C. Windows and Exterior Doors	4.0%				
D. Other	1.0%				
VI. Major Systems and Rough In		18.2%	\$20.93	\$20.02	
A. Plumbing (w/o fixtures or trim)	4.2%				
B. Electrical (w/o fixtures)	7.0%				
C. HVAC	4.0%				
D. Fire Sprinkler (confirm in Assumptions)	3.0%				NFPA 13R \$2.50 per SF, ADD TAP FEE if dedicated tap is required
VII. Interior Finishes		26.2%	\$30.13	\$28.82	
A. Insulation	2.0%				
B. Drywall	4.0%				
C. Interior Trim, Doors, Hardware, and Mirrors	4.4%				Tiled surround and bathroom wainscoat
D. Painting	3.1%				
E. Lighting	1.2%				
F. Casework, Cabinets, and Countertops	4.5%				
G. Appliances	1.5%				
H. Flooring	4.0%				Vinyl Plank or Carpet Floor, tile floor in bathrooms
I. Plumbing Fixtures and trim	1.5%				Builder Grade Cast Iron tubs or composite shower pans
VIII. Final Steps		6.5%	\$7.48	\$7.15	
A. Landscaping	2.5%				
B. Outdoor Structures, Deck, Patio, Fencing	1.0%				
C. Driveways, Curb Cuts, Sidewalks, Parking	2.0%				Gravel parking pads assumed
D. Cleaning	0.7%				
E. Other	0.3%				
TOTAL:	100.0%		\$115 per SF	\$110	

Figure 29: Percentage Breakdown of Hard Costs Assumed in My Proposals as Provided by R. John Anderson⁷⁰

⁷⁰ Contributed by R. John Anderson, <http://www.andersonkim.com/r-john-anderson/>.

D) Financial Models

a) Owner’s Existing 19-Unit Plan

a. 19-Unit Plan Using Owner’s Assumptions

Various cost estimates and a rough pro forma were included in the packet of information I received from the seller. I reformatted that information into the same models that I am using for my alternative proposals.

The owner’s hard costs are \$1,463,148 and his soft costs are \$197,185. He is renting apartments at \$1.90 per square foot. At an average of 645 square feet per unit, monthly rental amounts appear to be \$1,226.00 per unit. This equates to annual rents of \$279,528.00 for the 19-unit property. His cost estimates are quite a bit lower than I have been able to support in creating and budgeting alternatives.

Itemized Development Costs for Owner’s 19-Unit Development as Provided by Fields of Faith Ministries

Expenses Items	Amount		Amount
Appliances	\$85,998.00	dumpster	\$6,000.00
Appraisal	\$4,000.00	excavation/rent dozer	\$5,000.00
blinds/wood faux	\$4,458.00	labor/time	\$1,500.00
blueprints/architect	\$19,900.00	excavation/trucking	\$4,000.00
bicycle rack/trash/ park bench	\$2,798.00	electrical fixtures/interior	\$13,200.00
Brick	\$22,789.00	electrical labor	\$99,900.00
bricklaying/mason	\$14,475.00	electrical fixtures/exterior	\$5,300.00
Cabinets/factory	\$41,250.00	energy inspection	\$1,000.00
Camera	\$3,300.00	engineer; civil	\$6,600.00
cleaning/windows/doors	\$900.00	structural	\$4,500.00
countertops/granite	\$25,200.00	MEP	\$14,750.00
curbcut/haul off sidewalk	\$500.00	Fire alarm	\$9,900.00
cultured marble	\$4,295.00	Fire sprinkler	\$52,900.00
Decorating	\$5,700.00	Ext/wdw walls/store front	\$3,500.00
drywall/firerock/ Vin shield	\$23,500.00	ext doors/patio	\$9,770.00
drywall labor	\$22,300.00	ext/entrance doors	\$8,800.00
		fence labor/demo	\$2,400.00
		fence material	\$6,375.00
		fence stain/labor	\$1,200.00

flatwork material	\$40,000.00
flatwork; rent tractor	\$1,500.00
flatwork labor	\$25,000.00
floor labor	\$12,375.00
floor material;vinyl	\$16,100.00
forklift rental/two months	\$2,200.00
foundation labor	\$9,240.00
foundation material	\$13,200.00
framing labor	\$95,000.00
cornice material	\$5,265.00
framing material	\$94,780.00
Siding	\$13,070.00
gates/singular/vehicular	\$5,300.00
gates/double/vehicular	\$3,695.00
grading/ fill/sand	\$1,500.00
green energy	\$900.00
Gutters	\$3,600.00
Gypcrete	\$17,000.00
hardware/keyless locks	\$7,250.00
hardware labor	\$2,400.00
HVAC	\$61,875.00
Insulation	\$19,650.00
Insurance/builder's risk	\$11,450.00
Insurance; general liability	\$3,000.00
interior doors	\$11,500.00
Irrigation	\$4,200.00
landscape labor	\$1,000.00
landscaping/trees	\$3,500.00
light weight concrete	\$24,000.00
management/leasing	\$96,700.00
mail boxes	\$2,000.00
MEP	\$11,000.00
Miscellaneous Expense	\$6,000.00
paint exterior	\$10,500.00
paint Interior	\$25,500.00
parking curbs	\$2,500.00
Permits	\$8,900.00

permit, plan review	\$3,300.00
pier labor	\$2,350.00
Piers	\$16,000.00
plumbing fixtures	\$33,660.00
plumbing/water heaters	\$8,410.00
plumbing labor	\$97,500.00
railings;catwalk	\$56,400.00
ret walls/block/french drain	\$6,600.00
retaining walls/labor	\$1,500.00
roofing/TPO	\$46,000.00
scaffolding	\$1,500.00
Security/home automation	\$5,500.00
sewer tap	\$3,450.00
sign/ La Boheme	\$2,500.00
Sod	\$1,400.00
sod labor	\$600.00
soils test	\$1,740.00
soil retention fence	\$750.00
staging	\$3,000.00
stair labor/ install	\$7,000.00
stair material	\$40,000.00
steel posts/structural steel	\$1,500.00
Steel/grills	\$7,200.00
Steel/welding	\$4,200.00
survey	\$4,645.00
temp fence	\$1,500.00
termite	\$1,000.00
tile labor	\$5,540.00
tile material	\$5,720.00
Toilet	\$790.00
trailer rent	\$3,550.00
trim labor	\$23,820.00
Utilities	\$1,800.00
water tap	\$21,000.00
windows	\$28,300.00
Total Expenses	\$1,660,333.00

Project Costs

Land Cost	\$0	12,174 SF parcel	\$0.00 per parcel SF	0.0% of project costs
Hard and Soft Costs Total	\$1,660,333			
Total Project Costs (Land+ Hard Costs+ Soft Costs)	\$1,660,333			

Figure 30: 19-Unit Summary of Hard and Soft Development Costs Based on Owner's Assumptions

b. 19-Unit 10-Year DCF Using Owner's Assumptions

Other than using the owner's construction costs and rental rate figures, I created a 10-year Discounted Cash Flow (DCF) model using my assumptions. His construction and rental rates combined with my other assumptions result in the proposed land improvements (building) having a value at Time 0 of \$2,206,976 based on its projected operating income and sale price in year 10. When the Time 0 development costs are subtracted from the building value at Time 0, the land value is \$546,643. That equates to \$42.99 per square foot.

ASSUMPTIONS		DEBT				RENT ROLL				RESIDUAL VALUE			
Property Name	Zang	Construction Loan			Type	Units	Mo. Rent		Refinance Cap-Rate	6.00%			
Number of Units	19	LTC		70.0%	1Bed/1Bath 645sf	19	\$1,226		Terminal Cap-Rate	8.00%			
Hard & Soft Development Costs	\$1,660,333	Loan Amount	\$1,162,233		Total	19	\$23,294		Selling Costs	1.50%			
TDC with land cost at \$0	\$1,660,333	Interest Rate	5.1%						Discount Rate	8.00%			
Going-In Cap Rate	11.62%	Amortization	360 months										
Rent Growth Rate	1.50%	Monthly Payments	\$4,939										
Expense Growth Rate	1.50%	Permanent Loan											
Vacancy Rate	5.00%	LTV	80.0%										
		Loan Amount	\$2,572,373										
		Interest Rate	5.0%										
		Amortization	360 months										
		Monthly Payments	\$13,809.06										

CASH FLOWS	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11
Income	Inflation	0.0%	0.0%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Rent	\$ -	\$ 279,528	\$ 283,721	\$ 287,977	\$ 292,296	\$ 296,681	\$ 301,131	\$ 305,648	\$ 310,233	\$ 314,886	\$ 319,610	\$ 319,610
Other Income	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Recoveries	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Potential Gross Income	\$ -	\$ 279,528	\$ 283,721	\$ 287,977	\$ 292,296	\$ 296,681	\$ 301,131	\$ 305,648	\$ 310,233	\$ 314,886	\$ 319,610	\$ 319,610
Vacancy	Vacancy	5.0%	30.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
	\$ -	\$ 83,858	\$ 14,186	\$ 14,399	\$ 14,615	\$ 14,834	\$ 15,057	\$ 15,282	\$ 15,512	\$ 15,744	\$ 15,980	\$ 15,980
Effective Gross Income	\$ -	\$ 195,670	\$ 269,535	\$ 273,578	\$ 277,682	\$ 281,847	\$ 286,074	\$ 290,366	\$ 294,721	\$ 299,142	\$ 303,629	\$ 303,629
Expenses	Inflation	0.0%	0.0%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Marketing	\$100 per month	\$ 1,200	\$ 1,218	\$ 1,236	\$ 1,255	\$ 1,274	\$ 1,293	\$ 1,312	\$ 1,332	\$ 1,352	\$ 1,372	\$ 1,372
Payroll	\$100 per door	\$ 1,900	\$ 1,929	\$ 1,957	\$ 1,987	\$ 2,017	\$ 2,047	\$ 2,078	\$ 2,109	\$ 2,140	\$ 2,172	\$ 2,172
Repairs and Maintenance	\$250 per unit	\$ 4,750.00	\$ 4,821	\$ 4,894	\$ 4,967	\$ 5,041	\$ 5,117	\$ 5,194	\$ 5,272	\$ 5,351	\$ 5,431	\$ 5,431
Management	3% of PGI	\$ 8,385.84	\$ 8,511.63	\$ 8,639.30	\$ 8,768.89	\$ 8,900.42	\$ 9,033.93	\$ 9,169.44	\$ 9,306.98	\$ 9,446.59	\$ 9,588.29	\$ 9,588.29
Insurance	\$349 per door + \$750	\$ 7,381	\$ 7,492	\$ 7,604	\$ 7,718	\$ 7,834	\$ 7,951	\$ 8,071	\$ 8,192	\$ 8,315	\$ 8,439	\$ 8,439
Prop. Taxes	2.72% of Market Value	\$22,574.63	\$ 45,149	\$ 45,826	\$ 46,514	\$ 47,212	\$ 47,920	\$ 48,639	\$ 49,368	\$ 50,109	\$ 50,860	\$ 51,623
Utilities	2.4% of PGI	\$ 6,709	\$ 6,809	\$ 6,911	\$ 7,015	\$ 7,120	\$ 7,227	\$ 7,336	\$ 7,446	\$ 7,557	\$ 7,671	\$ 7,671
Operating Expenses	\$ 23,325	\$ 75,475	\$ 76,607	\$ 77,756	\$ 78,922	\$ 80,106	\$ 81,308	\$ 82,527	\$ 83,765	\$ 85,022	\$ 86,297	\$ 86,297
Net Operating Income (NOI)	\$ (23,325)	\$ 120,195	\$ 192,928	\$ 195,822	\$ 198,759	\$ 201,741	\$ 204,767	\$ 207,838	\$ 210,956	\$ 214,120	\$ 217,332	\$ 217,332
CapEx	10% of NOI	\$ -	\$ 12,019.48	\$ 19,292.80	\$ 19,582.19	\$ 19,875.92	\$ 20,174.06	\$ 20,476.67	\$ 20,783.82	\$ 21,095.58	\$ 21,412.01	\$ 21,412.01
Cash Flow from Operations	\$ (23,325)	\$ 108,175	\$ 173,635	\$ 176,240	\$ 178,883	\$ 181,567	\$ 184,290	\$ 187,054	\$ 189,860	\$ 192,708	\$ 195,918	\$ 195,918
Reversion												\$ 2,675,900
Cash Flow from Operations w/Reversion	(\$1,660,333)	\$ (23,325)	\$ 108,175	\$ 173,635	\$ 176,240	\$ 178,883	\$ 181,567	\$ 184,290	\$ 187,054	\$ 189,860	\$ 192,708	\$ 2,871,818
PV of Building at Time 0	\$2,206,976											
Land Value	\$546,643											

Figure 31: 19-Unit 10-Year Discounted Cash Flow Model Based on Owner's Assumptions

c. 19-Unit Plan Using My Assumptions

Using my per square foot assumptions, the hard costs for the owner’s 19-unit plan are \$1,824,825 and the soft costs are \$239,805. I have priced 640 square foot units in my site plans at \$1,400; therefore, that is the rent applied to the owner’s 645 square foot one-bedroom units. In my experience, apartment operators typically adjust rent rates based on comparable units and then translate that amount to a per square foot rate. This equates to annual rents of \$319,200 for the 19-unit property.

Project Costs					
Land Cost	\$1,000,000	12,174	SF parcel	\$82.14 per parcel SF	32.6% of project costs
Hard Construction Costs - Residential Cond. SF	\$1,409,325			\$115 per cond. SF	
Hard Construction Costs - Residential Unconditioned SF	\$393,900			\$60 per unconditioned SF	
Landscaping and hard scape	\$21,600	2700		\$8 SF	
Hard Cost Subtotal:	\$1,824,825				59.5% of project costs
Soft Construction Costs	\$239,805			\$18 per building SF	7.8% of project costs
Hard and Soft Costs Subtotal	\$2,064,630				
Total Project Costs (Land+ Hard Costs+ Soft Costs)	\$3,064,630				100.0% Project Costs

Figure 32: 19-Unit Summary of Hard and Soft Development Costs Based on My Assumptions

d. 19-Unit 10-Year DCF Using My Assumptions

The proposed building has a value at Time 0 of \$2,064,630 based on its projected operating income and sale price in year 10. When the Time 0 development costs are subtracted from the building value at Time 0, the land value is \$424,432. That equates to \$333.38 per square foot.

ASSUMPTIONS		DEBT			RENT ROLL			RESIDUAL VALUE		
Property Name	Zang	Construction Loan		Type	Units	Mo. Rent		Refinance Cap-Rate		6.00%
Number of Units	19	LTC	70.0%	1Bed/1Bath 645sf	19	\$1,400		Terminal Cap-Rate		8.00%
Hard & Soft Development Costs	\$2,064,630	Loan Amount	\$1,445,241	Total	19	\$26,600		Selling Costs		1.50%
TDC with land cost at \$0	\$2,064,630	Interest Rate	5.1%					Discount Rate		8.00%
Going-in Cap Rate	10.55%	Amortization	360 months							
Rent Growth Rate	1.50%	Monthly Payments	\$6,142							
Expense Growth Rate	1.50%	Permanent Loan								
Vacancy Rate	5.00%	LTV	80.0%							
		Loan Amount	\$2,904,645							
		Interest Rate	5.0%							
		Amortization	360 months							
		Monthly Payments	\$15,592.76							

CASH FLOWS		Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11
Income	Inflation		0.0%	0.0%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Rent		\$ -	\$ 319,200	\$ 323,988	\$ 328,848	\$ 333,781	\$ 338,787	\$ 343,869	\$ 349,027	\$ 354,262	\$ 359,576	\$ 364,970	
Other Income		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Recoveries		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Potential Gross Income		\$ -	\$ 319,200	\$ 323,988	\$ 328,848	\$ 333,781	\$ 338,787	\$ 343,869	\$ 349,027	\$ 354,262	\$ 359,576	\$ 364,970	
Vacancy	Vacancy		5.0%	30.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	
		\$ -	\$ 95,760	\$ 16,199	\$ 16,442	\$ 16,689	\$ 16,939	\$ 17,193	\$ 17,451	\$ 17,713	\$ 17,979	\$ 18,249	
Effective Gross Income		\$ -	\$ 223,440	\$ 307,789	\$ 312,405	\$ 317,092	\$ 321,848	\$ 326,676	\$ 331,576	\$ 336,549	\$ 341,598	\$ 346,722	
Expenses	Inflation		0.0%	0.0%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	
Marketing	\$100 per month	\$ 1,200	\$ 1,218	\$ 1,236	\$ 1,255	\$ 1,274	\$ 1,293	\$ 1,312	\$ 1,332	\$ 1,352	\$ 1,372		
Payroll	\$100 per door	\$ 1,900	\$ 1,929	\$ 1,957	\$ 1,987	\$ 2,017	\$ 2,047	\$ 2,078	\$ 2,109	\$ 2,140	\$ 2,172		
Repairs and Maintenance	\$250 per unit	\$ 4,750.00	\$ 4,821	\$ 4,894	\$ 4,967	\$ 5,041	\$ 5,117	\$ 5,194	\$ 5,272	\$ 5,351	\$ 5,431		
Management	3% of PGI	\$ 9,576.00	\$ 9,719.64	\$ 9,865.43	\$ 10,013.42	\$ 10,163.62	\$ 10,316.07	\$ 10,470.81	\$ 10,627.87	\$ 10,787.29	\$ 10,949.10		
Insurance	\$349 per door + 750	\$ 7,381	\$ 7,492	\$ 7,604	\$ 7,718	\$ 7,834	\$ 7,951	\$ 8,071	\$ 8,192	\$ 8,315	\$ 8,439		
Prop. Taxes	2.72% of Market Value	\$28,071.63	\$ 56,143	\$ 56,985	\$ 57,840	\$ 58,708	\$ 59,588	\$ 60,482	\$ 61,389	\$ 62,310	\$ 63,245		
Utilities	2.4% of PGI	\$ 7,661	\$ 7,776	\$ 7,892	\$ 8,011	\$ 8,131	\$ 8,253	\$ 8,377	\$ 8,502	\$ 8,630	\$ 8,759		
Operating Expenses		\$ 28,822	\$ 88,611	\$ 89,940	\$ 91,289	\$ 92,659	\$ 94,049	\$ 95,459	\$ 96,891	\$ 98,345	\$ 99,820	\$ 101,317	
Net Operating Income (NOI)		\$ (28,822)	\$ 134,829	\$ 217,848	\$ 221,116	\$ 224,433	\$ 227,799	\$ 231,216	\$ 234,685	\$ 238,205	\$ 241,778	\$ 245,405	
CapEx	10% of NOI	\$ -	\$ 13,482.89	\$ 21,784.84	\$ 22,111.61	\$ 22,443.28	\$ 22,779.93	\$ 23,121.63	\$ 23,468.46	\$ 23,820.48	\$ 24,177.79		
Cash Flow from Operations		\$ (28,822)	\$ 121,346	\$ 196,064	\$ 199,004	\$ 201,990	\$ 205,019	\$ 208,095	\$ 211,216	\$ 214,384	\$ 217,600		
Reversion											\$ 3,021,544		
Cash Flow from Operations w/Reversion		\$ (28,822)	\$ 121,346	\$ 196,064	\$ 199,004	\$ 201,990	\$ 205,019	\$ 208,095	\$ 211,216	\$ 214,384	\$ 217,600	\$ 3,239,144	
PV of Building at Time 0		\$2,489,062											
Land Value		\$424,432											

Figure 33: 19-Unit 10-Year Discounted Cash Flow Model Based on My Assumptions

b) Alternative 14-Unit Plan

a. 14-Unit Assumptions

The hard costs for the 14-unit plan are \$1,436,200 and the soft costs are \$194,976.

Applying the rent amounts from Figure 27, annual rents for the development are \$265,440.

Project Costs

Land Cost	\$0	12,174	SF parcel	\$0.00	per parcel SF	0.0%	of project costs
Hard Construction Costs - Residential Cond. SF	\$1,245,680			\$115	per cond. SF		
Hard Construction Costs - Residential Unconditioned SF	\$129,120			\$60	per unconditioned SF		
Landscaping and hard scape	\$61,400	7675		\$8	SF		
Hard Cost Subtotal:	\$1,436,200					88.0%	of project costs
Soft Construction Costs	\$194,976			\$18	per building SF	12.0%	of project costs
Hard and Soft Costs Subtotal	\$1,631,176						
Total Project Costs (Land+ Hard Costs+ Soft Costs)	\$1,631,176					100.0%	Project Costs

Figure 34: 14-Unit Summary of Hard and Soft Development Costs

b. 14-Unit 10-Year DCF

The proposed building has a value at Time 0 of \$2,109,972 based on its projected operating income and sale price in year 10. When the Time 0 development costs are subtracted from the building value at Time 0, the land value is \$478,786. That equates to \$37.66 per square foot.

ASSUMPTIONS	DEBT		RENT ROLL				RESIDUAL VALUE					
Property Name	Zang	Construction Loan	LTC	70.0%	Type	Units	Mo. Rent	Refinance Cap-Rate	6.00%			
Number of Units	14	LTC	Loan Amount	\$1,141,823	1Bed/1Bath 600sf	4	\$1,300	Terminal Cap-Rate	8.00%			
Hard & Soft Development Costs	\$1,631,176	Interest Rate	360 months	\$4,876	1Bed/1Bath 624sf	2	\$1,400	Selling Costs	1.50%			
TDC with land cost at \$0	\$1,631,176	Amortization	Monthly Payments	\$4,876	2Bed/2Bath 984sf	6	\$1,700	Discount Rate	8.00%			
Going-in Cap Rate	11.31%	Permanent Loan	LTV	80.0%	Garage	8	\$120					
Rent Growth Rate	1.50%	Loan Amount	Interest Rate	5.0%	Bike Locker	4	\$0					
Expense Growth Rate	1.50%	Monthly Payments	Amortization	\$13,203.52	Total	14	\$22,120					
Vacancy Rate	5.00%											
CASH FLOWS	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11
Income	Inflation	0.0%	0.0%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Rent	\$ -	\$ 265,440	\$ 269,422	\$ 273,463	\$ 277,565	\$ 281,728	\$ 285,954	\$ 290,244	\$ 294,597	\$ 299,016	\$ 303,501	
Other Income	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Recoveries	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Potential Gross Income	\$ -	\$ 265,440	\$ 269,422	\$ 273,463	\$ 277,565	\$ 281,728	\$ 285,954	\$ 290,244	\$ 294,597	\$ 299,016	\$ 303,501	
Vacancy	Vacancy	5.0%	30.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	
Effective Gross Income	\$ -	\$ 79,632	\$ 13,471	\$ 13,673	\$ 13,878	\$ 14,086	\$ 14,298	\$ 14,512	\$ 14,730	\$ 14,951	\$ 15,175	
Expenses	Inflation	0.0%	0.0%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	
Marketing	\$100 per month	\$ 1,200	\$ 1,218	\$ 1,236	\$ 1,255	\$ 1,274	\$ 1,293	\$ 1,312	\$ 1,332	\$ 1,352	\$ 1,372	
Payroll	\$100 per door	\$ 1,400	\$ 1,421	\$ 1,442	\$ 1,464	\$ 1,486	\$ 1,508	\$ 1,531	\$ 1,554	\$ 1,577	\$ 1,601	
Repairs and Maintenance	\$250 per unit	\$ 3,500.00	\$ 3,553	\$ 3,606	\$ 3,660	\$ 3,715	\$ 3,770	\$ 3,827	\$ 3,884	\$ 3,943	\$ 4,002	
Management	3% of PGI	\$ 7,963.20	\$ 8,082.65	\$ 8,203.89	\$ 8,326.95	\$ 8,451.85	\$ 8,578.63	\$ 8,707.31	\$ 8,837.92	\$ 8,970.49	\$ 9,105.04	
Insurance	\$349 per door + 5750	\$ 5,636	\$ 5,721	\$ 5,806	\$ 5,893	\$ 5,982	\$ 6,072	\$ 6,163	\$ 6,255	\$ 6,349	\$ 6,444	
Prop. Taxes	2.72% of Market Value	\$22,178.19	\$ 44,356	\$ 45,022	\$ 45,697	\$ 46,383	\$ 47,078	\$ 47,784	\$ 48,501	\$ 49,229	\$ 49,967	
Utilities	2.4% of PGI	\$ 6,371	\$ 6,466	\$ 6,563	\$ 6,662	\$ 6,761	\$ 6,863	\$ 6,966	\$ 7,070	\$ 7,176	\$ 7,284	
Operating Expenses	\$ 22,928	\$ 70,426	\$ 71,483	\$ 72,555	\$ 73,643	\$ 74,748	\$ 75,869	\$ 77,007	\$ 78,162	\$ 79,335	\$ 80,525	
Net Operating Income (NOI)	\$ (22,928)	\$ 115,382	\$ 184,468	\$ 187,235	\$ 190,044	\$ 192,894	\$ 195,788	\$ 198,724	\$ 201,705	\$ 204,731	\$ 207,802	
CapEx	10% of NOI	\$ -	\$ 11,538.19	\$ 18,446.80	\$ 18,723.50	\$ 19,004.35	\$ 19,289.42	\$ 19,578.76	\$ 19,872.44	\$ 20,170.53	\$ 20,473.08	
Cash Flow from Operations	\$ (22,928)	\$ 103,844	\$ 166,021	\$ 168,511	\$ 171,039	\$ 173,605	\$ 176,209	\$ 178,852	\$ 181,535	\$ 184,258		
Reversion										\$ 2,558,560		
Cash Flow from Operations w/Reversion										\$ 2,742,818		
PV of Building Time 0	(\$1,631,176)	\$ (22,928)	\$ 103,844	\$ 166,021	\$ 168,511	\$ 171,039	\$ 173,605	\$ 176,209	\$ 178,852	\$ 181,535	\$ 184,258	
Land Value	\$2,109,972											
	\$478,796											

Figure 35: 14-Unit 10-Year Discounted Cash Flow Model

c) Alternative 18-Unit Plan

a. 18-Unit Assumptions

The hard costs for the 18-unit plan are \$1,811,560 and the soft costs are \$238,306.

Applying the rent amounts from Figure 27, annual rents for the development are \$354,240.

Project Costs

Land Cost	\$569,000	12,174 SF parcel	\$46.74 per parcel SF	21.7% of project costs
Hard Construction Costs - Residential Cond. SF	\$1,532,720		\$115 per cond. SF	
Hard Construction Costs - Residential Unconditioned SF	\$217,440		\$60 per unconditioned SF	
Landscaping and hard scape	\$61,400	7675	\$8 SF	
Hard Cost Subtotal:	\$1,811,560			69.2% of project costs
Soft Construction Costs	\$238,306		\$18 per building SF	9.1% of project costs
Hard and Soft Costs Subtotal	\$2,049,866	\$113,881.46		
Total Project Costs (Land+ Hard Costs+ Soft Costs)	\$2,618,866			100.0% Project Costs

Figure 36: 18-Unit Summary of Hard and Soft Development Costs

b. 18-Unit 10-Year DCF

The proposed building has a value at Time 0 of \$2,644,477 based on its projected operating income and sale price in year 10. When the Time 0 development costs are subtracted from the building value at Time 0, the land value is \$594,611. That equates to \$46.77 per square foot.

ASSUMPTIONS		DEBT		RENT ROLL		RESIDUAL VALUE	
Property Name	Zang	Construction Loan		Type	Units	Mo. Rent	Refinance Cap-Rate
Number of Units	18	LTC	70.0%	1Bed/1Bath 600sf	4	\$1,300	Terminal Cap-Rate
Hard & Soft Development Costs	\$2,049,866	Loan Amount	\$1,434,906	1Bed/1Bath 624sf	6	\$1,400	Selling Costs
TDC with land cost at 50	\$2,049,866	Interest Rate	5.1%	1Bed/1Bath 640sf	2	\$1,400	Discount Rate
Going-in Cap Rate	11.28%	Amortization	360 months	2Bed/2Bath 984sf	6	\$1,700	
Rent Growth Rate	1.50%	Monthly Payments	\$6,128	Garage	8	\$120	
Expense Growth Rate	1.50%	Permanent Loan					
Vacancy Rate	5.00%	LTV	80.0%	Blke Locker	4	40	
		Loan Amount	\$3,082,510	Total	18	\$27,720	
		Interest Rate	5.0%				
		Amortization	360 months				
		Monthly Payments	\$16,547.58				

CASH FLOWS	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11
Income	Inflation	0.0%	0.0%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Rent	\$ -	\$ 332,640	\$ 337,630	\$ 342,694	\$ 347,834	\$ 353,052	\$ 358,348	\$ 363,723	\$ 369,179	\$ 374,716	\$ 380,337	\$ 386,037
Other Income	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Recoveries	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Potential Gross Income	\$ -	\$ 332,640	\$ 337,630	\$ 342,694	\$ 347,834	\$ 353,052	\$ 358,348	\$ 363,723	\$ 369,179	\$ 374,716	\$ 380,337	\$ 386,037
Vacancy	Vacancy	5.0%	30.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
	\$ -	\$ 99,792	\$ 16,881	\$ 17,135	\$ 17,392	\$ 17,653	\$ 17,917	\$ 18,186	\$ 18,459	\$ 18,736	\$ 19,017	\$ 19,299
Effective Gross Income	\$ -	\$ 232,848	\$ 320,748	\$ 325,559	\$ 330,443	\$ 335,399	\$ 340,430	\$ 345,537	\$ 350,720	\$ 355,981	\$ 361,320	\$ 366,738
Expenses	Inflation	0.0%	0.0%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Marketing	\$100 per month	\$ 1,200	\$ 1,218	\$ 1,236	\$ 1,255	\$ 1,274	\$ 1,293	\$ 1,312	\$ 1,332	\$ 1,352	\$ 1,372	\$ 1,392
Payroll	\$100 per door	\$ 1,800	\$ 1,827	\$ 1,854	\$ 1,882	\$ 1,910	\$ 1,939	\$ 1,968	\$ 1,998	\$ 2,028	\$ 2,058	\$ 2,088
Repairs and Maintenance	\$250 per unit	\$ 4,500.00	\$ 4,568	\$ 4,636	\$ 4,706	\$ 4,776	\$ 4,848	\$ 4,920	\$ 4,994	\$ 5,069	\$ 5,145	\$ 5,221
Management	3% of PGI	\$ 9,979.20	\$ 10,128.89	\$ 10,280.82	\$ 10,435.03	\$ 10,591.56	\$ 10,750.43	\$ 10,911.69	\$ 11,075.36	\$ 11,241.49	\$ 11,410.12	\$ 11,581.31
Insurance	\$349 per door + \$750	\$ 750	\$ 7,032	\$ 7,137	\$ 7,245	\$ 7,353	\$ 7,464	\$ 7,575	\$ 7,689	\$ 7,804	\$ 7,921	\$ 8,040
Prop. Taxes	2.72% of Market Value	\$ 27,870.89	\$ 55,742	\$ 56,578	\$ 57,427	\$ 58,288	\$ 59,162	\$ 60,050	\$ 60,952	\$ 61,865	\$ 62,793	\$ 63,735
Utilities	2.4% of PGI	\$ 7,983	\$ 8,103	\$ 8,225	\$ 8,348	\$ 8,473	\$ 8,600	\$ 8,729	\$ 8,860	\$ 8,993	\$ 9,128	\$ 9,265
Operating Expenses		\$ 28,621	\$ 88,236	\$ 89,560	\$ 90,903	\$ 92,267	\$ 93,651	\$ 95,056	\$ 96,481	\$ 97,929	\$ 99,398	\$ 100,889
Net Operating Income (NOI)		\$ (28,621)	\$ 144,612	\$ 231,188	\$ 234,656	\$ 238,176	\$ 241,749	\$ 245,375	\$ 249,055	\$ 252,791	\$ 256,583	\$ 260,432
CapEx	10% of NOI	\$ -	\$ 14,461.17	\$ 23,118.82	\$ 23,465.60	\$ 23,817.59	\$ 24,174.85	\$ 24,537.48	\$ 24,905.54	\$ 25,279.12	\$ 25,658.31	\$ 26,043.20
Cash Flow from Operations		\$ (28,621)	\$ 130,150	\$ 208,069	\$ 211,190	\$ 214,358	\$ 217,574	\$ 220,837	\$ 224,150	\$ 227,512	\$ 230,925	\$ 234,389
Reversion												\$ 3,206,567
Cash Flow from Operations w/Reversion												\$ 3,437,492
CapEx												
PV of building Time 0												
Land Value												

Figure 37: 18-Unit 10-Year Discounted Cash Flow Model

Chapter 7 – Conclusion

Of the site plans considered for the parcel, the 18-unit plan produced the greatest possible land value at \$594,611 or \$46.77 per square foot. This falls within the parameters advised by a successful Dallas broker who deals heavily in multifamily investment property sales and wishes to remain anonymous. The broker conveyed that one could expect \$45 – 65 per square foot for vacant land within walking distance of Bishop Arts. This individual added that parcels of a large scale are difficult to find near Bishop Arts and my search for a subject property supports that statement. Therefore, one can assume that larger parcels are going to command more dollars per square foot, as smaller parcels pose challenges around parking and height restrictions which make it difficult to reach the appropriate density. Additionally, some developer may wish to provide a site plan that is approachable, permeable, pedestrian-friendly and appropriate to the character and charm of Bishop Arts.

The Dallas market is very active now and multifamily investments are in great demand. This is fleeting and the determined value is time sensitive. For example, I found information about the recent sales of two nearby parcels, both of which are larger than the Zang site and currently under development for residential use.

901 N. Zang Boulevard is under construction and slated to become a 43-unit boutique multifamily rental community. Its current assessed value is \$427,360, assumedly based on a sale in November of 2014.⁷¹ The parcel is 42,632 square feet. If, indeed, the sales price was \$427,360, the price per square foot was \$10.03. 630 Elsbeth Street is under development to become 16 townhomes for sale. The lot is 26,000 square feet and following the logic for the Zang parcel discussed above, sold for \$20.65 per square foot in April of 2014 for a total of \$536,930. This parcel actually included a building which has been razed since the sale. The previous assessment value for the structure was

⁷¹ <https://loopnet.com>, accessed 7/20/17.

\$276,930. It might not be accurate to reduce the land value by the value of the structure as the purchaser clearly wanted the land for development purposes. Still, if either of these parcels' above values/prices were grown by 2015 and 2016 rental growth rates, they would still be nowhere near the \$46.77 per square foot that the site this thesis is evaluating has been valued at. This illustrates the power that two years can have on demand and valuation.

Additionally, one must consider that any of my assumptions can impact the valuation significantly. In my opinion, construction costs and long-term cap rates used should be considered in this light. The following sensitivity table illustrates the effect these assumptions have on the land value in the 18-unit plan:

\$594,610.45	6.00%	6.50%	7.00%	7.50%	8.00%	8.50%	9.00%	9.50%	10.00%
\$1,669,629	\$1,621,359	\$1,462,109	\$1,325,609	\$1,207,310	\$1,103,797	\$1,012,463	\$931,277	\$858,637	\$793,260
\$1,757,504	\$1,498,489	\$1,340,837	\$1,205,707	\$1,088,595	\$986,121	\$895,703	\$815,332	\$743,421	\$678,701
\$1,850,004	\$1,369,152	\$1,213,182	\$1,079,494	\$963,631	\$862,251	\$772,798	\$693,285	\$622,141	\$558,111
\$1,947,373	\$1,233,007	\$1,078,809	\$946,639	\$832,091	\$731,862	\$643,425	\$564,814	\$494,478	\$431,175
\$2,049,866	\$1,089,697	\$937,363	\$806,791	\$693,628	\$594,610	\$507,242	\$429,581	\$360,096	\$297,558
\$2,152,360	\$946,388	\$795,917	\$666,942	\$555,164	\$457,359	\$371,059	\$294,349	\$225,713	\$163,941
\$2,259,978	\$795,912	\$647,399	\$520,102	\$409,778	\$313,244	\$228,068	\$152,355	\$84,612	\$23,644
\$2,372,976	\$637,913	\$491,455	\$365,920	\$257,122	\$161,924	\$77,926	\$3,261	-\$63,544	-\$123,669
\$2,491,625	\$472,014	\$327,714	\$204,028	\$96,833	\$3,038	-\$79,722	-\$153,287	-\$219,108	-\$278,347

Figure 38: Sensitivity Table Illustrating the Effects on the 18-Unit Land Value of a 50 Basis Point Change and/or 5% Changes in Hard and Soft Costs

I have endeavored to remain conservative in my assumptions and respond to the concerns of the Dallas zoning commission. Each developer will approach the site, design and valuation method in a unique way. This is but one approach.

Personally, the maximum amount I would pay for this site is quite a bit lower than the number strictly derived from the financial models. I must take into account that this point in time is near or at the peak of this current real estate cycle and that construction would likely not be complete on this project for at least 1.5 years, even if I were to begin moving forward with an offer to purchase immediately. Additionally, I do believe that class A residential is nearing saturation in Dallas. I have no way of predicting what the long-term cap rate should be. However, given my reservations about this being the right time to start new construction in class A, class A rents give me pause as well. If attainable

rents were to decrease even moderately, purchasing the parcel at \$594,611 would prove to be highly problematic and potentially detrimental to the development. Combining uncertainty about cap rates and rents with the potential for construction overruns – the quotes I received were not guaranteed maximum price –and my personal comfort zone on this site is a purchase price between \$228,000 and \$300,000.

It is my personal opinion that value-add investments in converting class C investments to class B have a longer runway in front of them in Dallas. The strain for achieving maximum rental amounts and a swing in cap rates is of less concern. There is always a need for rental housing that is affordable within the confines of the lower-middle income salary bracket. There are always uncertainties surrounding construction costs when rehabilitating a structure; however, I feel more confident in managing that singular risk when rental rate and cap rate concerns are reduced.

I can say that going through the process of an in-depth evaluation is invaluable in coming to conclusions about one's risk appetite and desire to participate in certain types of real estate development at a given point in time.

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