REAL ESTATE ECONOMIC ANALYSIS
OF USE OPTIONS IN SOUTHERN SCOTTSDALE

A Report to

CITY OF SCOTTSDALE

From

GRUEN GRUEN + ASSOCIATES
Urban Economists, Market Strategists & Land Use / Public Policy Analysts

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REPORT HIGHLIGHTS

KEY FINDINGS

- Most of the existing properties with frontage along Scottsdale and McDowell roads encompass less than one acre of land. Approximately 40 percent of all frontage parcels are smaller than ½ acre, while an additional 25 percent are between ½ and one-acre in size. Fewer than 25 parcels contain more than four acres of land along Scottsdale and McDowell roads.

- Site coverage for small parcels less than one acre in size generally ranges from 30 to 40 percent. Site coverage for larger parcels averages between 23 to 28 percent. These coverage ratios are considered relatively low density compared to coverage ratios of 50 to 75 percent typical of an urban, higher-density environment.

- Smaller commercial properties along Scottsdale and McDowell roads are assessed at values of $30 to $40 per square foot of land.

- Many smaller properties are purchased at prices higher than justified by the current real estate economics or income property owners derive. Reservation prices (the minimum price at which a seller is willing to sell) are higher than what can be justified solely by the income the properties yield.

- Current net rent levels of small, older properties do not facilitate owners completing significant remodeling or updating. One option some existing property owners may be encouraged to adopt is to reduce maintenance or other expenditures on improvements. Real estate economics explain the deterioration that has been observed in the land use patterns and associated real estate in Southern Scottsdale and the relatively limited amount and frequency of redevelopment not subsidized by the City of Scottsdale.

- Prices of all real estate have been under pressure as a result of the recession. The asking prices of $150 to $300 per square foot of building space, or the equivalent of $40 to $60 per square foot of land for smaller commercial properties and $14 to nearly $38 per square foot of land for improved larger properties, and prices around $9.00 per square foot of land for unimproved larger properties provide indications of reservation prices.

- Under existing regulations, multi-family residential development may obtain between 22 and 30 percent site coverage if the building is three stories in height. Under the existing setback, open space and parking requirements, a height limit of two stories for Class A office or retail uses results in retail and office buildings that can obtain approximately 20 to 30 percent site coverage. However, office and retail buildings may obtain approximately 40 to 50 percent site coverage if the building is single story.

- The PUD regulations result in multi-family buildings of four stories that cover between 30 and 45 percent of land area.

- Obtainable site coverage for commercial uses under the adopted PUD are no different from those achieved under existing zoning regulations because setback, parking and open space requirements are the same. Higher densities (floor-area-ratios) may be obtained, however, due to increased building height restrictions.

- Under existing or PUD regulations and given current development cost and market conditions, apartment uses, especially those which require the development of structure parking rather than surface parking, are unlikely to support high enough land values to induce redevelopment. For larger sites, assuming above market rents, retail and restaurant uses appear closer to being able to support land values close to reservation prices for large sites, but not for smaller sites.

- The value created by a new retail or restaurant use on a small site would not be sufficient to induce the owner of a typical existing smaller property to redevelop the property into new retail and restaurant uses.

- Under the current relationships between development costs, operating revenues and costs, and capital values, even assuming the regulations are altered to permit hotel development of six stories, limited service and extended stay hotel products are unlikely to support land values high enough to encourage redevelopment of sites with existing income producing uses.

- For smaller sites, most property owners will be better off wringing whatever income can be produced by existing small, older commercial properties than redeveloping the properties into townhouse or live-work uses.

- While the income produced frequently cannot support the reservation prices for many smaller properties, the relatively high reservation prices make it challenging for properties to be assembled and redeveloped. Because the reservation prices of many owners are higher than what can be supported by obtainable multi-family and retail space rents, developers will have to either use different assumptions to justify buying the property needed for redevelopment of new residential and retail uses under the existing or newly adopted PUD regulations, or elect to accept a lower return now in anticipation of higher rents in the future.

- Southern Scottsdale will need to establish a more desirable and distinct image for multi-family residential, townhouse/live-work, retail, office and tech-service uses with a pattern of development products, infrastructure and amenities that permit competing effectively with alternative locations. Under the present market, cost and regulatory relationships most smaller properties with somewhat obsolete building space will not be redeveloped into new residential and retail uses. This likelihood suggests that the market on its own is not likely to cause in the near term the type of

changes needed to make Southern Scottsdale a more desirable and competitive location capable of supporting higher prices from increased obtainable demands.

- The current recession and poorly functioning capital markets will make it more challenging for the needed evolution of Southern Scottsdale to occur. Retail rents have declined significantly; office vacancy rates have increased, while office rents have declined; and average daily room rates and occupancy rates at hotels in and near Southern Scottsdale have also declined.

CONCLUSIONS AND RECOMMENDATIONS

For the private land use market in Southern Scottsdale to become sufficiently vigorous to support improving and sustainable economic and social conditions will require municipal entrepreneurial actions. The results of the real estate economic analysis and interviews suggest the following strategies and tactics for reinventing Southern Scottsdale corridors to increase their competitive magnetism and demands that sustain private feasible development and enhancements:

- Clarify and simplify the PUD for Southern Scottsdale to include effective by-right development standards because many developers for relatively small sites will not have the wherewithal to comply with the time and cost requirements of the PUD;

- To avoid high reservation prices causing stagnation, subject any zoning changes that will tend to cause owners to justify high reservation prices to "performance zoning" or a "sunset clause". Under these clauses, either the property would not be zoned unless specific development parameters are in place, or if the property is not developed for new residential, retail, or office users within a certain time, the zoning permitting higher-density uses would revert to a lower-density zoning classification;

- Facilitate private feasible development including land assembly and use changes in the corridors to accommodate recommended changes in land use (for example, from obsolete retail to higher density residential). For example, eliminate or modify regulations that reduce the amount of building space that can be created. Permit increases in site coverage, especially for smaller lots intended to be redeveloped for townhouse or live-work uses;

- Given the findings that the cost of structure parking discourages feasibility of higher density development alternatives associated with the proposed PUD, municipal assistance with the provision of necessary parking (or modification of parking requirements) may also be needed to encourage the feasible reuse or redevelopment of smaller, obsolete properties;

- Reduce impact fees, especially for small lot residential projects, to improve feasibility;

- Encourage a pedestrian-friendly environment with appropriate traffic signalization and crosswalks and landscaping and pedestrian-scaled streetscape amenities;

- Identify in the Community Area Plan for Southern Scottsdale locations for new General Plan activity areas of mixed-use, higher-intensity development at key intersections such as Scottsdale and McDowell roads. These core areas should accommodate a critical mass of activity and create a distinctive sense of place and encourage pedestrian and street-level activity. Until the economy turns around considerably and the real estate markets recover, insufficient demand is likely to exist to create mixed use, high density developments at all key intersections. The intersection of Scottsdale and McDowell is one place where higher intensity would

be best positioned to work, given the City's past public investment in SkySong and its location as a gateway to the City's Downtown; and

- Given the presence of General Dynamics and SkySong, the proximity to the Phoenix Sky Harbor International Airport and highway and transit connections, proximity to the Arizona State University campus in Tempe, and existing nodes of technology and service space users near the General Dynamics campus and near Papago Park, provide in the Southern Scottsdale Community Area plan the potential for additional research and development and technology and service uses. The Plan should also provide for public and private educational and healthcare activities.

CHAPTER I

DETERMINANTS OF LAND USE CHANGES, APPROACH TO EVALUATING REAL ESTATE ECONOMICS OF EXISTING CONDITIONS AND FEASIBILITY OF PROTOTYPICAL REDEVELOPMENT ALTERNATIVES, AND RESULTS AND IMPLICATIONS OF ANALYSIS

INTRODUCTION

The prior report by Gruen Gruen + Associates ("GG+A") entitled "The Market for Retail and Office Uses and Strategic Recommendations for The Enhancement of Southern Scottsdale" focused on gaining an understanding of the demographic, socioeconomic, and other factors that shape the demands that apply to Southern Scottsdale corridors. The prior report also reviewed the land use/real estate market conditions, including the supply of competing facilities and locations. The forces of demand and supply, land use policy/zoning regulations, and development costs interact to form the real estate economics that affect property development, redevelopment, and remodeling and maintenance decisions of owners and would-be developers.

The most significant determinants of land use value are the potential income (rents) that can be earned by alternative land uses, the costs associated with the construction and maintenance of alternative land uses, and the regulations that govern the right to develop or alter alternative land uses and the physical characteristics of how they can be developed. We focus in this report on identifying the real estate economics of prototypical development alternatives the City of Scottsdale Advance Planning and Policy Department identified for representative locations in Southern Scottsdale. The prototypical development alternatives were specified on the basis of existing city zoning and the recently adopted planned unit development ("PUD") regulations.

GG+A simulated the real estate investment results of prototypical multi-family rental development as well as the development of commercial and hotel uses under the existing and the recently adopted PUD zoning regulations. We estimated the land value the postulated prototypical development alternatives could support based on the estimated cash flows produced from these cost and revenue estimates and stipulated financial terms from the viewpoint of a prospective developer.

The residual land value methodology used to evaluate the prototypical development alternatives is similar to what is often referred to as an income approach, and provides an estimate of the amount of money a developer could afford to pay for land, given an estimate of the net cash flow that results from the development and operation of the development.[1]

[1] A residual land value refers to the amount a would-be developer could afford to pay for the land, given the cash flow that results from a specified set of cost and revenue forecasts and stipulated financial terms. An internal rate of return ("IRR") means the rate of return at which the discounted future cash flows from an investment equal the rate of the initial cash outlay. In the jargon of finance theory, the IRR is the discount rate at which the net present value is zero. If the IRR exceeds the desired rate of return, the investment is financially feasible; if the IRR is lower than the

We used this methodology of estimating the land value that would be supported by the investment returns of the forecast revenues and costs associated with multi-family rental, retail, and hotel development alternatives in order to identify whether such uses at the various sites will be feasible to develop. A hurdle rate or return requirement of 15 percent Internal Rate of Return ("IRR") was assumed for the multi-family and retail/restaurant development alternatives and 18 percent for the hotel development alternatives. A project is feasible if a developer can achieve a return on the developer/investor equity that meets a hurdle rate commensurate with the associated risk. If the residual land value from the investment is zero or less, the likely cost of the land makes the investment infeasible without municipal assistance. In essence, we asked the following question:

> How much could a prospective developer pay for the land needed to site the postulated development alternatives and earn the specified IRR, or alternatively, how many dollars of subsidy incentive would be required to provide the developer with the specified rate of return?

GG+A also analyzed the real estate economics of a for-sale townhouse product option based on the residual land value approach, assuming a required rate of return or profit margin. We input estimates of obtainable prices and of costs, including the necessary profit margin, in order to calculate the land costs that a small lot townhouse development could support. In this calculation, we assume that the developer would be a residential builder seeking to earn a fair return on a for-sale product, rather than an investor who would calculate feasibility by considering the return he would earn from rents over time. The results we would obtain by assuming an investor developer rather than a builder who would sell his products would be reasonably similar.

In cases where our findings suggest that the real estate economics currently affecting the area would not support the private, unassisted development of a given type of real estate, our analysis provides a measure of the public investment that would be required to encourage such development. For example, if we find that the residual land value of a use is minus $2 per square foot, then some form of a subsidy in excess of that amount would be required before a land owner would find the development of such a use feasible. The reader should keep in mind also that zoning and other land use regulations that govern density, heights, site coverage and the like play a significant role in affecting the feasibility that we are measuring in this report by estimates of supportable land value. Also, as we discuss further below, the so-called "reservation price" set by the perceptions of land owners essentially works to increase the feasibility point to well above simply breaking even on the land.

Note that the residual land value estimate is best used for comparing alternatives and obtaining insight on a developer's "ability to pay". Actual market value is also affected by the price of competing entitled land supply. For example, even if a developer could afford to pay $50 per square foot for the land and still obtain a minimum threshold return, the developer will not do so if other equally or more desirable development locations are available for less. Actual market prices are influenced by the buyer's perception of use value,



desired rate of return, the investment is not financially feasible.

expectations about the timing and risk of development, and the price of the other available locations.

In the recommendations derived from the results of the real estate economic analysis, consideration is given to the role of land use regulations as one approach to encouraging private redevelopment of Southern Scottsdale land uses.

EXISTING CONDITIONS

Characteristics of Existing Parcels

As summarized in Table I-1 and Map I-1 (see page 4), most of the existing properties with frontage along Scottsdale and McDowell roads are estimated to encompass less than one acre of land.

TABLE I-1

Characteristics of Existing Parcels With Frontage on Scottsdale or McDowell Roads

Size	Percentage of All Parcels	Average Parcel Size # Square Feet	Average Site Coverage[1] %
Smaller than ¼ Acre	11.2	6,182	39
¼ - ½ Acre	29.2	15,570	31
½ - 1 Acre	24.5	31,119	33
1-2 Acres	11.6	61,500	28
2-4 Acres	12.9	121,527	26
Larger than 4 Acres	10.7	527,819	23

[1] Average proportion of land area covered by building structure footprint.

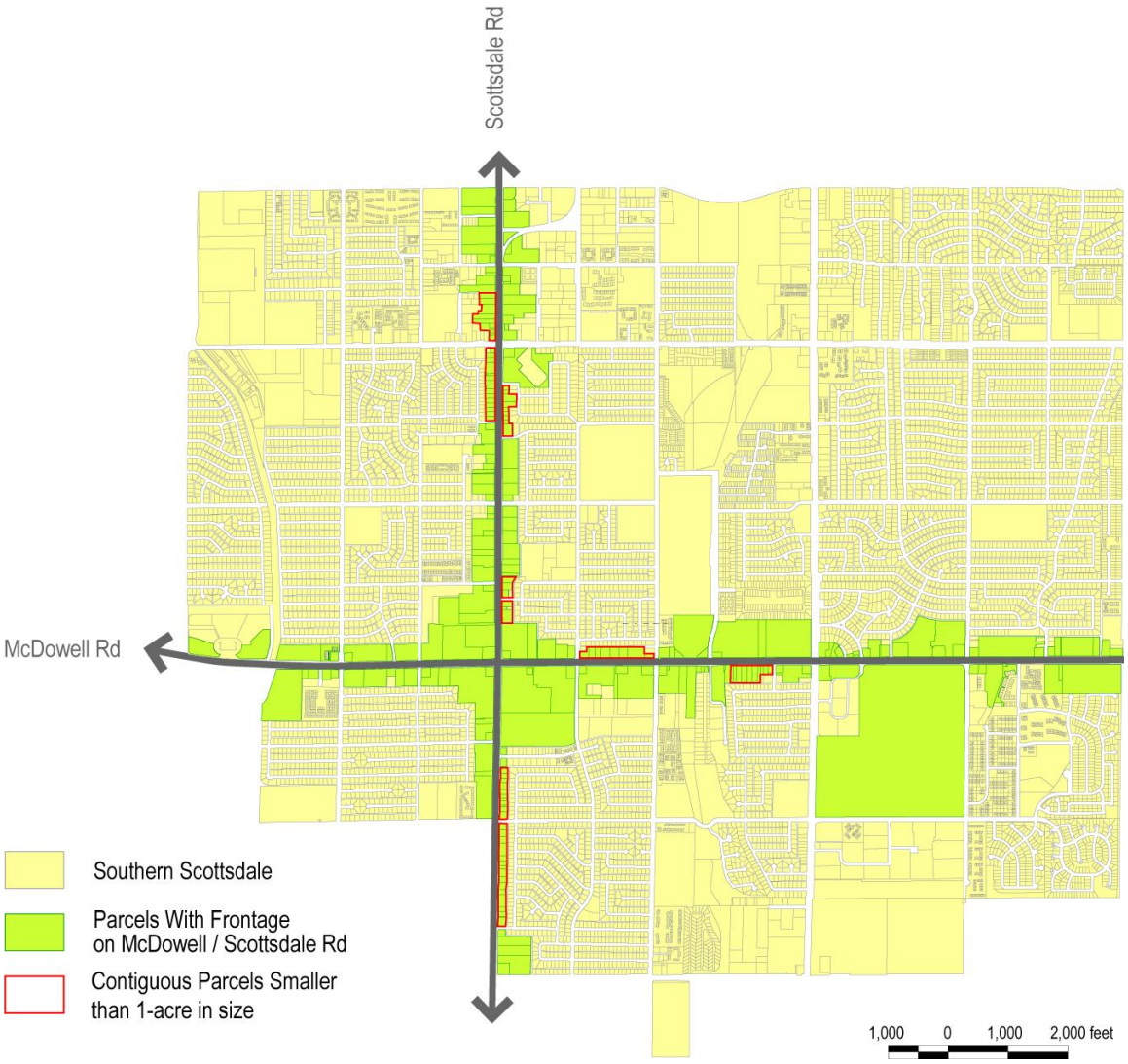
Sources: City of Scottsdale; Gruen Gruen + Associates.

Approximately 40 percent of all frontage parcels are smaller than ½ acre, while an additional 25 percent are between ½ and one-acre in size. Fewer than 25 parcels contain more than four acres of land along Scottsdale and McDowell roads. These larger parcels represent only 11 percent of the total parcels with frontage on Scottsdale and McDowell roads. While parcels larger than four acres only represent 11 percent of all parcels, they comprise approximately 60 percent of the total land area with frontage along Scottsdale and McDowell roads. Examples of uses associated with larger sites include automotive dealerships, the SkySong development, and the General Dynamics facility. The sites for SkySong and General Dynamics comprise approximately 161 acres or 32 percent of all the land along McDowell Road and Scottsdale Road in Southern Scottsdale. The General Dynamics facility, for example, encompasses 125 acres of land. The use of this land is unlikely to be subject to change. Excluding the SkySong and General Dynamics sites, parcels smaller than two acres in size contain a higher proportion of land area than do parcels larger than four acres. Parcels smaller than two acres total approximately 160 acres, while parcels larger than four acres, other than the General Dynamics and SkySong sites, total approximately 145 acres. Several sites formerly occupied by automotive dealerships, however, contain a relatively large

amount of land that could potentially support higher-intensity development nodes.

Map I-1 shows the location of parcels with frontage along Scottsdale and McDowell roads. The map also shows that in several locations, significant portions of Scottsdale and McDowell Roads are characterized by contiguous parcels smaller than one acre in size. Many of these parcels are also characterized by relatively shallow lot depths. Thus, even if such parcels are able to be assembled to create larger sites, the small depth of the parcels may still present challenges to redevelopment.

Figure I-1: Parcels With Frontage on Scottsdale and McDowell Roads



Based on existing lot and building footprint sizes, typical "as is" conditions for relatively small parcels highlighted in Map I-1 above are generalized below in Table I-2.

TABLE I-2

Typical Small Lot Sizes and Intensity of Existing Use

Lot Size Categories	Land Area # Square Feet	Site Coverage %	Building Footprint # Square Feet
Roughly ¼ acre	10,000 – 15,000	35 – 40	4,000 – 5,000
Roughly ½ acre	20,000 – 25,000	30 – 35	7,000 – 8,000
Just under 1 acre	35,000 – 40,000	30 – 35	11,000 -12,000

Sources: City of Scottsdale; Gruen Gruen + Associates.

Site coverage for small parcels less than one acre in size generally ranges from 30 to 40 percent. Site coverage for larger parcels averages between 23 to 28 percent. These coverage ratios are considered relatively low density compared to coverage ratios of 50 to 75 percent typical of an urban, higher-density environment.

Current Assessed Values for Small Parcels

Based on the assessed values assigned by the Maricopa County Assessor, Table I-3 summarizes estimated values of $30 to $40 per square foot of land for smaller commercial properties along Scottsdale and McDowell roads.

TABLE I-3

Small Site Assessed Market Values

Location	Parcel Sizes # Square Feet	Average Market Value[1] $ Per Square Foot Land
McDowell Rd between 74th and Miller	18,000 – 29,000	$26
McDowell Rd between 77th and 79th	8,000 – 28,000	$27
Scottsdale Rd between Roosevelt and Fillmore	7,000 – 27,000	$33
Scottsdale Rd southwest of Thomas	6,000 – 12,000	$40

[1] As determined for the upcoming 2010 assessment year by the Maricopa County Assessor.
As one example, a 28,000-square-foot lot with an existing 3,000-square-foot automotive repair facility on McDowell Road sold for $750,000 in 2007 (or approximately $27 per square foot of land).

Sources: Maricopa County Assessor; Gruen Gruen + Associates.

The interviews and review of the real estate economics of a typical "as is" property presented below suggest many smaller properties are purchased at prices that are not justified by the current real estate economics or income property owners derive. Reservation prices are higher than what can be justified solely by the income the properties yield. Interviews with owners and representatives of small (less than one acre) office and retail/service properties in Southern Scottsdale indicate that currently prevailing reservation prices tend to range from approximately $150 to $300 per square foot of building space. In terms of existing values perceived to apply to small sites, asking prices tend to approximate $40 to $60 per square foot of land. Because of the Scottsdale image and the perception that

property values will appreciate or remain stable in the long-term, most small properties are typically priced above what current income and capitalization rates would support. In addition, the high reservation prices reflect the relatively limited amount of sites available for development. For example, Table I-4 summarizes asking prices for a sample of small properties within Southern Scottsdale.

The current recession is likely to have a significant effect on reservation prices. Real estate experts across the country suggest that the effect of the decreased prices and increased vacancies that affect all types of real estate uses are working to reduce land values by as much as 40 percent below the levels that existed in 2007.

TABLE I-4

Asking Prices for Small Commercial Properties in Southern Scottsdale (June 2009)

Address	Existing Use	Building Size # Sq. Ft.	Lot Size # Sq. Ft.	Asking Price	Asking Price Per Square Foot of Land
2501 Hayden	Single Story Office	7,504	22,650	$1,275,680	$56
1025 N Scottsdale	Automotive Retail	3,030	16,500	$825,000	$50
6801 E Thomas	Medical Office	1,250	6,462	$399,000	$62
2343 N. Hayden	Single Story Office	1,920	12,060	$549,000	$46
2933 N. Hayden	Retail	6,278	44,340	$2,100,000	$47
3013 N 67th	Single Story Office	5,160	15,561	$1,025,000	$66

Sources: Loopnet; CoStar; Maricopa County Assessor; Gruen Gruen + Associates.

Value of Typical "As Is" Property

Based on a review of a sample of properties, we assume that a typical property has 7,000 square feet of commercial space on 23,000 square feet of land. Table I-5 summarizes a rough estimate of value based on the income the property generates.

TABLE I-5

Estimate of Value Produced by Income of Typical Existing Smaller Property[1]

Gross Rent	$15.50 per square foot
Operating Expenses, Insurance Expense and Real Estate Tax Expense	$4.25 per square foot
Net Annual Rent, Assuming 100% Leased	$11.25 per square foot
Total Net Operating Income Before Reserves	$78,750
Maintenance, Repair, Tenant Improvements, Leasing Commission Costs at $1.50 Per Square Foot	$10,500
Net Income After Reserves	$68,250
Capitalized Property Value at 9.0% Capitalization Rate	$758,333 ($108 per square foot of building space)
Capitalized Property Value Per Square Foot of Land Assuming 23,000 Square Feet of Land	$33

[1] Assumes 7,000 square feet of commercial building space on 23,000 square foot site.

Source: Gruen Gruen + Associates

Based on our interviews and review of secondary data, we estimate an annual base rent of $15.50 per square foot. We estimate annual operating expenses, property taxes and insurance expense of $4.25 per square foot. We allow for annual maintenance, repair, tenant improvement, marketing and leasing commission costs of $1.50 per square foot, a sum significantly below what would be required to perform any material upgrading or property renovation. Finally, we assume the capitalization rate or required yield on investment of nine percent. These assumptions produce a value estimate of $758,333 or $108 per square foot of building space. On a per square foot of land basis, this equates to $33 per square foot.

The analysis of the "As-Is" scenario and existing conditions indicate that current net rent levels of small, older properties do not facilitate owners completing significant remodeling or updating. The analysis suggests that one option some existing property owners may be encouraged to adopt is to reduce maintenance or other expenditures on improvements. This option is particularly likely for those owners with low cost bases of small properties with obsolete space and inadequate parking. The real estate economics that apply explain the deterioration that has been observed in the land use patterns and associated real estate in Southern Scottsdale and the relatively limited amount and frequency of privately accomplished redevelopment.

In order to evaluate whether property owners and developers would find development or redevelopment options value enhancing or more profitable than maintaining the present existing uses, we compare the estimated property values associated with the ownership and operation of a prototypical existing commercial property within the corridors under present market conditions to the land value estimates of alternative uses or actions postulated in the following chapters. We do so to describe typical sets of choices or options available to property owners and to identify whether redevelopment along the lines postulated by the City of Scottsdale Advance Planning and Policy Department is likely to be carried out by the private sector under the existing or newly adopted PUD regulations.

While market and land use policy and regulatory conditions and the physical circumstances of a particular property may vary by location, property owners tend to share a common motivation to seek to improve and benefit, if not maximize, their own economic well-being. One reference point for measuring economic well-being is the residual land value yardstick measure used to evaluate the postulated development or redevelopment alternatives. If the residual land values for the redevelopment alternatives are higher than the reservation prices associated with the existing status quo, then private redevelopment can occur if the land can be assembled at prices close to reservation prices. If existing property prices are higher than residual land values supported by redevelopment alternatives, then rents for new development will need to rise, costs will need to decrease, or regulations will need to be altered to permit more built space on a given land parcel in order to encourage property redevelopment.



Asking Prices for Larger Parcels

While as mentioned before, prices of all real estate have been under pressure as a result of the recession, the asking prices for commercial properties do give one some feel for at least historically perceived reservation prices.

Table I-6 summarizes asking prices for a sample of large properties within Southern Scottsdale.

TABLE I-6

Asking Prices for Large Commercial Properties in Southern Scottsdale (June 2009)

Address	Existing Use	Building Size # Sq. Ft.	Lot Size # Sq. Ft.	Asking Price	Asking Price Per Square Foot of Land
8705 E. McDowell W/SWC	Single Story Office/Flex	7,018	241,322	$3,500,000	$14.50
8705 E. McDowell SWC	Retail Showroom	29,236	246,550	$6,100,000	$24.74
NWC McDowell/Pima	Unimproved	0	234,020	$2,100,000	$8.97
6640 E. McDowell	Automotive	32,000	220,414	$5,400,000	$24.50
6850 E. McDowell	Automotive	94,000	222,263	Not Disclosed	N/A
7000 E. McDowell	Automotive	32,401	166,835	$6,300,000	$37.76

Sources: Loopnet; Ted Marek Real Estate Co., Inc.; SRS Real Estate Partners; Gruen Gruen + Associates.

In terms of existing values perceived to apply to large sites, asking prices tend to approximate over $14 to nearly $38 per square foot of land for improved properties and around $9 per square foot of land for unimproved properties.

THE INFLUENCE OF REGULATIONS ON THE AMOUNT OF LAND AREA THAT CAN BE COVERED BY BUILDING SPACE

Existing Zoning Regulations

Under both the existing zoning regulations and newly adopted PUD zoning regulations, the City of Scottsdale requires parking to be provided at a minimum ratio of (a) one space per 250 square feet of retail space, (b) one space per 300 square feet of office space, (c) one space per 50 square feet of restaurant space, and (d) 1.7 spaces per multi-family residential unit (based on two bedroom units). Existing setback and open space requirements for residential zoning in Southern Scottsdale (R-5) result in approximately 40 percent of the net site area being allocated to open space (with 50 percent of open space required to be located up front). Existing zoning for commercial uses requires that open space be provided at a minimum of 10 percent of net site area for any building less than 12 feet in height, plus an

additional 4/10th of one percent of net site area for each additional foot greater than 12 feet in height. These parking and setback/open space requirements, combined with a maximum density of 23 units per acre and a height limitation of three stories, result in multi-family residential development that may obtain between 22 and 30 percent site coverage if the building is three stories in height. Under the existing setback, open space and parking requirements, a height limit of two stories for Class A office or retail uses results in retail and office buildings that can obtain approximately 20 to 30 percent site coverage. However, office and retail buildings may obtain approximately 40 to 50 percent site coverage if the building is single story.

Newly Adopted PUD Zoning Regulations

Setback requirements for residential uses under the newly adopted PUD regulations equate to a minimum of 10 percent of the gross site area as open space, with an additional five percent of the gross floor area of a unit required to be devoted to private outdoor living space (such as patios and balconies). Stepback plane (rise over run ratio) requirements and a minimum setback of 34 feet on major arterial roads also influence site coverage for residential uses under the PUD regulations. For wood frame construction of multi-family uses of four stories, the newly adopted PUD regulations result in multi-family buildings that cover between 30 and 45 percent of land area. Greater site coverage for residential uses under the newly adopted PUD is possible, as compared to existing R-5 zoning, because less open space is required. Multi-family residential densities of approximately 19 to 45 dwelling units per acre or higher are possible under the newly adopted PUD regulations, with achievable densities generally increasing as the size of lot increases.

Obtainable site coverage for commercial uses under the newly adopted PUD are no different from those achieved under existing zoning regulations because setback, parking and open space requirements are the same.

In the subsequent analysis of conceptual redevelopment prototypes, on-site detention or storm water management regulations have not been taken into consideration because input from City staff indicates that: (a) site areas dedicated to open space or which are constrained by setback and stepback plane requirements may be sufficient to accommodate on-site detention; (b) detention requirements may vary substantially on a site-by-site basis; and (c) other stormwater management mechanisms such as recessed parking will likely be required to permit feasible redevelopment should substantial on-site detention be required.



RESULTS AND CONCLUSIONS

Table I-7 presents a summary of the prototypes evaluated, the residual land value estimates, site areas, and physical characteristics and height, parking, and floor-area ratio and dwelling units per acre characteristics of the prototypical development alternatives.

TABLE I-7

Summary of Prototype Characteristics and Results

	Land Value	Land Value Per Sq. Ft.	Site Area # Acres	Gross Space # Sq. Ft.	Units/ Rooms #	Height # Stories	Parking # Spaces	FAR	DU/ Acre
PROTOTYPE #1									
Existing Zoning									
Retail	$1,056,000	$20.00	1.22	12,000	n/a	1	37 surface	0.23	0
Apartments	$1,047,000	$8.00	3.16	91,200	72	3	130 surface	0.66	23
Total	$2,103,000	$11.00	4.39	103,200	72		167 surface	0.54	
Newly Adopted PUD									
Retail	$1,601,000	$30.00	1.22	16,000	n/a	1	52 surface	0.30	0
Apartments	$781,000	$6.00	3.16	235,504	210	5	265 podium	1.71	34
Total	$2,382,000	$12.00	4.39	251,504	210		317	1.32	
PROTOTYPE #2									
Existing Zoning									
Retail	$213,000	$5.00	0.98	6,497	n/a	1	37 surface	0.15	0
Apartments	$1,742,000	$10.00	4.11	142,800	96	3	274 Existing structure	0.80	23
Total	$1,955,000	$9.00	5.09	149,297	96		311	0.67	
Existing Zoning									
Retail & Restaurant	$2,047,000	$9.00	5.09	37,979	n/a		253 surface	0.17	0
Newly Adopted PUD									
Restaurant	$138,000	$3.00	0.96	5,000	n/a	1	105 surface	0.12	0
Apartments	$3,797,000	$21.00	4.13	178,669	185	4	274 Existing structure	0.99	45
Total	$3,935,000	$18.00	5.09	183,669	185		379	0.83	

TABLE I-7, CONTINUED

Summary of Prototype Characteristics and Results

	Land Value	Land Value Per Sq. Ft.	Site Area # Acres	Gross Space # Sq. Ft.	Units/ Rooms #	Height # Stories	Parking # Spaces	FAR	DU/ Acre
PROTOTYPE #3									
Hotel – Limited*	-$2,189,000	-$20.10	2.5	80,000	127	6	127	0.73	
Hotel – Extended	-$2,574,000	-$21.89	2.7	89,500	123	4	123	0.76	

* If, for example, the average daily rate assumption was 15 percent higher than the base case assumption and the capitalization rate was 100 basis points (one percentage point) lower, the residual land value for the limited service hotel product option would approximate $9 per square foot.

PROTOTYPE #4 **Newly Adopted PUD**									
Townhomes*	-$13,700	-$0.59	0.53	18,810	10	2 & 3	N/A	0.81	19

* If sales prices were to increase by 10 percent to $275 per square foot or $453,750 per unit, the residual land value would increase significantly to $184,300 or $8.00 per square foot of land area. Conversely, if developer profit were reduced to no more than 15 percent of sales revenue the total development costs would decline to $3.9 million. This would also result in a positive land residual value of approximately $192,600 or over $8.00 per square foot of land area.

Sources: City of Scottsdale Advance Planning and Policy Department; Gruen Gruen + Associates.

For prototype #1 of retail and apartment uses on a 4.4-acre site, under existing zoning regulations the supportable residual land value per square foot is estimated at $11.00. Under the newly adopted PUD regulations, the residual land value increases slightly due to a higher floor-area ratio (FAR).

Under the prototypical apartment development alternative postulated under the newly adopted PUD, the provision of podium parking at a cost of over $4.0 million in order to create almost three times the number of apartment units than the number of units under the existing zoning reduces the residual land value from $8 per square foot under existing zoning regulations to $6 per square foot under the PUD regulations. For the retail use, as the FAR increases under the newly adopted PUD regulations and more space is built, the land value increases from $20 per square foot under existing regulations to approximately $30 per square foot under the PUD regulations. As described below, however, the retail residual land value analysis assumes higher than prevailing rental rates and a market recovery.

For prototype #2 for retail and restaurant uses on almost one acre, the residual land value for either the retail use under existing zoning regulations or the restaurant use under the newly adopted PUD regulations is low, ranging from $3.00 per square foot to $5.00 per square foot. The low FAR ratio associated with the almost one acre of land allocated to

either retail or restaurant uses limits the generation of significantly higher land values. Compared to the existing market value of approximately $30 to $40 per square foot of land for small sites in Southern Scottsdale, the value created by a new retail or restaurant use on a small site would not be sufficient to induce the owner of a typical existing smaller property to redevelop the property into new retail and restaurant uses. When the FAR is increased so retail and restaurant uses cover the larger five acre site the residual land value increases to $9.00 per square foot which is closer to the reservation prices for larger sites in Southern Scottsdale.

For prototype #2 for the apartment uses on four acres in which a parking structure already exists, the residual land value increases from $10 per square foot under existing zoning regulations to $21 per square foot under the PUD regulations where the number of dwelling units increases from 23 units per acre to 45 units per acre. The residual land value estimate for residential uses on a larger site is greater than the existing market values because the provision of parking through an existing parking structure greatly enhances the land value. If structured parking had to be paid for to allow for greater density, the additional costs would not be supported by the additional revenue and the land value estimate would not be positive.

The real estate economic analysis of the first two prototypical development alternatives indicate that apartment uses, especially those which require the development of structure parking rather than surface parking, are unlikely to support high enough land values to induce redevelopment of obsolete uses. For larger sites, assuming above market rents, retail and restaurant uses appear closer to being able to support land values close to reservation prices for large sites, but not for smaller sites.

Under the current relationship between development costs, operating revenues and costs, and capital values, even assuming the regulations are altered to permit hotel development of six stories, limited service and extended stay hotel products are unlikely to support land values high enough to encourage redevelopment of sites with existing income producing uses. An increase in average daily rates of 15 percent and decrease in capitalization rates of 100 basis points (one percent) over the base case assumptions would produce a positive residual land value of $9 per square foot or an amount close to reservation prices for larger sites (but not smaller sites). The reader should note, however, that nationwide, average daily room rates have dropped 20 percent between 2008 and 2009, while occupancy rates have dropped from 60.4 percent to 55.7 percent. Furthermore, the willingness of financial institutions to lend money for new hotel developments has been seriously impaired by the financial de-leveraging going on as lending institutions seek to strengthen their balance sheets. Thus, the risk associated with starting a new hotel may suggest that the residual land value estimate of $9 per square foot suggested by our analysis may still not be high enough to encourage such development.

Under the newly adopted PUD regulations, a townhouse/live-work product on small lots representative of much of the parcelization in Southern Scottsdale would not be profitable



to develop. If sales prices were to increase by 10 percent over the base case assumption to $275 per square foot or $453,750 per unit, the residual land value would increase significantly to $184,300 or $8.00 per square foot of land area. Conversely, if developer profit were reduced to no more than 15 percent of sales revenue, total development costs would decline to $3.9 million. This would also result in a positive land residual value of approximately $192,600 or over $8.00 per square foot of land area. The results, however, suggest most property owners will be better off wringing whatever income can be produced by existing small, older commercial properties than redeveloping the properties into townhouse or live-work uses.

The analysis of existing conditions suggests the income produced cannot support the current reservation prices for many smaller properties. The relatively high reservation prices make it challenging for properties to be assembled and redeveloped along the lines of the postulated prototypical development envelopes evaluated in this report. Because the reservation prices of many owners are higher than what can be supported by obtainable multi-family and retail space rents under the assumptions described in this report, developers will have to either use different assumptions in order to justify buying the property needed for redevelopment of new residential and retail uses under the existing or newly adopted PUD regulations, or elect to accept a lower return now in anticipation of higher rents in the future. Without rental rate increases significantly exceeding cost increases, under the existing or newly adopted PUD regulations, the value of most existing commercial properties is likely to be more than the supportable land value of their sites for demolition and redevelopment into alternative uses.

Southern Scottsdale will need to establish a more desirable and distinct image for multi-family residential, townhouse/live-work, retail, office and tech-service uses with a pattern of development products, infrastructure and amenities that permit competing effectively with alternative locations. Under the present market, cost and regulatory relationships most smaller properties with somewhat obsolete building space will not be redeveloped into new residential and retail uses. This likelihood suggests that the market on its own is not likely to cause in the near term the type of changes needed to make Southern Scottsdale a more desirable and competitive location capable of supporting higher prices from increased obtainable demands.

The current recession will make it more challenging for the evolution to occur. Many retail chains are reducing their number of outlets. Rents for retail space in Southern Scottsdale have generally declined by 10 to 20 percent over the past two years from their peak in late 2007. Smaller, older and unanchored centers have from 10 to 50 percent of their space vacant. Furthermore, even when the recession ends, it is unlikely that consumers will quickly return to past levels of consumption. In 2007, consumer debt rose to 133 percent of personal disposable income. That leverage ratio of debt to personal disposable income has grown from 65 percent in the mid-1980s. If we assume that consumers, who are already increasing their saving rates, will reduce their debt to personal disposable income ratio to 100 percent at the same rate that Japanese households did during their depression, it will take until 2018 for that leverage ratio to reach 100 percent. While Scottsdale's retail base is



stronger than what one finds in many communities, it is nevertheless likely that retailers will be hesitant to expand to new locations during the next decade.

RECOMMENDED STRATEGIES AND TACTICS

For the land use market in Southern Scottsdale to become sufficiently vigorous to support improving and sustainable economic and social conditions will require municipal entrepreneurial actions. The results of the real estate economic analysis and interviews suggest the following strategies and tactics for reinventing Southern Scottsdale corridors to increase their competitive magnetism and demands that sustain private feasible development and enhancements:

- Clarify and simplify the PUD for Southern Scottsdale to include effective by-right development standards because many developers for relatively small sites will not have the wherewithal to comply with the time and cost requirements of the PUD;

- To avoid high reservation prices causing stagnation, make any zoning changes that will tend to cause owners to justify high reservation prices subject to "performance zoning" or a "sunset clause". Under these clauses, either the property would not be zoned unless specific development parameters are in place, or if the property is not developed for new residential, retail, or office users within a certain time, the zoning permitting higher-density uses would revert to a lower-density zoning classification;

- Facilitate private feasible development including land assembly and use changes in the corridors to accommodate recommended changes in land use (for example, from obsolete retail to higher density residential). For example, eliminate or modify regulations that reduce the amount of building space that can be created;

- Given the findings that the cost of structure parking discourages feasibility of higher density development alternatives associated with the newly adopted PUD, municipal assistance with the provision of necessary parking (or modification of parking requirements) may also be needed for the feasible reuse or redevelopment of smaller, obsolete properties;

- In addition, reducing impact fees, especially for small lot residential projects, will also improve feasibility;

- Encourage a pedestrian-friendly environment with appropriate traffic signalization, crosswalks, landscaping, and pedestrian-scaled streetscape amenities;

- Identify in the Community Area Plan for Southern Scottsdale locations for clusters of mixed-use, higher-intensity development at key intersections such as Scottsdale and McDowell roads. These core areas should accommodate a critical mass of

activity and create a distinctive sense of place and encourage pedestrian and street-level activity. Until the economy turns around considerably and the real estate markets recover, insufficient demand is likely to exist to create mixed use, high density developments at all key intersections. The intersection of Scottsdale and McDowell Roads is one place where higher intensity would be best positioned to work, given the City's past public investment in SkySong and its location as a gateway to the City's Downtown; and

- Given the presence of General Dynamics and SkySong, the proximity to the Phoenix Sky Harbor International Airport and highway and transit connections, proximity to the Arizona State University campus in Tempe, and existing nodes of technology and service space users near the General Dynamics campus and near Papago Park, provide for in the Southern Scottsdale Community Area Plan the potential for additional research and development and technology and service uses to locate and expand in Southern Scottsdale. Other uses for which the Plan should provide are public and private educational and healthcare activities.



CHAPTER II

ASSESSMENT OF RESIDENTIAL AND RETAIL DEVELOPMENT ALTERNATIVES ON RELATIVELY LARGE LOT

INTRODUCTION

This chapter reviews the spatial dimensions and primary cost, financial, and market or revenue inputs for simulation of the investment in the development, operation, and eventual sale of an apartment and retail project specified for a relatively large 4.4 acre site under both existing zoning (C-3, C-4 and rezoning a portion of the site to R-5) and the newly adopted PUD. It then presents the results of the investment analysis.

DESCRIPTION OF LAND USES FOR PROTOTYPICAL DEVELOPMENT OPTIONS

Tables II-1 summarizes the types and amounts of land uses and products for the prototypical development option the City prepared for a relatively larger site consisting of approximately 4.4-acres of land.

TABLE II-1

Spatial Dimensions of Residential and Retail Development Alternative for 4.4-Acre Site Under Existing Zoning Regulations

Retail Space in Gross Square Feet, with a loss factor of 10 percent	12,000
3-Story Apartment Buildings, with a loss factor of 15 percent and average unit size of 1,076 square feet	72 units
Surface Parking	167 spaces
Amount of Land Area in Acres	4.40
Source: City of Scottsdale Advance Planning and Policy Department	

The prototypical development alternative under the existing zoning regulations accommodates 72 apartment units in a three-story building on 2.7 acres of land and 12,000 square fee of retail space on 1.2 acres of land. The apartments would average 1,076 square feet in size. The residential portion of the project would contain 130 surface parking spaces and the retail portion would contain 37 surface parking spaces. Open space requirements, maximum density of 23 units per acre, surface parking, and the height limitation constrain the ability to provide more than 72 units.

Table II-2 summarizes another prototypical development option for the same site consisting of 4.4 acres under the newly adopted PUD regulations.

TABLE II-2

Spatial Dimensions of Residential and Retail Development Alternative for 4.4-Acre Site Under Newly Adopted PUD Regulations

Retail Space in Gross Square Feet, with a loss factor of 10 percent	16,000
5-Story Apartment Building (with ground floor parking), with a loss factor of 18 percent and average unit size of 920 square feet	210
Surface Parking for Retail Space	52 spaces
Podium Parking for Residential Space	265 spaces
Amount of Land Area in Acres	4.4
[1] The amount of parking required for the residential component is 325 spaces. The short-fall is made up via shared parking with the retail use and 12 street parking spots. This would be permitted under the newly adopted PUD.	
Source: City of Scottsdale Advance Planning and Policy Department	

The prototypical development alternative under the newly adopted PUD regulations includes 210 apartment units in a five-story building (with the first floor consisting of podium parking) on about 3.2 acres of land and 16,000 square feet of retail space in a building located on approximately 1.2 acres of land in the front of the site. The apartments would average 920 square feet in size. The residential portion of the project contains 265 parking spaces in a first floor podium in the five-story building. The retail portion contains 52 surface parking spaces. These spaces would be "shared" with the residential component. An additional 12 spaces on the street would be allocated to the residential component. These parking arrangements are permitted under the newly adopted PUD.

Note: Due to the newly adopted PUD providing a lower maximum height than contemplated in the proposed PUD when the prototypical development alternative was prepared, this prototype would not be permissible without further adjustment to the PUD ordinance.

KEY COST ELEMENTS

Based on information obtained from interviews with general contractors, developers, and brokers, Table II-3 summarizes the estimated development costs for the postulated prototypical apartment and retail development alternative under existing zoning regulations.



TABLE II-3

Summary of Key Cost Elements for Postulated Prototypical Apartment and Retail Development Alternative for 4.4 Acre Site Under Existing Zoning Regulations

	Cost Per Square Foot[1] $	Total Costs[1] $
Residential		
Hard Construction and Sitework (Including Parking) Costs per Square Foot of Building Area	82.00	7,478,000
Soft Costs as a Percentage of Total Costs, Excluding Land & Financing @ 16%	13.00	1,186,000
Impact Fees per Square Foot of Building Area[2]	5.00	432,000
Total Costs per Square Foot of Building Area	100.00	9,096,000
Retail		
Hard Construction Costs per Square Foot of Building Area	95.00	1,140,000
Soft Costs as a Percentage of Total Costs, Excluding Land & Financing @ 20%	28.00	335,000
Sitework Costs, Excluding Parking Costs @ an Average Cost of $9.00 Per Square Foot of Land Area	40.00	479,000
Parking Costs @ an Average Cost of $1,500 Per Space for 37 Surface Spaces	5.00	56,000
Tenant Improvement Costs Per Square Foot of Net Building Space[3]	27.00	277,000
Leasing Commission Costs Per Square Foot of Net Building Space[3]	6.00	62,000
Total Costs per Square Foot of Building Area	196.00	2,349,000

[1] Figures are rounded.
[2] Assume impact fees of $6,000 per unit.
[3] Reflects 95 percent occupancy.

Source: Gruen Gruen + Associates (from general contractor, developer, and real estate broker interviews)

For 72 apartment units, estimated hard costs, soft costs, site improvement and parking costs total approximately $8.7 million. Impact fees total $432,000 or $6,000 per unit. Total costs, excluding financing costs and loan fees and land costs, are estimated at $9.1 million or $100 per square foot of gross building space.

Excluding land and financing costs, but including hard costs, soft costs, site preparation costs, tenant improvement and leasing commission costs, total development costs to build 12,000 square feet of single-story retail space are estimated at over $2.3 million or $196 per square foot. Hard costs are estimated at $95 per square foot of building space, or $1.1 million. Sitework costs are estimated to total $9.00 per square foot of land or $479,000. Parking costs are estimated at $1,500 per space or $56,000 for 37 spaces. Tenant improvements are estimated to cost $27 per square foot or $277,000. Leasing commission costs are estimated at $6.00 per square foot or approximately $62,000.

Table II-4 summarizes the estimated development costs for the prototypical apartment and retail development alternative under the newly adopted PUD regulations.

TABLE II-4

Summary of Key Cost Elements for Postulated Prototypical Apartment and Retail Development Alternative for 4.4 Acre Site Under Newly Adopted PUD Regulations

	Cost Per Square Foot[1] $	Total Costs[1] $
Residential		
Hard Construction and Sitework Costs per Square Foot of Building Area	82.00	19,311,000
Soft Costs as a Percentage of Total Costs, Excluding Land & Financing @ 15%	15.00	3,533,000
Parking Costs @ an Average Cost of $14,500 Per Space for 265 Podium Spaces	16.00	3,843,000
Impact Fees per Square Foot of Building Area[2]	5.00	1,260,000
Total Costs per Square Foot of Building Area	118.00	27,946,000
Retail		
Hard Construction Costs per Square Foot of Building Area	95.00	1,520,000
Soft Costs as a Percentage of Total Costs, Excluding Land & Financing @ 20%	26.00	416,000
Sitework Costs, Excluding Parking Costs @ an Average Cost of $9.00 Per Square Foot of Land Area	30.00	479,000
Parking Costs @ an Average Cost of $1,500 Per Space for 52 Surface Spaces	5.00	78,000
Tenant Improvement Costs Per Square Foot of Net Building Space[3]	27.00	370,000
Leasing Commission Costs Per Square Foot of Net Building Space[3]	6.00	82,000
Total Costs per Square Foot of Building Area	184.00	2,945,000

[1] Figures are rounded.
[2] Assume impact fees of $6,000 per unit.
[3] Reflects 95 percent occupancy.

Source: Gruen Gruen + Associates (from general contractor, developer, and real estate broker interviews)

For 210 apartment units, estimated hard costs, soft costs, and site improvement costs total approximately $22.8 million. Parking costs are estimated at $14,500 per space or $3.8 million for 265 podium spaces. Impact fees total $1,260,000 or $6,000 per unit. Total costs, excluding financing costs and land costs, are estimated at $27.9 million or $118 per square foot of gross building space.

Excluding land and financing costs, but including hard costs, soft costs, site preparation costs, tenant improvement and leasing commission costs, total development costs to build 16,000 square feet of single-story retail space are estimated at over $2.9 million or $184 per square foot. Hard costs are estimated at $95 per square foot of building space, or $1.5 million. Sitework costs are estimated to total $9.00 per square foot of land or $479,000. Parking costs are estimated at $1,500 per space or $78,000 for 52 spaces. Tenant improvements are estimated to cost $27 per square foot or $370,000. Leasing commission costs are estimated at $6.00 per square foot or $82,000.

FINANCIAL PARAMETERS

Table II-5 summarizes the financial terms stipulated for the investment analysis. The financial term assumptions are the same for both prototypical development alternatives.

TABLE II-5

Investment and Financing Assumptions for Prototypical Apartment and Retail Development Alternative for 4.4 Acre Site

Equity as Percent of Project Total	30%
Internal Rate of Return (IRR)	15%
Sale Year for IRR Calculation	10
Mortgage Rate	8.25% Retail 6.25 % Residential
Mortgage Amortization Term in Years	25
Year Mortgage Taken Out	2
Construction Loan Financing Costs – Annual Interest Rate	8.5% Retail 7.5% Residential
Construction Loan Fee	1%
Capitalization Rate for Sale Year	8.5% Retail 7.0% Residential
Sales Expenses as Percent of Sales Price	3%

Sources: Urban Land Institute *Capital Markets Report*; Real Estate Capital Markets Institute; George Smith Partners; Gruen Gruen + Associates.

Financial parameters include equity and debt terms, construction and permanent loan arrangements, IRR and capitalization rates. Based on the interviews, we assume an equity requirement of 30 percent of project costs and a hurdle rate or IRR target threshold of 15 percent and a holding period of 10 years. We assume a one year construction period and a resulting construction loan period of one year. The construction and permanent loan term assumptions are drawn from a review of secondary capital markets data and interviews with financing sources and developers. We estimate a construction loan interest rate of 7.5 percent for residential uses and 8.5 percent for retail uses and a loan fee of one percent. We assume a permanent mortgage loan is obtained in year two to take out or retire the construction loan. We estimate an annual interest rate of 6.25 percent for the permanent mortgage for residential uses and 8.25 percent for retail uses under a loan amortization schedule of 25 years. We estimate a capitalization rate, or buyer's required yield on the purchase of the retail property, of 8.5 percent. For the apartment use, we assume a 7.0 percent capitalization rate. We assume expenses associated with the sale of the property are three percent of the transaction value.



MARKET PARAMETERS

Table II-6 summarizes the market or revenue parameters for the postulated prototypical apartment and retail development alternative for a 4.4 acre site under existing zoning regulations.

TABLE II-6

Market or Revenue Parameters for Postulated Prototypical Apartment and Retail Development Alternative for 4.4 Acre Site Under Existing Zoning Regulations

Residential	
Annual Rent Per Square Foot of Building Space	$15.00
Operating Costs Per Square Foot of Building Space	$4.00
Average Annual Rent Increase	2%
Residential Occupancy in Years 1,2, and Thereafter	75%, 95%
Retail	
Annual Retail Space Net Rent per Square Foot of Building Space	$30.00
Fixed Operating Costs and Reserves Per Square Foot of Building Space	$1.00
Average Annual Rent Increase	2.5%
Retail Occupancy in Years 1,2 and Thereafter	75%, 95%
Source: Gruen Gruen + Associates	

For 72 apartment units with an average unit size of 1,076 square feet, based on interviews with apartment developers, we assume annual rents of $15 per square foot, or monthly rents of $1.25 per square foot. We estimate annual operating expenses and reserves of $4.00 per square foot. We assume average annual rent increases of two percent. We assume that 75 percent of the space is leased following construction, and 95 percent leased in the second operating year and annually thereafter.

Note that the monthly rental rate assumption is higher than current rents for older apartment product located in Southern Scottsdale. For example, rents per square foot for Chaza at 1075 North Miller and San Tropez at 2700 North Hayden tend to be under $1.00 per square foot. The Colonial Grand projects also have low average rents of under $0.90 per square foot. The nearest Scottsdale projects that obtain the highest rents per square foot are The Palladium and San Marin. Although the location of these projects near the Civic Center and Old Town is considered more desirable than the locations of apartment projects in Southern Scottsdale, rents at these projects are currently lower than the rent estimate used for the financial analysis. Rents at The Palladium (a four-story elevator product) currently range from $1.11 to $1.23 per square foot, while rents the San Marin (a three-story walk-up product) range from $0.92 to $1.13 per square foot.

For the retail use, we assume the recession ends and assume an above current market annual net rent of $30.00 per square foot. As indicated by the rents shown for existing retail centers in the table in Appendix A, rents for existing retail centers in Southern Scottsdale have declined since 2007 to the low $20s per square foot for larger, well anchored centers to



under $20 per square foot for smaller, older and non retail anchored centers. We assume an annual rent increase of 2.5 percent. We estimate annual fixed operating costs and reserves of $1.00 per square foot. The occupancy rate for the retail space is assumed to be 75 percent in the first operating year and 95 percent in the second operating year and thereafter.

Table II-7 summarizes the market or revenue parameters for the postulated apartment and retail development alternative for the 4.4 acre site under the newly adopted PUD regulations.



TABLE II-7

Market or Revenue Parameters for Postulated Apartment and Retail Development Alternative for 4.4 Acre Site Under Newly Adopted PUD Regulations

Residential	
Annual Rent Per Square Foot of Building Space	$16.50
Operating Costs Per Square Foot of Building Space	$4.00
Average Annual Rent Increase	2%
Residential Occupancy in Years 1,2, and Thereafter	75%, 95%
Retail	
Annual Retail Space Net Rent per Square Foot of Building Space	$30.00
Fixed Operating Costs and Reserves Per Square Foot of Building Space	$1.00
Average Annual Rent Increase	2.5%
Retail Occupancy in Years 1, 2 and Thereafter	75%, 95%
Source: Gruen Gruen + Associates	

For 210 apartment units with podium style parking with an average unit size of 920 square feet, we assume annual rents of $16.50 per square foot, or monthly rents of approximately $1.38 per square foot. We estimate annual operating expenses and reserves of $4.00 per square foot. We assume average annual rent increases of two percent. We assume that 75 percent of the space is leased following construction, and 95 percent leased in the second operating year and annually thereafter.

For the retail use, we estimate above current market annual net rent of $30.00 per square foot. We assume an annual rent increase of 2.5 percent. We estimate annual operating and reserve costs of $1.00 per square foot. The occupancy rate for the retail space is assumed to be 75 percent in the first operating year and 95 percent in the second operating year and thereafter.



RESULTS OF INVESTMENT ANALYSIS FOR PROTOTYPICAL APARTMENT AND RETAIL ALTERNATIVE FOR 4.4 ACRE SITE

GG+A simulated the real estate investment results of constructing, marketing, and operating the postulated retail and apartment development alternatives under the existing zoning and newly adopted PUD regulations for the 4.4 acre site using GG+A's real estate cash flow model REALISM™. As indicated above, based on the postulated retail and residential space and revenue and cost assumptions, we calculated a land residual value that would permit an investor in the project which contributed 30 percent equity to earn a 15 percent IRR if the investor held the development for 10 years. The simulation projects the financial results, including the residual land value of the apartment and retail components of the mixed-use development option specified for the site.

Results Under Existing Zoning

Table II-8 summarizes the results of the simulation of the postulated prototypical apartment and retail development under existing zoning regulations.

TABLE II-8

Before-Tax Land Value and Return Supported by the Prototypical 72 Apartment Unit and 12,000-Square-Foot Retail Space Development Alternative Specified for 4.4 Acre Site Under Existing Zoning Regulations[1]

Residential	
Residual Land Value	$1,047,000
Residual Land Value Per Square Foot Based on 137,825 Square Feet of Land	$8.00
Total Project Value	$10,394,000
Equity	$3,118,000
Permanent Loan	$7,276,000
Annual Debt Service	$583,000
IRR in Year 10	15.0%
Retail	
Residual Land Value	$1,056,000
Residual Land Value Per Square Foot Based on 53,224 Square Feet of Land	$20.00
Total Project Value	$3,127,000
Equity	$938,000
Permanent Loan	$2,189,000
Annual Debt Service	$209,000
IRR in Year 10	15.0%
Total Residual Land Value	**$2,103,000**
Total Residual Land Value Per Square Foot	**$11.00**

[1] Figures are rounded.

Source: Gruen Gruen + Associates

These figures present a perspective for evaluation rather than a cardinal array of hard forecasts. The results are limited by the development potential, market, financial, and other underlying assumptions outlined above. The reader is cautioned to note that the residual land value estimates presented in this report exclude the effect of state and federal income taxes that would have to be paid. In effect, this simplifying assumption increases the residual value over what it might be under the more realistic assumption that taxes on income would be paid. We used the before-tax case, however, so as to avoid the distortions created by taxes and the need to consider whether owners would have offsetting gains and losses from other sources which is frequently the case.

The results of the investment analysis indicate that the apartment component under the existing zoning regulations would produce a residual land value of approximately $1.0 million. Based on the 137,825 square feet of land allocated to the apartment use, the estimated residual land value equates to $8.00 per square foot of land. In other words, the investor-developer could pay $1.0 million or $8.00 per square foot for the 137,825 square feet of land needed to site the development and earn a 15 percent return on investment. Equity for the project would total about $3.1 million and the permanent loan would total about $7.3 million for a total project value of $10.4 million. Annual debt service would approximate $583,000.

For the retail component, the results of the investment analysis produce a residual land value of approximately $1,056,000. Based on the 53,224 square feet of land allocated to retail uses, the estimated residual land value equates to approximately $20 per square foot of land. In other words, the investor-developer could pay $1,056,000 or $20 per square foot for the 53,224 square feet of land needed to site the development and earn a 15 percent return on investment. Equity for the project would total about $938,000 and the permanent loan would total about $2.2 million for a total project value of $3.1 million. Annual debt service would approximate $209,000.

The results of the investment analysis indicate that the prototypical apartment and retail development alternative postulated for the 4.4 acre site supports an estimated total residual land value of $2.1 million or approximately $11 per square foot of land.

Results Under Newly Adopted PUD

Table II-9 summarizes the results of the simulation of the postulated prototypical apartment and retail development alternative for the 4.4 acre site under the newly adopted PUD regulations.



TABLE II-9

Before-Tax Land Value and Return Supported by the Prototypical 210 Unit Apartment and 16,000-Square-Foot Retail Space Development Alternative Specified for the 4.4 Acre Site Under Newly Adopted PUD Regulations[1]

Residential	
Residual Land Value	$781,000
Residual Land Value Per Square Foot Based on 137,825 Square Feet of Land	$6.00
Total Project Value	$29,499,000
Equity	$8,850,000
Permanent Loan	$20,650,000
Annual Debt Service	$736,000
IRR in Year 10	15.0%
Retail	
Residual Land Value	$1,601,000
Residual Land Value Per Square Foot Based on 53,224 Square Feet of Land	$30.00
Total Project Value	$4,169,000
Equity	$1,251,000
Permanent Loan	$2,918,000
Annual Debt Service	$279,000
IRR in Year 10	15.0%
Total Residual Land Value	**$2,382,000**
Total Residual Land Value Per Square Foot	**$12.00**
[1] Figures are rounded.	
Source: Gruen Gruen + Associates	

The results of the investment analysis indicate that the apartment component under the newly adopted PUD regulations would produce a residual land value of approximately $781,000. Based on the 137,825 square feet of land allocated to residential uses, the estimated residual land value equates to approximately $6.00 per square foot of land. Equity for the project would total about $8.9 million and the permanent loan would total about $20.7 million for a total project value of $29.5 million. Annual debt service would approximate $736,000.

For the retail component the results of the investment analysis produce a residual land value of approximately $1,601,000. Based on the 53,224 square feet of land allocated to retail uses, the estimated residual land value equates to approximately $30 per square foot of land. In other words, the investor-developer could pay $1,601,000 or $30 per square foot for the 53,224 square feet of land needed to site the development and earn a 15 percent return on investment. Equity for the project would total about $1.3 million and the permanent loan would total about $2.9 million for a total project value of $4.2 million. Annual debt service would approximate $279,000.

The land value estimated to be supported by the apartment product postulated under



existing zoning is higher than the residual land value associated with the prototype under the newly adopted PUD. Compared to the retail prototype under the existing zoning, the retail prototype under the newly adopted PUD supports a higher land value because a larger amount of space is allowed to be built on a given site. The floor-area ratio increases from a low 23 percent under the existing zoning regulations to a higher, but still relatively low, 30 percent under the newly adopted PUD regulations.



CHAPTER III

ASSESSMENT OF RESIDENTIAL AND RETAIL DEVELOPMENT ALTERNATIVES WITH EXISTING PARKING STRUCTURE

INTRODUCTION

This chapter reviews the spatial dimensions and primary cost, financial, and market or revenue inputs for simulation of the investment in the development, operation, and eventual sale of a residential and retail/restaurant project specified for a relatively large 5.1 acre site with an existing parking structure under both existing zoning (C-3 and rezoning a portion of the site to R-5) and the adopted PUD. In addition, a prototypical retail/restaurant alternative consistent with existing C-3 zoning is also evaluated.

DESCRIPTION OF LAND USES FOR PROTOTYPICAL MIXED-USE DEVELOPMENT OPTIONS

Table III-1 summarizes the types and amounts of land uses and products for the prototypical development option the City prepared for a relatively larger site consisting of approximately 5.1-acres of land with an existing parking structure containing 274 spaces.

TABLE III-1

Spatial Dimensions of Residential and Retail Development Alternative for 5.1 Acre Site Under Existing Zoning Regulations

Retail Space in Gross Square Feet, with a loss factor of 10 percent	6,497
3-Story Apartment Buildings, with a loss factor of 15 percent and an average unit size of 1,264 square feet	96 units
Parking Structure (Apartment) – utilizes existing structure on site	274 spaces
Parking Surface (Retail)	37
Amount of Land Area in Acres	5.1
Source: City of Scottsdale Advance Planning and Policy Department	

The prototypical development alternative under the existing zoning regulation accommodates 96 apartment units in a three-story building on 4.1 acres of land and 6,497 square feet of retail space on 0.98 acres of land. The apartments would average 1,264 square feet in size.[2] The residential portion of the project would contain 274 structure parking spaces in an existing structure and the retail portion would contain 37 surface parking spaces.

Table III-2 summarizes another prototypical mixed-use development alternative for the relatively larger site consisting of 5.1 acres with an existing parking structure under the PUD regulations.

[2] For purposes of this analysis, we have assumed average rents associated with a market responsive unit distribution and average unit size, irrespective of whether the average unit size for the prototypical development alternative is optimal.

TABLE III-2 Spatial Dimensions of Residential and Restaurant Development Alternative for 5.1 Acre Site Under Newly Adopted PUD Regulations	
Restaurant Space in Gross Square Feet with loss factor of 10 percent	5,000
4-Story Apartment Building with loss factor of 18 percent and an average unit size of 792 square feet	185
Parking Structure (Apartment) - utilizes existing structure on site	274 spaces
Parking Surface (Restaurant)	105
Amount of Land Area in Acres	5.1
Source: City of Scottsdale Advance Planning and Policy Department	

The prototypical development alternative under the PUD regulations accommodates 185 apartment units in a four-story building on 4.1 acres of land and 5,000 gross square feet of restaurant space (4,500 net square feet) of restaurant space on 0.98 acres of land. The apartments would average 792 square feet in size. The residential portion of the project would contain 274 structure parking spaces and the restaurant portion would contain 105 surface parking spaces.

KEY COST ELEMENTS

Based on information obtained from interviews with general contractors, developers, and brokers, Table III-3 summarizes the estimated development costs for the postulated prototypical apartment and retail development alternative under existing zoning regulations.



TABLE III-3

Summary of Key Cost Elements for Postulated Prototypical Apartment and Retail Development Alternative for 5.1 Acre Site Under Existing Zoning Regulations

	Cost Per Square Foot[1] $	Total Costs[1] $
Residential		
Hard Construction and Sitework Costs per Square Foot of Building Area	82.00	11,709,000
Soft Costs as a Percentage of Total Costs, Excluding Land & Financing @ 16%	13.00	1,856,000
Impact Fees per Square Foot of Building Area[2]	4.00	576,000
Total Costs per Square Foot of Building Area	99.00	14,141,000
Retail		
Hard Construction Costs per Square Foot of Building Area	109.00	708,000
Soft Costs as a Percentage of Total Costs, Excluding Land & Financing @ 20%	35.00	229,000
Sitework Costs, Excluding Parking Costs @ an Average Cost of $9.00 Per Square Foot of Land Area	59.00	382,000
Parking Costs @ an Average Cost of $1,500 Per Space for 37 Surface Spaces	9.00	56,000
Tenant Improvement Costs Per Square Foot of Net Building Space[3]	27.00	150,000
Leasing Commission Costs Per Square Foot of Net Building Space[3]	6.00	33,000
Total Costs per Square Foot of Building Area	240.00	1,558,000

[1] Figures are rounded.
[2] Assume impact fees of $6,000 per unit.
[3] Reflects 95 percent occupancy.

Source: Gruen Gruen + Associates (from general contractor, developer, and real estate broker interviews)

For 96 apartment units, estimated hard costs, soft costs, and site improvement costs total approximately $13.6 million. Structure parking costs for maintenance are included in the hard construction and sitework. Impact fees total $576,000 or $6,000 per unit. Total costs, excluding financing costs and loan fees and land costs, are estimated at $14.1 million or $99 per square foot of gross building space.

Excluding land and financing costs, but including hard costs, soft costs, site preparation costs, tenant improvement and leasing commission costs, total development costs to build 6,497 square feet of single-story retail space are estimated at over $1.6 million or $240 per square foot. Hard costs are estimated at $109 per square foot of building space, or $708,000. Sitework costs are estimated to total $9.00 per square foot of land or $382,000. Parking costs are estimated at $1,500 per space or $56,000 for 37 spaces. Tenant improvements are estimated to cost $27 per square foot or $150,000. Leasing commission costs are estimated at $6.00 per square foot or approximately $33,000.

Table III-4 summarizes the estimated development costs for the prototypical apartment and retail development alternative under the PUD regulations.

TABLE III-4

Summary of Key Cost Elements for Postulated Prototypical Apartment and Retail Development Alternative for 5.1 Acre Site Under Newly Adopted PUD Regulations

	Cost Per Square Foot $	Total Costs[1] $
Residential		
Hard Construction and Sitework Costs (Including Parking) Costs per Square Foot of Building Area	82.00	14,651,000
Soft Costs as a Percentage of Total Costs, Excluding Land & Financing @ 16%	13.00	2,323,000
Impact Fees per Square Foot of Building Area[2]	6.00	1,110,000
Total Costs per Square Foot of Building Area	101.00	18,084,000
Restaurant		
Hard Construction Costs per Square Foot of Building Area	140.00	700,000
Soft Costs as a Percentage of Total Costs, Excluding Land & Financing @ 20%	49.00	247,000
Sitework Costs, Excluding Parking Costs @ an Average Cost of $9.00 Per Square Foot of Land Area	75.00	376,000
Parking Costs @ an Average Cost of $1,500 Per Space for 105 Surface Spaces	31.50	158,000
Tenant Improvement Costs Per Square Foot of Net Building Space	27.00	122,000
Leasing Commission Costs Per Square Foot of Net Building Space	6.00	27,000
Total Costs per Square Foot of Building Area	326.00	1,630,000

[1] Figures are rounded.
[2] Assume impact fees of $6,000 per unit.

Source: Gruen Gruen + Associates (from general contractor, developer, and real estate broker interviews)

For 185 apartment units, estimated hard costs, soft costs, and site improvement costs total approximately $17.0 million. Impact fees total $1.1 million or $6,000 per unit. Total costs, excluding financing costs and land costs, are estimated at $18.1 million or $101 per square foot of gross building space.

Excluding land and financing costs, but including hard costs, soft costs, site preparation costs, tenant improvement and leasing commission costs, total development costs to build 5,000 square feet of single-story restaurant space are estimated at over $1.6 million or $326 per square foot. Hard costs are estimated at $140 per square foot of building space, or $700,000. Sitework costs are estimated to total $9.00 per square foot of land or $375,800. Parking costs are estimated at $1,500 per space or $158,000 for 105 spaces. Tenant improvements paid for by the landlord are estimated to cost $27 per square foot or $122,000. Leasing commission costs are estimated at $6.00 per square foot or $27,000.

FINANCIAL PARAMETERS

For simplicity, we assume the same financial parameters apply to the apartment and retail/restaurant alternatives for the 5.1 acre site with an existing parking structure as applies to the 4.4 acre site without an existing parking structure.

MARKET PARAMETERS

Table III-5 summarizes the market or revenue parameters for the postulated prototypical apartment and retail development alternative for a 5.1 acre site with an existing parking structure under existing zoning regulations.

TABLE III-5

Market or Revenue Parameters for Postulated Prototypical Apartment and Retail Development Alternative for 5.1 Acre Site Under Existing Zoning Regulations

Residential	
Annual Rent Per Square Foot of Building Space	$15.00
Operating Costs Per Square Foot of Building Space	$4.00
Average Annual Rent Increase	2%
Residential Occupancy in Years 1,2, and Thereafter	75%, 95%
Retail	
Annual Retail Space Net Rent per Square Foot of Building Space	$30.00
Fixed Operating Costs and Reserves Per Square Foot of Building Space	$1.00
Average Annual Rent Increase	2.5%
Retail Occupancy in Years 1,2 and Thereafter	75%, 95%
Source: Gruen Gruen + Associates	

For simplicity, we use the same market or revenue parameters for the 96 apartment units with an average unit size of 1,264 square feet as used for the alternative with 72 units averaging 1,076 square feet of space.[3] We also estimate annual operating expenses and reserves of $4.00 per square foot. We assume average annual rent increases of two percent. We assume that 75 percent of the space is leased following construction, and 95 percent leased in the second operating year and annually thereafter.

For the retail space we estimate the same market or revenue parameters as used for the 12,000-square-foot alternative described above with rent of $30 per square foot. This rental rate assumes a market recovery.

Table III-6 summarizes the market or revenue parameters for the postulated apartment and retail development alternative for the 5.1 acre site under PUD regulations.

[3] The rentable areas of apartment units vary considerably by the prototypical development envelopes specified by the Advance Planning and Policy Department. The rent estimates assume that a market responsive unit distribution and sizes of units are ultimately provided.

TABLE III-6 Market or Revenue Parameters for Postulated Apartment and Restaurant Development Alternative for 5.1 Acre Site Under Newly Adopted PUD Regulations	
Residential	
Annual Rent Per Square Foot of Building Space	$16.50
Operating Costs Per Square Foot of Building Space	$4.00
Average Annual Rent Increase	2%
Residential Occupancy in Years 1,2, and Thereafter	75%, 95%
Restaurant	
Annual Retail Space Net Rent per Square Foot of Building Space	$35.00
Average Annual Rent Increase	2.5%
Retail Occupancy in Years 1, 2 and Thereafter	100%
Source: Gruen Gruen + Associates	

For 185 apartment units with structure parking with an average unit size of 792 square feet, we assume annual rents of $16.50 per square foot, or monthly rents of $1.38 per square foot. We estimate annual operating expenses and reserves of $4.00 per square foot. We assume average annual rent increases of two percent. We assume that 75 percent of the space is leased following construction, and 95 percent leased in the second operating year and annually thereafter.

For the restaurant use, we assume the space is 100 percent leased following construction and estimate above current market annual net rent of $35.00 per square foot. We assume an annual rent increase of 2.5 percent.

RESULTS OF INVESTMENT ANALYSIS

Results Under Existing Zoning

Table III-7 summarizes the results of the simulation of the postulated prototypical apartment and retail development under existing zoning regulations.



TABLE III-7

Before-Tax Land Value and Return Supported by the Prototypical 96 Apartment Unit and 6,497-Square-Foot Retail Space Development Alternative Specified for 5.1 Acre Site Under Existing Zoning Regulations[1]

Residential	
Residual Land Value	$1,742,000
Residual Land Value Per Square Foot Based on 179,183 Square Feet of Land	$10.00
Total Project Value	$16,275,000
Equity	$4,883,000
Permanent Loan	$11,393,000
Annual Debt Service	$912,000
IRR in Year 10	15.0%
Retail	
Residual Land Value	$213,000
Residual Land Value Per Square Foot Based on 42,494 Square Feet of Land	$5.00
Total Project Value	$1,630,000
Equity	$489,000
Permanent Loan	$1,141,000
Annual Debt Service	$109,000
IRR in Year 10	15.0%
Total Residual Land Value	**$1,955,000**
Total Residual Land Value Per Square Foot	**$9.00**
[1] Figures are rounded.	
Source: Gruen Gruen + Associates	

The results of the investment analysis indicate that the apartment component under the existing zoning regulations would produce a residual land value of approximately $1.7 million. Based on the 179,183 square feet of land allocated to the apartment use, the estimated residual land value equates to approximately $10.00 per square foot of land. In other words, the investor-developer could pay $1.7 million or $10.00 per square foot for the 179,183 square feet of land needed to site the development and earn a 15 percent return on investment. Equity for the project would total about $4.9 million and the permanent loan would total about $11.4 million for a total project value of nearly $16.3 million. Annual debt service would approximate $912,000.

For the retail component, the results of the investment analysis produce a residual land value of approximately $213,000. Based on the 42,494 square feet of land allocated to retail uses, the estimated residual land value equates to approximately $5.00 per square foot of land. In other words, the investor-developer could pay $213,000 or $5.00 per square foot for the 42,494 square feet of land needed to site the development and earn a 15 percent return on investment. Equity for the project would total about $489,000 and the permanent loan would total about $1.1 million for a total project value of $1.6 million. Annual debt service would approximate $109,000.

The results of the investment analysis under the existing zoning indicate that the prototypical apartment and retail development alternative postulated for the 5.1 acre site supports an estimated total residual land value of nearly $2.0 million or $9.00 per square foot of land.

Results Under Newly Adopted PUD

Table III-8 summarizes the results of the simulation of the postulated prototypical apartment and retail development alternative for the 5.1 acre site under the PUD regulations.

TABLE III-8

Before-Tax Land Value and Return Supported by the Prototypical 185 Unit Apartment and 5,000-Square-Foot Restaurant Space Development Alternative Specified for the 5.1 Acre Site Under Newly Adopted PUD Regulations[1]

Residential	
Residual Land Value	$3,797,000
Residual Land Value Per Square Foot Based on 179,927 Square Feet of Land	$21.00
Total Project Value	$22,380,000
Equity	$6,714,000
Permanent Loan	$15,666,000
Annual Debt Service	$1,255,000
IRR in Year 10	15.0%
Restaurant	
Residual Land Value	$138,000
Residual Land Value Per Square Foot Based on 41,750 Square Feet of Land	$3.00
Total Project Value	$1,663,000
Equity	$499,000
Permanent Loan	$1,164,000
Annual Debt Service	$111,000
IRR in Year 10	15.0%
Total Residual Land Value	**$3,935,000**
Total Residual Land Value Per Square Foot	**$18.00**

[1] Figures are rounded.

Source: Gruen Gruen + Associates

The results of the investment analysis indicate that the apartment component under the PUD regulations would produce a residual land value of approximately $3.8 million. Based on the 179,927 square feet of land allocated to residential uses, the estimated residual land value of equates to $21 per square foot of land. Equity for the project would total about $6.7 million and the permanent loan would total about $15.7 million for a total project value of $22.4 million. Annual debt service would approximate $1.3 million.

For the restaurant component the results of the investment analysis produce a residual land value of approximately $138,000. Based on the 41,750 square feet of land allocated to restaurant uses, the estimated residual land value equates to $3.00 per square foot of land.



Equity for the project would total about $500,000 and the permanent loan would total about $1.2 million for a total project value of $1.7 million. Annual debt service would approximate $111,000.

The results of the investment analysis under the PUD indicate that the prototypical apartment and restaurant development alternative postulated for the 5.1 acre site supports an estimated total residual land value of nearly $4.0 million or nearly $18 per square foot of land.

The results of the real estate economic analysis of the prototypical development analysis illustrate the importance of parking costs to development feasibility and supportable land values. The higher density or number of apartment units permitted by the PUD results in a substantially higher residual land value compared to the lower density alternative in the case where parking costs have already been absorbed. Where structure parking would need to be provided to accommodate the greater density, revenue does not offset the added parking costs.

DESCRIPTION OF PROTOTYPICAL RETAIL AND RESTAURANT DEVELOPMENT OPTION CONFORMING TO EXISTING C-3 ZONING

Table III-9 summarizes the amount of restaurant and retail building space for the prototypical development option the City prepared for the relatively larger site consisting of approximately 5.1-acres of land conforming to the existing C-3 zoning.

TABLE III-9

Spatial Dimensions of Retail and Restaurant Development Alternative for 5.1-Acre Site Under Existing C-3 Zoning

Retail Gross Space in Square Feet	31,722
Restaurant Gross Space in Square Feet	6,257
Parking Surface (retail and restaurant)	253
Amount of Retail Land Area in Acres	3.9
Amount of Restaurant Land Area in Acres	1.2
Source: City of Scottsdale Advance Planning and Policy Department	

Approximately 32,000 square feet of retail space and 6,300 square feet of restaurant space with 253 parking spaces could be created under existing C-3 zoning.

KEY COST ELEMENTS

Table III-10 summarizes the estimated development costs for the prototypical retail and restaurant development alternative under the existing zoning regulations.

TABLE III-10

Summary of Key Cost Elements for Postulated Prototypical Retail and Restaurant Development Alternative for 5.1 Acre Site Under Existing Zoning Regulations

	Cost Per Square Foot $	Total Costs[1] $
Retail		
Hard Construction Costs per Square Foot of Building Area	109.00	3,458,000
Soft Costs as a Percentage of Total Costs, Excluding Land & Financing @20%	33.00	1,038,000
Sitework Costs, Excluding Parking Costs @ an Average Cost of $9.00 Per Square Foot of Land Area	49.00	1,542,000
Parking Costs @ an Average Cost of $1,500 Per Space for 127 Surface Spaces	6.00	191,000
Tenant Improvement Costs Per Square Foot of Net Building Space[2]	27.00	736,000
Leasing Commission Costs Per Square Foot of Net Building Space[2]	6.00	164,000
Total Costs per Square Foot of Building Area	225.00	7,129,000
Restaurant		
Hard Construction Costs per Square Foot of Building Area	140.00	876,000
Soft Costs as a Percentage of Total Costs, Excluding Land & Financing @ 20%	49.00	304,000
Sitework Costs, Excluding Parking Costs @ an Average Cost of $9.00 Per Square Foot of Land Area	72.00	453,000
Parking Costs @ an Average Cost of $1,500 Per Space for 126 Surface Spaces	30.00	189,000
Tenant Improvement Costs Per Square Foot of Net Building Space	27.00	152,000
Leasing Commission Costs Per Square Foot of Net Building Space	6.00	34,000
Total Costs per Square Foot of Building Area	321.00	2,008,000

[1] Figures are rounded.
[2] Reflects 95 percent occupancy.

Source: Gruen Gruen + Associates (from general contractor, developer, and real estate broker interviews)

Excluding land and financing costs, but including hard costs, soft costs, site preparation costs, tenant improvement and leasing commission costs, total development costs to build 31,722 square feet of single-story retail space are estimated at over $7.1 million or $225 per square foot. Hard costs are estimated at $109 per square foot of building space, or $3.5 million. Sitework costs are estimated to total $9.00 per square foot of land or $1.5 million. Parking costs are estimated at $1,500 per space or $191,000 for 127 surface spaces. Tenant improvements are estimated to cost $27 per square foot or $736,000. Leasing commission costs are estimated at $6.00 per square foot or $164,000.

Excluding land and financing costs, but including hard costs, soft costs, site preparation costs, tenant improvement and leasing commission costs, total development costs to build 6,257 square feet of single-story restaurant space are estimated at over $2.0 million or $321 per square foot. Hard costs are estimated at $140 per square foot of building space, or $876,000. Sitework costs are estimated to total $9.00 per square foot of land or $453,000. Parking costs are estimated at $1,500 per space or $189,000 for 126 surface spaces. Tenant improvements paid for by landlord are estimated to cost $27 per square foot or $152,000. Leasing commission costs are estimated at $6.00 per square foot or $34,000.

FINANCIAL PARAMETERS

For simplicity, we assume the same financial parameters apply to the retail and restaurant alternatives for the 5.1 acre site with surface parking as applies to the retail/restaurant alternative for the 5.1 acre site with an existing parking structure and retail alternative on the 4.4 acre site without an existing parking structure.

MARKET PARAMETERS

Table III-11 summarizes the market or revenue parameters for the postulated retail and restaurant development alternative for the 5.1 acre site under existing zoning regulations.

TABLE III-11

Market or Revenue Parameters for Postulated Prototypical Retail and Restaurant Development Alternative for 5.1 Acre Site Under Existing Zoning Regulations

Retail	
Annual Rent Per Square Foot of Building Space	$30.00
Operating Costs Per Square Foot of Building Space	$1.00
Average Annual Rent Increase	2.5%
Residential Occupancy in Years 1,2, and Thereafter	75%, 95%
Restaurant	
Annual Retail Space Net Rent per Square Foot of Building Space	$35.00
Average Annual Rent Increase	2.5%
Restaurant Occupancy in Years 1 and Thereafter	100%

Source: Gruen Gruen + Associates

For the retail use, we estimate above current market annual net rent of $30.00 per square foot. We assume an annual rent increase of 2.5 percent. We estimate annual operating and reserve costs of $1.00 per square foot. The occupancy rate for the retail space is assumed to be 75 percent in the first operating year and 95 percent in the second operating year and thereafter.

For the restaurant use, we estimate above current market annual net rent of $35.00 per square foot. We assume an annual rent increase of 2.5 percent. The occupancy rate for the restaurant space is assumed to be 100 percent in the first operating year and thereafter.

RESULTS OF INVESTMENT ANALYSIS

Table III-12 summarizes the results of the simulation of the postulated prototypical retail and restaurant development alternative for the 5.1 acre site under the existing zoning regulations.



TABLE III-12

Before-Tax Land Value and Return Supported by the Prototypical 31,722-Square-Foot Retail Space and 6,257-Square-Foot Restaurant Space Development Alternative Specified for the 5.1 Acre Site Under Existing Zoning Regulations[1]

Residual Land Value	$2,047,000
Residual Land Value Per Square Foot Based on 221,677 Square Feet of Land	$9.00
Total Project Value	$10,342,000
Equity	$3,102,000
Permanent Loan	$7,239,000
Annual Debt Service	$693,000
IRR in Year 10	15.0%

Source: Gruen Gruen + Associates

The results of the investment analysis indicate that the retail space and restaurant space built under the existing zoning regulations would produce a residual land value of approximately $2.0 million. Based on the 221,677 square feet of land allocated to both uses, the estimated residual land value equates to approximately $9.00 per square foot of land. Equity for the project would total about $3.1 million and the permanent loan would total about $7.2 million for a total project value of $10.3 million. Annual debt service would approximate $693,000.



CHAPTER IV

ASSESSMENT OF HOTEL USES

HOTEL PROTOTYPES AND RESIDUAL LAND VALUE ANALYSIS

For purposes of estimating the land value supported by hotel development, we use a six-story limited service prototype of 127 rooms on 2.5 acres of land and a four-story extended service prototype of 123 rooms on 2.7 acres of land.

Note: Due to the newly adopted PUD providing a lower maximum height than contemplated in the proposed PUD when the prototypical development alternative was prepared, this prototype would not be permissible without further adjustment to the PUD ordinance.

COST ELEMENTS OF LIMITED SERVICE HOTEL DEVELOPMENT OPTION

Table IV-1 summarizes the key cost elements of the prototypical limited service hotel development.

TABLE IV-1

Development Cost Assumptions for Prototypical Limited Service Hotel

	127 Rooms $
Hard Costs @ $78,740 Per Room	10,000,000
Sitework Costs (Excluding Demolition and Any Environmental-Related Costs) But Including Parking Costs ($15,000 Per Room)	1,905,000
Furniture, Fixture and Equipment (FF&E) @ $14,000 Per Room	1,778,000
Soft Costs @ Approximately 32 Percent of Hard Costs (approximately $25,000 Per Room)	3,175,000
Construction Loan Financing Costs Including Loan Points @ 9.0 Percent Interest Rate	417,000
Total Costs, Excluding Land Costs	17,275,000
Total Costs, Excluding Land Costs, Per Room	136,000

Source: Gruen Gruen + Associates (from general contractor and developer interviews)

Based on GG+A's interviews with hotel developers and general contractors, excluding land costs, the postulated limited service 127-room hotel is estimated to cost approximately $17.3 million or $136,000 per room to develop. Construction (hard) costs are estimated at approximately $79,000 per room. Site improvement costs are estimated at $1.9 million. Furniture, fixture, and equipment ("FF&E") costs are estimated at $14,000 per room or $1.8 million. "Soft" (i.e., architectural and engineering and other non "bricks and mortar") costs are estimated at approximately 32 percent of hard costs or approximately $3.2 million

($25,000 per room) for the 127 room hotel. Loan points and financing costs during the construction phrase are estimated to total approximately $417,000 or about $3,300 per room.

FINANCIAL PARAMETERS

Table IV-2 summarizes the financial terms stipulated for the investment analysis.

TABLE IV-2

Investment and Financing Assumptions

Equity As Percent of Project	30%
Net Present Value (NPV) Discount Rate and Internal Rate of Return (IRR)	18%
Sale Year for IRR Calculation	10
Mortgage Rate	8.75%
Mortgage Amortization Term in Years	25
Year Mortgage Taken Out	2
Construction Loan Financing Costs Including Loan Points – Annual Interest Rate	9.0%
Capitalization Rate at Sale Year	9.5%
Sales Expenses as Percent of Sales Price	3%

Sources: Urban Land Institute *Capital Markets Report*; Integra Realty Resources *IRR Viewpoint 2008*; Real Estate Capital Institute; George Smith Partners; Gruen Gruen + Associates.

The investment and financing estimates are drawn from our interviews with hotel developers and review of secondary data. We assume an equity requirement of 30 percent of project costs (which assumes a recovery in the capital markets). We assume a one-year construction period and a resulting construction loan period of one year. We estimate a construction loan interest rate of 9.0 percent. We assume a permanent mortgage loan is obtained in year two to take out or retire the construction loan. We estimate an annual interest rate of 8.75 percent for the permanent mortgage and a loan amortization schedule of 25 years. We estimate the capitalization rate, or buyer's required yield on the purchase of an income-producing property, of 9.5 percent for the sale year. We assume expenses associated with the sale of the property total three percent of the transaction value.

MARKET PARAMETERS OF LIMITED SERVICE HOTEL DEVELOPMENT OPTION

Table IV-3 summarizes the market or revenue parameters for the limited service hotel development option.

TABLE IV-3

Market/Revenue Assumptions of Prototypical Limited Service Hotel Development

Average Daily Rate	$150.00
Annual Occupancy Rate:	
Operating Year 1	60%
Operating Year 2	65%
Operating Year 3 and Thereafter	75%
Variable Expense[1]	29% of annual room revenue
Fixed Expenses[2]	29% of annual room revenue
Growth in Average Daily Room Rate	3%
Growth in Expenses	3%

Notes:
[1] Variable expenses include distributed and undistributed costs, including administrative, marketing, department expenses and franchise fee.
[2] Fixed expenses include management fee, property taxes, insurance and reserve for replacement.

Sources: Gruen Gruen + Associates hotel developer interviews and review of travel/hotel web sites.

Based on interviews with hotel brand representatives and hotel developers, and review of travel and hotel web sites, we assume an average daily room rate of $150 and an occupancy rate of 60 percent in the first operating year; 65 percent in the second operating year; 75 percent in the third operating year and thereafter. We estimate that variable expenses will approximate 29 percent of revenues, while fixed expenses, or those that do not vary with changes in occupancy, will approximate 29 percent of revenues.

RESULTS OF INVESTMENT ANALYSIS OF PROTOTYPICAL LIMITED SERVICE HOTEL DEVELOPMENT OPTION

Table IV-4 summarizes the results of the investment simulation of the development and operation of the limited service hotel development option.



TABLE IV-4

Investment Results of Prototypical Limited Service Hotel Development[1]

	127 Room Hotel
Land Value Residual	($2,189,000)
Residual Land Value per Room	($17,000)
Residual Land Value per Square Foot	($20.00)
Total Project Value	$15,087,000
Equity	$4,526,000
Permanent Loan	$10,561,000
Annual Debt Service	$1,053,000
IRR in Year 10	18%

[1] Figures are rounded.

Source: Gruen Gruen + Associates

The results of the investment analysis indicate that the postulated prototypical limited service 127-room hotel development program would produce a negative land value residual of -$2.2 million or negative ($20.00) per square foot of land or ($17,000) per room. Equity for the project would approximate $4.5 million and the permanent loan of about $10.6 million for a total project value of approximately $15.1 million. This equates to a value per room of $118,800.

Note, however, if the capitalization rate assumption was improved by 100 basis points or in other words, lowered by one percentage point to 8.5 percent and if average daily room rates increased by 15 percent to $173, the residual land value would turn positive at approximately $977,000 as summarized in Table IV-5.

TABLE IV-5

Investment Results of Prototypical Limited Service Hotel Development Assuming Higher Average Daily Rate and Lower Capitalization Rate[1]

	127 Room Hotel
Land Value Residual	$977,000
Residual Land Value per Room	$7,700
Residual Land Value per Square Foot	$9.00
Total Project Value	$18,252,000
Equity	$5,476,000
Permanent Loan	$12,777,000
Annual Debt Service	$1,274,000
IRR in Year 10	18%

[1] Figures are rounded. Assumes capitalization rate of 8.5 percent and average daily rate of $173.

Source: Gruen Gruen + Associates

COST ELEMENTS OF EXTENDED STAY HOTEL DEVELOPMENT OPTION

Table IV-6 summarizes the key cost elements of the prototypical extended stay hotel development.

TABLE IV-6

Development Cost Assumptions for Prototypical Extended Stay Hotel

	123 Rooms $
Hard Costs @ $94,065 Per Room	11,570,000
Sitework Costs (Excluding Demolition and Any Environmental-Related Costs) But Including Parking Costs ($15,000 Per Room)	1,845,000
Furniture, Fixture and Equipment (FF&E) @ $16,500 Per Room	2,030,000
Soft Costs @ Approximately 27 Percent of Hard Costs (approximately $25,000 Per Room)	3,075,000
Construction Loan Financing Costs Including Loan Points @ 9.0 Percent Interest Rate	458,000
Total Costs, Excluding Land Costs	18,978,000
Total Costs, Excluding Land Costs, Per Room	154,000

Source: Gruen Gruen + Associates (from general contractor and developer interviews)

Excluding land costs, the postulated limited service 123-room hotel is estimated to cost approximately $19 million or $154,000 per room to develop. Construction (hard) costs are estimated at approximately $94,000 per room. Site improvement costs are estimated at $1.8 million. Furniture, fixture, and equipment ("FF&E") costs are estimated at $16,500 per room or $2.0 million. "Soft" (i.e., architectural and engineering and other non "bricks and mortar") costs are estimated at approximately 27 percent of hard costs or approximately $3.1 million ($25,000 per room) for the 123 room hotel. Loan points and financing costs during the construction phrase are estimated to total approximately $458,000 or about $3,700 per room.

FINANCIAL PARAMETERS

We use the same financial parameters for the extended stay hotel alternative as used for the limited service hotel alternative (See Table IV-2).

MARKET PARAMETERS OF EXTENDED STAY HOTEL DEVELOPMENT OPTION

Table IV-7 summarizes the market or revenue parameters for the extended stay hotel development option.



TABLE IV-7

Market/Revenue Assumptions of Prototypical Extended Stay Hotel Development

Average Daily Rate	$140.00
Annual Occupancy Rate:	
Operating Year 1	60%
Operating Year 2	65%
Operating Year 3 and Thereafter	78%
Variable Expense[1]	27% of annual room revenue
Fixed Expenses[2]	28% of annual room revenue
Growth in Average Daily Room Rate	3%
Growth in Expenses	3%

Notes:
[1] Variable expenses include distributed and undistributed costs, including administrative, marketing, department expenses and franchise fee.
[2] Fixed expenses include management fee, property taxes, insurance and reserve for replacement.

Sources: Gruen Gruen + Associates hotel developer interviews and review of travel/hotel web sites.

Based on interviews with hotel representatives and hotel developers, and review of travel and hotel web sites, we assume an average daily room rate of $140 and an occupancy rate of 60 percent in the first operating year; 65 percent in the second operating year; 78 percent in the third operating year and thereafter. We estimate that variable expenses will approximate 27 percent of revenues, while fixed expenses will approximate 28 percent of revenues.

RESULTS OF INVESTMENT ANALYSIS OF PROTOTYPICAL EXTENDED STAY HOTEL DEVELOPMENT OPTION

Table IV-8 summarizes the results of the investment simulation of the development and operation of the extended stay hotel development option.

TABLE IV-8

Investment Results of Prototypical Extended Stay Hotel Development[1]

	123 Room Hotel
Land Value Residual	($2,574,000)
Residual Land Value per Room	($21,000)
Residual Land Value per Square Foot	($22.00)
Total Project Value	$16,404,000
Equity	$4,921,000
Permanent Loan	$11,483,000
Annual Debt Service	$1,145,000
IRR in Year 10	18%

[1] Figures are rounded.

Source: Gruen Gruen + Associates

The results of the investment analysis indicate that the postulated prototypical extended stay 123-room hotel development program would produce a negative land value residual of -$2.6 million or negative ($22.00) per square foot of land or ($21,000) per room. Equity for the project would approximate $4.9 million and the permanent loan of about $11.5 million for a total project value of approximately $16.4 million. This equates to a value per room of $133,400.



CHAPTER V

ASSESSMENT OF TOWNHOUSE DEVELOPMENT ALTERNATIVE ON SMALL LOT

DESCRIPTION OF PROTOTYPICAL SMALL LOT TOWNHOUSE DEVELOPMENT ALTERNATIVE

The prototypical development alternative on a 23,147-square-foot site under the newly adopted PUD regulation accommodates 10 residential units. The units would consist of four two-story live/work units and six three-story townhome units. The units would average 1,650 square feet in size. The units would contain two car garages on the first floor of the buildings. The density equates to 20 units per acre.

KEY REVENUE AND COST ELEMENTS FOR TOWNHOUSE DEVELOPMENT

Table V-1 shows the revenue and cost estimates for the two- and three-story, townhouse unit development option.

TABLE V-1

Estimated Revenues and Costs for Prototypical Townhome Development Alternative of 20 Units Per Acre and an Average Unit Size of 1,650 Square Feet[1]

	Per Square Foot $	Per Unit $
Estimated Obtainable Revenues	250	413,000
Estimated Obtainable Revenues for 10 Townhome Units	**$4,125,000**	
Hard Construction Costs	100	165,000
Site Engineering, Site Work and Utility Costs	21	34,000
Sales, Advertising, and Commission Costs @ 10% of Sales Price	25	41,000
Additional Soft Costs (e.g., architectural, engineering, fees) @ 22% of Sales Price	55	91,000
Developer Profit @ 20% of Sales Price	50	83,000
Total Costs	251	414,000
Estimated Total Costs for 10 Townhome Units	**$4,139,000**	

[1] Figures have been rounded.

Sources: City of Scottsdale, Modus Development; Farmer Ave. Lofts, Tempe; Artisan Village, Phoenix; Gruen Gruen + Associates.

The 1,650-square-foot townhouse units are estimated to obtain average sales prices of $250 per square foot or $413,000 per unit. Appendix B summarizes pricing and other characteristics of recent townhome developments in Scottsdale and Tempe. This results in a total revenue estimate of $4.1 million for ten units on a 23,147-square-foot land area.

Hard development costs are estimated at $100 per square foot for the townhome units or $165,000 per unit. Site engineering, site work, and utility costs are estimated at $21 per square foot or $34,000 per unit. Sales, advertising, and commission costs are estimated at 10 percent of the sales price or $25 per square foot ($41,000 per unit). Additional soft costs including architectural, engineering fees, and impact fees are estimated at 22 percent of the sales price or $55 per square foot ($91,000 per unit). We use a developer profit margin threshold of 20 percent. The cost and profit margin assumptions produce a total cost estimate of $50 per square foot or $83,000 for the townhome product. Total development costs are estimated at $4.1 million for the 10 townhome units.

ESTIMATED RESIDUAL LAND VALUE

Table V-2 shows the estimated residual land value, or the amount of dollars potentially available for the purchase of the approximately 0.53 acres of land allocated for the townhouse use, given the revenue and cost assumptions outlined above.

TABLE V-2

Estimated Residual Land Value
For Small Lot Townhouse Prototype[1]

Residual Land Value Per Unit	($1,400)
Residual Land Value for 10 Units	($14,000)
Total Land Area # Square Feet	23,147
Residual Land Value Per Square Foot of Land	($0.59)

[1] Figures have been rounded.

Source: Gruen Gruen + Associates

Assuming an average unit sales price of $250 per square foot for a 1,650-square-foot unit, the revenue and cost assumptions produce a negative residual land value per unit estimate of ($1,400) per unit. For the 10 unit prototypical small lot townhouse development alternative, this equates to a negative residual land value of approximately ($14,000). Given the land area of approximately 23,147 square feet of land (0.53 acres), the total dollars available for the purchase of the land approximates negative ($0.59) per square foot of land, before taking into account the bid discount of approximately 20 percent that can be expected.

The residual land value analysis is very sensitive to small changes in revenues and/or development costs. If sales prices were to increase by 10 percent to $275 per square foot or $453,750 per unit, the residual land value would increase significantly to $184,300 or $8.00 per square foot of land area. Conversely, if developer profit were reduced to no more than 15 percent of sales revenue than the total development costs would decline to $3.9 million. This would also result in a positive land residual value of approximately $192,600 or over $8.00 per square foot of land area.



APPENDIX A

RETAIL CENTER RENTS AND OCCUPANCY RATES

TABLE A

Anchored Neighborhood Centers and Grocery Stores Within Southern Scottsdale

ID	Name / Location	Year Built (remodeled)	Size # Sq. Ft.	Anchors	Occupancy	Asking Rents $ Per Sq. Ft.
1	Fountain Plaza McDowell & 77th St	1980	106,000	Fry's, Dollar Tree, Hollywood Video	98%	15 – 20
2	Food City Plaza Scottsdale & McKellips	1977	78,000	Food City, Big Lots	87%	12 – 18
3	Scottsdale Crossings Thomas & Scottsdale	1991	119,000	Albertson's, Ace Hardware	95%	21 – 22
4	Indian River Plaza Hayden & Thomas	1979	92,000	CVS, 99 Cent Only	77%	9 – 18
5	Walgreens-Staples Center Osborn & Scottsdale	1994	45,000	Walgreens, Staples	NA	
6	Office Max Plaza Osborn & Hayden	1981 (2004)	76,000	Office Max, Big 5 Sporting Goods	94%	15 – 22
7	Fry's Thomas & 61st Place	1977	45,000	Freestanding	NA	
8	Miller Plaza Miller & Indian School	1975	120,000	Fry's	85%	17 - 21
9	Basha's/Walgreen's Center Indian School & Hayden	1960 (2004)	64,000	Basha's, Walgreen's	100%	
TOTAL SUPPLY			**745,000**			

Sources: City of Scottsdale; BRE Phoenix; Weingarten Realty Investors; Arizona Partners; Loopnet.com; Gruen Gruen + Associates.

APPENDIX B

TOWNHOUSE DEVELOPMENTS

TABLE B

Examples of Active Residential Loft and Live/Work Projects in Scottsdale and Tempe

Name of Project Address	Number of Units / Year Built	Number of Stories	Type and Size of Units (# square feet)	Sales Price $	Sales Price $ Per Square Foot
SCOTTSDALE					
SL 12 3635 N. 68th St. (certificate of occupancy not yet obtained)	12 / 2009	2 story	1Br/1Ba – 595 2Br/1Ba – 936 2Br/2Ba – 1,401 2Br/2Ba – 1,457 3Br/2Ba – 1,958	185,000 290,000 440,000 444,500 600,000	311 310 314 305 306
Villa Contento 1550 N. 85th St.	18	2 story	3Br/2.5Ba – 1,797 3Br/2.5Ba – 1,852	N/A	N/A
TEMPE					
Merrion Square 1200 W. University	8 / 2006[1]	3 story	1Br/2Ba – 1,000 2Br/2Ba – 1,400	250,000 325,000	250 232
5th St. West 1300 W. 5th St.	13 / 2009	2-3 story	2Br/2Ba – 1,309 3Br/3Ba – 1,891	330,000 460,000	252 243
Farmer Ave. Lofts 360 S. Farmer Ave	18 / 2008[2]	3 story	3Br/3Ba – 2,440 3Br/3Ba – 2,494 3Br/3Ba – 2,534 3Br/3Ba – 2,570 3Br/3.5Ba – 2,533 3Br/3.5Ba – 2,570	499,000 529,000 – 545,000 554,900 564,900 574,900 600,000	205 212-218 219 220 227 233

[1] Project includes 2,300 square feet of ground floor commercial space. Project was foreclosed upon and none of units have been sold. Three units are currently rented out at $0.90 per square foot monthly

[2] Six units are live/work

Sources: Phoenix Urban Living; Gruen Gruen + Associates.

Gruen Gruen + Associates (GG+A) is a firm of economists, sociologists, statisticians and market, financial and fiscal analysts. Developers, public agencies, attorneys and others involved in real estate asset management utilize GG+A research and consulting to make and implement investment, marketing, product, pricing and legal support decisions. The firm's staff has extensive experience and special training in the use of demographic analysis, survey research, econometrics, psychometrics and financial analysis to describe and forecast markets for a wide variety of real estate projects and economic activities.

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