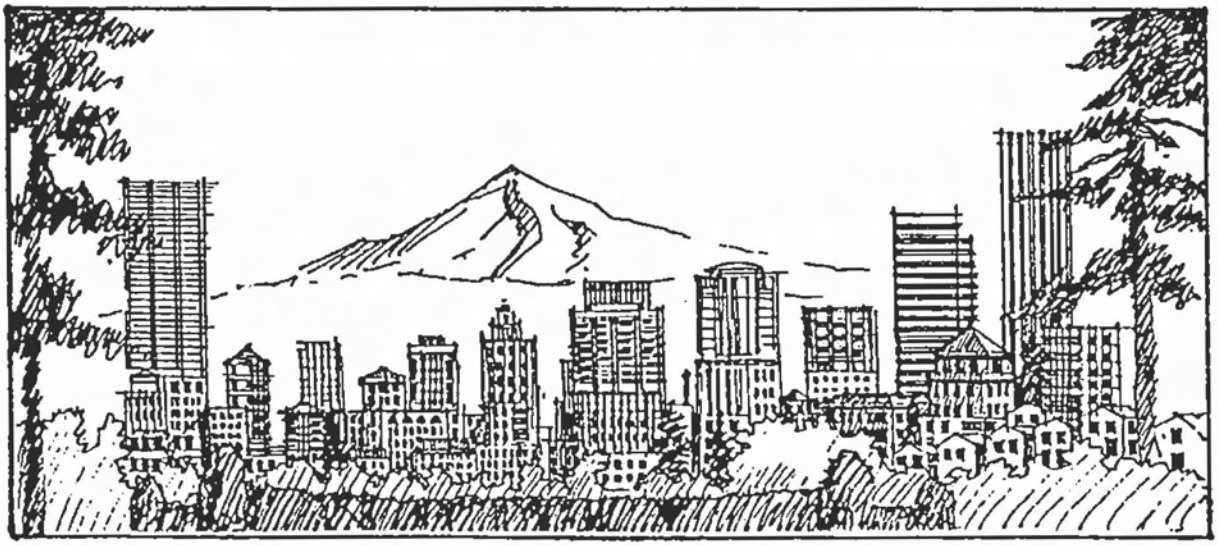
INFILL AND REDEVELOPMENT STRATEGIES



Prepared For:
City of Portland
Bureau of Planning
Portland, Oregon

Prepared By:
Tashman Associates
Planners and Policy Consultants

Leland Consulting Group
Real Estate Economists,Development Advisors
and Project Managers

November 1994

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EXECUTIVE SUMMARY

CITY OF PORTLAND INFILL AND REDEVELOPMENT STRATEGIES

The City of Portland recognizes that to achieve regional compact development objectives, a much greater proportion of future development should take the form of infill and redevelopment in existing Portland neighborhoods. The Infill and Redevelopment Strategies project was undertaken to:

- analyze the demand for those housing and mixed residential/commercial uses that are most appropriate for infill and redevelopment and identify those factors that affect demand for such development;
- assess Portland's capacity to accommodate such demand;
- identify neighborhood characteristics that influence the feasibility of infill and redevelopment; and
- develop strategies to promote infill and redevelopment.

The key findings of the study are as follows:

Demand for Infill and Redevelopment In Portland

Certain types of development are more appropriate for infill and redevelopment projects in Portland because they use a relatively small amount of land per square foot of occupied space and because they are supported by an existing urban infrastructure of transportation and amenities. These types include higher density residential (both attached and detached, and both ownership and rental) and mixed-use residential/commercial projects.

The demand for these types of development in Portland will grow because of many factors:

- Demographic changes will continue to result in greater numbers of smaller, non-traditional households that demand housing units which are lower cost, more convenient and easier to maintain than the typical detached single family house.
- High rates of in-migration will continue to create the need for transitional forms of housing, such as apartments and condominiums.
- The forecast age structure of the future population is more evenly distributed than the current population structure, which shows the effects of the "baby boom" and the "baby bust." Though there will be a large component of the population that will enter retirement age, the younger population cohorts will also increase, creating demand for multi-family housing units.

The higher rates of increase in minority populations will also favor Portland over suburban locations, if historic locational preferences hold.

Capacity for Infill and Redevelopment

The capacity analysis is built off of the quantitative analysis done for Region 2040. Alternative Growth Concept B represented a growth form that emphasizes the growth of Portland in terms of jobs and housing. Growth Concept B forecast the development and redevelopment of higher density housing and mixed use projects, in Portland's Central City and along transit corridors.

Rather than duplicate the quantitative capacity analysis conducted by Metro, the Infill and Redevelopment Strategies Study focused on the economic feasibility of the types of development projects needed to achieve the growth targets of Concept B. Five hypothetical projects in "pilot areas" of Portland—all of which are shown in Concept B as accommodating substantial higher density and mixed-use development—were examined and financial pro-formas developed to analyze their feasibility.

Four of the five projects were shown as feasible under current market rents, construction costs and land costs. The fifth project was shown as feasible if subsidized equity financing were provided, and this project is located in an area of the city where such subsidies are currently available.

Though the economic feasibility of these projects indicates that Portland can support the high growth projections of Concept B, the ability of the City to support this growth while maintaining its livability is not to be taken for granted.

Neighborhood Characteristics Leading to Infill and Redevelopment

Members of the development community were surveyed regarding their judgment of what neighborhood factors were most important in determining where infill and redevelopment would occur and what neighborhoods were most attractive to them as locations for such projects.

The developers concluded that public safety was far and away the most important factor, with good parks and good sidewalks also cited as important. In ranking the neighborhoods that they found most attractive, there was some correspondence between their attraction to these neighborhoods and low levels of crime and high quality parks, although the data used for the analysis were not specific enough to draw strong conclusions. For instance, Southwest was judged attractive, and had low crime rates, good quality parks, but poor sidewalks. East Portland was rated as not attractive for redevelopment and infill, but has a moderate crime rate. More detailed study would be beneficial.

In comparing actual development to developers' perceptions, Southwest and Downtown had high levels of development during the 1980's and early 1990's, which corresponded to their high attractiveness to developers. On the other hand, Northwest had relatively low levels of development during this period, even though it was judged attractive. East

Portland had relatively high levels of development, even though it was judged less attractive to developers. Again, more analysis would be helpful.

Recommended Infill and Redevelopment Strategies

The study concludes that a range of strategies will be necessary to achieve Portland's infill and redevelopment goals. What is of paramount importance is that the City must continue to maintain its basic quality of life. It must provide safe streets and high quality community facilities. The challenge to the viability of Portland's public school system must be met if the City intends to attract families with school age children.

Beyond these basic objectives, the City should adopt a developer's attitude toward infill and redevelopment. Its public strategies should address the different stages of the development process. Portland can take actions to increase the knowledge of development opportunities, reduce pre-development costs, reduce development costs and increase the quality and acceptance of infill and redevelopment projects.

INTRODUCTION

Though the Portland Metropolitan Area has experienced substantial growth since 1970, the majority of this growth has occurred in suburban areas outside of the City of Portland. Metro's 1989 projections of population growth for the Metropolitan Area through the year 2010 foresaw continuation of this trend, with the City of Portland attracting (or/ "capturing") only three percent of the total regional growth.

In 1991, the City of Portland undertook a long range strategic planning process, called "Portland Future Focus." One of the major goals developed during this process was for the City of Portland to regain its status as a major attractor of both residential development and employment. The strategies identified in Portland Future Focus call for Portland to offer opportunities for infill development and redevelopment in a manner that maintains the livability of existing neighborhoods. The strategic plan set as a target, Portland's share of the future regional growth allocation at 20 percent.

Metro is currently developing a long range regional plan entitled Region 2040. The plan will ultimately guide decisions on land use, transportation, other infrastructure and environmental protection. It will form the base for a pattern of growth. Metropolitan Area concepts which illustrate different possible growth patterns. The concepts include expansion of the urban growth boundary (growing out), retaining the existing urban growth boundary and using higher densities and mixed-uses to accommodate future population (growing up). A third alternative retains the existing urban growth boundaries while planning for new or greatly expanded communities outside the urban growth boundary to accommodate residents and economic activity in satellites. The final growth pattern desired by metropolitan Area citizens will likely be a hybrid concept that incorporates features of these three alternative concepts.

The City of Portland is committed to helping achieve a compact growth form in the Metropolitan area that emphasizes the City's role as the region's central city, as a major employment center, transportation hub, cultural center and place of residence for a substantial portion of the region's population. The Portland Bureau of Planning and the Office of Transportation are undertaking programs to further this goal. The Planning Bureau's Livable Cities program seeks to provide Portland citizens with a realistic understanding of the benefits of vital urban neighborhoods — a mix of housing, retail goods, services and employment opportunities. The Office of Transportation Regional Rail program is promoting the development of a predominantly radial light rail system that emphasizes Portland's position as a hub. A major element in achieving such a transportation system is development of transit-oriented land uses which result in safe and convenient access to transit.

As a participant in Region 2040, the City of Portland seeks to demonstrate that an urban

growth form that emphasizes higher-density and mixed-use development that is focused on transit is an economically realistic objective. The City has prepared studies of market trends for infill and mixed-use development, engaged in "specific plan" processes in three Portland neighborhoods to involve citizens in planning for infill and redevelopment and conducted a Visual Preference survey that showed residents of the region preferring traditional types of development that are street-oriented and diverse.

As a part of this continuing effort, the City has undertaken the "Infill and Redevelopment strategies" project. This project builds upon previous work to focus on the economic context for substantial new development within the City of Portland and to analyze and recommend strategies that will facilitate such development[1].

The Infill and Redevelopment Strategies project consists of:

- Analyzing the demand for housing and mixed residential/commercial uses and identifying those factors that may be expected to affect demand for such development within the City of Portland;

- Analyzing the capacity of the City of Portland to accommodate such demand;

- Identifying neighborhood characteristics that affect the feasibility of infill and redevelopment; and

- Developing a program of strategies that can be undertaken by citizens, the City, other public agencies and the private sector to promote infill and redevelopment.

[1] Infill Development: Market Trends and Prototypes, January 1993, Tashman Associates and Leland Consulting Group.

CHAPTER I:

Demand Analysis

Introduction

This section of the report addresses the demand for housing and mixed-use development. The analysis includes a discussion of demographic forces and such factors as land cost, housing cost and income that affect a household's preference for, and ability to obtain, different types of housing. The study also looks at the impacts of different growth patterns as they are portrayed in Region 2040 on development demand.

Current Demographics of the Portland Market

Using data from the U.S. Census, a correlation of housing types, household size, race, age and income were examined to look at future projections of growth and market demand in Portland as opposed to the Metropolitan Area as a whole. Portland differs from the Metropolitan Area in some significant ways. Its population is more diverse than that of the region (see Tables 1 and 2).[2] In addition, Portland has a higher proportion of single households, single parent families and nonfamily households than both the region and national averages. The higher proportion of singles, single parent and nonfamily household numbers are understandably reflected in a higher proportion of multifamily and rental units than is the case in the rest of the Metropolitan Area.

Table 1
Population by Race for the Portland Metropolitan Area

Universe: Persons	Portland Number	Portland Percent	Metro Number	Metro Percent
White	370,135	84.64%	1,062,828	90.51%
Black	33,530	7.67%	38,325	3.26%
American Indian, Eskimo or Aleut	5,399	1.23%	10,484	0.89%
Asian or Pacific Islander	23,185	5.30%	45,577	3.88%
Other Race	5,070	1.16%	17,077	1.45%
Total	437,319	100.00%	1,174,291	100.00%

Source: U.S. Census and Leland Consulting Group

[2] Census data were derived from the U.S. Census Public Use Microdata Series and from CENDATE, the on-line service of the U.S. Census.

Table 2
Comparison of Portland Households to National Averages

Households	Portland Households	Portland Percent	National Percent
Family Households:			
Married-couple family with child	33,448	17.9%	33.0%
Married-couple family no child	43,328	23.1%	23.1%
Other Family:			
Male householder, no wife present	6,569	3.5%	1.2%
Female householder, no husband present	20,622	11.0%	7.1%
Nonfamily Households:			
Male householder	37,464	20.0%	9.7%
Female householder	44,767	23.9%	14.9%
Other nonfamily	1,070	0.6%	4.6%

Source: U.S. Census, American Demographics Magazine and Leland Consulting Group

Current Housing Occupancy Types

Portland, with slightly more than 187,000 dwelling units, has a higher proportion of multifamily housing than the Metro region as a whole. This is as expected, given the demographics shown above. The proportion of owned single family detached units in Portland is currently around 50 percent of all dwelling units, and the proportion of all owned units to rented units is around 53 to 47 percent (Appendix Figure 1 and Appendix Table 1 illustrate the proportion of owned to rental units in Portland in 1990). This pattern in the City differs from the Metropolitan Area as a whole, where owned single family detached units are approximately 60 percent of all units and multifamily rentals are approximately 22 percent[3].

Who occupies different kinds of housing units is determined largely by age and income (see the series of graphs relating to units by income in the Appendix). Examination of data from the U.S. Census Public Use Microdata show that as the age of household rises, single family occupancy rises, and as incomes rise, single family occupancy rises. Households from age 15 to 30 have a high proportion of multifamily tenancy and a low frequency of single family occupancy, a relationship which is reversed in the 30 to 45 age range. Single family occupancy peaks in the age range from 45 to 60 and then, as incomes drop in the 60 to 75 year age range, multifamily tenancy again rises slightly.

Single family detached housing has been the historical preference in Portland due to historical low house pricing relative to rental rates and income. In 1990, for a median income of $30,964, Portland's median house value was $59,200, with a likely mortgage cost of around $600 compared to median rent of $340. In the same time period, according to the 1990 Census, the median house value in San Francisco, an area with a much bigger percentage of apartments, was $298,900 with a likely mortgage cost of $2,900 versus a

[3] Report on Aggregate Housing Demand (Draft), Mr. Sonny Conder, Metro, October 20, 1993

median rent of $613. For this reason unit occupancy may be viewed as a preference based on the ability to pay (rental rate versus mortgage payment and equity requirement) and not necessarily a bias against other housing products.

The Base Case Unit Demand and Variations Based on Changes in Growth

The base projection for housing units is represented in Figure 1. This base projection uses household growth from Metro's Base Case II. The capture for Portland's share of the 2015 forecast is around nineteen percent and for 2040, only about three and a half percent, well below the twenty percent target. The base case shows no adjustment in the relationship of income to housing cost and thus the housing preferences demonstrate a continuation of the current pattern. This does not take into account the likely shift to what are becoming more popular (and affordable) housing types—single family attached, rowhousing and condominiums (stacked housing). Metro's base case projection indicates demand in 2015 (units over those existing in 1990) for 52 percent single family detached units (21,756 units), 2.5 percent single family attached (1,088 units) and 46 percent multifamily (19,249 units). The base case projection for 2040 using current occupancy and income patterns indicates that 2040 demand for units over those existing in 1990 will be 57 percent for single family detached units (31,943 units), 2.3 percent for single family attached (1,318 units) and 41 percent for multifamily (23,199 units).

Target Capture Projections of Housing Type Demand

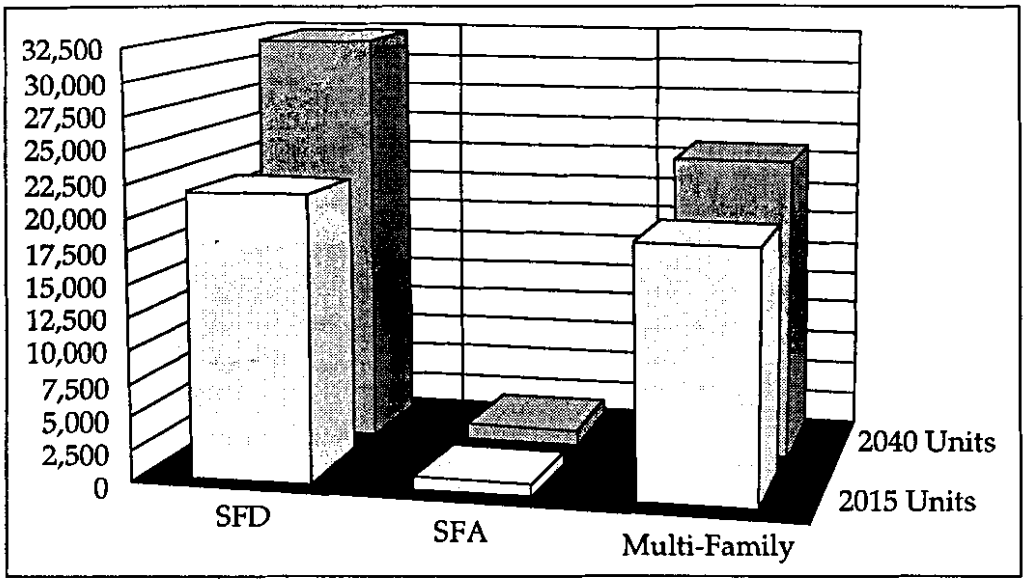
To understand what factors might lead to Portland achieving a capture rate nearer the target 20 percent, the following factors have been taken into account and a model has been formulated to illustrate the possible unit breakdown by age and income should Portland achieve that higher ratio. Table 4 shows the base case estimates and a calculation of the 20 percent goal for 2015 and 2040. Note that for 2015 the base case is close enough to this goal given the time period that differences are not significant.

Future Demographic Trends Leading to Higher Capture in Portland

The U.S. demographics for 2015 and 2040 show minorities as a rising percentage of the population while the percentage of whites in the total population goes down. The U.S. Census has issued new projections to 2050 with new assumptions about immigration and family size convergence by minorities[4]. The new assumption is that convergence of minority birth trends is not occurring, and thus minority populations are expected to make up a larger part of the population as a whole. In addition, the west coast is considered more likely to attract immigrants, and Oregon is more likely to attract in-country migration than in the past. Thus we can expect to see to future trends in Oregon differ from the past. Over time, with growth, Oregon can be expected to converge toward national averages on race and age, and Portland as the urban center could be expected to reflect this shift more than outlying rural areas.

[4]Day, Jennifer, "Population Projections of the United States, by Age, Sex, Race, and Hispanic Origion: 1992 to 2050," U.S. Publication P25-1092, 1993

Figure 1
Additional Units Needed for 2015 and 2040 Under Adjusted Metro Base Case Estimate



Source: Metro and Leland Consulting Group

Table 3
Metro Base Case 2 Estimate of Units Growth Over 1990
Units Not Adjusted for Shift from Single Family Detached to Single Family Attached

	Single Family Detached	Single Family Attached	Multi-Family	Totals
2015 Units	21,756	1,088	19,249	42,094
2040 Units	31,943	1,318	23,199	56,460
DU/Acre	8	12	30	
2040 Acres	3,993	110	773	4,876

Source: Metro, U.S. Census PUMS 1990 and Leland Consulting Group

Table 4
Metro Base Case 2 Households (without Clark County)

	1990	2015	2040
Aggregate Units	464,643	688,300	878,400
Change from 1990		223,700	413,800
Portland Goal - 20 Percent of Change		44,700	82,800

Source: Metro and Leland Consulting Group

Re-evaluation of Structural Change in the California Economy

The structural changes in the California and Oregon economies will also play a part in future immigration projections. Because of these new trends, it is difficult to project in any other than a qualitative way what the future migration to Oregon and the Portland Metropolitan Area will be. Currently, Metro is projecting a continuing downturn in the percentage of in-migration and growth in the Metropolitan Area. Based on previous estimates of growth on the west coast and the capture of major cities, this seemed reasonable. California is now expected to continue growing at a rapid rate (an additional six million between 1990 and 2000) and estimators at the U.S. Census expect Oregon to start picking up in-migration as California becomes more congested. Should this occur, there will be a steady stream of newcomers needing transitional housing (typically multifamily rentals), and a greater minority in-migration (who typically have clustered in urban areas) leading to a higher capture by Portland of new in-migration.

Age Distribution

From 1990, the mix of age has changed to even out the bulge caused by the post-World War II baby boom. This flattening of the age curve means that more units will be occupied by people between 16 and 30, an age group with higher proportions of singles and higher use of multifamily units. The percentage of households able to afford a traditional single family home will go down, resulting in a higher demand for multifamily units, small lot housing, and other alternatives which make more efficient use of land. The consultant team projection for Portland is therefore for an increasing demand for multifamily units and strengthening demand for products which allow the expression of preference for single family detached units at a lower cost. The expected number of total units needed in a higher capture scenario is presented in Table 5.

Sources of Growth and Their Effect on Portland's Capture Ratio

Growth in a region can result when demand from outside the region for goods and services produced in the region is higher than the current production of the goods and services. This type of growth is demand-induced. Skilled people who can add to production are at a premium so wages rise, while the fact that more money is flowing into the region than out of the region produces wealth. Thus wages rise in relation to housing pricing.

In contrast, a labor-supply driven growth produces lower wages and higher housing costs relative to income (not, it should be noted, higher quality housing). In labor supply growth, people come to the area searching for jobs drawn by the quality of life, environment and other factors than an existing under-supply of jobs. The oversupply of labor allows wages to fall due to competition for employment. At the same time, desirable housing is competed for, resulting in rising rent; and prices without a change in the quality of product.

If the Metropolitan Area grows as a result of demand for goods and services output, people will be able to afford more housing services, resulting in less construction of lower cost, smaller size, multifamily units. The demand for move up homes would escalate. While renovations of architecturally attractive older units would increase, older units without distinction would be more likely to be replaced by greater quality units, possibly at the

same density as the demolition. The demand for retail will be greater per household as disposable income rises supporting more shops and mixed-use development of high quality.

On the other hand, if growth is driven by oversupply of labor, then people will be able to afford less housing services, resulting in construction of more lower cost or smaller sized multifamily units. Costly renovations of single family units would not be as attractive as a change in density which captures a higher cash flow stream and compensates for construction costs. Thus older units in need of extensive repairs would be more likely to be demolished and replaced with smaller and denser units. Portland has the largest supply of older housing units in the Metropolitan Area. Therefore one would expect to see Portland have the largest ratio of unit conversions. The possibility of maintaining a low housing market entry cost through such conversions will offer Portland a competitive advantage compared to newer lower-density suburban tracts where land is used less intensely.

Portland can be expected to have some high demand sectors of employment and other sectors where wages are driven by labor supply. On the west coast, however, all major metropolitan areas which have experienced growth in the post-war era have experienced rising housing costs in relation to wages. Since the U.S. Census is expecting Oregon to feel more impact from California and foreign in-migration, the Portland Metropolitan Area is likely to experience more labor supply driven change than demand side driven change. The net result should be an ability for the City of Portland to compete regionally because of its existing base for redevelopment as discussed above.

Congestion and Land Pricing

In a standard simplified economic model of land pricing in urban areas, land pricing (not housing unit pricing) is a function of proximity to the employment center and the distance to the edge of the urban area. Those who work at the employment center trade the advantage of land price for commuting. Land pricing per square foot at the center is high and at the edge, the square foot price sinks to rural use value. In practical terms, a square foot of land in downtown Portland costs more than a square foot in Hillsboro. As congestion rises, the time of commuting increases. This does not affect the price of land at the edge (which remains at the rural value), but the price at the center increases. If it is assumed that all development must occur within the given range from center to edge, then land prices in the center will force more intense utilization. For living units, this means that housing, to stay within a salary workers price range, must take up less land (i.e., occupy the land at higher densities).

If development spreads beyond the original range, the pricing at the center increases, again because of the lengthening of commute time. Thus, any growth that depends on the employment center for income will cause rising land pricing at the center and the need for developers to build at higher-density to gain a profit.

In terms of the future of Portland, there are practical considerations to this theoretical view. If Portland retains importance as a center of employment, wages would need to rise to compensate for higher housing costs. In other cities this has not happened. As the San Francisco Bay Area grew, real wages grew to allow median incomes access to housing in

the region as a whole, but not in San Francisco. In the center, land prices rose well beyond the ability to produce units at low density for median incomes, such that by 1990, the San Francisco Planning Department reported that only about seven percent of residents could afford to buy the unit in which they lived.

Rising land pricing in Portland combined with a labor supply driven growth, would produce the need for more attached and multifamily units than shown in the neutral base estimate. The base estimate itself must assume higher incomes to maintain the current relationship between housing affordability and housing occupancy and density. If it is assumed that congestion becomes a factor in land pricing for the Portland Metropolitan Area such that land pricing (and thus housing costs) rises at a greater rate than income, then the entry cost to participate in the owned housing market will rise. As the entry cost rises, it will take longer to accumulate the required equity, thus raising the age and income at which the shift to single family detached owner units would take place.

Projection for 2040 Under a Modified Growth Scenario

The changes noted above result in a somewhat different scenario for Portland than that represented by the base case. If the sort of growth and congestion factors previously discussed are assumed, then development patterns are likely to favor higher-density in Portland and a higher capture for Portland due to these factors. In addition, as the relative cost of housing rises, fewer households will be able to acquire the necessary entry price to the single family detached housing market. This should result in more demand for multifamily and single family attached housing as illustrated in Table 5 following. The graph below (Figure 2) also represents redevelopment of single family detached rental units to single family attached units (through both conversion-and demolition and new construction). The demand for attached units in Portland is relatively new, however, gaining momentum. The strength of attached housing sales indicate a willingness on the part of buyers to have an alternative single family product.

The modified projection indicates that, of housing demand in 2015 (units over those existing in 1990), 44.5 percent will be for single family detached units (18,800 units),

Figure 2
Additional Units Needed for 2015 and 2040 Under Modified Growth/Income Estimates

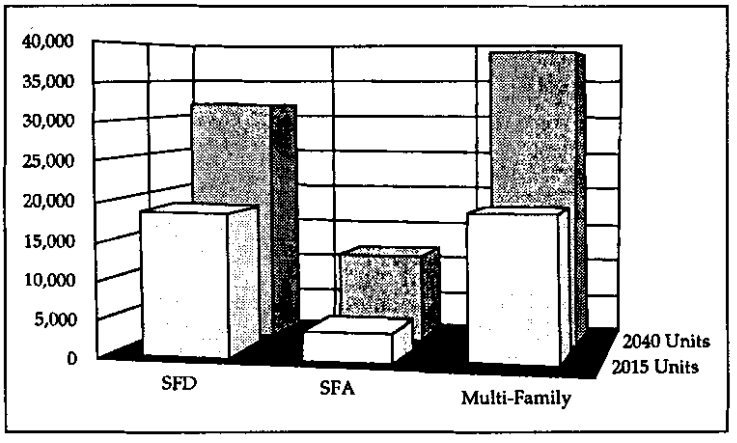


Table 5
Modified Growth Estimate of Additional Units Over 1990
Conversion from Single Family Detached to Single Family Attached from Redevelopment of Single Family Detached Rental Stock

	Conversion Units	Single Family Detached	Single Family Attached	Multi-Family	Totals
2015 Units	3,000	18,756	4,088	19,249	42,094
2040 Units	10,000	31,846	11,778	38,807	82,432
DU/Acre		7.5	12	24	
2040 Acres		4,246	982	1,617	6,845

Source: Leland Consulting Group

approximately 9.7 percent for single family attached (4,100 units) and 45.7 percent for multifamily (19,000 units). The modified projection for 2040 using current-occupancy and income patterns indicates that 2040 demand for units over those existing in 1990 will be 38.6 percent for single family detached units (31,800 units), 14.3 percent for single family attached (11,800 units) and 47 percent for multifamily (38,400 units). The conversion of units from single family detached is based on the attrition and redevelopment of single family detached rental units to the next higher-density category. As land pricing rises, redevelopment will occur and this table projects that 50 percent of current single family rental stock (or about 6.5 percent of all 2040 single family detached) will undergo conversion within 50 years.

Mixed-Use Projections

Local mixed-use development encompasses a large variety of projects, from a room over a shop to RiverPlace in Portland, a multi-million dollar hotel/office/condominium project. For the purposes of this discussion, short-term mixed-use in Portland will consist primarily of developments of apartments or condominiums over retail or service/office space. The three factors determining mixed-use demand in Portland (other than financing constraints and developer acceptance of the product) are demand for multifamily units, levels of consumer spending and employment. Mixed-use is limited by the demand for multifamily unit; the total acreage of multifamily development provides the base into which the retail element of mixed-use must be inserted. The estimates for multifamily acreage for 2040 range from 773 acres at 30 units per acre in the base case estimate to 1,617 in the modified 2040 estimate.

With the assumption of current income and spending patterns, consumer spending in Portland for 2015 can be expected to rise above 1990 spending by $1.134 billion (for a complete breakdown by spending category with square feet of demand see Appendix Table 2). The rise in expected square feet of space needed for 2015 is around 3,041,000 square feet. For the 2040 base case spending will top 1990 by around $1.521 billion with space required of approximately 4,079,000 square feet. Using the modified 2040 projection, spending would rise by around $2.221 billion requiring approximately 5,955,000 square fleet of space.

There is little likelihood that all new multifamily units will be in mixed-use projects, as it is clear that the demand for multifamily space outstrips the demand for new retail space. The acreage available under the projections of multifamily units is around 642 acres for 2015 or around 28,000,000 square feet, while commercial demand is about 3,041,000 square feet or slightly more than 10.8 percent. Multifamily acreage for the 2040 base case is around 773 acres or 33,672,000 square feet with retail at about 4,079,000 or 12 percent. The modified 2040 projection yields multifamily acreage of 1,617 acres or 70,436,520 square feet while spending indicates new commercial space of around 5,955,000 square feet or about 8.5 percent.

Mixed-use (multifamily housing over service/office) requires a different analysis. According to the Metro Base Case for 2015, there will be an additional 70,645 employees in Portland. The Base Case for 2040 projects an additional 123,181 employees over 1990 in Portland. Currently service and office comprise approximately 43 percent of total employment in Multnomah County, while retail comprises around 18 percent. At current ratios, expected service employees would be around 23,000 for 2015 and around 41,000 for 2040. These estimates are likely to be conservative, given the past upward trend in the expansion of services.

The space needs for service and office employees can be estimated conservatively at around 500 square feet per service employee (the ratio used by Metro for its area calculations) and around 350 square feet per office employee. For 2015 the expected space needed for both uses would be around fourteen million square feet. For 2040 the space need for both would be around 25 million square feet. Base case multifamily for 2015 requires 28 million square feet, thus fifty percent of the required square feet of multifamily acreage coverage would satisfy the space need for 2015 service office. Since a proportion of this service use (such as hospitals) will not be suitable for multifamily, the actual space requirement would probably be less, but it is clear that the space needs for all mixed-use commercial can be met within the expected multifamily housing stock projections.

Projection of Demand and the Region 2040 Concepts

Metro has created a series of design concepts or scenarios for the Portland Metropolitan Area to assess public opinion and assist in setting policies for future growth. The object of the Metro concepts was not to reflect the base case or to try to project actual development, but rather to estimate the potential for development in the Metropolitan Area and the development patterns which might result under certain growth assumptions. Thus they are not a predictor of growth, but rather a demonstration of possible allocations of growth based on transportation, redevelopment and growth boundary issues. The Metro concepts are outlined in the Tables 6, 7 and 8. Concepts A and C allocate less growth to Portland by absolute numbers of households than the base case, but only Concept B allocates a higher growth percentage than the 20 percent target chosen for this study. The growth in all concepts is allocated among: residential transit centers (which are likely to be mixed-use with office and services); Mixed-Use Centers at low, medium and high (the CBD Category) density; Main Streets; 10 Minute Service Transit Corridors; Other Land in UGB; and several other categories which do not apply to Portland.

Concept A

Concept A proposes the expansion of the urban growth boundary, resulting in less restricted growth. This produces an allocation of 54,777 household's to Portland for 14.1 percent of total growth on the Oregon side of the Metropolitan Area under the concept. While the percentage growth allocation is higher, the absolute growth numbers are lower by 1,683 households.

In an unrestrained market, as previously, the spread over which development took place would lengthen commutes such that if there were alternatives within Portland offering more amenities without the commute, one would expect higher-density at the center and greater redevelopment of obsolete properties. The assessment of redevelopment capacity used by Metro does not take into account economic and functional obsolescence and physical deterioration of housing over the time from 1990 to 2040. This is critical for Portland because Portland's stock of housing is being compared directly to recently built subdivisions.

Metro determined redevelopment acres by taking a minimum land size and minimum improvement value as indicators of redevelopment potential. The difficulty with this approach is that properties above the minimum value which are in Portland may be 60 to 100 years older than the properties above the minimum value elsewhere.

By 2040 these same Portland properties would be from 110 to 150 years old, but are being compared to subdivisions-which by 2040 would be 60 years old. If obsolescence and deterioration were taken into account, by 2040, due to attrition of old and obsolete units, Portland would have a stock of available redevelopment properties that is larger than what has been allocated as redevelopment land by Metro's Estimating method. For this reason, the allocation of units to Portland in Concepts A and C will underestimate significantly the potential market capture of Portland in the Metropolitan Area.

Concept B

Concept B fulfills expectations of the results of constraint on growth, with central location of housing becoming desirable due to congestion, and density rising as a function in the rise of land values as discussed previously in the section on Congestion and Growth above.

Concept C

Concept C retains the Urban Growth Boundary but adds satellite development in cities outside of the growth boundary. While the satellite development would siphon off growth, the same discussion on redevelopment applies to this concept as to Concept A.

Table 6
Concept A: Unretained Urban Growth Boundary

	Household Growth			Employee Growth			Land Use Volumes		
	Metro	Portland	Portland % of Metro	Metro	Portland	Portland % of Metro	Metro Redev/ Vacant	Portland Redev/ Vacant	Portland % of Metro
Design Overlay Areas									
Residential Transit Centers	43,995	9,850	22.4%	109,083	24,104	22.1%	4,229	1,041	24.6%
Mixed-Use Centers									
Portland CBD	4,477	4,477	100.0%	10,998	10,998	100.0%	67	67	100.0%
Moderate-Density	5,657	0	0.0%	14,145	0	0.0%	369	0	0.0%
Lower-Density	2,196	859	39.1%	5,283	1,996	37.8%	218	102	46.8%
Main Streets	656	118	18.0%	1,679	302	18.0%	127	22	17.3%
10 Minute Corridor	48,082	6,546	13.6%	42,126	9,049	21.5%	7,462	1,155	15.5%
Other Land in UGB	180,700	32,927	18.2%	250,113	79,298	31.7%	49,353	11,400	23.1%
New Land Brought into UGB	204,659	0	0.0%	3,982			42,500	0	0.0%
Optional New Land to Add to UGB		0					NA		
Satellites**							NA		
Age and Forest Lands							NA		
Exception Lands							NA		
Clark County							NA		
Total by Design Overlay	490,422	54,777	11.2%	437,409	125,747	28.7%	104,325	13,787	13.2%
Targets (OR Side)*	389,563	54,777	14.1%	388,072		32.4%			
Greenspaces Reduction (4%)	13,936			6,403			4,500		
+/-	86,923			42,934					

* Targets are the expected net additional pop/employ to be accommodated by 2040, as defined by the Base Case UGB and Ex-UGB areas.
** Satellites being: Sandy, Estacada, Canby, Newberg, North Plains, Scappoose; represented by acres and pop/employ totals only.

Source: Metro and Leland Consulting Group

Table 7
Concept B: Retained Urban Growth Boundary

	Household Growth			Employee Growth			Land Use Volumes		
	Metro	Portland	Portland % of Metro	Metro	Portland	Portland % of Metro	Metro Redev/ Vacant	Portland Redev/ Vacant	Portland % of Metro
Design Overlay Areas									
Residential Transit Centers	59,382	20,900	35.2%	112,121	49,202	43.9%	5,322	2,002	37.6%
Mixed-Use Centers									
Portland CBD	6,942	6,942	100.0%	17,052	17,052	100.0%	100	100	100.0%
Moderate-Density	10,782	1,877	17.4%	26,554	4,614	17.4%	507	85	16.8%
Lower-Density	4,167	3,638	87.3%	7,982	6,721	84.2%	323	278	86.1%
Main Streets	11,622	5,048	43.4%	12,924	6,067	46.9%	791	314	39.7%
10 Minute Corridor	106,315	28,551	26.9%	99,441	23,705	23.8%	9,370	2,730	29.1%
Other Land in UGB	199,736	39,441	19.7%	232,448	72,171	31.0%	48,635	11,787	24.2%
New Land Brought into UGB									0.0%
Optional New Land to Add to UGB									
Satellites**							NA		
Age and Forest Lands							NA		
Exception Lands							NA		
Clark County							267,633		
Total by Design Overlay	398,946	106,397	26.7%	508,552	179,532	35.3%	332,681		
Targets (OR Side)*	389,563	106,397	27.3%	388,072	179,532	46.3%	65,048	17,296	26.6%
Greenspaces Reduction (4%)	28,146			18,482			7,000		
+/-	(18,763)			101,968					

* Targets are the expected net additional pop/employ to be accommodated by 2040, as defined by the Base Case UGB and Ex-UGB areas.
** Satellites being: Sandy, Estacada, Canby, Newberg, North Plains, Scappoose; represented by acres and pop/employ totals only.

Source: Metro and Leland Consulting Group

Table 8
Concept C: Satellite Growth

	Household Growth			Employee Growth			Land Use Volumes		
	Metro	Portland	Portland % of Metro	Metro	Portland	Portland % of Metro	Metro Redev/ Vacant	Portland Redev/ Vacant	Portland % of Metro
Design Overlay Areas									
Residential Transit Centers	45,226	7,440	16.5%	111,767	18,193	16.3%	4,338	760	17.5%
Mixed-Use Centers									
Portland CBD	4,477	4,477	100.0%	10,998	10,998	100.0%	67	67	100.0%
Moderate-Density	6,230	0	0.0%	15,573		0.0%	403	0	0.0%
Lower-Density	1,417	876	61.8%	3,370	2,038	60.5%	151	104	68.9%
Main Streets	1,745	491	28.1%	4,475	1,246	27.8%	342	92	26.9%
10 Minute Corridor	36,476	7,076	19.4%	37,559	9,005	24.0%	5,955	1,191	20.0%
Other Land in UGB	181,529	33,195	18.3%	250,657	79,244	31.6%	49,580	11,575	23.3%
New Land Brought into UGB	88,119			824			17,738	0	0.0%
Optional New Land to Add to UGB									
Satellites**	128,556			128,064			25,264		0.0%
Age and Forest Lands							NA		
Exception Lands							NA		
Clark County							267,633		
Total by Design Overlay	493,775	53,555	10.8%	563,287	120,724	21.4%	371,471	13,789	3.7%
Targets (OR Side)*	389,563	53,555	13.7%	388,072	120,724	31.1%	103,838		13.3%
Greenspaces Reduction (4%)	13,773			8,455			4,500		
+/-	90,439			166,760			99,338		

* Targets are the expected net additional pop/employ to be accommodated by 2040, as defined by the Base Case UGB and Ex-UGB areas.
** Satellites being: Sandy, Estacada, Canby, Newberg, North Plains, Scappoose; represented by acres and pop/employ totals only.

Source: Metro and Leland Consulting Group

Projected Growth and Redevelopment

The growth projection for 2015 postulates a need for approximately 42,094 housing units in the City of Portland. For 2040 the modified growth scenario proposes approximately 82,000 units over 1990.

Table 9
Portland Permits Since 1989*

	1989	1990	1991	1992	**1993	Totals
Single Family	683	729	673	820	775	3,680
Multi-Family	461	594	299	333	327	2,014
Totals	1,144	1,323	972	1,153	1,102	5,694

* 1989 permits are included because they will be finished additions to housing by 1990.
** Represents permits through November, 1993 only.

Source: Metropolitan Real Estate Report, Vol. 77, and Leland Consulting Group.

Units permitted since 1989 are 5,694 leaving 36,400 to be supplied by 2015 over a 21-year period. The City of Portland Housing and community Development Department has planned approximately 9,000 units of subsidized and elderly housing for the ten year period from 1994 to 2004 of which possibly half will be new construction. This leaves a supply to be provided for 2015 by the market of 31,900 units or around 1,520 units per year from the end of 1993 forward. Looking at historical figures for Portland, this is not an unreasonable target if policy supports it. In considering where housing can be built or redeveloped, there are several categories. The supply of vacant land will allow some development of new housing. Redevelopment will occur under several scenarios. There will be a market for mixed-use development. There will be transit-oriented development occurring at locations such as the development being planned at the Hollywood MAX Station, Murray Woods (Beaverton), and the Winmar property (Gresham).

Redevelopment

Redevelopment can be broken down into several categories: amenity driven, land price driven, and attrition caused redevelopment.

Amenity Driven/Transit Driven

Amenity driven redevelopment can be seen in areas such as the housing areas adjacent to the Lloyd Center district, where the existence of amenities has caused a revival in nearby housing. In the Hawthorne district the same phenomenon has sparked rowhousing construction and house and apartment renovations. Amenity driven sites may be good locations for multi-unit complexes which cater to a market which desires more urban amenities and has higher service needs, such as the singles market and elderly residents who want convenience.

Land Price Driven Redevelopment

Redevelopment is sometimes feasible due to differentials in land pricing. As congestion in a regional area increases, or as demand in a regional area increases, land pricing increases at the center and subcenters and it may be feasible to demolish existing units to replace them with units of higher-density or quality. In suburban or semi-urban locations elsewhere, this type of redevelopment has resulted in high cost, high quality single family detached units replacing former less expensive suburban developments. In urban areas this type of economic pressure has resulted in higher development densities to offset land cost. In land price driven development, functionally or economically obsolete units in neighborhoods which are not obsolete are replaced.

Attrition Sites for Redevelopment

There are sites where the physical deterioration of the unit is so pronounced that with or without a change in land price it is worthwhile to demolish the unit and build new. Sites where the housing disappears through attrition are much the same as vacant land except that they may have a lower cost to develop because of existing infrastructure and utility connections.

Implications of 2040 Growth Concepts for Portland

Region 2040 has been a process oriented to the exploration of design alternatives for the future using transportation modeling and the RLIS geographic information system to map the alternatives. To date, it has been emphasized that the alternatives presented are designs, not projections of future real estate markets or in-migration preferences regarding residential location. Only now are population numbers being developed that are projections based upon econometric models.

Concepts A and C (Tables 6 and 8) show more households that the population projections proposed for 2040. In these projections, the aim has been to look at styles of development and place them on the landscape and then count up the capacity produced. For Portland this has several implications. First, it assumes that relatively low-density environments like Beaverton will be as attractive for mixed-use centers as Portland. It is unlikely, however that a retail development can survive only from the development proposed above it. For this reason Portland has a distinct advantage in the marketplace for this style of development. Portland is also the likeliest place for transit facilities to be densely enough placed to successfully support the kinds of development envisioned in the 2040 Transit Development.

Second, the redevelopment assumptions undertaken to produce the mapping of available acreage in Portland do not take into account the various types of redevelopment discussed above, but only look at a fixed 1990 unit value ($20,000 and under) on a fixed land parcel (10,000 square feet and greater). If changes in the economic and functional obsolescence, physical deterioration of units, land pricing and amenities are not taken into account, Portland's available redevelopment capacity will be undervalued in relation to suburban locations. Portland has much older housing stock than the suburbs and it is more likely to

experience rising land pricing which can spur higher-density development. Portland has more amenities per unit area than the suburbs due to its finer urban grain and for all of these reasons is likely to have a higher amount of redevelopment area and vacant land (through housing demolitions and deterioration) than predicted in the Metro projections.

Portland remains the major employment center in all three concepts, retaining between 31 and 46 percent of Portland Metro area employment. Inasmuch as these concepts are designs, it seems reasonable to suggest that the housing units be apportioned more in accord with the redevelopment factors listed above. Such a scenario would plan for lower vehicle miles traveled by more evenly matching employment growth and housing and services availability. When this is done, Portland will pick up a larger percentage of redevelopment acreage. This will result in a different mapping of site uses, with conversions to higher-density products on infill sites raising Portland's percentage of regional growth.

CHAPTER II:

Capacity Analysis

Introduction

Chapter I identified the demographic trends and other development factors, such as land cost, housing cost and income, that affects the demand for different types of development that are essentially suited for infill and redevelopment sites. These types include higher-density residential and mixed commercial/residential projects. The analysts concluded that it is reasonable to project increases in demand for such development within Portland in support of the city's objective to increase its share of regional population and employment growth.

Chapter II analyzes the capacity of the City to accommodate this projected demand for new development. The capacity analysis relies on the calculations of vacant and redevelopable land that were made by Metro for Region 2040. No independent analysis of such data was undertaken. Nor does this analysis assess the infrastructure capacities necessary to support the development or attempt to measure its environmental impacts.

Rather, the analysis focuses on the economic capacity of the development community to produce the types of projects that are projected by Metro to accommodate future residents and workers. The underlying assumption is that the most significant constraint to development of multi-family residential, small-lot and attached single family residential and mixed residential/commercial projects will be their economic feasibility. The demand side of the equation is supported by a high confidence in future growth and a large number of one- and two-person households needing urban housing.

To examine this feasibility, the consultants selected "pilot areas" within the City that have been projected by Region 2040, and especially in Growth Concept B, as described below, to accommodate a substantial amount of population and employment growth. For each of the pilot areas, the consultants defined development programs for prototypical projects corresponding to the population and employment densities given in Concept B. The costs and revenues attributable to those projects were then analyzed using current dollar values.

The analysis thereby shows that given the demand assumptions discussed in Chapter I and the land supply calculations prepared by Metro, economically feasible projects can be developed that would house people and provide commercial services and employment to the extent envisioned by Portland policymakers.

Region 2040 Assumptions and Implications of Growth Concepts

Region 2040 is a long-term regional planning effort that is being undertaken by Metro. To date, the process has generated a "base case" projection and three land use alternatives for the region, that are being presented for public comment and review:

Concept A was designed to show how the region could develop if current development methods continued (although it does not assume as much "sprawl" as the base case). It expands the Urban Growth Boundary to areas that are easiest to serve, but avoids farm lands. Concept A reflects the notion of "growing out."

Concept B would keep the current Urban Growth Boundary (UGB) while providing the most intensive transit system and requiring a more compact development pattern and more efficient land use. Concept B reflects the idea of "growing up."

Concept C shows the development of satellite communities in three parts of the region, while holding the current Urban Growth Boundary in place for the contiguous part of the region.

Though evaluation of these concepts is still on-going, Metro staff believe that the feedback they have received to date strongly supports efforts to accommodate increased densities and mixed-use development along light rail corridors in general, and in the central city, in particular.

Base Case and Concept Methodologies

Metro began the process with a forecast of population and employment growth in the region through 2040. Though many alternatives were examined, ranging between adding 615,000 - 1,400,000 to the 1990 regional population of 1,412,344, a mid-range growth projection of 1,100,000 people was selected. The Base Case and the three alternative Growth Concepts all shared this same regional growth projection.

The Base Case was developed using a "spatial allocation model" (SAM) to approximate the development resulting from continuation of lower-density dispersed development patterns. It assumes that the UGB will expand every five years to provide a 20 year supply of buildable land. Development would proceed according to existing planning and zoning regulations, and it assumes that no major policy changes (or even existing policies such as the Transportation Planning Rule) are implemented. Transportation investments continue to favor the automobile.

The Base Case allocation was accomplished by quantifying locational factors such as accessibility and neighborhood quality (measured by household income) and correlating the locational decisions (housing and commercial development) of the last ten years to these factors. Based on the continuation of such preferences, population and employment was spread throughout the region.

In contrast to the Base Case, three alternative Growth Concepts were developed that were

based on deliberate urban design choices. Development was purposely allocated to neighborhoods, corridors and currently undeveloped areas based on achieving a specific urban design pattern. Changes in zoning and transportation modes were assumed to support the three growth concepts.

The resulting patterns were then modeled on a one-quarter acre grid, using Metro's Regional Land Use Information System (RLIS). The analysis quantified vacant land and redevelopable acreages, and allocated development types and zones to this land. The "design types" classified new development by location, density and mix of uses:

- The region's central city - the Portland CBD has the greatest transit service in the hub of the projected light rail system, and was allocated the densest development, with a Floor Area Ratio of 6.0:1. The mixed-use zoning for the central city allows densities of up to 420 persons (residents and employees) per acre.

- Regional centers - high concentrations of commercial development such as areas of Gresham, Beaverton and the Clackamas Town Center area are also located on light rail and were assigned FARs of 1.5-2.0:1. Mixed-use zoning designations allowed densities of 100 to 150 persons per acre.

- Sub-regional centers (e.g., downtown Oregon City and Forest Grove) are smaller concentrations of commercial and residential development, and were assigned FARs of 0.5-1.0:1. Mixed-use zoning would permit densities of up to 70 persons per acre.

- Commercial nodes are fairly small commercial centers located on transit corridors, having less intensive development with FARs of 0.5:1. The zoning designations applied to this design type allowed 40 to 70 persons per acre.

- Main Streets are streets that are the historic or traditional retail commercial streets serving residential neighborhoods. FARs for this design type were 0.75:1, with zoning that would permit densities of 20 to 70 people per acre.

- Ten Minute Corridors are areas within three and one-half blocks of a high frequency service bus line (10 minute headways during peak hours). Zoning allows a mix of moderate to low-density residential types and a mix of commercial and light industrial. Zoning densities range from 15 to 70 people per acre.

- Other areas are less accessible to transit and were allocated lower densities and less mixed-use zoning.

Design types that were not applied within the City of Portland included new UGB areas added to the UGB in Concept A and satellite cities, communities outside the UGB that are designated for substantial growth in Concept C.

While vacant land is constant across the three growth concepts, the assumptions on the amount of redevelopable land were more conservative in Concepts A and C. In Concept B, more land is considered redevelopable, given the desire to achieve a more compact development form.

Concept A

As mentioned above, Concept A would expand the current UGB, but the Concept does take into account the recently adopted Transportation Planning Rule and federal air quality mandates. This expansion of approximately 25 percent provides sufficient land to allow continued lower-density residential development, characterized by single family homes on lots of 8,000 to 10,000 square feet.

Concept A also assumes the construction of three major freeway systems that increase auto access to areas at the fringe of or currently outside the UGB. These include:

- The Sunrise Corridor serving the Clackamas Industrial Area and increasing access to Damascus and Boring further east;
- The Westside Bypass, connecting the I-5 and Sunset Corridors; and
- The Mt. Hood Parkway, connecting I-84 with State Highway 26 servingeastern Multnomah and Clackamas Counties.

Table 10 shows the allocation of households and employees to Portland in the Base Case and the three growth concepts. Of the three growth concepts, Concept A shows the lowest allocation of growth in both households (10 percent) and next lowest allocation of growth in employees (27 percent) to Portland. This reflects Concept A's projection of growth outward into suburban areas and areas newly added to the UGB, at the expense of growth in population and jobs in Portland. The implicit assumption is that housing preferences remain relatively unaffected by demographic changes, i.e., that single family homes remain the dominant type of housing (70 percent of all housing units). This type of housing choice logically results in suburban development over central city infill or redevelopment, as its economic feasibility depends on a supply of relatively large parcels of relatively inexpensive land.

Concept B

Concept B calls for retaining the UGB in its current location and accommodating future growth through 2040 within this area. To achieve this objective, the housing supply shifts toward higher-density product types, both attached (rowhouses, apartments, condominiums) and detached (small lot single family houses). Single family houses are projected to account for 55 percent of total units, compared to 70 percent in Concept A.

Employment in Concept B is projected to be concentrated in centers, as opposed to the more dispersed commercial and industrial development pattern reflected in Concept A.

Transportation investments under Concept B favor transit over highways. None of the three freeway systems assumed for Concept A are constructed in Concept B. The improvements to the transit system support population and employment growth in the Portland central business district, in other regional and subregional centers served by transit and in main street and 10 minute corridors. Growth is achieved through mixed-use projects as opposed to single use patterns.

Table 10
Allocations of Growth in Household and Employment to Portland
1990 to 2040

	1990	Base Case	Concept A	Concept B	Concept C
Portland:					
Households	200,128	55,165	52,924	112,007	57,772
Employment	414,047	194,820	226,185	279,823	163,434
Region:					
Households	548,771	551,449	551,449	551,449	511,847
Employment	831,458	718,340	718,340	718,340	669,165
Portland % Growth:					
Households		10%	10%	20%	11%
Employment		27%	31%	39%	24%

Source: Metro and Tashman Associates.

As would be expected, Portland's growth allocations under Concept B are considerably higher than in Concept A (See Table 10). Portland is shown as accommodating 20 percent of the growth in households and 39 percent of the growth in jobs. These projections reflect the judgment that because of the geographic restrictions inherent in Concept B, development—both residential and commercial/industrial—does not continue the trend of dispersal to the suburbs but rather concentrates in Portland and other centers within the UGB.

Concept C

Concept C calls for a combination of growth management strategies. The metro UGB is held constant, as in Concept B, but additional growth is projected to occur in six satellite cities well outside the current UGB. These communities are located in Canby, Estacada, Newberg, North Plains, Sandy and Scappoose. Approximately one-third of the total regional growth would be projected to occur in these communities. The satellites would differ from traditional "bedroom communities" in that they would have a balance of jobs and housing.

Housing choices would be similar to Concept A, in that 70 percent of total units would be single family. However, densities would be higher, especially in regional centers such as Gresham and Beaverton.

Table 10 shows that under Concept C, Portland attracts more growth in households (11 percent) than in either the Base Case or Concept A, but less than in Concept B. Portland's share of growth in jobs (24 percent) is lower than the Base Case or Concepts A and B, reflecting the allocation of a substantial amount of employment to the satellite communities. This achieves a greater balance of jobs and housing in Portland's CBD.

Pilot Area/Prototype Project Analysis

As described above, the capacity analysis focuses on the analysis of prototype projects that achieve the mix of uses and densities necessary to accommodate 20 percent of the region's projected growth within Portland. Because Concept B provides the desired level of growth, the analysis centered on the development types that Concept B primarily uses to accommodate the development projected to occur within Portland. The development types differed slightly from the design types described above, which have been revised for use in defining the "preferred" concept or alternative.

Table 11 below describes the development types and pilot areas chosen. The pilot area selection process involved both the consultants and City staff.

Table 11
Region 2040 Development Types

Design Type	Zoning	Dwelling Units (dus)/ Employees (emp) Per Acre	Floor Area Ratio (FAR)	Pilot Project Site
Residential Transit Center	Mixed-Use Center (MUC) 1	15.0 dus/35 emp	1.0	SE 122nd Avenue and Burnside
Other UGB	Single Family Residential/ Multi-Family Residential	SFR: 8.7 dus MFR: 20 dus		SE 115th/Division Site 2
Main Streets	PUD/Neighborhood Commercial	PUD: 12 dus/3 emp NC: 17 dus/30 emp	NC: 1.0:1	SE 39th and Division
Low-Density/ Mixed-Use	Mixed-Use Center (MUC) 1	15.0 dus/35 emp	1.0	NE MLK, Jr. Blvd. at Portland Blvd. and SE 115th/Division, Site 1

Source: Metro and Tashman Associates.

Pilot Project 1: SE 122nd and Burnside

Project Description

The SE 122nd and Burnside site contains 1.5 acres of land currently occupied by a MAX light-rail park-and-ride lot. There is commercial development to the south and residential to the west. The 122nd and Burnside MAX Station sits at the northern site frontage and 122nd Street on the west is an arterial leading north to I-84. The site is zoned CG (General Commercial), is served by sewer, and slopes gently up toward the southeast.

Proposed development for this site is mixed-use commercial/residential which can be enhanced by the presence of the light rail system. The concept includes 48 apartments and 15,000 square feet of office/commercial space. The two uses have a site footprint of 29,975 square feet, with 59,950 total square feet of building. The project has an FAR of approximately 0.48:1. Residential density on the site is approximately 17 du's (dwelling units) per acre and employment density is 37 employees per acre. Both densities slightly exceed the Mixed-Use Center zoning densities of 15 du's and 35 employees per acre.

Residential units proposed for this site are low-rise two story apartments in clusters. The office concept is for a two story building which faces the intersection of 122nd and Burnside and the MAX station. The residential units are studios, one- and two-bedroom apartments. Parking is 182 spaces for all uses. Total site coverage is approximately 95,639 square feet.

Financial Feasibility

Appendix Table 3 shows the pro forma analysis of the project. Assuming market rate rents for the residential rental units ranging from $450 for a 400 sf (square foot) studio to $750 for a 750 sf two-bedroom and commercial market rents of $15.50/sf, and market rate financing, the project returns 8.95 percent on equity in the first stabilized year of occupancy. This rate of return is considered low for a for-profit developer. By year 10, however, return on equity would rise to around 18 to 20 percent given moderate rent escalations. Thus, for long-term investors, this would be a reasonable investment.

Pilot Project 2: SE 115th Avenue and Division, Site 1 (West of 115th)

Project Description

The site at Southeast 115th and Division is divided by SE 115th Avenue. Because of this configuration and the opportunity to illustrate two different project types, this pilot project site was divided into two separate sites.

The site at Southeast 115th south of Division is 1.5 acres of vacant land. It is adjacent to two apartment complexes to the south and west, has frontage on Division to the north and on 115th Street to the east. It is zoned CN2 and R1. The site is served by sewer and is flat, allowing for easy development of site improvements.

Proposed development is a mixed-use commercial/residential project. The concept proposes that Sites 1 and 2 together form a single project with a variety of units for differing incomes. The Site 1 concept includes 25 rental apartments and 18,000 square feet of commercial space. The project has a site footprint of 24,100 square feet, with 33, 750 total square feet of building. Project FAR is approximately 0.5:1. Residential density is approximately 17 units per acre and employment density is 37 employees per acre. These densities are those of the Mixed-Use Center 1 zoning, similar to Pilot Project 1.

Units proposed for this site are low-rise rental apartments set behind a single story commercial retail/office building which fronts on Division Street. The units are one- and two-bedroom.

Financial Feasibility

The pro forma shown in Appendix Table 4 shows a return on equity of 10.5 percent in the first stabilized year of occupancy. By year 5, the return would rise to almost 15 percent given a modest increase in rents of three percent per year at lease/turnover. The market residential rental rates range from $500 for a 550 sf one-bedroom unit to $700 for a 750 sf two-bedroom unit. Commercial rents are $14.00/sf.

Pilot Project 3: SE 115th and Division, Site 2 (East of 115th)

Project Description

The site at the east side of SE 115th and Division contains 2.5 acres of vacant land. It is adjacent to single family detached housing to the south, apartments to the east and has frontage on Division to the north and 115th Street to the west. It is zoned CN2 and R1. The site is served by sewer, and, like the other SE 115th/Division site, is flat.

The proposed development concept is a small lot residential development. The Site 2 concept includes 30 two-story single family detached for-sale units. The average unit size is 1,350 square feet. All 30 units together fill a site footprint of 21,750 square feet, with 43,500 total square feet of building. The project has an FAR of 0.39:1. Residential density on the site is approximately 12 du's per gross acre, which exceeds the SFR 3 zoning density of 8.7 du's per gross acre. Lot size is approximately 3,000 square feet. No employment is proposed in this concept.

Vehicle circulation on site other than parking will require 12,000 square feet, including parking at two spaces per unit, site coverage is approximately 55,000 square feet.

Financial Feasibility

Assuming sales prices of $135, 000 for a 1,350 sf single family home and lot, the project returns 29.2 percent of cost as net revenue (see Appendix Table 5). This is considered a reasonable return for this form of development. The size of the housing units was determined by current market preference, while the price was constrained by the cost of existing housing in the area.

Pilot Project 4: SE 39th and Division

Project Description

The site at SE 39th and Division contains 0.46 acres of vacant land. It is the southeast corner of a highly traveled intersection used by both north-south and east-west commuters. It is zoned CS (Storefront Commercial). The site is served by sewer. It is flat, with fencing which separates it from the neighborhood behind and ensures that site access will be from Division.

The proposed development is mixed-use retail/residential. The concept includes eight apartments and 7,000 square feet of commercial space. The project has a site footprint of 7,000 square feet, and 11,500 square feet of building. The FAR is around 0.6:1. Residential site density is approximately 17 du's per acre. Employment density is 30 employees per acre. These densities substantially meet the density requirements of Neighborhood Commercial zoning.

Housing units proposed for this site are single story apartments above a single story commercial building which fronts on Division Street and 39th. The units are mostly one-bedroom in accordance with the findings in the "Main Street" study of this area conducted

as part of the Planning Bureau's Livable Cities Program. The 30 parking spaces provided are shared between uses. Total site coverage is approximately 19,420 square feet, making this one of the more urban projects proposed.

Financial Feasibility

Appendix Table 6 shows the pro forma cost and revenue analysis for this project. Assuming residential market rents of $450 for a 400 sf studio unit to $750 for a two-bedroom unit, and commercial rents of $14.00/sf, the project returns 9.72 percent on equity in the first stabilized year of occupancy. While this is low initially, by year five returns would increase to around 12.0 percent and by year 10, to around 19 percent. Thus, over time, this is an attractive project for private investment.

Pilot Project 5: NE Martin Luther King, Jr. Blvd. and Portland Blvd.

Project Description

The site at Portland Boulevard and NE Martin Luther King, Jr. Blvd. contains 1.5 acres of land in multiple ownership. It is adjacent to a technical industrial business. It is designated for "urban commercial" on the Portland Comprehensive Plan. The site is served by sewer, and is flat, allowing for easy development after demolition. The site is on a major arterial, Martin Luther King, Jr. Blvd., at its intersection with a major collector, Portland Boulevard.

The proposed development for this site is mixed-use commercial/residential. The concept includes 24 apartments and 12,000 square feet of commercial space. The project has a site footprint of 19,800 square feet, with 27,600 total built square feet for an FAR of around 0.4:1. Density on the site for residential is approximately 17 units per acre with employment density at 34 employees per acre. This substantially achieves the zoning densities called for the Mixed-Use Center 1 zoning applied to Low-Density/Mixed-Use design types.

Units proposed for this site are low-rise two-story apartments set on the site behind a single story commercial building which fronts on Martin Luther King, Jr. Blvd. The units are one- and two-bedroom. There are 79 parking spaces on site, and total site coverage is approximately 48,312 square feet.

Financial Feasibility

Appendix Table 7 shows the pro forma cost and revenue analysis for this project. Market rents achievable at this site are less than those for the other projects. Residential market rents range from $425 for a 550 sf studio unit to $550 for a 750 sf two-bedroom unit. Commercial rents are $11.50/sf. The resulting revenue yields only 4.71 percent return on equity, and does not support a project financed at market rates (9.0 percent). To achieve the return on equity of 11.53 percent for this project, revenue bond financing was assumed at a rate of 5.5 percent.

Conclusions

Region 2040's Growth Concept B demonstrates that there is land area capacity for accommodating 20 percent of the region's projected growth in households through 2040 in Portland. Questions remain about the capacity of Portland's transportation and utility systems to handle this growth. This analysis, however, focused on the economic feasibility, under current market conditions, of developing "pilot projects" that correspond to the land use mix and densities which Metro has found would accommodate the Concept B projected growth within Portland. With the exception of Project 5 (NE Martin Luther King, Jr. Blvd. and Portland Blvd.) the projects are supportable under market rents. Project 5 requires subsidies in the form of reduced financing costs, to provide an adequate return on equity.

CHAPTER III:

Neighborhood Assessment/Development Community Survey

Introduction

The first chapter of this report discussed how changes in demographics and household income will increase the demand for housing and commercial space within Portland relative to the remainder of the Metropolitan Area. The second chapter discussed how the Region 2040 analysis demonstrated sufficient land supply capacity to accommodate the growth projected in Growth Concept B (in which Portland captures 20 percent of the projected household growth through 2040). It further demonstrated the economic feasibility of the types of real estate projects that were shown by Metro to correspond to the Concept B growth pattern. These included detached small lot single family homes, and various mixes of attached rental housing and commercial space.

This chapter of the report presents some of the factors that will promote or hinder the infill and redevelopment process in Portland. The first section discusses the general locational factors that tend to attract redevelopment and infill. These include proximity to downtown, proximity to transit, neighborhood quality and other sorts of factors. The second section discusses the neighborhoods or areas of Portland that appear to be attractive to developers, and how the developers' perceptions of these areas correspond to more objective measures of quality of life.

Both sections are based in part on information obtained from a survey of developers. The survey consisted of a written questionnaire that was sent to 18 developers of housing and/or residential/commercial mixed-use projects. A copy of the survey is included in the Appendix.

All the recipients of the survey have developed projects in Portland. They included developers of apartments, rowhouses, mixed residential/retail/office projects and small lot single family homes. For the most part, the firms are small and local. Almost all had developed projects in both urban and suburban locations within the Metropolitan area.

The list of recipients was developed using a combination of sources: mailing lists for the Livable Cities program; lists of City of Portland building permits for multi-family projects; and suggestions from individual developers and builders. Of the 18 surveys distributed, 10 responses were received.

The survey addressed the following issues:

- What is the relative importance of various factors in determining where there are redevelopment or infill development opportunities?

- What is the relative attractiveness of various neighborhood areas for redevelopment and/or infill?

- What types of development opportunities exist in different parts of Portland and why?

The survey's questions and responses are discussed in more detail in the following sections.

Redevelopment and Infill Factors

This section describes the general and regional factors that affect the feasibility of infill and redevelopment, and then discusses the responses of the developers surveyed regarding the factors that make a particular area attractive for infill and redevelopment.

General Factors

All real estate development can be seen as a response by a developer to a perceived economic opportunity, i.e., that the overall revenues that may be derived from a particular project will exceed the overall costs. The factors that distinguish redevelopment and infill from new development in newly developing areas relate to the perception and reality of differences in revenues and costs.

On the revenue side, infill and redevelopment projects are perceived as having more of a "niche market" than conventional suburban projects. (More accurately, these projects are perceived as having a *smaller* niche than the suburban projects.) Based on the reality of development patterns in the last twenty to thirty years, the "mainstream" development pattern has had the following characteristics:

- Single family homes have been the dominant housing choice. Single family development has been dominated by moderate size (7,000 - 10,000 sf) single family detached homes, built in newly subdivided lots in suburban locations.

- Suburban locations have been favored in part because they are perceived as providing a more economically and ethnically homogenous, safe, and nuclear family-oriented environment.

- Alternatives to the detached single family home have been predominately apartments, again primarily developed in suburban locations.

- Commercial and industrial development has been single-use, with some exceptions, and again in predominately suburban locations.

- Retail development has "evolved" from an early focus on enclosed regional malls to a more recent emphasis on free-standing large national chain stores—the so-called "big box" stores such as Costco/Price Club, Cub Foods, Home Depot, Home Base, Circuit City, and others. Other retail development has moved in the direction of "Power Centers" which are extremely large strip centers consisting of mostly large anchor

tenants. Good examples are Clackamas Promenade and Gresham Town Faire. Typical tenants are junior department stores (e.g. Mervyns), discount stores (e.g. Target) and larger specialty stores (e.g. Magnolia Hi Fi). A third new direction in retail is the off-price mall, which is typically a large strip mall with outlet stores operated by manufacturers. In the Portland Metropolitan Area, off-price malls are currently located at Troutdale and McMinnville.

- Class A Office development has continued in downtown, but downtown's share of new Class A development is declining in response to the success of new office corridors such as Kruse Way and the Sunset Corridor. Class B development has been sporadic.

- Industrial development has been dominated by suburban industrial and flex space parks.

Urban infill and redevelopment projects are commonly positioned outside these "mainstream" markets.

For single residential uses, urban infill/redevelopment locations generally:

- Lack large vacant parcels for economic subdividing into moderate/large lots

- Command higher land costs

- Are perceived to be less safe

- Are perceived to more ethnically and economically diverse

Urban residential locations can appeal to younger families, families with few or no children, low income families wishing to rent older single family homes and other segments of the market.

For retail uses, urban infill/redevelopment locations generally lack large sites with good freeway access. In some cases, zoning restricts development of "big box" stores; in other case, neighborhood resistance can result in much longer development time lines. Urban retail development has been substantial in the CBD and the Lloyd District, and specialty retailing has succeeded in Northwest. Big box retaining and power centers have been attracted to less urban Portland locations such as Gateway. Neighborhood retail, as it traditionally existed, seems to capture a smaller and smaller share of total retail expenditures, and must be developed with a close and accurate assessment of the adjacent neighborhood.

For industrial uses, urban infill/redevelopment sites do not generally afford the inexpensive land with good freeway access that is found in some suburban locales.

For the above reasons, urban infill and redevelopment projects are perceived as having smaller segments of the overall market for residential, commercial and industrial development. The smaller market segment does not mean that projects will not be

economically successful; it does mean that the projects must be even more carefully planned, located and executed for them to succeed. The developer must have a fine-tuned sense of the size of the targeted market segment and a strong sense of locational preferences. Timing is critical, if a developer is to be able to option a property in a "hot" neighborhood before land prices increase beyond the point that is supportable in the current marketplace.

In this context what are the general factors that are normally considered in the infill or redevelopment project? The following updated from an earlier report (by Tashman and Leland) for the City of Portland, Infill Development, Market Trends and Prototypes. In particular, the "trends" have been updated to reflect the changes in the 18 months since the report was published.

Population Growth and Household Formation

High rates of population growth and household formation create demand for new housing and increase interest in all residential development. Low rates of population growth and household formation reduce overall interest.

TREND: High population growth is forecast. The Region 2040 process forecasts 1.1 million new residents in the region by 2040. This forecast was a "mid-range" forecast, and growth may indeed be higher. Household formation rates are likely to decline due to aging of population, but this will be offset by in-migration, as in-migrants are generally younger and higher rates of household formation.

Employment Centers

A strong concentration of jobs in the central city and in Portland neighborhood centers will stimulate development of close-in housing units. A pattern of large suburban centers reduces the likelihood of development in Portland.

TREND: Employment centers are dispersed and will likely become more so. Though efforts to develop new employment centers (e.g., Airport Way) have been slowed by the loss of tax increment financing, such development is still proceeding. The Port of Portland has been successful in attracting new employers and Portland's Enterprise Zone has been used to retain existing industrial facilities. With continued efforts, Portland can capture and retain job generating businesses. New patterns in office development (such as small job team centers linked via computer) will allow Portland neighborhoods to hold a higher proportion of jobs while lowering vehicle miles traveled thus capturing more of the local housing market.

Commuting Costs

In general, high commuting costs (time and money) encourage urban infill and redevelopment near employment centers. Low commuting costs encourage or allow more dispersed development patterns.

TREND: Commuting costs are relatively low at present. As congestion worsens and gas tax

increases phase in, one would expect cost increases to be offset by a trend toward reduced commuting distances. The failure of the 1993 Legislature to pass the Oregon Transportation Plan funding package has delayed substantially the development of highway improvements. The Westside Bypass project is stalled. Highway improvements are not keeping pace with traffic growth.

However, as suburban communities attract more employment, the opportunity to live near work is less confined to the central city. Despite dispersal of residential development, most region residents work and live in the same county. Portland will have to increase its efforts to attract employment to maintain a comparative advantage regarding home to work commuting.

Neighborhood Preservation

High investment in neighborhood preservation is one of the most critical factors to developers for additional infill and redevelopment. Low investment in neighborhood preservation, presence of unmaintained building stock will discourage reinvestment.

TREND: Many Portland neighborhoods are attracting substantial private re-investment; southeast neighborhoods along Hawthorne and Division have continued to attract new residents who have invested heavily in upgrading the existing housing stock. The MLK corridor shows signs of revitalizing, and the extensive neighborhood-oriented rehabilitation programs in North/Northeast and Outer Southeast have been yielding results.

Infill Parcel Location

A supply of infill of redevelopable parcels in a variety of neighborhoods, including moderate and middle income neighborhoods, will promote interest in urban infill. Supply of infill and redevelopment parcels in only low income neighborhoods will reduce interest in urban infill.

TREND: As discussed above, Region 2040 has shown that there is an ample supply of vacant and redevelopable parcels throughout Portland. The definition of "redevelopable" parcels depends on market forces; as demand for development in Portland grows, more parcels will be redevelopable. The availability, configuration and appropriate zoning for vacant parcels has not been studied in Region 2040, and it is safe to assume that infill parcels have more than their share of development constraints.

Growth Management Regulation

Strict control over expansion of suburban communities will promote urban infill and redevelopment. Permissive growth management regulations will inhibit such development.

TREND: As discussed above, Region 2040 has shown that there is substantial support for growth management policies that maintain the existing UGB and direct future growth to locations including Portland. No decisions have yet been made by the Metro Council, and

the public involvement process is continuing. But initial responses by the member jurisdictions of Metro and the public indicate a concern about control of urban sprawl. The increased connections between land use and transportation policy and planning will also exert pressure for a compact growth form.

Developers' Opinions

The developers' survey asked the respondents to rate the relative importance of 28 different neighborhood factors as a determinant of whether they would decide to undertake an infill or redevelopment project. Respondents rated the importance of each factor on a one to five scale, with five indicating "very important" and one indicating "not important."

Table 12 below shows the ranking of the factors.

Table 12
Infill and Redevelopment Factors

Factor		Rating
1	Low crime rate	5.0
2	Good parks	4.4
3	Good sidewalks	4.3
4	Good schools	4.2
5	Existing housing: good value and price	4.1
6	Close to downtown	4.0
7	Frequent bus service	4.0
8	Good arterial access	3.7
9	Existing housing: high level of maintenance	3.7
10	Existing population: mixed income	3.7
11	Light rail	3.6
12	Good community services	3.6
13	Population diversity	3.6
14	Close to active retail street	3.5
15	Household type: married couples w/children	3.5
16	Household type: singles, childless couples	3.5
17	Good freeway access	3.3
18	Close to employment centers	3.2
19	Existing population: high income	3.2
20	Existing population: high education	3.1
21	Grid street pattern	3.1
22	Existing housing: high value and price	3.1
23	Existing population: young	3.1
24	Existing population: old	3.1
25	Existing population: high disposable income	2.8
26	Existing housing: low value and price	2.7
27	Existing housing: vintage architecture	2.6
28	Close to mall or shopping center	2.2

Source: Tashman Associates.

"Low crime rate" was cited as having the highest importance (marked a "5") by every respondent. It was the only factor that was rated this high. It would be reasonable to assume that developers believe Portlanders place a very high value on personal safety, and choose residential locations where they perceive that they will be relatively safe.

The next three most important factors related to neighborhood amenities and facilities: good parks, good sidewalks and good schools. The presence of good value and price for existing housing stock was cited as relatively important.

The next group refers to access and proximity to downtown. Interestingly enough, frequent bus service was rate as more important than good arterial access. This (among other responses) deserves further probing, but demonstrates that the development community does appear to place importance on transit.

At the opposite end of the scale, the factors cited as the least important included high disposable income. This may make sense for residential development, in that housing expenditures aren't made from disposable income, but it would clearly have import for retail development. Low cost and value existing stock was similarly cited as not important, as was "vintage architecture." These factors may in fact be very important in terms of opportunities for neighborhood upgrading, as has happened in many areas of Southeast. The respondents did not, however, cite it as important for new projects.

Surprisingly, proximity to a mall or shopping center was cited as the least important factor, whereas proximity to downtown was cited as very important. Perhaps urban locations are not as dependent on this factor as one expects suburban locations are.

Neighborhood Conditions and Opportunities

Data from three sources were examined to evaluate neighborhood conditions and development opportunities. The survey of developers included questions regarding what neighborhoods were attractive for redevelopment. The City of Portland Auditor's office conducts a survey of Portland residents (as part of the annual report on Service Efforts and Accomplishments) in which they are asked to assess neighborhood area conditions. Finally, in 1991, the City of Portland compiled development statistics by neighborhood for the period from 1981-1990, that give some indication of what development actually occurred within the City.

Analysis from Developers' Survey

The developers' survey asked respondents to indicate their rating of "neighborhood attractiveness for infill and redevelopment." The neighborhood areas were as shown on the map in Figure 3 and generally correspond to the City's neighborhood areas as used in the Auditor's survey, except the Downtown/Burnside was separated from the remainder of Northwest. The developers' survey asked the respondents to rate the relative attractiveness of eight neighborhood areas on a one to five scale, with five indicating "very attractive" and one indicating "not attractive." Table 13 below shows the responses of the developers. The figures represent the average score for each neighborhood area.

Northwest was considered the most attractive, followed by Southwest. Central Northeast and East were considered the least attractive.

Developers were also asked to describe what kinds of projects that would develop in the different neighborhood areas. The responses are summarized below in Table 14.

Rowhouses were seen as an opportunity in every area of the city, reflecting the current popularity of this housing type. Condominiums were mentioned as opportunities for Northwest and Downtown/Burnside. Single family houses were mentioned for North and Northeast Portland.

Table 13
Neighborhood Attractiveness Ratings (Maximum Rating: 5.0)

Neighborhood	Rating
Northwest	4.4
Southwest	4.2
Downtown/Burnside	3.4
North	3.0
Northeast District	2.9
Southeast	2.3
Central Northeast	1.8
East	1.8

Source: Tashman Associates.

Table 14
Development Type Preferences

Neighborhood	Developer Responses
Northwest	Mixed-use, rowhouses, condominiums
Southwest	Rowhouses, condominiums, multi-family
Downtown/Burnside	Rowhouses, condominiums, multi-family, mixed use
North Portland	Rowhouses, single family
Northeast District	Rowhouses, multi-family, single family
Southeast	Multi-family, rowhouses, mixed-use
Central Northeast	Rowhouses, multi-family
East	Rowhouses, multi-family

Source: Tashman Associates.

Analysis from Auditor's Survey

The Auditor's survey was mailed to randomly selected Portland addresses in the City's seven neighborhood areas. A map showing the delineation of the subareas referred to is shown in Figure 4. For the 1992/93 survey, 9,500 surveys were mailed, of which 4,656 were returned, a response rate of 49 percent. Demographic analysis of the respondents indicated that they were more educated and older than the entire population, and that minorities were under-represented. No adjustments were made to the results to approximate the weighting of the entire population, as available data indicated that changes would be minor.

Figure 3
Neighborhood Areas

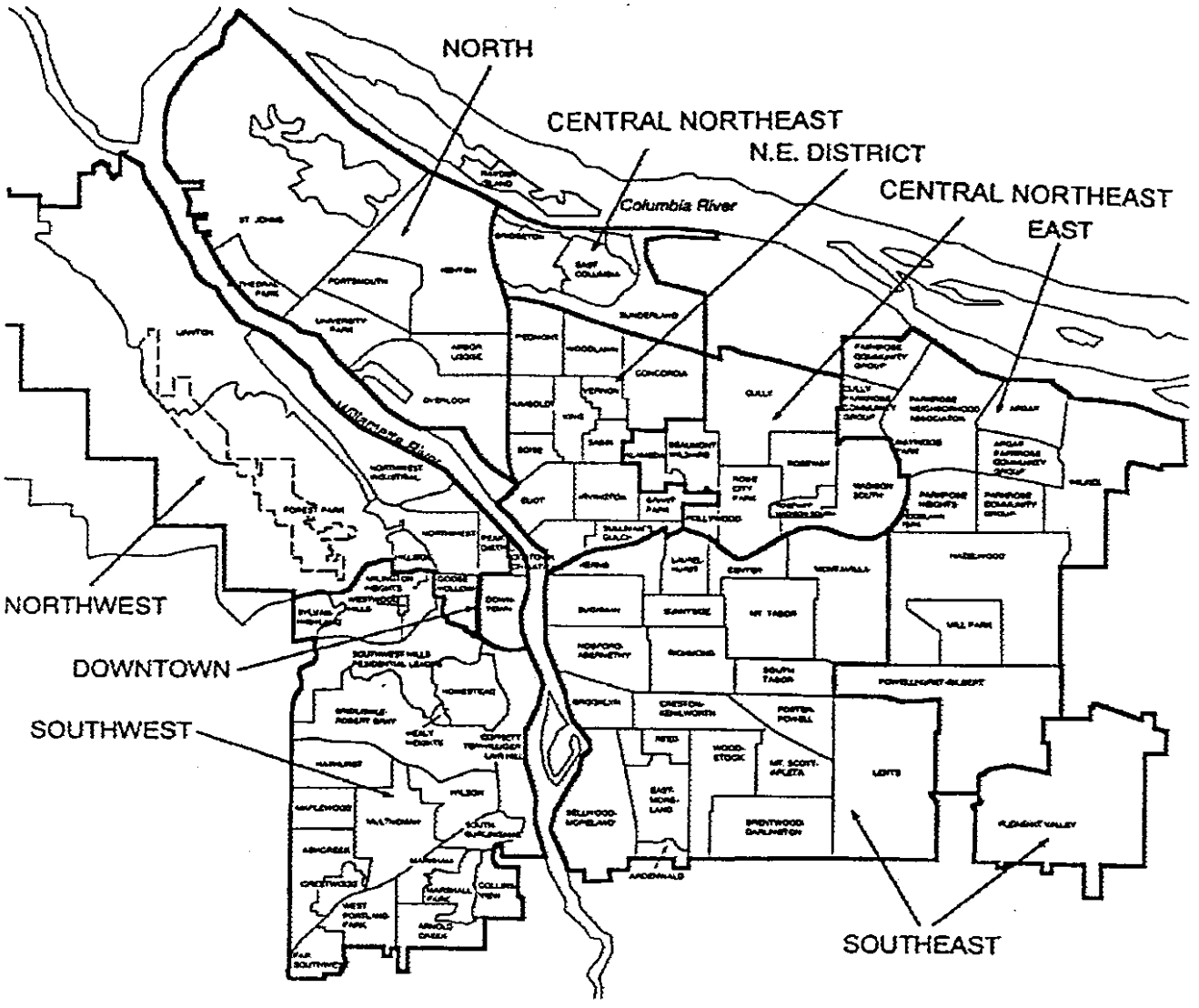
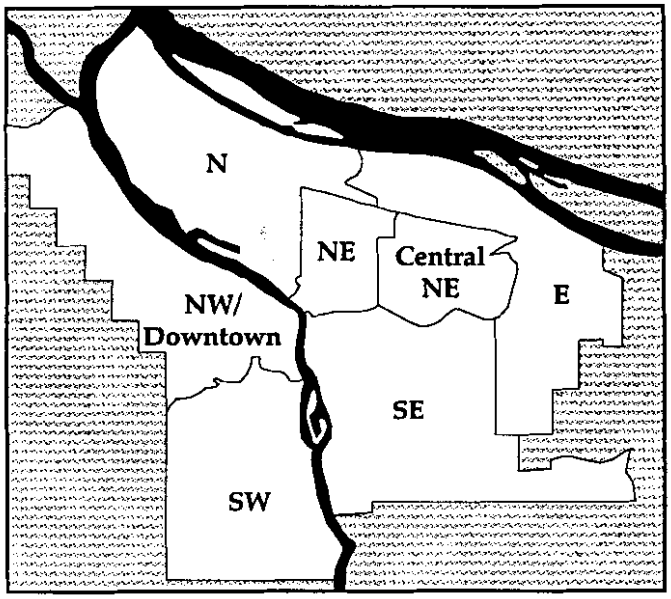


Figure 4
1993 Citizen Survey Neighborhoods



Source: City of Portland Auditor's Office and Tashman Associates.

The Auditor's office asked residents at total of 14 questions that covered issues of public safety, neighborhood conditions and City services. Respondents also provided demographic data regarding their sex, age, ethnic background and level of education.

Given the responses of the developers regarding the importance of the 28 neighborhood factors, of particular interest are the responses to the following questions:

"How safe would you feel walking alone at night...in your neighborhood?"

- Respondents could choose "very safe," "safe," "neither safe nor unsafe," "unsafe" or "very unsafe."

"In general, how do you rate the quality of the parks near your home in the following categories?" Of the several categories given, "well-maintained grounds" was taken as a proxy for the quality of the parks.

- Respondents could choose "very good," "good," "neither good nor bad," "bad" or "very bad."

"In general, how do you rate the streets in your neighborhood in the following categories?" Of the several categories given, "smoothness" was chosen as a proxy for overall quality.

- Respondents could choose "very good," "good," "neither good nor bad," "bad" or "very bad."

- In 1992/93, but not in preceding years, residents were also asked to rate the overall livability of their neighborhood area. Again, respondents could choose "very good," "good," "neither good nor bad," "bad" or "very bad."

The overall response for a particular sub-area was quantified by assigned five points to the "very safe" or "very good" response, four points to the "safe" or "good" response, three points to the "neither...nor" response, two points to the "unsafe" or "bad" response and one point to the "very unsafe" or "very bad" response. Possible scores therefore ranged from 5.0 for the very best to 1.0 for the very worst.

Table 15 shows the results of this analysis of survey responses for the 1992/93 survey.

Table 15
Responses to City Auditor's Survey
Fiscal Year 1992/93

	District							
Nighttime Safety	**City**	**SW**	**DT/ NW**	**East**	**C-NE**	**SE**	**North**	**NE**
Very safe	9%	17%	13%	8%	5%	7%	4%	4%
Safe	26%	42%	32%	25%	25%	23%	18%	18%
Neutral	23%	21%	24%	25%	27%	23%	24%	19%
Unsafe	27%	15%	23%	28%	29%	32%	30%	31%
Very Unsafe	15%	5%	8%	14%	14%	15%	24%	28%
Mean Weighted Response	2.87	3.51	3.19	2.85	2.78	2.75	2.48	2.39
Parks Quality/Maintenance	**City**	**SW**	**DT/ NW**	**East**	**C-NE**	**SE**	**North**	**NE**
Very good	25%	30%	36%	25%	16%	26%	18%	21%
Good	57%	53%	51%	52%	65%	57%	64%	59%
Neutral	14%	14%	10%	18%	15%	13%	14%	16%
Bad	3%	2%	2%	3%	3%	3%	3%	2%
Very Bad	1%	1%	1%	2%	1%	1%	1%	2%
Mean Weighted Response	4.02	4.09	4.20	3.95	3.92	4.04	3.95	3.95
Streets/Smoothness	**City**	**SW**	**DT/ NW**	**East**	**C-NE**	**SE**	**North**	**NE**
Very good	12%	13%	15%	16%	7%	14%	10%	11%
Good	43%	42%	43%	42%	41%	42%	49%	45%
Neutral	23%	20%	23%	20%	25%	23%	24%	23%
Bad	15%	14%	13%	15%	18%	14%	12%	15%
Very Bad	7%	11%	6%	7%	9%	7%	5%	6%
Mean Weighted Response	3.38	3.32	3.48	3.45	3.19	3.42	3.47	3.40
Overall Livability	**City**	**SW**	**DT/ NW**	**East**	**C-NE**	**SE**	**North**	**NE**
Very Good	25%	43%	40%	25%	18%	17%	13%	17%
Good	52%	49%	47%	55%	59%	56%	51%	45%
Neutral	17%	6%	9%	16%	17%	21%	28%	22%
Bad	5%	1%	3%	4%	5%	6%	7%	10%
Very Bad	1%	1%	1%	0%	1%	0%	1%	4%
Mean Weighted Response	3.95	4.32	4.22	4.01	3.88	3.84	3.68	3.55

Source: City of Portland Auditor's Office and Tashman Associates

Southwest received the highest ranking in nighttime safety, with Downtown/Northwest (DT/NW) second, and Northeast last. For parks quality, Downtown/Northwest was highest, Southwest second and Central Northeast (C-NE) last. In terms of street smoothness, Downtown/Northwest was ranked highest, North was second and Central Northeast was last. In terms of overall livability, Southwest received the highest ranking, followed by Downtown/Northwest. Northeast was ranked last.

Responses were relatively consistent over the three year survey period. Table 16 shows the changes in response categories from FY 1991/92 to FY 1992/93 and from FY 1990/91 to FY 1991/92.

Analysis from Neighborhood Profiles

In 1991, the City compiled development statistics by neighborhoods and neighborhood areas. Data include the number of residential units by type—single family, rowhouses, duplex and multi-family and commercial and industrial development by number of permits and total square feet.

Figure 5 contains a map showing the delineation of the areas. The subareas in this grouping generally match the subareas used in the developers' survey and the City Auditor's survey, with the exception of the eastern portion of the city. The neighborhood profiles divide southeast into "inner south" and "outer southeast" and "outer northeast" is separately defined, whereas the developers' survey used subareas for "southeast" and "east" and "east" include areas both in northeast and southeast.

There are unfortunately some serious inconsistencies in the way the data were either compiled or reported. From 1981-1990, the report shows the level of gross new construction with no data on demolitions. From 1984-1990, data are given for "net gain," i.e., the difference between new construction and demolition.

Table 17 shows a summary of the data in terms of the percentage share of both new construction (1981-90) and net gain (1984-90). The neighborhood areas are shown in descending order of new construction, 1981-90, by number of units for residential and for square feet for commercial and industrial.

Southwest attracted the largest share of total residential construction, and, by type, for single family houses, rowhouses and duplex units. Downtown attracted the largest share of multi-family. Central Northeast attracted the most commercial development—in terms of permits and square footage. North Portland attracted the most industrial development.

Table 18 shows a summary of residential building permit activity between 1990 and 1993 in the City of Portland.

Southwest captured by far the largest share of both single family and multi-family development. Outer Southeast was second in both categories. North Portland attracted a significant number of new multi-family units.

Table 16
Changes in Responses to City Auditor's Survey
Fiscal Year 1992/93 and 1991/92

Fiscal Year 1992/93:

	District							
Nighttime Safety	**City**	**SW**	**DT/ NW**	**East**	**C-NE**	**SE**	**North**	**NE**
Very safe	-1%	-3%	-2%	-1%	-4%	-1%	0%	1%
Safe	-2%	4%	-3%	-7%	0%	-3%	-3%	1%
Neutral	1%	1%	5%	1%	4%	-2%	4%	-4%
Unsafe	1%	-3%	0%	2%	2%	4%	-2%	1%
Very Unsafe	1%	1%	0%	5%	-2%	2%	1%	1%
Mean Weighted Response	-2%	1%	-3%	-4%	-2%	-2%	-2%	1%
Parks Quality/Maintenance	**City**	**SW**	**DT/ NW**	**East**	**C-NE**	**SE**	**North**	**NE**
Very good	3%	1%	4%	3%	-4%	4%	-4%	1%
Good	0%	4%	-1%	-3%	6%	-1%	5%	4%
Neutral	-2%	1%	-3%	-2%	-6%	0%	-2%	-2%
Bad	0%	0%	0%	-2%	0%	0%	0%	-4%
Very Bad	0%	1%	0%	1%	1%	0%	1%	1%
Mean Weighted Response	1%	-1%	2%	2%	3%	0%	1%	3%
Streets/Smoothness	**City**	**SW**	**DT/ NW**	**East**	**C-NE**	**SE**	**North**	**NE**
Very good	1%	1%	2%	4%	-1%	3%	-3%	-1%
Good	-2%	2%	-2%	0%	1%	-11%	-1%	-2%
Neutral	1%	-1%	4%	-3%	0%	3%	7%	-1%
Bad	0%	-4%	-1%	-1%	2%	3%	-2%	2%
Very Bad	0%	0%	-3%	0%	-2%	2%	-1%	2%
Mean Weighted Response	-1%	2%	0%	2%	0%	-4%	-2%	-2%

Fiscal Year 1991/92:

Nighttime Safety	**City**	**SW**	**DT/ NW**	**East**	**C-NE**	**SE**	**North**	**NE**
Very Safe	2%	1%	2%	1%	3%	1%	1%	0%
Safe	2%	2%	4%	6%	1%	1%	3%	-2%
Neutral	-2%	-3%	-5%	-2%	-3%	1%	-3%	3%
Unsafe	-1%	1%	1%	1%	-4%	0%	0%	-1%
Very Unsafe	-2%	-1%	-2%	-6%	2%	-3%	0%	-1%
Mean Weighted Response	2%	2%	3%	4%	2%	1%	2%	-1%
Parks Quality/Maintenance	**City**	**SW**	**DT/ NW**	**East**	**C-NE**	**SE**	**North**	**NE**
Very Good	1%	-1%	-1%	0%	-3%	3%	2%	-2%
Good	0%	2%	1%	2%	3%	-4%	-2%	-1%
Neutral	0%	0%	-1%	1%	1%	2%	0%	3%
Bad	0%	0%	0%	0%	0%	0%	-2%	-1%
Very Bad	-2%	-5%	2%	-9%	-1%	-1%	0%	-11%
Mean Weighted Response	0%	4%	0%	2%	0%	-1%	0%	-2%
Streets/Smoothness	**City**	**SW**	**DT/ NW**	**East**	**C-NE**	**SE**	**North**	**NE**
Very Good	3%	6%	2%	4%	-1%	9%	4%	-4%
Good	-1%	-2%	-3%	1%	2%	3%	-2%	-6%
Neutral	0%	-1%	-3%	-3%	-1%	-2%	-2%	4%
Bad	-1%	-4%	3%	-2%	4%	-4%	-1%	0%
Very Bad	0%	17%	6%	16%	-11%	19%	2%	-9%
Mean Weighted Response	1%	2%	-1%	3%	1%	3%	-1%	-1%

Source: City of Portland Auditor's Office and Tashman Associates

Figure 5
Neighborhood Subareas

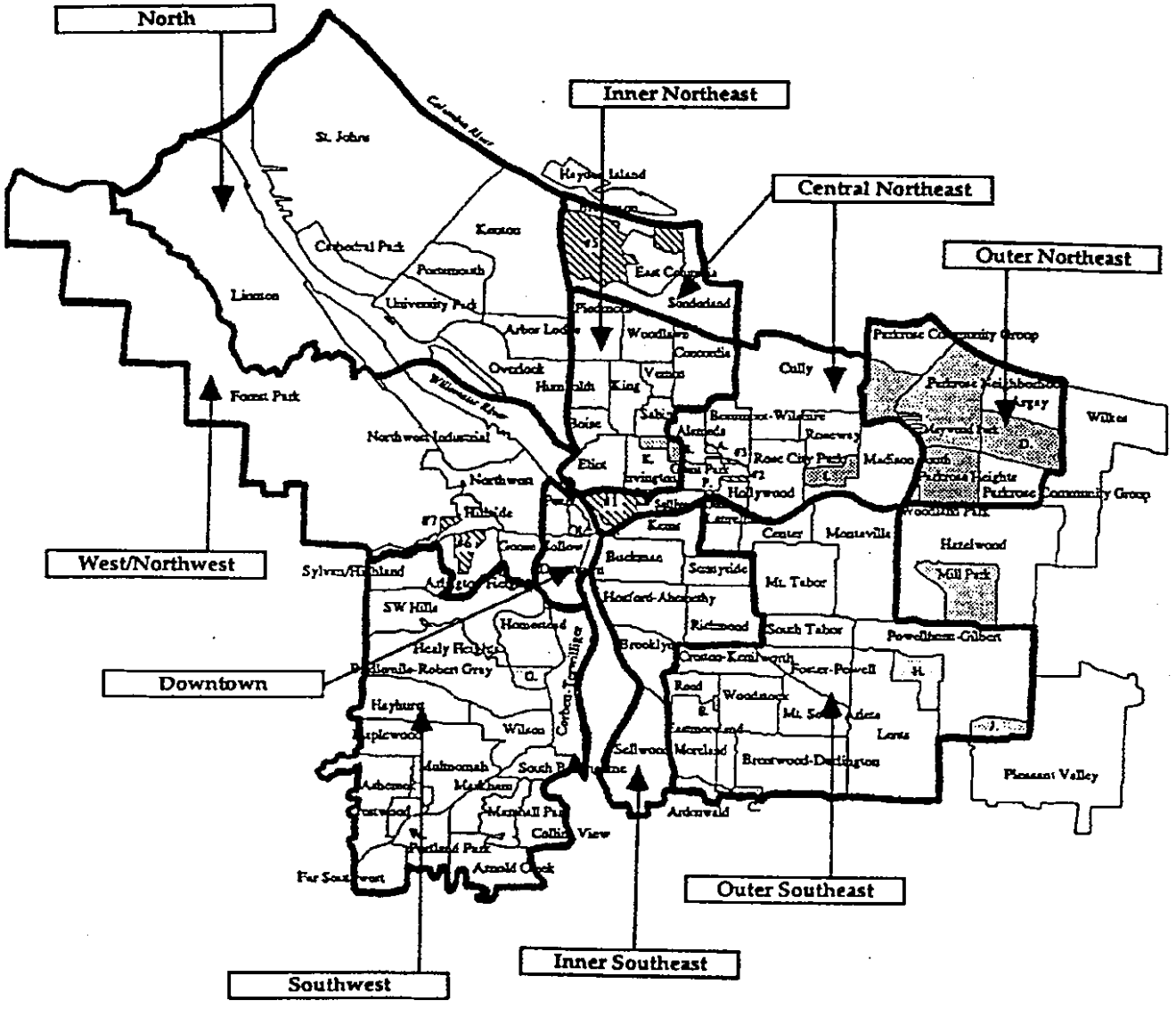


Table 17
City of Portland Development
Percentage Share by Neighborhood District*

All Residential	City	SW	O-SE	O-NE	DT	W/NW	I-SE	North	C-NE	I-NE
New Construction, 1981-90	8,556	36%	19%	12%	11%	11%	3%	3%	3%	2%
Net Gain, 1984-90	4,787	48%	17%	21%	15%	7%	-4%	0%	1%	-5%

Single Family	City	SW	O-SE	O-NE	W/NW	North	C-NE	I-SE	I-NE	DT
New Construction, 1981-90	4,890	48%	24%	11%	7%	4%	3%	2%	1%	0%
Net Gain, 1984-90	2,687	66%	20%	19%	8%	-1%	0%	-4%	-8%	0%

Rowhouses	City	SW	W/NW	I-SE	O-SE	North	O-NE	C-NE	DT	I-NE
New Construction, 1981-90	176	38%	31%	18%	7%	6%	1%	0%	0%	0%
Net Gain, 1984-90	137	41%	39%	15%	4%	0%	1%	0%	-1%	0%

Multi-Family	City	DT	SW	W/NW	O-NE	O-SE	I-SE	C-NE	I-NE	North
New Construction, 1981-90	3,332	27%	18%	16%	14%	12%	4%	3%	3%	2%
Net Gain, 1984-90	1,873	39%	22%	3%	26%	14%	-4%	1%	-2%	1%

Duplex	City	SW	O-SE	I-SE	W/NW	O-NE	C-NE	I-NE	North	DT
New Construction, 1981-90	162	30%	26%	11%	7%	7%	6%	4%	1%	0%
Net Gain, 1984-90	72	58%	24%	-31%	8%	15%	8%	-6%	-17%	3%

Commercial	City	C-NE	DT	O-SE	I-SE	SW	W/NW	North	O-NE	I-NE
Total Permits	445	20%	8%	25%	13%	11%	7%	4%	4%	0%
Square Feet	12,414,755	28%	13%	9%	6%	6%	1%	1%	1%	0%

Industrial	City	North	O-NE	C-NE	I-SE	W/NW	O-SE	SW	I-NE	DT
Total Permits	381	25%	14%	19%	20%	8%	6%	3%	4%	1%
Square Feet	15,079,447	68%	10%	7%	4%	3%	2%	1%	1%	0%

* Neighborhood Districts: Southwest (SW); Outer Southeast (O-SE); Outer Northeast (O-NE); Downtown (DT); West/Northwest (W/NW); Inner Southeast (I-SE); North; Central Northeast (C-NE); and Inner Northeast (I-NE).

Source: City of Portland and Tashman Associates

Table 18
Residential Building Permit Activity
City of Portland, 1990-1993

Residential	City	SW	O-SE	W/NW	O-NE	North	C-NE	I-SE	I-NE	DT
New Single Family	2,103	777	483	342	287	75	69	38	32	0
Single Family Demolitions	114	30	45	5	8	6	8	13	29	0
Net Change, Single Family	1,959	747	438	337	279	69	61	25	3	0

Multi-Family	City	SW	O-SE	North	C-NE	O-NE	I-NE	DT	I-SE	W/NW
New Multi-Family	2,478	1,277	436	386	155	96	64	40	16	8
Multi-Family Demolitions	9	0	3	0	0	0	5	0	1	0
Net Change, Multi-Family	2,469	1,277	433	386	155	96	59	40	15	8

Source: Metro and Tashman Associates.

Conclusions

In analyzing the developers' response to the survey, the consultants examined the relationship between what factors were listed as important and how those factors actually apply in the neighborhoods that were listed as attractive. For example, if developers say that low crime rates are important and that Southwest is attractive for development, what are the actual crime rates in Southwest? How does the perception correspond to the reality?

The three highest rated factors were "low crime rates," "good parks" and "good sidewalks." The Auditor's annual report on Service Efforts and Accomplishments measures various conditions for the different neighborhood areas, including crime rates. For a check on parks quality, the Auditor's survey reports residents' ranking of their neighborhood parks. For good sidewalks, there is no readily available measure. In this case, the consultants ranked the pedestrian circulation quality of each neighborhood area according to their judgment.

Table 19 shows that Northwest was reported by developers to be most attractive, but has a very high rate of crime per 1,000 population. Northwest does have high ratings for parks and pedestrian circulation. The crime rate for Northwest must be looked at in more detail, as the subarea includes Downtown and North of Burnside. The crime rates for the area corresponding to Northwest in the developers' survey are probably much lower.

Table 19
Correspondence Between Development
Factors and Neighborhood Attractiveness

	Northwest	Southwest	Downtown Burnside	North	Northeast District	Southeast	Central Northeast	East
Perceived Attractiveness	4.4	4.2	3.4	3	2.9	2.3	1.8	1.8
Order	1	2	3	4	5	6	7	8
Crime Rates/1000	168	57	na	122	160	92	92	99
Order	7	1		5	6	3	2	4
Percent of Residents Rating Parks Good or Very Good	81	82	na	73	76	76	74	69
Order	2	1		6	3	4	5	7
Pedestrian Circulation	2	8	1	4	3	5	6	7

Source: Tashman Associates.

East Portland is reported as least attractive, but has a moderate crime rate. The area does have low rating for parks and pedestrian circulation.

Southwest is reported as the second most attractive. Southwest has a low crime rate, good parks but low pedestrian circulation.

This admittedly limited analysis does show some important correspondences between the perceptions of developers and the perception of residents in terms of parks. The crime data demands more detailed analysis, and the response to the "good sidewalks" factors should also be probed.

Another point of analysis is the correspondence between developers' perception of the attractiveness of a particular area and the amount of development that has actually occurred.

Table 20 following examines these relationships. It compares the ranking of areas according to the developers' perception of attractiveness and the ranking in order of most units or permits in the period 1981-1990, from the Neighborhood Profiles.

Table 20
Related Neighborhood Rankings
Reported Attractiveness and Permit Activity

	Northwest	Southwest	Downtown Burnside	North	Northeast District	Southeast*	Central Northeast	East**
Attractiveness Rank	1	2	3	4	5	6	7	8
All Residential Development, Rank	5	1	4	7	9	2,6	8	2,3
Commercial Development, Rank	6	5	2	7	9	3,4	1	3,8

* Southeast in the Neighborhood Profiles is assumed to include Inner SE and Outer SE, rank indicates Outer, Inner.
** East in the Neighborhood Profiles is assumed to include Outer SE and Outer NE, rank indicates Outer SE, Outer NE.

Source: City of Portland and Tashman Associates.

The most telling characteristic of these data is the discrepancy between developers' perceptions of East Portland and the amount of development that has taken place. In looking at the Neighborhood Profiles development statistics, it is Outer Southeast that has attracted a significant share of development within the mid to late 1980's. One explanation is that most of the developers surveyed are focusing on multi-family and attached single family housing products, and most of the development taking place in Outer Southeast is single family.

CHAPTER IV:

Infill and Redevelopment Strategies

Introduction

To retain and enhance its role as a regional residential and employment center, the City, in concert with citizens and the development community, should consider adopting a "developer's attitude" toward infill development and redevelopment. This attitude is characterized by:

- Having a clear overall vision of neighborhood-compatible, high quality development;
- Removing unneeded obstacles to development;
- Looking for the best development opportunities;
- Having a strong sense of timing relative to the market and available financing.

Vision of Neighborhood-Compatible High-Quality Development

In many cases, resistance to "densification" of neighborhoods arises from an unnecessarily negative image of infill and redevelopment projects. The negative images result from prior development proposals or built projects that have been insensitively designed and disregarding the fabric of their surrounding neighborhood.

As is shown in the Project Catalogue (Appendix B), even multi-family attached dwelling projects that substantially increase overall density can be designed to blend well with their surroundings. The Catalogue shows projects that are designed with a single family house look and/or in which the scale of the project is graduated, so that the perimeter of the project—where the project meets its neighborhood—is of lower scale than the middle.

As infill and redevelopment projects are more sensitively designed—in response to formal or informal design standards and guidelines or in response to the market—the image that residents have of infill projects will improve. The City, by supporting design competitions, design studies and documents such as the Project Catalogue, can help raise public perception of the quality of infill and redevelopment.

It is equally important that the City itself—and especially the Planning Commission and Planning Bureau—have a positive image of infill and redevelopment projects. This attitude that development can, if well done, enhance the livability of a neighborhood is critical if the City is to achieve its Future Focus development goals.

Removing Unneeded Obstacles to Development

The City's development review process has been subject to a great scrutiny and revision over the last several years, and this process is continuing. The issue of what regulations are desirable and how they should be applied is very complex. Conclusions that there should be less regulation are insupportable. Regulation serves a critical role in ensuring safety, quality and compatibility.

Yet developers, builders and their consultants report that City of Portland development review processes are cumbersome and that code requirements are applied in a rigid manner. Ongoing attention is needed if developers are to be attracted to infill and redevelopment opportunities. Given that the City has adopted development goals that will require extensive infill and redevelopment, the development review process and the application of code requirements by staff must be affected by a desire to assist the development process. Allowing poorly planned and constructed projects to proceed is no solution, but placing undue regulatory obstacles before willing developers of infill or redevelopment sites will defeat the city's purpose. The difficulty of course is in deciding what regulatory strategy is balanced and appropriate and what is the best means of applying such a strategy.

Looking for the Best Development Opportunities

Skillful developers can identify the best opportunities in terms of site location, site characteristics, market demand and financing. The City, in its regulatory role, must apply zoning and building code requirements in a uniform manner. However, its role as the provider of urban services—and in particular streets, utilities, parks and other neighborhood amenities—the City can be informed by a sense of where public investment will have the greatest payoffs in terms of redevelopment and infill.

In the absence of tax increment financing or some substitute form of redevelopment financing, the City's capital improvements program should be linked to its infill and redevelopment goals. Where particular neighborhoods show signs of revitalization and densification, the City's investment in public capital facilities can support that process.

Having A Strong Sense of Timing Relative to the Market and Available Financing

While the City's planning policies are often focused on long-term goals and objectives, real-estate development occurs in the present and is governed by present market and financing conditions. Perhaps the most important challenge is to balance the short and long-term effects of comprehensive plan designations and zoning regulations. Regulations that have minimum density requirements or overly specific land use mix requirements (e.g., floor area retail in office buildings) can serve to inhibit short-term development that would actually help to achieve the City's land use objectives.

Specific Strategies

These "attitudinal" characteristics can affect all aspects of the City's planning policy

development, code enforcement and capital improvements programming. In addition, there are specific strategies that can be undertaken to achieve infill and redevelopment goals.

The development process occurs in well defined stages, starting with the identification of development opportunities, site acquisition, pre-development, development, and marketing. Public strategies should relate to these states of the development process. The following tables summarize strategies that can be undertaken to achieve infill and redevelopment goals.

Marketing and Promotion of Development Opportunities

The thrust of marketing and promotion efforts should be to ensure that developers with the capability of undertaking higher-density and mixed-use projects are aware of development opportunities in Portland. The local development community may be aware of these opportunities, but may lack the depth of experience that developers in larger urban areas may have. The Livable Cities Housing Initiative program may well be the appropriate entity to compile and disseminate this information.

Action:	Benefit:
Compile real estate market, demographic and site availability information about Portland that demonstrates the feasibility of a variety of housing and mixed-use product types.	All of these actions lower the cost to the developer of identifying development opportunities. It would result in an increase in the pool of interested and capable developers of infill and redevelopment projects.
Desseminate information at real estate conferences and seminars.	There are normal channels through which the development community shares information. Commonly these are not the same as those used by the planning and public policy community. Organizations such as the Urban Land Institute, the International Conference of Shopping Centers and the National Association of Industrial and Office Parks have regular national and regional meetings which should be regularly attended by Portland planners and policy makers.
Hold direct meetings with targeted developers in larger urban areas such as Vancouver, B.C., Seattle, the San Francisco Bay area, and Southern California.	Larger western urban areas have a larger pool of developers that have expertise in innovative real estate product types. Such developers can be attracted to development opportunities in Portland. Especially in California, such developers are seeking new opportunities as the normal market areas suffer from poor demand.
Develop and distribute newsletter of Portland development trends, including data on land prices and home sale prices. Can be compiled with assistance of brokers. Distribute to lenders and developers.	Such a newsletter provides an important tool to supplement the strategies described above.

Predevelopment Activities

Action:	Benefit:
Conduct (or complete existing) real estate market analyses to identify optimum development programs and timing.	Providing up-to-date market information helps identify opportunities and reduces market uncertainty. It also provides a basis for project-specific loan packages and thus reduces cost of obtaining information.
Identify sites of adequate size for specific develoment types that are properly zoned and served with streets and utilities.	Such initial site inventorying reduces pre-development costs.
The following actions are all components of what can be called "specific area planning": • Identify neighborhood planning and design issues and how they would affect site development; • Hold meetings with neighborhood groups to discuss and resolve development issues; and • Prepare development guidelines that meet developers' and neighbors' concerns.	Such planning, whatever formal process it follows, reduces the timeframe for development approvals and increases the quality and neighborhood acceptance of the product.

Public/Private Redevelopment

The following strategies primarily apply during the actual development process. Some of the strategies require that a source of redevelopment funding be developed. Tax increment financing in urban renewal areas has been discontinued by the City in order to avoid losses in property tax revenues to other local governments and districts. This form of financing, which has been very effective in the central city and in the Columbia Corridor, may be more politically feasible in the future, if tax rates in Portland drip below the $10.00 per $1,000 constitutional limits. Other redevelopment funding sources should be actively explored, as any new funding source may take years to establish.

Action:	Benefit:
Aquire and assemble development sites.	Provides infill and redevelopment sites, especially when current owners are unwilling sellers and site assembly can be accomplished via eminent domain.
Prepare sites by clearance and environmental remediation.	Reduces development costs and the burden of conducting environmental surveys and remediation.
Develop quality public facilities, such as parks, community centers, and pedestrian and transit facilities.	Increases attractiveness of sites for redevelopment and helps promote Portland's mobility goals at a lower cost to developers.
Public participation in finance of utilities and street improvements, including: • Initiation and participation of LID's; and • Capital improvement focused on infill and redevelopment sites or areas.	Reduces development costs.

Development Finance

In recent years the availability of project financing has been a serious constraint to many forms of commercial development. Financing for innovative housing or mixed-use projects is limited because of the poor track record for these types of development in the 1980's. There are few public finance programs that can improve both the availability and cost of financing for projects other than low income or elderly housing. Restrictive lending practices and appraisal practices originated in the savings and loan crisis brought on by real estate activities in the 1980's and are still having a profound impact on what can be financed and built.

Action:	**Benefit:**
Expand public development finance programs, including: revenue bond financing of low-income housing; property tax abatement, funding of Community Development Corporations projects for low- and mixed-income housing, support of HAP proposal for mixed-income housing and mixed-use development.	Increases return on investment for developers and increases interest in eligible projects.
Focus CRA lending by encouraging loans for mixed-use to promote community objectives.	Lower interest rates or financing in marginal areas can allow projects to proceed which would otherwise be difficult to fund.
Condemn under-used properties and, using PDC, market them to developers to produce innovative products.	Low land pricing and City involvement as a guarantor or partner can make financing possible.
Put together a low-interest construction loan program and encourage local banks to take part in projects via permanent financing.	A revolving, no-risk construction loan pool could be used to lower carrying costs thus lowering permanent loan amounts in relation to developer equity providing an incentive to both developers and lenders.
The City should work with appraisal community to get them to add value for access to transit.	This would help lenders in issuing financing.
The City should get appraisers to recognize trends rather than their usual reliance on comparable projects.	This would allow lenders to finance in marginal areas.

Applicability of Strategies

Key questions about the strategies discussed above include:

- Are the strategies applicable to small projects, large projects or both?
- What strategies should be given the highest priority?

Of the strategies listed, all but one are applicable to both small and large projects. Though the implementation of a particular strategy may need to be adapted to either small or large

projects, the basic mechanisms apply to one or two-lot infill developments or large redevelopment projects. For example, the strategy of public participation in LID's can be used for large mixed-use projects or for small infill subdivisions. The process will be different for the different projects, but the strategy applies across the board.

The exception, perhaps, is the strategy of meeting with individual developers in west coast cities such as San Francisco and Vancouver, B.C. This strategy is best suited for larger development firms who are more likely to be interested in projects outside their home base. Such firms are correspondingly more likely to be interested in larger projects that can support the expenses inherent in undertaking an out of town project.

In terms of priorities, none of the strategies recommended can be described as low priority. However, the strategies that the consultants believe are of the highest priority are:

- Hold direct meetings with targeted developers in larger urban areas such as Vancouver, B.C., Seattle, the San Francisco Bay Area and Southern California; and

- Identify sites of adequate size for specific development types that are properly zoned and served with streets and utilities.

Undertake specific area planning:

- Identify neighborhood planning and design issues and how they would affect site development;

- Hold meetings with neighborhood groups to discuss and resolve development issues; and

- Prepare development guidelines that meet developers' and neighbors' concerns.

Participation in finance of utilities and street improvements, including:

- Initiation and participation in LID's; and

- Capital improvement focused on infill and redevelopment sites or areas.

Expand public development finance programs, including:

- Revenue bond financing of low income housing;

- Property tax abatement;

- Funding of Community Development Corporation projects for low and mixed income housing; and

- Support of Housing Authority of Portland's proposal for mixed income housing and mixed-use development.

CHAPTER V:

Conclusions

The Infill and Redevelopment Strategies Study has examined:

- The basic economic factors of need (demand) for new housing and mixed-use development and the capacity (supply) of Portland to accommodate anticipated growth;

- The neighborhood characteristics and factors that lead to successful infill and redevelopment projects; and

- The strategies that can be adopted by Portland to achieve its redevelopment and infill objectives.

The study has reached the following conclusions:

Demand for Infill and Redevelopment in Portland

Certain types of development are more appropriate for infill and redevelopment projects in Portland, because they use a relatively small amount of land per square foot of occupied space and because they are supported by an existing urban infrastructure of transportation and amenities. These types include higher-density residential (both attached and detached, and both ownership and rental) and mixed-use residential/commercial projects.

The demand for these types of development in Portland will grow because of many factors:

- Demographic changes will continue to result in greater numbers of smaller, non-traditional households that demand housing units which are lower cost, more convenient and easier to maintain than the typical detached single family house.

- High rates of in-migration will continue to create the need for transitional forms of housing, such as apartments and condominiums.

- The forecast age structure of the future population is more evenly distributed that the current population structure, which shows the effects of the "baby boom" and the "baby bust." Though there will be a large component of the population that will enter retirement age, the younger population cohorts will also increase, creating demand for multi-family housing units.

The higher rates of increase in minority populations will also favor Portland over suburban locations, if historic locational preferences hold.

Capacity for Infill and Redevelopment

The capacity analysis built off of the quantitative analysis done for Region 2040. Alternative Growth Concept B represented a growth form that emphasizes the growth of Portland in terms of jobs and housing. Growth Concept B forecast the development and redevelopment of higher-density housing and mixed-use projects, in Portland's Central City and along transit corridors.

Rather than duplicate the quantitative capacity analysis conducted by Metro, the Infill and Redevelopment Strategies Study focused on the economic feasibility of the types of development projects needed to achieve the growth targets of Concept B. Five hypothetical projects in "pilot areas" of Portland—all of which are shown in Concept B as accommodating substantial higher-density and mixed-use development—were examined and financial pro-formas developed to analyze their feasibility.

Four of the five projects were shown as feasible under the current market rents, construction costs and land costs. The fifth project was shown as feasible if subsidized equity financing were provided, and this project is located in an area of the City where such subsidies are currently available.

Though the economic feasibility of these projects indicates that Portland can support the high growth projects of Concept B, the ability of the City to support this growth while maintaining its livability is not to be taken for granted.

Neighborhood Characteristics Leading to Infill and Redevelopment

Members of the development community were surveyed regarding their judgment of what neighborhood factors were most important in determining where infill and redevelopment would occur and what neighborhoods were most attractive to them as locations for such projects.

The developers concluded that public safety was far and away the most important factor, with good parks and good sidewalks also cited as important. In ranking the neighborhoods that they found most attractive, there was some correspondence between their attraction to these neighborhoods and low levels of crime and high quality parks, although the data used for the analysis was not specific enough to draw strong conclusions. For instance, Southwest was judged attractive, and had low crime rates, good quality parks, but poor sidewalks. East Portland was rated as not attractive for redevelopment and infill, but has a moderate crime rate. More detailed study would be beneficial.

In comparing actual development to developers' perceptions, Southwest and Downtown had high levels of development during the 1980's and early 1990's, which corresponded to their high attractiveness to developers. On the other hand, Northwest had relatively low levels of development during this period, even though it was judged attractive. East Portland had relatively high levels of development, even though it was judged less attractive to developers. Again, more analysis would be helpful.

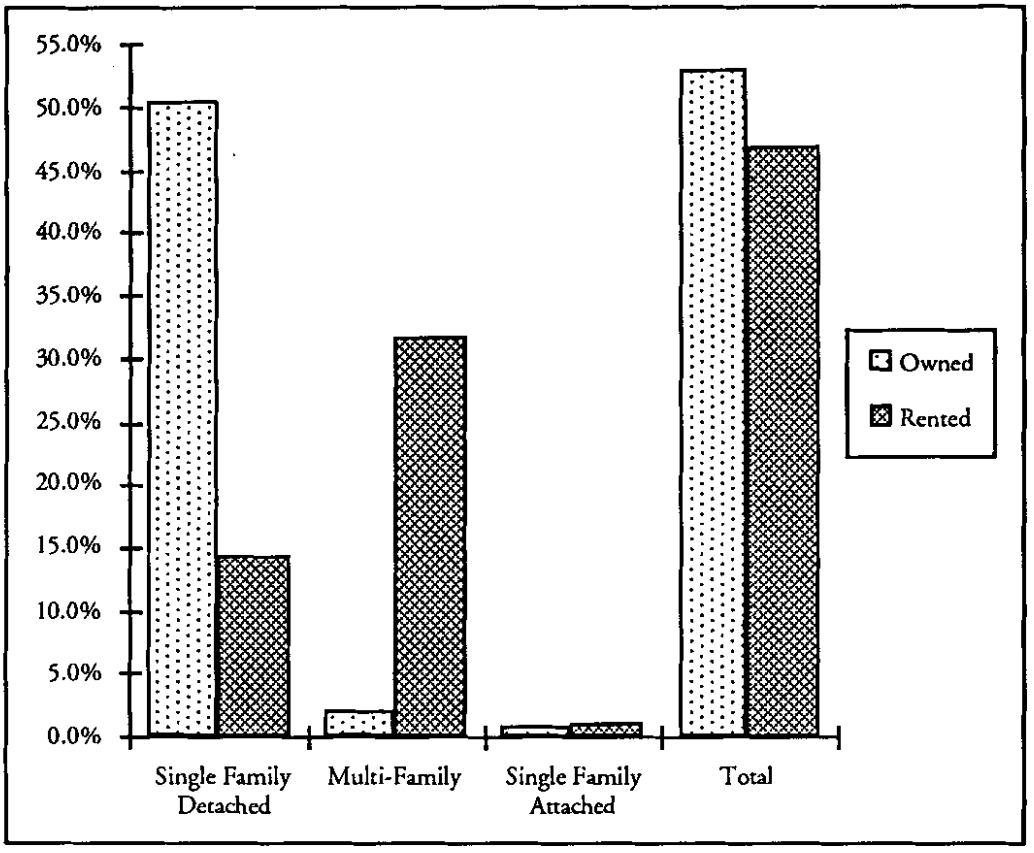
Recommended Infill and Redevelopment Strategies

The study concludes that a range of strategies will be necessary to achieve Portland's infill and redevelopment goals. What is of paramount importance is that the City must continue to maintain its basic quality of life. It must provide safe streets and high quality community facilities. The challenge to the viability of Portland's public school system must be met if the City intends to attract families with school age children

Beyond these basic objectives, the City should adopt a developer's attitude toward infill and redevelopment. Its public strategies should address the different stages of the development process. Portland can take actions to increase the knowledge of development opportunities, reduce pre-development costs, reduce development costs and increase the quality and acceptance of infill and redevelopment projects.

APPENDIX A

Appendix Figure 1
UNITS OWNED OR RENTED: PERCENTAGE OF PORTLAND TOTAL

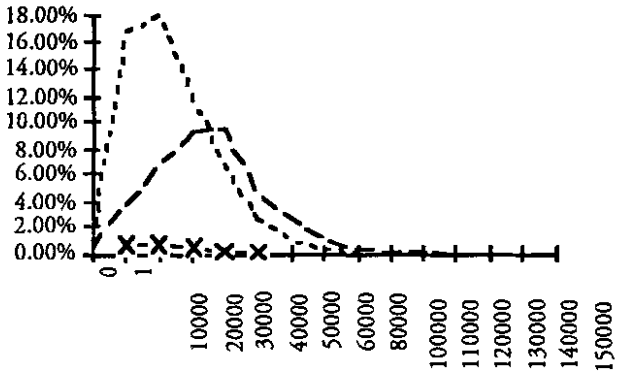


	Single Family Detached	Multi-Family	Single-Family Attached	Total
Owned	50.4%	2.0%	0.7%	53.1%
Rented	14.2%	31.8%	1.0%	46.9%

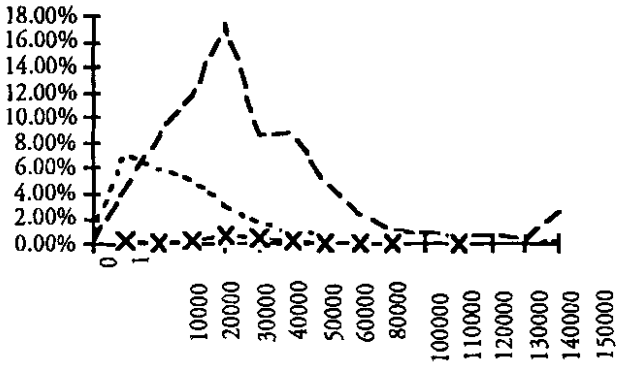
Source: U.S. Census and Leland Consulting Group.

Appendix Figure 2
GRAPHS ILLUSTRATING 1990 UNIT OCCUPANCY BY AGE AND INCOME
Derived from U.S. Census Public Use Microdata

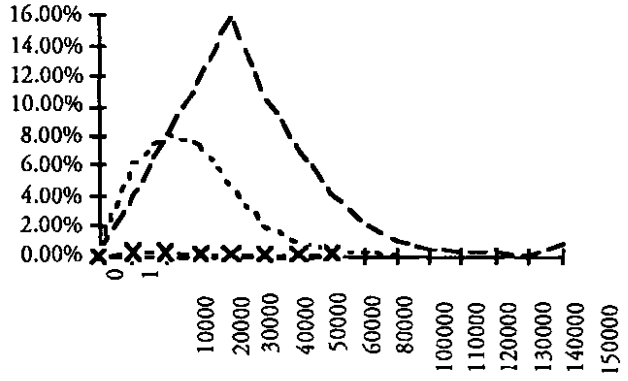
Units By Income For Age 15 to 30



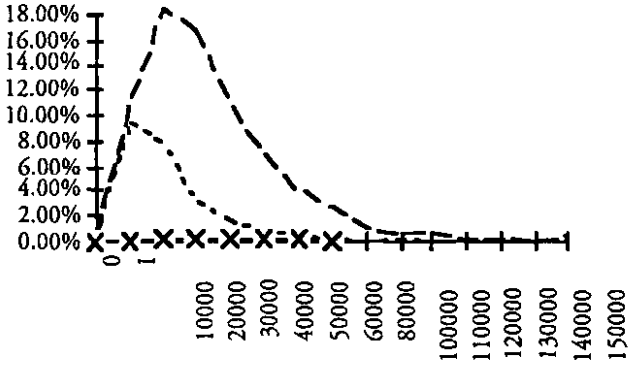
Units By Income 45 to 60

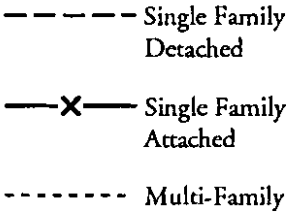


Units By Income Age 30 to 45



Units By Income 60 to 75





Source: U.S. Census and Leland Consulting Group.

Appendix Table 1
EMPLOYMENT IN MULTNOMAH COUNTY BY SIC CODE

	Establishments	Employees	Percent of Total	Payroll
Total	19,993	329,650	100.00%	7,598,163
07 Agriculture, Forestry, and Fishing	172	877	0.27%	13,730
10 Mining	10	138	0.04%	9,280
15 Construction	1,333	16,186	4.91%	468,589
20 Manufacturing	1,313	47,481	14.40%	1,388,647
50 Wholesale Trade	2,005	32,028	9.72%	956,557
52 Retail Trade	4,137	59,161	17.95%	792,227
60 Finance, Insurance, and Real Estate	1,928	33,033	10.02%	834,845
70 Services	7,233	109,120	33.10%	2,167,217
99 Unclassified	1,043	1,525	0.46%	29,392

Source: U.S. Census County Business Patterns and Leland Consulting Group.

Appendix Table 2
SQUARE FEET RETAIL DEMAND BASED ON CONSUMER SPENDING

	2015 Households Over 1990	2015 Income	2040 Base Case Households Over 1990	2040 Income	2040 Mod Case Households Over 1990	2040 Mod Case Income
	42,094	$1,535,418,397	56,460	$2,059,448,272	82,432	$3,006,780,142
	2015 Sq Ft Created	**Spending Over 1990**	**2040 Sq Ft Created**	**Spending Over 1990**	**2040 Mod Sq Ft Created**	**Spending Over 1990**
Food And Drink:						
Food at home	475,241	$142,572,160	637,438	$191,231,256	930,654	$279,196,303
Food away from home	421,360	$84,272,059	565,168	$113,033,651	825,142	$165,028,343
Alcoholic beverages	78,174	$13,680,529	104,855	$18,349,619	153,088	$26,790,315
Misc. Personal Items:						
Tobacco/smoking supplies	76,892	$11,533,738	103,134	$15,470,140	150,575	$22,586,297
Personal care services	71,560	$7,155,969	95,983	$9,598,262	140,134	$14,013,396
Household Equip. and Svces.:						
Textiles	36,706	$4,588,239	49,233	$6,154,180	71,880	$8,985,060
Furniture	132,787	$14,606,596	178,107	$19,591,747	260,035	$28,603,814
Floor coverings	24,535	$4,293,581	32,908	$5,758,957	48,046	$8,408,037
Major appliances	45,461	$6,819,218	60,977	$9,146,579	89,026	$13,353,942
Small appliances	23,853	$2,862,388	31,994	$3,839,305	46,711	$5,605,358
Misc. household equip.	111,178	$18,900,177	149,122	$25,350,704	217,717	$37,011,851
Domestic services	151,187	$18,142,486	202,787	$24,334,417	296,067	$35,528,080
Other household expenses	32,272	$3,872,642	43,286	$5,194,354	63,198	$7,583,720
Apparel:						
Women's apparel, 16+	135,963	$27,192,682	182,367	$36,473,396	266,255	$53,250,904
Men's apparel, 16+	75,980	$15,195,911	101,911	$20,382,192	148,789	$29,757,858
Girl's apparel, 2-15	20,626	$4,125,206	27,666	$5,533,116	40,392	$8,078,311
Boy's apparel, 2-15	16,417	$3,283,327	22,020	$4,403,908	32,148	$6,429,676
Children's apparel, <2	16,206	$3,241,233	21,737	$4,347,448	31,736	$6,347,244
Footwear	52,407	$10,481,390	70,293	$14,058,631	102,628	$20,525,503
Other apparel	60,615	$12,123,053	81,303	$16,260,585	118,702	$23,740,341
Entertainment:						
Entertainment fees (Theaters)	351,063	$17,553,171	470,879	$23,543,972	687,481	$34,374,036
TV, sound equip., etc.	105,656	$21,131,156	141,716	$28,343,103	206,904	$41,380,733
Misc. entertainment	152,380	$15,238,005	204,387	$20,438,652	298,403	$29,840,290
Reading	41,846	$7,113,875	56,128	$9,541,802	81,947	$13,930,964
Education	NA	$18,858,083	NA	$25,294,244	NA	$36,929,419

	2015 Sq Ft Created	Spending Over 1990	2040 Sq Ft Created	Spending Over 1990	2040 Mod Sq Ft Created	Spending Over 1990
Shelter and Related Exp.:						
Owner dwell exc. rep/maint	NA	$114,579,693	NA	$153,685,113	NA	$224,379,196
Owner dwell repairs/maint. (hardware, paint, etc.)	202,752	$24,330,295	271,951	$32,634,091	397,046	$47,645,546
Rented dwelling expenses	NA	$68,360,552	NA	$91,691,633	NA	$133,869,145
Other lodging expenses	NA	$25,508,925	NA	$34,214,981	NA	$49,953,634
Fuels, util., pub. svces.	NA	$85,661,159	NA	$114,896,843	NA	$167,748,591
Transportation Expenses:						
Cars/trucks - new	NA	$55,058,868	NA	$73,850,157	NA	$107,820,716
Cars/trucks - used	NA	$43,819,787	NA	$58,775,240	NA	$85,811,441
Other vehicles	NA	$1,052,348	NA	$1,411,509	NA	$2,060,793
Vehicle finance charge	NA	$14,143,562	NA	$18,970,683	NA	$27,697,065
Gas, motor oil	NA	$48,239,650	NA	$64,703,578	NA	$94,466,774
Vehicle repairs/maint.	NA	$27,487,340	NA	$36,868,618	NA	$53,827,926
Vehicle insurance	NA	$26,140,334	NA	$35,061,887	NA	$51,190,110
Public transportation	NA	$14,017,281	NA	$18,801,302	NA	$27,449,769
Vehicle rental, etc.	NA	$8,966,008	NA	$12,026,058	NA	$17,557,961
Health Care:						
Health insurance	NA	$26,266,616	NA	$35,231,268	NA	$51,437,406
Medical services	NA	$25,635,207	NA	$34,384,362	NA	$50,200,930
Prescription drugs	49,237	$8,124,130	66,042	$10,896,850	96,420	$15,909,326
Miscellaneous Items:						
Life and other insurance	NA	$15,911,508	NA	$21,342,018	NA	$31,159,198
Gift Expenditures:						
Gift clothing	44,620	$6,692,936	59,848	$8,977,198	87,378	$13,106,647
Gift jewelry and watches	2,183	$589,315	2,928	$790,445	4,274	$1,154,044
Gift small appliances	6,104	$1,220,724	8,187	$1,637,351	11,953	$2,390,520
All other gifts	25,904	$3,367,515	34,745	$4,516,829	50,727	$6,594,539
Totals	**3,041,165**	**$1,134,010,627**	**4,079,098**	**$1,521,042,232**	**5,955,455**	**$2,220,711,071**

Source: NPDC and Leland Consulting Group.

Appendix Table 3 (page 1)
Pro Forma for Transit Center Development
SE 122nd and Burnside

Program

	Acres	Square Feet
Project Land Area	2.9	125,000

Floor Area Ratio	0.48
Dwelling Units per Acre	17
Employees per Acre	37
Total Employees	105

	Stories	Footprint/Floor Area	Total
Project Commercial Square Feet	2	15,000	30,000
Project Residential Square Feet	2	14,975	29,950
Square Feet built		29,975	59,950

Surface Parking	65,664
Parking Spaces - 4/1000 SF Commercial, 1.3/Residential Unit	182
Square feet Site Coverage	95,639
Project Residential Units	48
Cost per Square Foot of Project	$81.84

Rent Assumptions

Unit Type	Units	SF/Unit	Rent/Unit or SF	Rent/Mo	Rent/Year
Studio	3	400	$450	$1,350	$16,200
One Bedroom	25	550	$550	$13,750	$165,000
Two Bedroom	20	750	$750	$15,000	$180,000
Office Commercial		30,000	$15.50	$38,750	$465,000

Appendix Table 3 (page 2)
Pro Forma for Transit Center Development
SE 122nd and Burnside

Stabilized Year Income Pro Forma

Gross Income - Rent				826,200
Less Vacancy/Credit Loss		5%		(41,310)
Effective Gross Income (EGI)				784,890
Less:				
Operating Expense	27.8% of EGI		(218,199)	
3% Replacement Reserve			(24,786)	
Real Estate Tax			(86,321)	
Total	42.0% of EGI			(329,307)
Net Operating Income				455,583
Debt Service @ Coverage of		1.30		(350,449)
Cash Flow Before Tax				105,135

Stabilized Year Return on Equity Before Tax 8.95%

Financing Information

Capitalized Value at 9.5%		$4,795,616
Max Loan @ 1.3 Debt Coverage Ratio		$3,798,096
Cash Equity Required		$1,108,473
Permanent Loan Rate	8.50%	
Amortization Period Yrs.	30	
Permanent Loan Points	1.75%	$66,467
Debt Service @ 1.3 Debt Coverage Ratio		$350,449
Construction Loan at Rate of	9.00%	$4,638,549
Construction Points	1.5%	$69,578

Appendix Table 3 (page 3)
Pro Forma for Transit Center Development
SE 122nd and Burnside

	Amount	Unit	Unit Cost	Cost
A. Land Acquisition				
Land Cost	125,000	SF	$2.98	**372,500**
B. Site Construction Costs				
Demolition/Site Clearing		LS	18750	18,750
Site Improvements				
Grading	125,000	SF	$0.25	31,250
Sewer/Water	800	LF	$60	48,000
Surface Parking	65,664	SF	$2.50	164,160
Landscaping	29,361	SF	$1.50	44,042
Total				**306,202**
C. Building Construction Costs				
Residential Building Shell Costs	29,950	SF	$40.00	1,198,000
Commercial Building Shell	30,000		$42.00	1,260,000
Com'l Tenant Improvements	30,000		$18.00	540,000
Contractor Overhd/Profit			5%	149,900
Total				**3,147,900**
D. Soft Costs				
Soft Costs other than interest and points			8.0%	276,328
Construction Interest			9.0%	419,270
Construction Points			1.5%	69,578
Total Soft Costs	18% as a percent of Hard and Soft Costs			**765,177**
Contingency			10%	**314,790**
Total Project Cost				**4,906,568**

Appendix Table 4 (page 1)
Pro Forma for Infill Redevelopment
SE 115th and Division, Site 1 (West of 115th)

Program

	Acres	Square Feet
Project Land Area	1.5	64,394

Floor Area Ratio	0.52
Dwelling Units per Acre	17
Employees per Acre	37
Total Employees @ 3/1000 Square Feet Commercial	54

	Stories	Footprint/Floor Area	Total
Project Commercial SF	1	18,000	18,000
Project Rental Square Feet	2.5	6,300	15,750
Square Feet built		24,300	33,750

Surface Parking	37,620
Parking Spaces 4/1000 SF Commercial, 1.3/Residential Unit	105
Square feet Site Coverage	61,920
Project Residential Units	25
Cost per Square Foot of Project	72.40

Rent Assumptions

Unit Type	Units	SF/Unit	Rent/Unit or SF	Rent/Mo	Rent/Year
Studio	0	400		$0	$0
One Bedroom	15	550	$500	$7,500	$90,000
Two Bedroom	10	750	$700	$7,000	$84,000
Retail/Office Space		18,000	$14.00	$21,000	$252,000

Appendix Table 4 (page 2)
Pro Forma for Infill Redevelopment
SE 115th and Division, Site 1 (West of 115th)

Stabilized Year Income Pro Forma

Gross Income - Rent				426,000
Less Vacancy/Credit Loss		5%		(21,300)
Effective Gross Income (EGI)				404,700
Less:				
Operating Expense	27.8% of EGI		(112,507)	
3% Replacement Reserve			(12,780)	
Real Estate Tax			(44,508)	
Total	42.0% of EGI			(169,795)
Net Operating Income				234,905
Debt Service @ Coverage of		1.30		(180,696)
Cash Flow Before Tax				54,209

Stabilized Year Return on Equity Before Tax 10.53%

Financing Information

Capitalized Value at 9.5%		$2,472,685
Max Loan @ 1.3 Debt Coverage Ratio		$1,958,350
Equity Required		$485,188
Permanent Loan Rate	8.50%	
Amortization Period Yrs.	30	
Permanent Loan Points	1.50%	$29,375
Debt Service @ 1.3 Debt Coverage Ratio		$180,696
Construction Loan at Rate of	9%	$2,442,715
Construction Points	1.5%	$36,641

Appendix Table 4 (page 3)
Pro Forma for Infill Redevelopment
SE 115th and Division, Site 1 (West of 115th)

	Amount	Unit	Unit Cost	Cost
A. Land Acquisition				
Land Cost	64,394	SF	$0.80	**51,516**
B. Site Construction Costs				
Demolition/Site Clearing		LS	6000	6,000
Site Improvements				
Grading	64,394	SF	$0.25	16,099
Sewer/Water	200	LF	$60	12,000
Surface Parking	37,620	SF	$2.50	94,050
Landscaping	2,474	SF	$1.50	3,712
Total				**131,860**
C. Building Construction Costs				
Residential Building Shell Costs	15,750	SF	$40.00	630,000
Commercial Building Shell	18,000		$40.00	720,000
Com'l Tenant Improvements	18,000		$15.00	270,000
Contractor Overhd/Profit			5%	81,000
Total				**1,701,000**
D. Soft Costs				
Soft Costs other than interest and points			9%	164,957
Construction Interest			9%	220,793
Construction Points			1.5%	3,312
Total Soft Costs	18% as a percent of Hard and Soft Costs			**389,062**
Contingency		10%		**170,100**
Total Project Cost				**2,443,538**

Appendix Table 5 (page 1)
Pro Forma for Infill Redevelopment
SE 115th and Division, Site 2 (East of 115th)

Program

	Acres	Square Feet
Project Land Area	2.5	110,413
Floor Area Ratio		0.37
Dwelling Units per Acre		12

	Stories	Footprint/Floor Plate	Total SF
Project Residential Square Feet	2	20,250	40,500
Square Feet built		20,250	40,500
Circulation - Includes 2 Parking Spaces per Unit			33,300
Square feet Site Coverage			53,550
Project Residential Units			30
Cost per Square Foot of Project			72.72

Rent Assumptions

Unit Type	Units	SF/Unit	Value or Rent	Sales or Rent/Year
Studio	0	400		$0
One Bedroom	0	550		$0
Two Bedroom	0	750		$0
For Sale Units	30	1,350	$135,000	$4,050,000
Commercial - Retail				$0

Appendix Table 5 (page 2)
Pro Forma for Infill Redevelopment
SE 115th and Division, Site 2 (East of 115th)

Stabilized Year Income Pro Forma

Gross Sales Revenues		$4,050,000
Less Brokerage	6%	($243,000)
Effective Sales Revenue		$3,807,000
Less: Real Estate Tax on Land Only		($1,590)
Cost of Construction		($2,945,307)
Net Revenues from Sales		$860,103
Cost per Unit		$98,177
Net Revenue per Unit		$28,670
Net Revenue as a Percent of Cost		29.20%

Financing Information

Construction Loan at	9.00%	$3,092,914
Construction Points	1.50%	$46,394
Term of Loan in Momths		12

Appendix Table 5 (page 3)
Pro Forma for Infill Redevelopment
SE 115th and Division, Site 2 (East of 115th)

	Amount	Unit	Unit Cost	Cost
A. Land Acquisition				
Land Cost - Unimproved, no permits	110,413	SF	$0.80	**88,330**
Cost per Lot	30	Lots	$2,944	
B. Site Construction Costs				
Demolition/Site Clearing		LS	6000	6,000
Site Improvements				
Grading	110,413	SF	$0.25	27,603
Sewer/Water	600	LF	$60	36,000
Circulation and Hardscape	33,300	SF	$3.50	116,550
Landscaping	5,000	SF	$1.50	7,500
Total				**193,653**
C. Building Construction Costs				
Residential Building Shell Costs	40,500	SF	$48.00	1,944,000
Commercial Building Shell	0		$42.00	0
Com'l Tenant Improvements	0		$18.00	0
Contractor Overhd/Profit			5%	97,200
Total				**2,041,200**
D. Soft Costs				
Soft Costs other than interest and points			12%	268,182
Construction Interest			9.0%	147,607
Construction Points			1.5%	2,214
Total Soft Costs	16% as a percent of Hard and Soft Costs			**418,004**
Contingency		10%		**204,120**
Total Project Cost				**2,945,307**

Appendix Table 6 (page 1)
Pro Forma for Infill Redevelopment
SE 39th and Division

Program

		Acres	Square Feet
Project Land Area		0.46	20,000
Floor Area Ratio			0.58
Dwelling Units per Acre			17
Employees per Acre			30
Total Employees	Retail at 2/1000 square feet		14

	Stories	Footprint/Floor Area		Total
Project Commercial SF	1	7,000		7,000
Project Residential Square Feet	1		4,500	4,500
Square Feet built		7,000		11,500
Surface Parking				12,420
Parking Spaces - 3.5/1000 SF Commercial, 1.25/Residential Unit				35
Square feet Site Coverage				19,420
Project Residential Units				8
Cost per Square Foot of Project				82.89

Rent Assumptions

Unit Type	Units	SF/Unit	Rent/Unit or SF	Rent/Mo	Rent/Year
Studio	2	400	$450	$900	$10,800
One Bedroom	4	550	$550	$2,200	$26,400
Two Bedroom	2	750	$750	$1,500	$18,000
Three Bedroom	0	1,000		$0	$0
Commercial Retail		7,000	$14.00	$8,167	$98,000

Appendix Table 6 (page 2)
Pro Forma for Infill Redevelopment
SE 39th and Division

Stabilized Year Income Pro Forma

Gross Income - Rent				153,200
Less Vacancy/Credit Loss		5%		(7,660)
Effective Gross Income (EGI)				145,540
Less:				
Operating Expense	23.1% of EGI		(33,620)	
3% Replacement Reserve			(4,596)	
Real Estate Tax			(17,096)	
Total	38.0% of EGI			(55,312)
Net Operating Income				90,228
Debt Service @ Coverage of		1.30		(69,406)
Cash Flow Before Tax				20,822

Stabilized Year Return on Equity Before Tax 9.72%

Financing Information

Capitalized Value at 9.5%		$949,772
Max Loan @ 1.3 Debt Coverage Ratio		$752,213
Equity Required		$200,966
Permanent Loan Rate	8.50%	
Amortization Period Yrs.	30	
Permanent Loan Points	1.75%	$13,164
Debt Service @ 1.3 Debt Coverage Ratio		$69,406
Construction Loan at Rate of	9.0%	$882,118
Construction Points	1.5%	$13,232

Appendix Table 6 (page 3)
Pro Forma for Infill Redevelopment
SE 39th and Division

	Amount	Unit	Unit Cost	Cost
A. Land Acquisition				
Land Cost	20,000	SF	$4.50	**90,000**
B. Site Construction Costs				
Demolition/Site Clearing		LS	0	0
Site Improvements				
Grading	20,000	SF	$0.25	5,000
Sewer/Water	200	LF	$60	12,000
Surface Parking	12,420	SF	$2.50	31,050
Landscaping	580	SF	$1.50	870
Total				**48,920**
C. Building Construction Costs				
Residential Building Shell Costs	4,500	SF	$40.00	180,000
Commercial Building Shell	7,000		$42.00	294,000
Com'l Tenant Improvements	7,000		$15.00	105,000
Contractor Overhd/Profit			5%	28,950
Total				**607,950**
D. Soft Costs				
Soft Costs other than interest and points			8%	52,550
Construction Interest			9%	79,733
Construction Points			1.5%	13,232
Total Soft Costs	18% as a percent of Hard and Soft Costs			**145,514**
Contingency		10%		**60,795**
Total Project Cost				**953,179**

Appendix Table 7 (page 1)
Pro Forma for Infill Redevelopment
NE Martin Luther King Blvd. and Portland Blvd.

Program

	Acres	Square Feet
Project Land Area	1.4	61,490

Floor Area Ratio	0.45
Dwelling Units per Acre	17
Employees per Acre	34
Total Employees	48

	Stories	Footprint/Floor Area	Total SF
Project Commercial Square Feet	1	12,000	12,000
Project Residential Square Feet	2	7,800	15,600
Square Feet built		19,800	27,600

Surface Parking Square Feet	28,512
Parking Spaces - 4/1000 SF Commercial, 1.3/Residential Unit	79
Square feet Site Coverage	48,312
Project Residential Units	24

Cost per Square Foot of Project	$72.83

Rent Assumptions

Unit Type	Units	SF/Unit	Rent/Unit or SF	Rent/Mo	Rent/Year
One Bedroom	12	550	$425	$5,100	$61,200
Two Bedroom	12	750	$550	$6,600	$79,200
Commercial - Retail		12,000	$11.50	$11,500	$138,000

Appendix Table 7 (page 2)
Pro Forma for Infill Redevelopment
NE Martin Luther King Blvd. and Portland Blvd.

Stabilized Year Income Pro Forma			
Gross Income - Rent			278,400
Less Vacancy/Credit Loss	5%		(13,920)
Effective Gross Income (EGI)			264,480
Less:			
Operating Expense	27.8% of EGI	(73,525)	
3% Replacement Reserve		(8,352)	
Real Estate Tax @ 1.8% of Value		(29,087)	
Total	42.0% of EGI		(110,965)
Net Operating Income			153,515
Debt Service @ Coverage of	1.30		(118,089)
Cash Flow Before Tax			35,427

Stabilized Year Return on Equity Before Tax	11.53%

Financing Information

Capitalized Value at 9.5%		$1,615,952
Max Loan @ 1.3 Debt Coverage Ratio		$1,733,167
Cash Equity Required		$276,843
Rate - Bond Revenue Financing	5.50%	
Amortization Period Yrs.	30	
Permanaent Loan Points	1.75%	$30,330
Debt Service @ 1.3 Debt Coverage Ratio		$118,089
Construction Loan at Rate of	9.00%	$2,011,437
Construction Points	1.5%	$30,172

Appendix Table 7 (page 3)
Pro Forma for Infill Redevelopment
NE Martin Luther King Blvd. and Portland Blvd.

	Amount	Unit	Unit Cost	Cost
A. Land Acquisition				
Land Cost	61,490	SF	$0.70	**43,043**
B. Site Construction Costs				
Demolition/Site Clearing		LS	6000	6,000
Site Improvements				
Grading	61,490	SF	$0.25	15,373
Sewer/Water	200	LF	$60	12,000
Surface Parking	28,512	SF	$2.50	71,280
Landscaping	13,178	SF	$1.50	19,767
Total				**124,420**
C. Building Construction Costs				
Residential Building Shell Costs	15,600	SF	$40.00	624,000
Commercial Building Shell	12,000		$42.00	504,000
Com'l Tenant Improvements	12,000		$15.00	180,000
Contractor Overhd/Profit			5%	65,400
Total				**1,373,400**
D. Soft Costs				
Soft Costs other than interest and points			8%	119,826
Construction Interest			9%	181,810
Construction Points			1.5%	30,172
Total Soft Costs	18% as a percent of Hard and Soft Costs			**331,807**
Contingency		10%		**137,340**
Total Project Cost				**2,010,010**

APPENDIX B

(Project Catalogue Attached Separately)