

**POST-CONSTRUCTION  
RESIDENTIAL WORKFORCE DYNAMICS  
IN PITKIN COUNTY**

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## TABLE OF CONTENTS

Introduction.....	3
Executive Summary.....	4
Data and Methods.....	6
Analysis of Residence Square Footage and Employment Generation.....	8
Comparative Analysis of Representative Populations.....	13
Use Types and Employment.....	17
Part-Time Resident Current Use Patterns, History, and Preferences.....	18
Property Management: A Residential Services Industry.....	23
Summary and Conclusions.....	28

## LIST OF FIGURES AND TABLES

Figure 1: Employment and Square Feet City/County Employee and High-End Residence Owner Surveys.....	9
Figures 2-4: Square Footage Threshold Calculations.....	10
Figure 5: Distribution of Responses by Size Thresholds.....	11
Figure 6: Merchandise Retail Jobs, Pitkin County.....	16
Figure 7: Eating and Drinking Employment, Pitkin County.....	17
Figure 8: Pitkin County Real Estate Jobs.....	25
Figure 9: Roaring Fork Region Landscaping Jobs.....	26
Figure 10: Average Employment in Housekeeping and Janitorial Services, Aspen to Rifle.....	27
Table 1: Residence Employment Analyzed by Square Footage Thresholds Excluding Retail Expenditures.....	12
Table 2: Residence Employment Analyzed by Square Footage Thresholds Including Retail Expenditures.....	12
Tables 3 & 4: Comparative Analysis of High-End Residences and Employee of City or County Residences.....	15
Table 5: Average FTEs of High-End Residences by Use Type.....	17
Table 6: Part-Time Resident Use Patterns, History, and Preferences.....	20
Table 7: Units Managed by Property Management Firms.....	23
Table 8: Units Owned by Property Management Firm Employees.....	23
Table 9: Units Managed by a Property Management Firm FTE and Physical Type.....	24
Table 10: Units Managed by a Property Management Firm FTE and Management Type.....	24

## INTRODUCTION

The purpose of this portion of the residential workforce dynamics study is to quantify the employment demands generated by built residential units in Pitkin County and to explore the relationship of residential use patterns to employment demands.

Much of the quantitative analysis in this study focuses on exploring linkages between measurable characteristics of residences and employment generation. This approach of economic analysis with a tangible land use focus will help local officials understand how residential development contributes to growth in the dynamic economic arena in Pitkin County.

Evolving residential use patterns continually influence socio-economic processes in resort communities. The 1997 Residential Use Patterns and Workforce Dynamics report (Riebsame and Preston) concluded that residential use patterns<sup>1</sup> relate to service demands. While the 1997 study was based on data collected in interviews, it did not include quantitative analysis tying use types to service demands. This study tests the conclusion of the 1997 study that use types relate to service demands using quantitative data and methods.

The influx of affluent part-time residents has had some significant effects on the socioeconomic, cultural, and political scenes in the Roaring Fork Valley. However, the characteristics and preferences of this important population are not well understood. This study uses qualitative and quantitative data to illustrate residential use patterns, demographics, history, and preferences of the part-time resident population in Pitkin County.

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<sup>1</sup> *Residential use patterns* arise from varying uses of residences in terms of annual occupancy patterns, ownership arrangements, and behaviors and types of occupants.

## EXECUTIVE SUMMARY

Job growth is an important aspect of economic growth, especially in Pitkin County where increased job growth can cause increased traffic congestion, increased stress on public services, and increased demand on the already scarce affordable housing stock. Local residential real estate, particularly high-end residential real estate generates significant labor demands. The 1999 *Pitkin County Residential Construction Workforce Dynamics*<sup>2</sup> study estimates the labor demand and job growth associated with *building and remodeling* residential units. This study, companion to the *Pitkin County Residential Construction Workforce Dynamics* study quantitatively analyzes on-going labor demands connected to built residential units in Pitkin County and the service demands connected to the occupants and owners of these units.

### **Analysis of Residential Square Footage and Employment Generation**

Descriptive statistical analysis<sup>3</sup> of data collected from two representative populations (e.g., high-end residence owners and working residents) revealed that labor demands associated with the on-going service requirements of built residences increase with the size of residential units. The Pearson's *r* correlation coefficient<sup>4</sup> between square footage and labor demand is .72 (*r*= .81 excluding labor generated by retail spending). Averages and median calculations above and below the three house size thresholds (4000 sq. ft., 5000 sq. ft., and 6000 sq. ft.) further reinforce the finding that larger homes have greater employment demands than smaller homes.

### **Comparative Analysis of High-End Residence Owners and Working Residents**

Comparative analysis of the representative populations, consisting of working residents and high-end residence owners, revealed some fundamental economic differences between the two populations. Working residents earn most of their income locally, live in smaller, less expensive homes, they provide most of their own residential services, and spend modest amounts in the retail sector, resulting in a relatively small per household employment demand figure (average=.15 FTE). High-end residence owners earn most of their income outside of the regional economy, own larger, more expensive residences, and hire individuals and firms to provide the services required by their high-end homes. They also tend to spend substantial amounts of money in the local retail, and eating and drinking sectors. The result is that high-end residences have larger labor demands (average=1.32 FTE) than working resident homes.

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<sup>2</sup> By Gabe Preston (1999), Available at the Pitkin County Community Development Department.

<sup>3</sup> Descriptive Statistics: Procedures used to organize and present data in a convenient, usable, summary form.

<sup>4</sup> Pearson's *r* is a measure of the linearity of a relationship between two numeric variables. The coefficient is always expressed between 1 and -1 where a positive *r* indicates that high scores of one variable tend to be associated with high scores of the other variable while low scores of both variables tend to be associated as well. A negative score indicates an inverse relationship between the two variables. *r*=1 or -1 would mean that the two variables relate in a perfectly linear manner while *r*=0 would mean that the two variables have no relationship. In other words Pearson's *r* measures how two variables move together.

### **Residential Use Types and Employment Demands**

The major residential use types found in this study, the working residence home, the itinerant residence, the vacation home, and the primary high-end residence, all have unique labor demands. Data collected from part-time residents (e.g., itinerant residences and vacation homes) suggest that the part-time resident population will most likely increase their occupancy of their Pitkin County homes in the future, and to a certain degree, they already have increased their occupancy beyond what it has been in recent years. This increased occupancy will most likely create additional labor demands.

### **Property Management**

The local property management industry is largely based on providing residential services to part-time residences. The average per unit labor demand supplied to a unit by a property management company is .66 FTE. Growth in this industry is difficult to detect because it occurs mainly in dispersed residential services sub-contractor businesses or in an informal, unreported manner.

## DATA AND METHODS

The lack of existing adequate data for addressing any of the main research questions necessitated several data collection efforts. While the populations targeted for data collection are all distinct, they have common elements. The housing unit is the basic unit of residential land use. Thus, data collection efforts compiled information about individual housing units and those units' occupants/owners. In order to get accurate employment figures, the respondents and interviewees needed to have a detailed knowledge of the expenditures associated with their respective residential units. This eliminated substantial portions of the population, like renters, who most likely do not know the cost of maintaining or landscaping their rented units. The methodological challenge was to target populations that would be able to answer detailed household expenditure questions and still generally represent the range of households in Pitkin County. Targeting representative populations was the solution to this methodological challenge. In other words, interviewees or survey subjects were not selected by random sample, but were chosen based on their potential for having detailed knowledge of household expenditures and by the type of economic entity their household represented within the resort economy.

The survey and interview efforts consisted of two different pairs of complementary and parallel surveys. The basic characteristics of each of these pairs is summarized below:

### **Property Management Company Surveys**

Property management companies were an obvious place to start collecting data. They provide a whole range of services to built residences and, in most cases, they keep accounts of the labor hours or the total expenditures related to various categories of service offered to a given unit. Two parallel surveys were distributed to more than 20 Pitkin County property management firms. The Property Management Company Unit Profiles (Appendix A) asked the firms to outline the expenses (easily converted into an employment figure)<sup>5</sup> for each of five units representative of the units under their management. Firms were also asked to provide information about the physical characteristics of each unit as well as the level of management for each unit (e.g., short-term rental, non-rental, long-term rental). Also included in the survey packets were several Working Resident Questionnaires (Appendix B) which were distributed to several employees of the property management companies. The questions on these surveys essentially paralleled the questions on the Unit Profiles, thus establishing a mechanism for comparing managed, largely part-time residences to residences owned by working full-time residents.

### **High-End Residence Owner Interviews**

The property management surveys did not provide the full spectrum of labor demands arising from the kind of residential development occurring in Pitkin County at the present

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<sup>5</sup> RIMS data (Regional Input-Output Modeling System), available from the Federal Bureau of Economic Analysis; local sales tax revenues; ES202 data, available from the Colorado Department of Labor Statistics were all used to calculate coefficients that convert household expenses of various types into employment figures.

time. A representative population approach was then taken to more fully explore the residential labor market. The bulk of recent residential development has been remarkably high-end, but very little is known about the labor demands arising from high-end residential real estate and the economic behavior of the occupants of high-end residences. However, the high-end residence is only one side of the residential spectrum in Pitkin County. The various political entities that makeup Pitkin County have struggled to maintain the working resident population because several market forces have been threatening their ability to continue to live in Pitkin County (e.g., housing prices). High-end residences dominate the local real estate market while the working residents are continually displaced by the high cost of living in Pitkin County. This suggests a socio-economic dichotomy between high-end residence owners and working residents. These dichotomous groups proved statistically useful for conducting comparative analysis that sheds light on the relative employment demands, residence characteristics, and demographics of each group.

Initially the high-end residence owner population was located by asking intermediary contacts (e.g., real estate agents, property management companies, and other community members who work with or are socially connected to owners of high-end residential real estate) to provide a list of names and phone numbers of "owners of high-end residential real estate." Thirty-eight (38) high-end residence owners were contacted and interviewed. The key characteristics of the high-end residence owner population are summarized in and discussed later on in this report (see Table 3).

### **Working Resident Survey**

Pitkin County homeowners that are Employees of the City of Aspen and Pitkin County were also surveyed. In addition to being very accessible, this group represents the population of full-time residents working for local businesses or organizations. The questions on Employees of the City of Aspen and Pitkin County survey paralleled the questions asked in the high-end residential real estate owner interviews so that results from the two surveys could be compared and analyzed side by side.

Interview questions for the high-end residence owners and for employees of the City of Aspen and Pitkin County asked for information about service requirements for building and systems maintenance, landscaping, housekeeping, snow removal, security, utilities, and expenditures for retail and health/sporting clubs. Interviewee and survey respondents answered the service requirement question either in terms of labor time (e.g., hours per week) or expenditures. Full time equivalent (FTE) employees were calculated for each unit by using labor per receipt sales coefficients.<sup>6</sup> The labor time figures were simply flattened into an FTE figure (e.g., a gardener working for 4 hours 2 times per week is .2 of an FTE where an FTE is 40 hrs per week).

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<sup>6</sup> RIMS data has a jobs per dollars of receipts figure for a whole range of industrial classifications. This same coefficient was also calculated for some sectors (eating and drinking, merchandise retail, hotels and motels) by dividing ES202 employment figures for the City of Aspen for a given sector by the total sales (compiled in the sales tax data) for that sector.

## **Existing State and National Data**

Two types of existing data proved useful in this study. ES202 data provided by the Labor Market Information section of the Colorado Department of Labor provides information about individual firms including industrial classification, employment, wages, zip code, and county. Unfortunately, the industrial classification system is based on an out-dated urban industrial/rural agricultural model and so does not apply well to resort economies. Nonetheless, employment information from 1990 to 1997 for Pitkin, Garfield, and Eagle counties is useful for tracking trends in some sectors (e.g., retail, eating and drinking, and housekeeping). RIMS data for the "Ski Country Region" provides important coefficients for analysis and confirmation of the data collected in the surveys and interviews. One particularly important coefficient converts receipt sales into employment figures for specific industrial classifications. RIMS data are disaggregated down from national input-output models, so their accuracy was checked where it was possible to do so.

## **ANALYSIS OF RESIDENTIAL SQUARE FOOTAGE AND EMPLOYMENT GENERATION**

The parallel structure and content of Employee of the City of Aspen and Pitkin County survey and High-End Residence Owner interviews allowed for the combination of them into one database. Analysis consisted of a systematic exploration of the database to find correlation between measurable characteristics of the residential units and employment generation. For each unit, the FTE total was graphed against value, physical type (condo, single family etc.), the number of bedrooms, and the square footage. The total number of observations with the combined survey responses and completed interviews was 77 or,  $n=77$ , (where  $n$  stands for the total number of observations used for a given calculation).

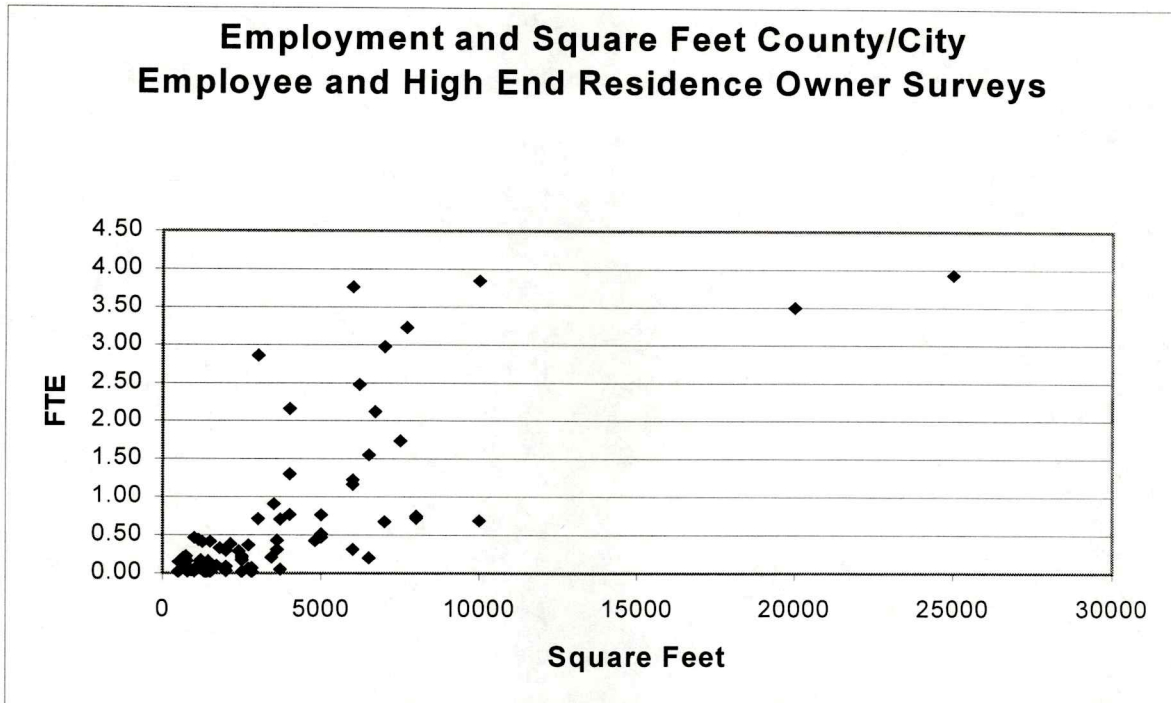
### **Analysis Using a Correlation Coefficient**

Analysis of square footage against FTE requirements reveals a substantial positive correlation between square footage and FTE demands. Figure 1 is a scatter-gram of the FTE requirements graphed against the square footage for each unit in the Employee of the City of Aspen or Pitkin County survey and High-End Residence Owner interviews. The correlation between square footage and FTE requirements is .74 using Pearson's  $r$  correlation coefficient.<sup>7</sup> Subtracting out the portion of the FTE total for each unit generated by retail spending, increases the correlation coefficient to .81. These figures indicate that overall, larger homes have larger labor demands and conversely, smaller homes have smaller labor demands.

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<sup>7</sup> Pearson's  $r$  correlation coefficient is a measure of the degree to which two variables move together.  $r=1$  would mean that all of the data points would arrange themselves on a straight line sloping in the positive direction, while  $r=0$  would indicate no relationship at all.

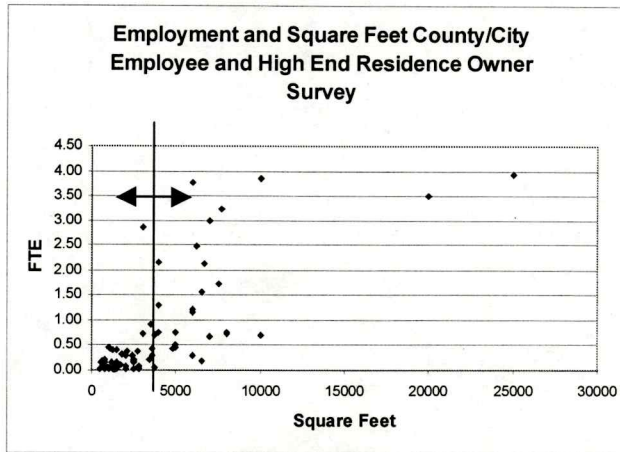
Figure 1



### Analysis Using Square Footage Thresholds

Another approach to analyzing the relationship of square footage to FTE requirements is to divide the database at square footage thresholds and calculate the average and mean FTE requirements for the whole data set on either side of the threshold. For example, in Figure 2, the data set was divided such that the homes greater than 4000 sq. ft. were separated from those less than or equal to 4000 sq. ft. The averages and the means were calculated for the groups of observations on either side of the 4000 sq. ft. threshold line. The results are summarized in the small table below each scatter-gram. The same operation was applied to the 5000 sq. ft. and 6000 sq. ft. thresholds to yield the results in Figures 3 & 4.

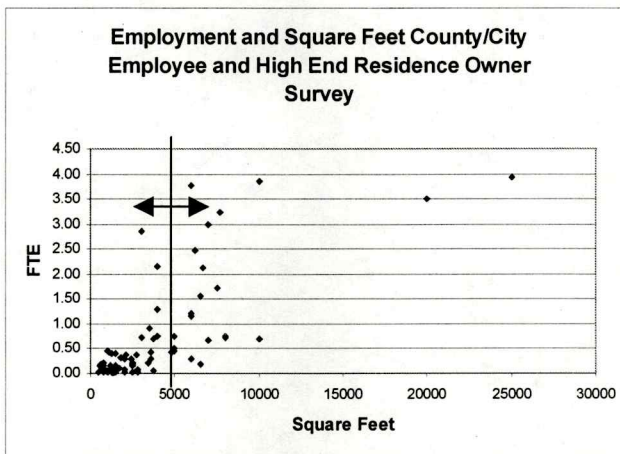
**Figure 2**  
Data Set Divided at 4000 sq. ft.



	<b>Average FTE</b>	<b>Median FTE</b>
<i>less than or equal to 4000 sq. ft.</i>	.31	.16
<i>greater than 4000 sq. ft.</i>	1.64	1.17

*n*=77 (where *n* means the total number of observations)

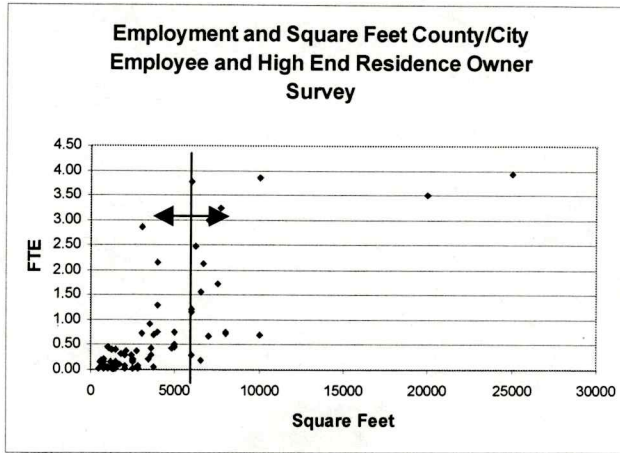
**Figure 3**  
Data Set Divided at 5000 sq. ft.



	<b>Average FTE</b>	<b>Median FTE</b>
<i>less than or equal to 5000 sq. ft.</i>	.33	.17
<i>greater than 5000 sq. ft.</i>	1.87	1.55

*n*=77

**Figure 4**  
Data Set Divided at 6000 sq. ft.

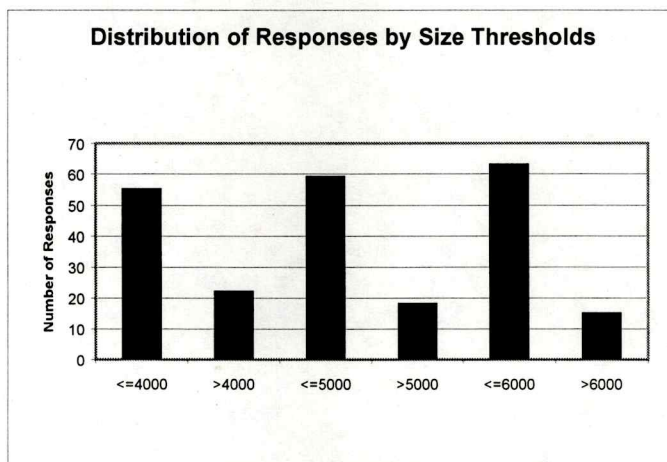


	Average FTE	Median FTE
<i>less than or equal to 6000 sq. ft.</i>	.41	.2
<i>greater than 6000 sq. ft.</i>	1.94	1.74

*n=77*

6000 sq. ft. is the largest threshold used in this analysis because of the low number of homes larger than 6000 sq. ft. [ $n=15$ ]. A larger threshold number would yield less reliable results due to the low number of observations used for the median and average calculations. Figure 5 summarizes the number of observations above and below each of the three square footage thresholds.

**Figure 5**



The whole procedure was also performed with the FTE total for each unit generated by retail spending subtracted out of the data. Table 1 summarizes the results of this operation. Table 2 summarizes the information contained in Figures 2-4, which includes Pitkin County employment generated from local retail expenditures.

**Table 1**

<b>Residence Employment Analyzed by Square Footage Thresholds Excluding Retail Expenditures</b>		
<b>Residence Size Threshold</b>	<b>Average FTE For Square Footage Threshold Group</b>	<b>Median FTE For Square Footage Threshold Group</b>
<i>less than or equal to 4000 sq. ft.</i>	.22	.05
<i>greater than 4000 sq. ft.</i>	1.45	1.19
<i>less than or equal to 5000 sq. ft.</i>	.24	.06
<i>greater than 5000 sq. ft.</i>	1.67	1.35
<i>less than or equal to 6000 sq. ft.</i>	.31	.13
<i>greater than 6000 sq. ft.</i>	1.74	1.43

**Table 2**

<b>Residence Employment Analyzed by Square Footage Thresholds Including Retail Expenditures</b>		
<b>Residence Size Threshold</b>	<b>Average FTE For Square Footage Threshold Group</b>	<b>Median FTE For Square Footage Threshold Group</b>
<i>less than or equal to 4000 sq. ft.</i>	.31	.16
<i>greater than 4000 sq. ft.</i>	1.64	1.17
<i>less than or equal to 5000 sq. ft.</i>	.33	.17
<i>greater than 5000 sq. ft.</i>	1.87	1.55
<i>less than or equal to 6000 sq. ft.</i>	.41	.2
<i>greater than 6000 sq. ft.</i>	1.94	1.74

## **Summary of Square Footage and FTE Analysis**

### **Conclusion:**

Employment demands increase with the size of residences.

### **Strengths:**

- Methodology ties economic activity, specifically employment generation to a measurable land use characteristic (i.e., residential square footage).
- Possibly the only study to collect economic data for the difficult to access part-time resident population.
- The surveys and the interviews were parallel, allowing for their analysis as a single database.

**Weaknesses:**

- Populations for surveys and interviews were not determined by random sampling.
- Respondents' answers to survey questions were usually estimates.
- Survey and interview populations did not include rental units.

**Assumptions:**

- Respondents of two surveys generally represent the population of homeowners in Pitkin County.
- One person working a 40 hr. workweek is one FTE.
- Small numbers of observations (as low as  $n=15$ ) were used for calculating larger home mean and average FTE figures.

## **COMPARATIVE ANALYSIS OF REPRESENTATIVE POPULATIONS**

Further analysis of the data collected in the employees of Pitkin County and City of Aspen surveys and the high-end residence owner interviews revealed several differing characteristics between the two populations. Three basic categories delineate the differences between the two populations: 1.) residence characteristics 2.) economic behavior 3.) demographics. Refer to Table 3 for the summary of the figures calculated from the surveys and interviews.

### **Residence Characteristics**

- High-end residence owners' homes are considerably larger and more valuable than those of employees of Pitkin County and the City of Aspen.
- High-end residence owners' homes have more bedrooms than those of employees of Pitkin County and the City of Aspen.
- Around half of the high-end residence owners have remodeled their home since they purchased it, while 34% of the employees of Pitkin County and the City of Aspen have remodeled their homes (see Table 4).

### **Economic Behavior**

- The average high-end residence owner generates nearly nine times more employment demand (including retail) than do the employees of Pitkin County and the City of Aspen.
- The average high-end residence owner spends about three times as much on merchandise retail and goes out to eat about twice as often as an average Employee of Pitkin County or City of Aspen.
- While Pitkin County and City of Aspen employees earn most of their money in Pitkin County and spend most of their money elsewhere, high-end residence owners earn

nearly all of their money outside of our regional economy and spend it in Pitkin County.<sup>8</sup>

## **Demographics**

- High-end residence owners are an average age of 55 years old while an average Employee of Pitkin County or the City of Aspen is 44 years old.
- The average length of ownership of the current residence is between eight and nine years (8-9 yrs.) for high-end residence owners and Employees of Pitkin County or City of Aspen alike.
- The average high-end residence owner's household has .2 children in Aspen public schools while the average Employee of Pitkin County or City of Aspen household has .3 children in public school.

## **Summary of Comparative Analysis**

Comparative analysis of the data collected from the two populations reveals insights into some basic characteristics of each. Portraits of each population follow:

### **Portrait of a Working Resident**

The household owned by an Employee of Pitkin County or City of Aspen represents a traditional economic unit. The members of this population earn their money in the regional economy and have thereby purchased homes within automobile commuting distance from their place of work. Working residents have low FTE requirements for services connected to their residences. They tend to have smaller, relatively inexpensive residences (49% deed restricted affordable housing units), about 54% of which are units in a multifamily building. While condo owners have to pay association managers and groundskeepers, most working residents provide the majority of their own maintenance and repairs, landscaping, housekeeping etc. Pitkin County working resident households spend most of their retail dollars quite far from their residence (e.g., down-valley or mail order) due to the high cost of goods or their unavailability in the resort communities.

### **Portrait of a High-End Residence Owner**

High-end residence owners are generally vacationers, long-distance commuters/telecommuters, or retirees. In other words they spend money in Pitkin County that they earn outside of the Roaring Fork Regional Economy, and therefore act collectively as an *economic base*. According to Colorado Division of Local Government's Demography Section, an economic base is any unit functioning to bring "new," outside money into a regional economy. In an industrial model, a base industry is

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<sup>8</sup> While the percentage of high-end residence owners' spending that occurs in Pitkin County is unknown, the interviewees indicated qualitatively that the majority of their spending occurs in the Aspen area commercial districts.

Table 3

	High-End Residence Survey			Employees of City and County Survey		
	Number of Respondents	Average	Median	Number of Respondents	Average	Median
Square Footage	37	6298	6000	41	1608	1350
Market Value of Residential Property	29	\$3,740,690	\$2,900,000	40	\$467,705	\$197,500
# Bedrooms	37	4.4	5	41	3	3
FTE With Retail	37	1.32	.75	41	.15	.09
FTE Without Retail	37	1.1	.71	41	.1	.04
Years Owned	36	8.3yrs	5yrs	40	8.6yrs	5yrs
Age of Respondents	37	55yrs	54yrs	40	44yrs	46yrs
# Children in Local Public School	34	.2	0	41	.3	0
Retail Expenditures	22	\$47,300	\$18,100	40	\$15,300	\$12,500
# Times Out to Eat/Drink Per Week	33	4	3	41	1.8	1
% of Retail Spending in Pitkin County	No data	-----	-----	38	42%	32.5%
% of Income Earned in Roaring Fork Regional Economy	37	6%	0%	41	90%	100%

Table 4

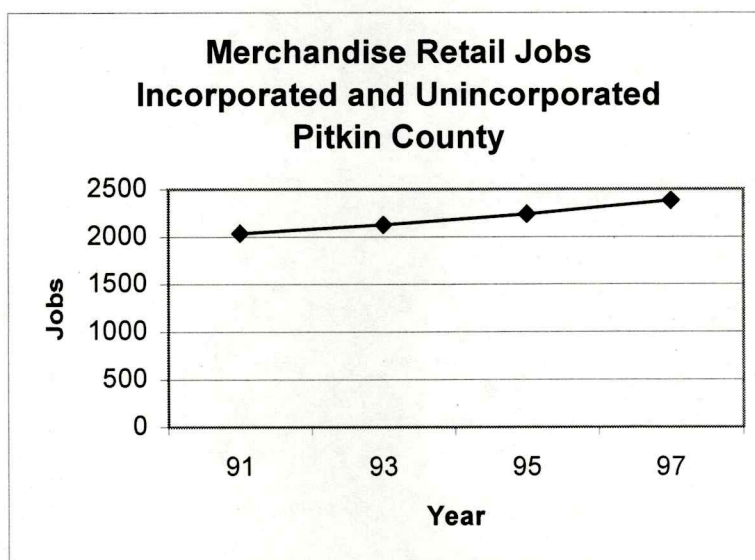
	High-End Residence Survey			Employees of City and County Survey		
	# of Respondents	% yes	% no	# of Respondents	% yes	% no
Have Remodeled	37	49%	51%	41	34%	66%
Will Remodel in Near Future	34	21%	79%	41	78%	22%

an export industry, but in a resort economy, economic bases consist of economic entities like tourism, part-time residences, and transfer payments. Base economic activity acts as an engine for growth in other sectors by injecting new money into the regional economy. This is called the *multiplier effect*. Working residents, by virtue of the fact that they earn most of their income in Pitkin County, do not act as an economic base, but rather are multipliers of other base economic activity.

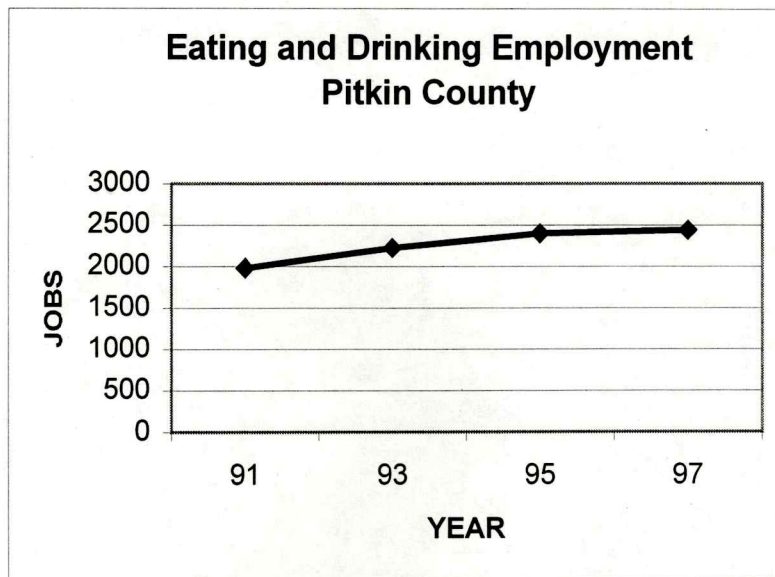
High-end residence owners spend significant amounts of money on their homes and in the downtown retail sectors. Their homes are large and expensive, and they tend to hire firms or individuals to service them. Their spending in the retail, eating and drinking, and sporting/health clubs sectors is quite high as well, resulting in significant employment in these sectors. Every dollar that they spend on maintaining their homes or shopping downtown is a new dollar into the community, and therefore has multiplier effects that recycled money does not have.

High-end residence owners' spending in the restaurant, retail, and recreational services sectors tends to mesh with tourist spending. Figures 6 and 7 chart growth in reported employment in Pitkin County in the Merchandise Retail and Eating and Drinking sectors from 1991 to 1997. A glance at Figures 6 & 7 indicates that these sectors are large and growth is significant (3-4% annually), but there is no indication of where this growth comes from. Given that new dollars are economically more potent than recycled dollars, an interesting future study would be to attempt to separate the growth in retail, eating and drinking, and recreational services generated by tourist visits and high-end residence owners (spending outside money) from that generated by working residents (spending recycled money). The results of such a study would reveal what proportion of downtown sector spending is acting as an economic base.

**Figure 6**



**Figure 7**



### **USE TYPES AND EMPLOYMENT**

The 1997 Residential Use Patterns and Workforce Dynamics Report (Preston and Riebsame) concluded that use patterns have a direct effect on service demand levels. The high-end residence owner interview database includes information about residence occupancy making it possible to categorize the use type of each of the residences in the population. Pitkin County homeowners who are employees of Pitkin County or the City of Aspen constitute their own use type: the working resident home. The three use types for high-end residences are primary residences (used nearly year-round and claimed by the owner as their primary residence), itinerant residences, (used 4-8 months per year and sometimes claimed by the owners as their primary residence), and vacation homes (used for skiing and summer vacations). Table 5 summarizes the results of analyzing employment requirements by Use Type.

Not surprisingly, given the socio-economic differences between the two groups (see Table 3), employment demands for the working resident use type are lower than for any

**Table 5**

#### **Average FTEs of High End Residences By Use Type**

Use Type	Average FTE	Median FTE	# of Responses
Primary Residence (high-end)	1.7	1.17	11
Itinerant Residence (high-end)	1.4	.83	14
Vacation Home (high-end)	.9	.52	12
Primary Residence (working resident)	.15	.09	41

of the use types in the high-end residence owner categories. Employment demands for high-end residences increase with the amount of time the home is occupied (e.g., vacation homes are occupied the least and primary residences the most). The increase of service demands connected to the actual occupancy of the home (e.g., housekeeping, laundry, floral arrangements, catering, more retail expenditures, etc.) explains why employment demand increases with occupancy.

Occupancy is not the only useful factor for categorizing use types. Riebsame and Preston (Residential Use Patterns and Workforce Dynamics, 1997) used several other factors in defining use types such as ownership arrangements, or in the case of part-time residences, the purpose for visits (skiing, retirement, etc.). However, since employment is focus of the current study, occupancy serves as the critical factor in defining use types.

## **PART-TIME RESIDENT CURRENT USE PATTERNS, HISTORY AND PREFERENCES**

Part-time residences are as much a part of the fabric of the resort scene as are hotels and t-shirt shops. However, little research exists about the evolution of the part-time resident population. The purpose of this portion of research is to track changing use patterns of the part-time resident population in Pitkin County.

All of the part-time residents in the high-end residence owner population were asked several directed “yes/no” questions about their plans for their residence in Pitkin County in the formal part of the interview. The most pertinent findings from these questions are summarized below:

Part-time residents planning to use their Pitkin County residence more in the future: **63%**

Part-time residents planning to use their Pitkin County residence in retirement: **53%**

Part-time residents who plan on making the transition into full-time residents: **46%**

Informal dialogue with willing interviewees provided details about past and future use patterns of part-time residents that the directed “yes/no” questions could not. Each row in Table 6 summarizes the history, present residential use, and future plans for each of 24 interviewees, 21 of which are part-time residents. The total number of high-end residence owner interviewees is 37. The 13 interviewees not included in this analysis were either full-time residents that did not shed light on the changing use patterns of part-time residents, or they were part-time resident interviewees that did not divulge enough information to create an entry in the table. All of the interviewees, by definition (owners of high-end residential real estate) have a current use of their residential real estate and so this column in Table 6 is entirely full. If the interviewees have owned other Pitkin County residences in the past and/or have changed the use of their current residence, they were asked to summarize their “residential history.” If their current residence is their first residence in Pitkin County and they have used it in the same manner since they

purchased it, they were asked to summarize their past visitation to the Aspen area. All residents were asked to summarize their plans for future residential use in Pitkin County.

A previously unknown use type, the itinerant home base, emerged in significant numbers. Briefly, several of the interviewees “live” in their Pitkin County home for around half of the year, mostly during the ski season and summer. Their Pitkin County home is one of two or perhaps three large homes in amenity rich settings. Their other main residences are in places like Newport Beach or San Diego, California; Naples, Florida; or Hilton Head, South Carolina, where the weather is favorable during the Roaring Fork Valley’s off-season. Their Pitkin County home and their other major home(s) serve as their home base for long distance commuting and telecommuting to cities, where they may have apartments for business trips. Often, the breadwinner’s spouse will stay in residence at one of the two or three home bases while the breadwinner goes on business trips. One interviewee nicely encapsulated the motives behind this residential trend when he said “I like to be on vacation when I’m home.”

The main purpose of this portion of the analysis was to explore how, and to what degree, part-time residents change their residential use patterns. Out of the entire set of interviewee responses summarized in Table 6, only one interviewee uses their residence less than they have in the past. Virtually none of the interviewees plan on using their residence less in the future; they either plan on maintaining their current occupancy patterns or increasing their occupancy of their Pitkin County high-end home. Several trends in Table 6 provide evidence to that effect.

About half of the itinerant residents in Table 6 previously used their home as a vacation home as did the two primary residents, suggesting that the move toward higher occupancy rates of part-time residences is already underway. Over half of the vacation homeowners in Table 6 indicated that they want to spend more time in residence at their Pitkin County home. Some vacation homeowners specified future occupancy patterns (e.g., 40% of the year, or all summer long) that characterize the itinerant residence use type and one even expressed serious plans to become a primary resident of Pitkin County. The majority of itinerant residents (already spending at least 4 months per year in residence) expressed plans to spend more time at their Pitkin County residence. In many cases, this would mean a transition into full-time residency.

It appears that around half of the part-time residents in Table 6 are evolving through the use types into full-time residents (e.g., tourists into vacation homeowners into itinerant residents into primary residents). Obviously, this is not true in all cases. Some interviewees went straight from being visitors to the Aspen Area to being itinerant residents, and do not plan on occupying their Pitkin County home more often than they already do. But only in one case (e.g., a full-time resident became an itinerant resident) does the trend move in the opposite direction. For the part-time resident population as a whole, occupancy is on the rise. Given the fact that employment demands increase with occupancy of high-end real estate, an increase in occupancy could have some significant employment market implications. Thus, the changing use patterns of part-time residents will continue to be a worthwhile object of study.

**Table 6: Part-Time Resident Use Patterns, History, and Preferences**

Current Residence Use Profile	Past Visitation to the Aspen Area	Residential History	Future Plans for Use of Residence
<p>Itinerant Homebase: Uses Pitkin County residence as a homebase for telecommuting and frequent business trips for 6 months per year.</p>		<p>Owners have owned current residence since 1972, and are currently building a new residence in the County. Used residence as a vacation home until recent years.</p>	<p>Use will stay the same for the foreseeable future.</p>
<p>Itinerant Home Base: The owners use their home for a home base during the winter and summer for long distance commuting.</p>		<p>Owned a home in Aspen for several years and currently renting while having a new home constructed. They began using their Aspen home as a vacation home and have since begun to spend more time in residence.</p>	<p>They will most likely keep using their home as an itinerant residence.</p>
<p>Itinerant Home Base: The owners use their home for a home base during the winter and summer for long distance commuting.</p>	<p>Owners skied in the valley for 25 years before deciding to purchase their property.</p>		<p>In the next few years, the husband will reduce business ties and they will spend more time in residence.</p>
<p>Itinerant Home Base: Wife is here during summer and ski season while husband long-term commutes.</p>		<p>They have owned a rural mountain home and a town home for over 20 years.</p>	<p>Not Available.</p>
<p>Itinerant Home Base: Wife is in residence during summer and ski season while husband long distance commutes.</p>	<p>Owners have family connections in the area and have visited for years.</p>		<p>Owners plan on spending more time in Aspen, but this will require semi-retirement.</p>
<p>Itinerant Residence: Under construction. Owners plan to use residence as a gathering place for their extended family and friends</p>	<p>Owners have explored the Aspen area several times while visiting local relatives.</p>		<p>Owners hope to eventually spend 40% of their time living at their Pitkin County Home.</p>
<p>Itinerant Residence: Used almost every weekend and for longer stays during summer.</p>		<p>Used to live full-time in the Roaring Fork Valley.</p>	<p>Would like to be spend more time in residence during the summer.</p>
<p>Itinerant Residence: Time split evenly between Pitkin County home and California home.</p>		<p>Was a full-time resident until three years ago.</p>	<p>Continue to use residence as an itinerant residence.</p>

<b>Current Residence Use Profile</b>	<b>Past Visitation to the Aspen Area</b>	<b>Residential History</b>	<b>Future Plans for Use of Residence</b>
<p>Itinerant Residence: Owners use their residence in the summer and ski season.</p>	<p>Owners have skied here for 20 years and rented an apartment for the summer of 1992 and bought their home that year.</p>		<p>Unsure.</p>
<p>Itinerant Residence: To be used as a place for gathering with extended family and friends.</p>		<p>Currently living in what will become the guest house when they build their new home.</p>	<p>The owners would like to spend more time in residence, but this will only happen in conjunction with some form of retirement.</p>
<p>Itinerant Residence: Used mostly during the ski season and summer. Owners entertain several guests.</p>		<p>Owners first used their Aspen residence as a vacation home.</p>	<p>Currently, they are building a new home. They "arrive earlier and leave later each year."</p>
<p>Itinerant/Extended Family Residence: Owners allow children and grandchildren to use the home. The home is fully occupied for ski season and summer and sometimes during off-season.</p>		<p>Currently, one branch of the family has plans to subdivide the parcel and build a home to live in full-time.</p>	<p>Current residence will always be an extended family retreat.</p>
<p>Vacation Home: Owners use their home six times per year for two week periods.</p>	<p>Owners have a tourist accommodations business in Aspen.</p>		<p>They want to continue to use their residence as a vacation home.</p>
<p>Vacation Home: Used for short vacations during the ski season and summer.</p>	<p>Owners were on vacation one summer in Aspen and bought their home.</p>		<p>Spending more time in Aspen will require some form of retirement.</p>
<p>Vacation Home: Owners use their home for about 8 visits per year 2-3 weeks in duration, mostly during ski season and summer.</p>		<p>Bought first condo in 1972 and current single family residence in 1985.</p>	<p>Owners would like to eventually spend 40% of their time in Aspen once the husband semi-retires.</p>
<p>Vacation Home: Owners use home to provide a place for immediate family gatherings and traditions. Also for entertaining guests and other family.</p>	<p>Rented short-term rentals for several years. Got tired of logistical problems and inconveniences of renting.</p>		<p>Owners are currently in the process of building a larger home on same property. Existing house will be for guests.</p>

<b>Current Residence Use Profile</b>	<b>Past Visitation to the Aspen Area</b>	<b>Residential History</b>	<b>Future Plans for Use of Residence</b>
<p>Vacation Home: Owners use their home as a weekend retreat one time per month.</p>		<p>Husband's parents bought a condo in 1963. Owners had a condo from '89-'98 when they bought their duplex unit.</p>	<p>The owners plan on retiring in Aspen.</p>
<p>Vacation Home: Used during winter for short ski vacations and occupied all summer by wife and children while husband long distance commutes.</p>	<p>Owners have family connections in the area and have visited for years.</p>		<p>They plan on using their residence in the same manner for several years.</p>
<p>Vacation Home: Owners are in residence about 8 times per year totaling 3 months of occupancy. They entertain several guests per year.</p>	<p>Owners rented short-term rentals in the early 80's mostly during the ski season.</p>	<p>Having discovered the summertime amenities during some visits, they bought their first home in '86.</p>	<p>Would like to be able to live in Aspen full-time, but such a move is unlikely.</p>
<p>Ski Vacation Loft: Used by owners and guests 6 weeks during ski season and rented short-term during remaining weeks.</p>	<p>Owners rented rooms and condos for ski vacations from 1968 until the purchase of their unit.</p>		<p>The owners would like to spend more time in Aspen, but would need a larger unit.</p>
<p>Ski Vacation Condo: Owner uses this property for two or more ski vacations per year. He does not rent it out.</p>			<p>Owner will continue to use property as a ski condo.</p>
<p>Primary Residence: Owners live in Aspen full-time</p>		<p>They originally used their Aspen home as a vacation home and have made the transition into full-time residents.</p>	
<p>Primary Residence: Full-time resident family with a telecommuting father.</p>	<p>Vacationed in Aspen for the first time in the late '60s.</p>	<p>Purchased a home and used it as a vacation home for several years and made the transition into full time residents.</p>	<p>Family will stay in Aspen. Father will continue to run private company using tele-communications.</p>
<p>Home Base Residence: The wife is in residence 80% of the time while the husband is in residence 40% of the time.</p>			<p>Husband will semi-retire and become more of a full-time resident.</p>

## PROPERTY MANAGEMENT: A RESIDENTIAL SERVICES INDUSTRY

The first efforts of this study focused on collecting information from property management companies. Property management companies were an obvious place to start data collection because they are organized businesses that provide services to built residences and presumably hold records summarizing the types and levels of service requirements for various residences. Unfortunately, analysis of the data yielded information about workforce dynamics of Pitkin County units managed by property management companies, not necessarily of Pitkin County residences in general. Some property management clients only use their management company to “walk through” their residence when they are not in residence and report any problems. These types of clients may have their own plumbers, housekeepers, etc. not associated with their property management company, and so the property management firm will not have records of these service demands. Other clients use their property management firms to book rentals for their unit and take care of the accounting, housekeeping, landscaping, maintenance etc., and so virtually all service requirements associated with the residence for this type of client would be contained in the property management records. The large variation of services rendered by property management companies makes it difficult to draw conclusions about service requirements of residences in general. Nonetheless, the information is valuable insofar as it reveals employment details about units managed by property management companies (managed units).

Table 7 shows the average employment demands supplied by property management firms and their sub-contractors for managed units along with the average size and value. Table 8 provides a point of comparison between managed units and units owned by employees and associates of property management companies. Managed units demand about 3 times more employment than units owned by working residents and managed units are about twice the size of units owned by the working residents.

**Table 7**

<b>Units Managed by Property Management Firm: Figures for All Unit Profiles</b>		
	Average	Median
FTE	.66	.43
Size	3,845 sq. ft.	3,500 sq. ft.
Value	\$2,600,000	\$1,740,000

*n*=36 (where *n* means the total number of observations)

**Table 8**

<b>Units Owned by Property Management Firm Employees and Associates</b>		
	Average	Median
FTE	.21	.21
Size	2154 sq. ft.	2050 sq. ft.
Value	\$720,600	\$600,000

*n*=20

Single family detached homes have a larger propensity for creating high service demands than do units in multi-family buildings (e.g., condos and duplexes), as summarized in Table 9. Informal discussions with property management firm owners and employees reinforced this finding. Single family residences have their own service requirements for their individual yards, driveways, roofs, spas, and other service requiring features that may be more consolidated in a unit in multi-family building. Furthermore single family residences are generally bigger than units in multi-family buildings, which further increases service demands.

**Table 9**  
**Units Managed by a Property Management Firm FTE and Physical Type**

	Single Family Detached	Condominium	Other Multi-Family
Management FTE Requirements	Average = .80 Median = .43	Average = .53 Median = .46	Average = .38 Median = .39
# of Units This Type	20	12	4
% of Units This Type	56%	33%	11%

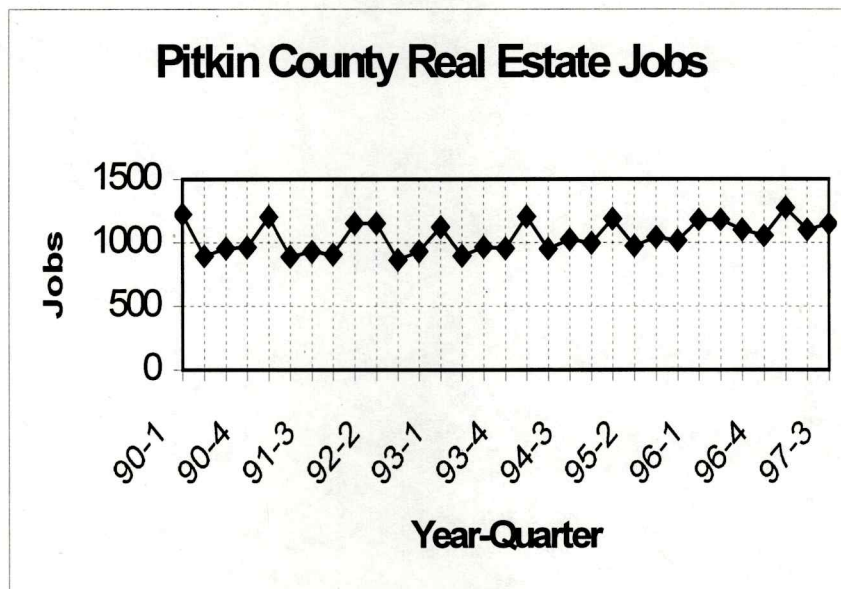
Table 10 summarizes the management types for the unit profiles. Short-term rentals are residences (mostly condos) owned by a private individual and rented by the day, week, month, or season. The owners generally set aside specific times of year to use their residence themselves. Short-term rentals make up 59% of the unit profiles and they are, by definition, part-time residences. Managed non-rentals are generally part-time residences as well (making up 33% of the unit profiles). Long-term rentals (making up 33% of the unit profiles), rented for six month periods or longer, are generally occupied by working, full-time residents. The relatively low labor demands arising from long-term rental is consistent with the finding in the Use Type and Employment section of this report that the working resident use type has relatively low employment demands. The employment requirements are much higher for the predominantly part-time residence management types (e.g., short-term rentals and non-rentals) than for the full-time management type (e.g. long-term rentals), suggesting that the property management labor market is based primarily on part-time residences.

**Table 10**  
**Units Managed by a Property Management Firm FTE and Management Type**

	Short-Term Rental	Non-Rental	Long-Term Rental
Management FTE Requirements	Average = .70 Median = .44	Average = .73 Median = .57	Average = .12 Median = .07
# of Units This Management Type	21	12	3
% of Units This Management Type	59%	33%	8%

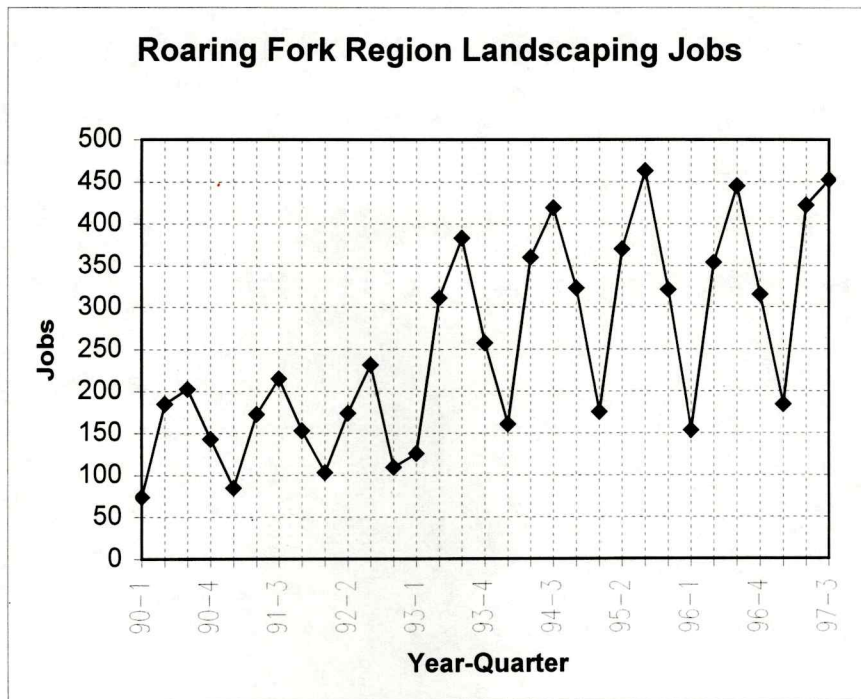
The service market related to part-time residences is on the rise (1997 Residential Use Patterns and Workforce Dynamics, Preston and Riebsame) and so one would expect growth in property management, which is largely based on part-time residences. Figure 8 charts growth in property management staff and real estate support staff from 1990 to 1997. The employment numbers show no growth in those types of jobs. Three possibilities explain why management is not growing. First is the possibility that there is no demand for growth in the residential services sector, which is highly unlikely. The second possibility is that property management firms' business volume has been growing, but not their staffing requirements. Informal conversations with property management companies indicated that most firms "sub-out" large portions of their workload to other businesses (housekeeping companies, building contractors, landscaping/yard maintenance companies, florists, laundry services, etc.). The sub-contractor residential services companies are difficult to filter out of the ES202 employment data. However, landscaping and housekeeping, the only two sub-contractor residential services with a code in the ES202 data, have been growing significantly for the last several years (see Figures 9 and 10). Housekeeping essentially doubled in 6 years with an average annual growth rate of 12%. Property management firms could easily increase their business without increasing their staff by sub-contracting the increased workload. The final possibility, also mentioned by property management firm employees and owners, is that the property management industry is growing in an informal and unreported manner. The industry may be increasing under the guise of one or two person teams with only one to three properties under their management. Law related to real estate brokering prevents operation of rental properties by individuals with out a broker's license, and so most of the informal property management companies probably manage non-rentals.

Figure 8



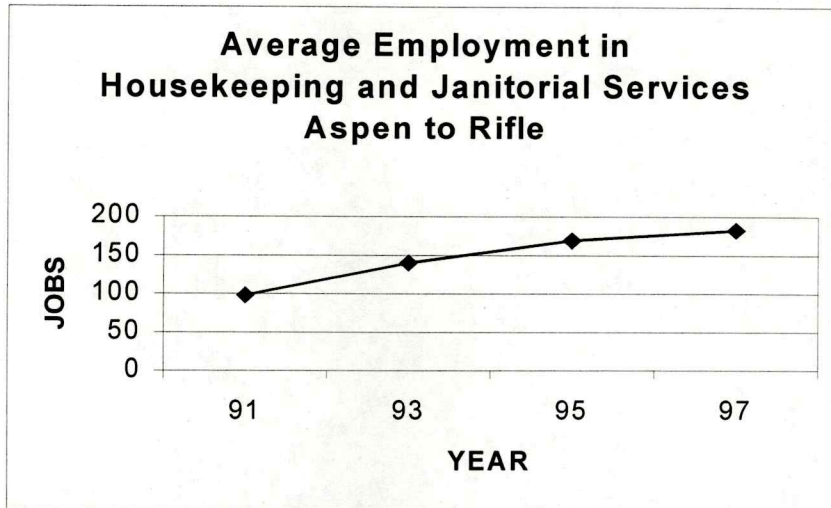
The employment requirements for employees and associates of property management companies, in addition to providing a point of comparison for managed units, provides an interesting point of comparison for the employees of the City of Aspen and Pitkin County (compare Tables 8 and 3). The employment demands and house size and value are all significantly higher for the property management employees than for the government employees.<sup>9</sup> One reasonable explanation is that property management employees and associates are, for the most part, in a higher income bracket than employees of the City of Aspen and Pitkin County. This higher income level allows for the purchase of larger homes and gives the owners a greater ability to purchase services for their homes.

**Figure 9**



<sup>9</sup> The property management employee FTE requirements figure does not include retail.

**Figure 10**



## SUMMARY AND CONCLUSIONS

### House Size and Employment:

- The Pearson's  $r$  correlation coefficient between residence square footage and employment requirements is .74. This means that larger homes tend to generate larger employment demands and smaller homes generate smaller employment demands.
- Averages and median calculations above and below the three house size thresholds (4000 sq. ft., 5000 sq. ft., and 6000 sq. ft.) indicate that larger homes have greater employment demands.

Size Threshold	Average FTE Requirements
<=4000 sq. ft.	.31
>4000 sq. ft.	1.64
<=5000 sq. ft.	.33
>5000 sq. ft.	1.87
<=6000 sq. ft.	.41
>6000 sq. ft.	1.94

### Comparing Two Representative Populations:

#### Working Residents...

- Earn income mostly in Pitkin County, but much spend much of it outside of the County.
- Own smaller, less expensive homes, about half of which are deed restricted affordable housing units. (e.g., average size=1608 sq. ft., average value=\$467,705)
- Generally provide their own services to maintain their residence and property and have low employment demands (e.g., average=.15).
- Do not act collectively as an economic base, but instead are multipliers of other base economic activity.

#### High-End Residence Owners...

- Earn income outside of the regional economy and spend large amounts of money in Pitkin County.
- Spend large amounts of money in the local retail and eating and drinking sectors, thus contributing to the "tourist" economy.
- Own large, expensive homes (e.g., average size=6298 sq. ft., average value=\$3,740,690)
- Have high employment demands connected to their residence and to their retail and eating and drinking spending (e.g., average=1.32 FTE).
- Because the high-end residence owners spend significant quantities new, outside money in the local economy, they act collectively as an economic base, with high multiplier effects.

## **Use Types and Employment**

- The four use types are high-end primary residences, itinerant residences, and vacation homes, and working resident homes.
- Employment increases with occupancy for high-end residences.

## **Part-Time Resident Use Patterns, History, and Preferences**

- The itinerant home base has emerged as an important use type that is indicative of the lifestyles of owners of high-end residences in Pitkin County.
- The overwhelming trend for part-time residents' residential use patterns is towards increased occupancy of their Pitkin County Home, possibly to the point of primary residency.
- Increased occupancy is often accompanied by some form of retirement.

## **The Property Management Industry**

- The average managed unit is 3845 sq. ft., is valued at \$2,600,000, and requires .66 of an FTE.
- Employees and associates of property management companies own homes that are an average of 2154 sq. ft., have an average value of \$720,600, and require an average of .21 of an FTE.
- Property management is largely based on providing services to part-time residences.
- Single family homes have larger service requirements than units in multi-family buildings.
- Growth in property management is occurring in the informal, unreported sector, and in the sub-contractor businesses working for the property management companies.

