



LAND USE PLAN

An element of the Town of Vail Comprehensive Plan

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AND MOST OF ALL
CITIZENS OF THE COMMUNITY

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Adoption and Amendments to Land Use Plan

(Land Use Map Amendments Listed On Map)

1. **RESOLUTION NO. 27, SERIES OF 1986:** RESOLUTION ADOPTING THE MASTER LAND USE PLAN FOR THE TOWN OF VAIL
2. **RESOLUTION NO. 13 SERIES OF 1991:** A RESOLUTION MODIFYING THE TOWN OF VAIL LAND USE PLAN, CHANGING THE LAND USE DESIGNATION OF A PARCEL OF LAND GENERALLY LOCATED WEST OF THE TOWN OF VAIL SHOPS FROM OPEN SPACE TO SEMI-PUBLIC, AND SETTING FORTH DETAILS IN REGARD THERETO.
3. **RESOLUTION NO. 2 SERIES OF 2003:** A RESOLUTION AMENDING THE VAIL LAND USE PLAN TO EXPAND THE BOUNDARIES OF THE PLAN, AMENDING THE TEXT OF THE PLAN REGARDING THE EXCHANGE OF UNITED STATES FOREST SERVICE LANDS, AMENDING THE DESCRIPTION OF THE "SKI BASE" LAND USE DESIGNATION.
4. **ORDINANCE NO. 17 SERIES OF 2005:** AN ORDINANCE AMENDING CHAPTER VII, PART 1, INVENTORY AND ASSESSMENT OF TOWN OWNED PROPERTY, VAIL LAND USE PLAN, PURSUANT TO CHAPTER VIII, PART 3B, PLANNING AND ENVIRONMENTAL COMMISSION OR TOWN COUNCIL AMENDMENTS, VAIL LAND USE PLAN, TO ALLOW FOR AN AMENDMENT TO ADD THE CHAMONIX PARCEL AS TRACT 431 IN THE INVENTORY AND ASSESSMENT OF TOWN OWNED PROPERTY, CHAPTER VII, PART 1, VAIL LAND USE PLAN; ADD THE LAND USE PLAN FOR THE CHAMONIX PARCEL AS APPENDIX F, VAIL LAND USE PLAN; AND SETTING FORTH DETAILS IN REGARD THERETO.
5. **RESOLUTION NO. 3 SERIES OF 2006:** A RESOLUTION AMENDING A CERTAIN SECTION OF THE VAIL LAND USE PLAN TO ALLOW FOR ADDITION OF THE LIONSHEAD REDEVELOPMENT MASTER PLAN LAND USE DESIGNATION, DELETION OF THE TOURIST COMMERCIAL LAND USE DESIGNATION, AMENDMENTS TO VAIL LAND USE PLAN MAP.
6. **RESOLUTION NO. 2, SERIES OF 2009:** A RESOLUTION ADOPTING THE CHAMONIX MASTER PLAN, TO FACILITATE THE DEVELOPMENT OF EMPLOYEE HOUSING AND A FIRE STATION ON THE "CHAMONIX PARCEL" AND "WENDY'S PARCEL" AND TO AMEND THE VAIL LAND USE PLAN, PURSUANT TO SECTION 8-3, AMENDMENT PROCESS, VAIL LAND USE PLAN TO DESIGNATE THE CHAMONIX MASTER PLAN AREA LOCATED AT 2399 NORTH FRONTAGE ROAD AND 2310 CHAMONIX ROAD/PARCELS A AND B, RE-SUBDIVISION OF TRACT D, VAIL DAS SCHONE FILING 1.

CHAPTER I – INTRODUCTION

1. Purpose of Project

During 1985, the Town of Vail, Community Development Department initiated the process of developing a Comprehensive Plan for the Town. This process has involved the analysis and design of a series of plan elements including:

- A. Master plans for Ford and Donovan Parks, completed in 1985;
- B. The Vail Village Master Plan, presently being completed; and
- C. The Land Use Plan, contained in this document.

Following adoption of this key element of the Plan, other components are scheduled to be undertaken including a Parks, Recreation and Open Space Plan and a Transportation Element. These elements, when integrated together, will serve to guide the development of the Town of Vail for the next fifteen years.

This document is intended to serve as a basis from which future decisions may be made regarding land use within the Valley. The primary focus of the Land Use Plan has been to address the long-term needs and desires of the Town as it matures. The Town of Vail has evolved from a small ski resort founded in 1962 with 190,000¹ annual skier visits and virtually no permanent residents to a community with 4,500 permanent residents and 1,223,450 annual skier visits in the short time span of twenty-four years. The Town is now faced with the challenge of creatively accommodating the projected growth, while preserving the important qualities which have made Vail successful in the past – as a ski resort, as a permanent place to live, and as a growing year-round resort. This is a considerable challenge, given the fact that land within the Vial Valley is a well-defined “finite” resource, with much of the developable land having already been developed at this junction. This Land Use Plan has been undertaken with the goal of addressing this challenge.

A secondary purpose of the Land Use Plan project was to analyze a series of properties owned by the Town of Vail, to determine their suitability for various types of community facilities. Selected community facilities were analyzed for future needs and then matched with a series of suitable sites owned by the Town.

2. Planning Process

The process which was utilized to complete the Land Use Plan has been a dynamic one, with citizen participation playing an important role. The process has involved:

- A. A systematic inventory of the physical properties of the Town, including the land conditions and the statistical components of the socioeconomic base.
- B. A thorough analysis of the inventory to determine the long-term implications of such data.
- C. An interactive public participation process to solicit goals, desires, and needs of the citizen, business and political communities within the Town.
- D. A creative interpolation of the public input combined, with the development opportunities and constraints, into a realistic and achievable Land Use Plan for the Town.

¹ 1965-66 Annual Skier Visits – “The Contribution of Skiing to the Colorado Economy – Eagle County Case Study – Colorado Ski Country U.S.A., 1982.

3. Public Participation

The public participation process has been a major factor in shaping the preferred Land Use Plan.

- A. The participation process was initiated with the following goals:
1. To develop an understanding of the forces which will direct the future of the community.
 2. To help discover the various futures which the community could have.
 3. To help develop a “collective” vision for the future, which could be supported by the community at large.
- B. The public participation has involved the following steps:
1. A Land Use Plan Task Force was established to act as a steering committee to guide the plan development process. This Task Force included a representative from the Planning and Environmental Commission, the Town Council, Vail Associates, the Forest Service, a Citizen/Business Community Representative and Community Development Staff. This Task Force met regularly throughout the duration of the project to develop policy and refine the plan as it progressed.
 2. The “Town Meeting” was held early on in the process to introduce the Land Use Plan project. There was a brief presentation of the purpose of the project and the project schedule, which was followed by an open discussion of growth issues. The meeting was well attended with a total of 60 participants. Those in attendance were asked to break up into smaller groups of about ten and then each group discussed:
 - a. Likes and dislikes about the Town as it exists now.
 - b. Level, location and type of growth.
 - c. Hot Spots – areas of specific concern regarding land use.

A community survey was also distributed which was tabulated and is included in Appendix A. The results of this first meeting were tabulated and categorized, then used to formulate an initial set of goal statements. This information also was then used as input in the generation of several Plan alternatives.
 3. A second public meeting was held one month later to review the findings of the project to date with respect to the socioeconomic data base, the Plan alternatives, and the goal statements developed from the first meeting. This meeting was also well attended, with approximately 60 people. Small groups were again formed and each group voted on and responded to the goal statements and finished by critiquing the proposed Land Use Plan alternatives. The results of this meeting were tabulated and used to refine the goal statements and to develop the preferred Plan.
 4. A meeting was then held with the Planning/Environmental Commission and the Town Council to obtain their feedback to the socioeconomic base data and the preferred Plan.
 5. A third public meeting was held to obtain additional input on the preferred Plan and begin the discussion of the various community facilities within the Town. This meeting was attended by 40 people and the input was again utilized to refine the Plan. The draft report was then written.

4. Growth Issues

The Land Use Plan was intended to help to address the following growth related questions identified by the Task Force.

A. General

1. What are the various existing philosophies, issues and problems which have shaped growth in the past and will continue to influence the future?
2. What are the major constraints to growth and how many these change or be changed in the future?
3. What are the market demands for growth and how should these be directed by public policy decisions?
4. What type of growth is necessary and desirable for the economic well being of the Town?
5. How should environmental quality of life concerns play a role in directing growth?
6. Where is there room for growth, where go growth pressures exist versus where growth should optimally occur?
7. How should the Town of Vail approach the issue of annexation and National Forest land transfers?
8. What types of general administrative changes are necessary to address the issue of growth (i.e., land use regulation revisions, zoning changes, etc.)?

B. Level of Growth

1. Given that Vail Mountain has approved plans for expansion of its capacity gradually over the next 25 years (annual average 3%), how will this growth be accommodated and when?
2. What growth rate is appropriate?
 - a. no growth (expand parking for day use of mountain);
 - b. slow growth; and
 - c. keep expanding at current rate
3. Should growth accommodations be steered toward day use or overnight use?

C. Location of Growth – should growth be accommodated through:

1. Increased density in Core Areas;
2. Growth up hillsides / forest service land transfers;
3. Growth in existing multi-family developed areas; and/or
4. Growth in undeveloped areas.

D. Location of Growth – should growth occur primarily in:

1. Hotels;
2. Accommodation units;
3. Condominiums;
4. Townhouses;
5. Single family / duplex residences;
6. Commercial facilities; and/or
7. Balances in all sectors.

The series of public meetings, along with input from the PEC, Town Council and Task Force have effectively answered many of these questions, as will be evidenced in the later chapters of this document, specifically in the Goals Chapter and in the design of the Plan itself.

CHAPTER II – LAND USE PLAN GOALS / POLICIES

The goals articulated here reflect the desires of the citizenry as expressed through the series of public meetings that were held throughout the project. A set of initial goals were developed which were then substantially revised after different types of opinions were brought out in the second meeting. The goal statements were developed to reflect a general consensus once the public had had the opportunity to reflect on the concepts and ideas initially presented. The goal statements were then revised through the review process with the Task Force, the Planning and Environmental Commission and Town Council and now represent policy guidelines in the review process for new development proposals. These goal statements should be used in conjunction with the adopted Land Use Plan map, in the evaluation of any development proposal.

The goal statements which are reflected in the design of the proposed Plan are as follows:

1. General Growth / Development

- 1.1. Vail should continue to grow in a controlled environment, maintaining a balance between residential, commercial and recreational uses to serve both the visitor and the permanent resident.
- 1.2. The quality of the environment including air, water and other natural resources should be protected as the Town grows.
- 1.3. The quality of development should be maintained and upgraded whenever possible.
- 1.4. The original theme of the old Village Core should be carried into new development in the Village Core through continued implementation of the Urban Design Guide Plan.
- 1.5. Commercial strip development of the Valley should be avoided.
- 1.6. Development proposals on the hillsides should be evaluated on a case by case basis. Limited development may be permitted for some low intensity uses in areas that are not highly visible from the Valley floor. New projects should be carefully controlled and developed with sensitivity to the environment.
- 1.7. New subdivisions should not be permitted in high geologic hazard areas.
- 1.8. Recreational and public facility development on National Forest lands may be permitted where no high hazards exist if:
 - a. Community objectives are met as articulated in the Comprehensive Plan.
 - b. The parcel is adjacent to the Town boundaries, with good access.
 - c. The affected neighborhood can be involved in the decision-making process.
- 1.9. The existing condition and use of National Forest Land (USFS) which is exchanged, sold, or otherwise falls into private ownership should remain unchanged. A change in the existing condition and use may be considered if the change substantially complies with the Vail Comprehensive Plan and achieves a compelling public benefit which furthers the public interest, as determined by the Town Council.
- 1.10. Development of Town owned lands by the Town of Vail (other than parks and open space) may be permitted where no high hazards exist, if such development is for public use.

- 1.11. Town owned lands shall not be sold to a private entity, long term leased to a private entity or converted to a private use without a public hearing process.
- 1.12. Vail should accommodate most of the additional growth in existing developed areas (infill areas).
- 1.13. Vail recognizes its stream tract as being a desirable land feature as well as its potential for public use.

2. Skier /Tourist Concerns

- 2.1. The community should emphasize its role as a destination resort while accommodating day visitors.
- 2.2. The ski area owner, the business community and the Town leaders should work together closely to make existing facilities and the Town function more efficiently.
- 2.3. The ski area owner, the business community and the Town leaders should work together to improve facilities for day skiers.
- 2.4. The community should improve summer recreational options to improve year-round tourism.
- 2.5. The community should improve non-skier recreational options to improve year-round tourism.
- 2.6. An additional golf course is needed. The Town should work with the down valley communities to develop a golf course as well as other sports facilities to serve the regional demand for recreational facilities.
- 2.7. The Town of Vail should improve the existing park and open space lands while continuing to purchase open space.
- 2.8. Day skier needs for parking and access should be accommodated through creative solutions such as:
 - a. Increase busing from out of town.
 - b. Expanded points of access to the mountain by adding additional base portals.
 - c. Continuing to provide temporary surface parking.
 - d. Addition of structured parking.

3. Commercial

- 3.1. The hotel bed base should be preserved and use more efficiently.
- 3.2. The Village and Lionshead areas the best location for hotels to serve the future needs of destination skiers.
- 3.3. Hotels are important to the continued success of the Town of Vail, therefore conversion to condominiums should be discouraged.
- 3.4. Commercial growth should be concentrated in existing commercial areas to accommodate both local and visitor needs.
- 3.5. Entertainment oriented business and cultural activities should be encouraged in the core areas to create diversity. More night-time businesses, on-going events and sanctioned "street happenings" should be encouraged.

4. Village Core / Lionshead

- 4.1. Future commercial development should continue to occur primarily in existing commercial areas. Future commercial development in the Core areas needs to be carefully controlled to facilitate access and delivery.
- 4.2. Increased density in the Core areas is acceptable so long as the existing character of each area is preserved through implementation of the Urban Design Guide Plan and the Vail Village Master Plan.
- 4.3. The ambiance of the Village is important to the identity of Vail and should be preserved. (Scale, alpine character, small town feeling, mountains, natural settings, intimate size, cosmopolitan feeling, environmental quality.)
- 4.4. The connection between the Village Core and Lionshead should be enhanced through:
 - a. Installation of a new type of people mover.
 - b. Improving the pedestrian system with a creatively designed connection, oriented toward a nature walk, alpine garden, and/or sculpture plaza.
 - c. New development should be controlled to limit commercial uses.

5. Residential

- 5.1. Additional residential growth should continue to occur primarily in existing, platted areas and as appropriate in new areas where high hazards do not exist.
- 5.2. Quality time share units should be accommodated to help keep occupancy rates up.
- 5.3. Affordable employee housing should be made available through private efforts, assisted by limited incentives, provided by the Town of Vail, with appropriate restrictions.
- 5.4. Residential growth should keep pace with the market place demands for a full range of housing types.
- 5.5. The existing employee housing base should be preserved and upgraded. Additional employee housing needs should be accommodated at varied sites throughout the community.

6. Community Services

- 6.1. Services should keep pace with increased growth.
- 6.2. The Town of Vail should play a role in future development through balancing growth with services.
- 6.3. Services should be adjusted to keep pace with the needs of peak periods.

A number of additional goals were developed as a result of the public meeting input. These goals were related to other elements of the Comprehensive Plan such as Parks and Recreation, Transportation and Economic Development. These are included only for informational purposes in Appendix B. These goals are not considered as a part of the goals adopted in this Land Use Plan.

CHAPTER III – OPPORTUNITIES AND CONSTRAINTS

Before an accurate picture of potential land use in Vail could be developed, it was of critical importance to assess both the constraints and opportunities, with respect to development potential which exists in the Town of Vail. These constraints / opportunities included an analysis of:

1. Floodplains / River Corridors / Water Bodies

These were mapped within the Valley and were considered an area which would preclude new development activity, except as related to open space and park development. The source for this information was the Gore Creek Floodplain Map, 1977, Hydro-Triad, Ltd.

2. Steep Slopes

All areas over 40% slopes were mapped. These areas were also classified to preclude development, as the Town of Vail presently has adopted (as a part of the zoning ordinance) requirements for development on slopes greater than 40%. Slope maps were also obtained from the source listed above.

3. Major Barriers

The I-70 right-of-way was designated on the Existing Land Use Map as an area that would not be available for future development. I-70 right-of-way maps were provided by the Town.

4. Rockfall, Debris Flow, Debris Avalanche, Snow Avalanche

Rockfall debris flow and debris avalanche areas were mapped on a separate 1"=400' map for low, moderate and high hazard areas. A composite map which included snow avalanche, geologic hazards, steep slopes, and floodplain areas was then compiled at a smaller scale of 1"=1,000'. The composite map showed only high hazard avalanche, debris flow and rockfall areas. These high hazard areas were considered areas in which new development should not occur. The source of this information was the Environmental Constraints Map, 1977, Briscoe, Maphis, Murray and Lamont and Royston, Hanamoto, Beck and Abbey. The Debris Flow and Debris Avalanche Hazard Analysis, 1980, by Arthur T. Mears and the Rockfall Study, 1984, Schmueser and Associates studies and maps were also utilized.

5. Open Space / Park Lands

All areas which were designated as permanent park and open space lands were identified as a part of the Existing Land Use Map Exhibit. These lands included active parks owned by the Town of Vail and passive open space and greenbelt areas owned by the Town and homeowners' associations. These areas were considered to be unavailable for any future development, other than park-type developments. The Community Development Department provided a list of these sites.

6. Vacant Lands

Areas which contained no development as of 1986 were identified, mapped and quantified. Vacant lands were quantified with and without constraints according to the composite map which showed high geologic hazard areas, avalanche, floodplain and slopes over 40%. Vacant lands were identified through field observation and cross-checked with aerial photographs.

7. National Forest Lands

An important component of the Land Use Plan study was to help the Town develop a process whereby National Forest lands, proposed for exchange or sale, could be evaluated at a time prior to transfer, annexation and zoning. The Town of Vail Council and staff had identified this as an area of primary concern at the time requests for proposals were issued for this Plan. The main motivation for investigating this issue was for the benefit of both the town and the Forest Service, so that both entities would be able to develop a cooperative approach to evaluating proposals on National Forest lands, having carefully evaluated the long-term needs and desires of both entities.

In order to evaluate these lands the following analysis was performed.

- A. As a starting point, lands which had been designated by the Forest Service on the "National Forest Land Disposal Map" were identified and added to the plan boundary.
- B. The Task Force decided, after discussion with the National Forest representative, to analyze all parcels adjacent to the Town that had areas less than 40% slope which could be feasibly accessed. These areas were evaluated by a study of U.S.G.S. quad maps, combined with the knowledge of the Forest Service, as to areas which should be analyzed. These areas amounted to isolated small parcels south of the Town boundaries, as well as parcels north and east of Potato Patch. These parcels were added into the plan boundary.

8. Vail Mountain Expansion Plans

The Vail Mountain Master Plan provided by Vail Associates, was carefully studied and where the plans affected lands within the Town boundaries, these were identified and mapped. In particular, a new area for the ski portal at Cascade Village and planned improvements south of Lionshead were shown as Ski Base Facilities, to indicate that these areas would not be available to other uses.

A more detailed list of all reports utilized as a part of this study is provided in Appendix C. A map which illustrates the combined constraints is contained on figure "1". More detailed large scale maps are available for review with the Town of Vail Community Development Department.

CHAPTER IV – EXISTING LAND USE

An important step leading to the development of the proposed land use plan is to analyze the pattern of existing land uses within the Town. This analysis allowed for a definition of the opportunities for future growth, where it could be located, and why based on compatibility of surrounding land uses and physical constraints.

1. Inventory Process

Existing land use within the Town were inventoried through the combination of: a) field reconnaissance; b) analysis of 1977 existing land use maps; c) aerial photo interpretation; and d) verification with the Community Development Department. This information was then mapped and land uses were measured by land use category. The categories which were used to classify land use were chosen to be consistent with earlier land use inventories, as well as to accurately reflect the array of land uses within the Town. The land uses were classified as follows:

A. Residential

1. Single Family Detached / Two Family – includes single family and duplex units, at a density of less than 3 units per acre.
2. Multi-family Medium Density – includes Townhomes, row houses, condominiums, and cluster housing when individual units are not detached. Densities range from 3 to 18 dwelling units per acre.
3. Multi-family High Density – includes apartments and condominiums at densities of over 18 dwelling units per acre.

B. Hotels, Lodges and Accommodation Units

Includes all units which are occupied on a short-term basis, other than condominiums and apartments.

C. Village and Lionshead Core Areas

Includes a mix of uses including: retail, office, hotel, condominiums and public / semi-public facilities such as: the municipal complex, post office, hospital and fire station.

D. Commercial

1. Business Services – includes offices, clinics, banks, savings and loans.
2. Commercial / Retail – includes retail uses, restaurants and personal services.
3. Intensive Commercial – includes commercial recreation, service stations, vehicle repair shops and sales, and general storage facilities.

E. Public and Semi-Public

Includes fire stations, churches, schools, water and sewer service and storage facilities, communication facilities, and municipal facilities such as maintenance and storage facilities.

F. Parks

Includes designated parks and athletic fields.

G. Open Space

Includes greenbelts, stream corridors, drainageways and other areas which function as passive open space.

H. Ski Area Development

Includes ski trails and ski base facilities such as ticket purchase areas, restaurants, ski school facilities, etc.

I. Vacant / Platted

Includes all lands which are within recorded subdivisions that are presently vacant.

J. Vacant / Unplatted

Includes all undeveloped lands that are unsubdivided, including National Forest lands administered by the Forest Service, as well as private holdings within the present municipal boundaries.

K. Interstate 70 Right-of-Way

Includes all lands designated interstate right-of-way as it traverses the Vail Valley within the Town boundaries.

L. Areas of Less than 40% Slope Outside of Town Boundary

Includes lands adjacent to the Town boundaries presently within the National Forest, which have areas of less than 40% slope.

In the analysis of existing land use, a series of documents were studied. These documents included:

1. The Community Action Plan – Town of Vail, 1984.
2. Development Statistics – Community Development Department, 1985.
3. Vail Plan – Royston, Hanamoto, Beck and Abey, 1973.
4. Final Report – Economic Development Commission, 1984.
5. The Vail Village Master Plan – Draft, 1986.
6. Vail Mountain Master Plan – Vail Associates, 1986.
7. Land Development Regulations and Codes – Community Development Department.
8. Numerous other technical reports supplied by the Community Development Department, as noted in Appendix C.

The study of these documents led to a clear understanding of the various forces that have influenced the development of Vail and will play a part in its future development.

2. Land Use Pattern

The pattern of existing land uses in Vail has been shaped by the natural characteristics of the Valley in concert with the man-made features that have been constructed over the years. The predominant features of the Valley which have played a major role in Vail's design include the proximity of steep slopes, the location of Gore Creek and its floodplain, the location of the ski mountain and attendant ski facilities and the presence of a major transportation corridor – Interstate 70 and its interchanges.

The primary nodes of urban development have developed at the base of the ski mountain at the Vail Village and Lionshead. With the ski access points planned at Cascade Village along with the construction of the hotel, and its attendant retail uses, a third node of urban development is being created.

These nodes are presently the focus of the majority of the tourist oriented retail, service and hotel activity within the Town. A fourth urban node has emerged at the I-70 interchange at West Vail, which is primarily oriented toward serving the consumer needs for local residents.

The areas outside of the urban nodes have been shaped by the combined forces of the steep slopes, Gore Creek and I-70. Gore Creek has remained as an open space spine through the Valley and along with the golf course, has served to influence the location and type of growth. Residential land uses have developed over the years east and west of the urban nodes,

primarily south of I-70, due to the proximity of steep slopes to I-70 on the north. Some development has also occurred in West Vail, north of I-70 where suitable development conditions have existed. The focus of the most intensive residential development has been to the south of I-70 between the freeway and Gore Creek. Less intensive development has occurred south of the Creek, where more sensitive land conditions and less suitable access to I-70 have continued to influence the type of growth.

These factors have significantly shaped the pattern of growth in the Vail Valley and will continue to do so throughout the life of this Plan. As Vail is, at this point in time, already fairly intensely developed, with land being a finite resource within the confines of the Valley, these past land use patterns are not expected to change drastically with the design and adoption of this plan. The community, at its public meeting process, expressed a desire to continue to build on these well established trends and for this reason, these trends have been used as a foundation for the design of the proposed Land Use Plan.

A. Residential Development

The most important force which has directed the mix of land uses in Vail has been the ski industry, which is dependent on an adequate supply of lodging units, tourist-related retail uses and areas for parking. These demands, when combined with the physical components of the Vail Valley and a relative scarcity of suitable land for development, have created a fairly intense pattern of development within the Town of Vail. This is reflected in the fact that 60% of all dwelling units are devoted to multi-family, with an additional 20% in accommodation units.

Densities range from 18-20 dwelling units per acres for multi-family and up to 50 dwelling units/acre for hotels in the core areas. While multi-family accounts for the majority of the types of units, single family uses still cover more land area, with 408.6 acres (or 12%) of the total land area in Vail devoted to single family and duplex uses. Multi-family uses account for 11% of the land area in Vail outside of the core areas of the Village and Lionshead.

B. Parks and Open Space

The residential areas are broken up by significant amounts of open space, greenbelt and park areas in both public and private ownership. These combined areas account for 17% of the land area within the Town of 555.7 acres. The park acreage includes both developed and undeveloped parks and the golf course. These park areas include Stephen's Park and Donovan Park in West Vail, Ford Park in the Mid-Vail area and Big Horn Park in East Vail, all south of I-70 and the Buffehr Creek, Red Sandstone and Booth creek Parks, north of I-70. Areas designated as open space, which account for 296.6 acres, include the Katsos property east of the golf course, owned by the Town and several other parcels which have been designated to remain permanent open space, i.e., the Gore Creek stream tract.

C. Ski Base Facilities / Public and Semi-Public Uses

Ski based facilities within the Town boundaries add up to 43.6 acres or 1% of the Town. Public and semi-public facilities also serve as partial areas of open space within the Town. Uses such as churches, schools, water service and storage facilities make up a total of 56.6 acres or 2% of the Town's land area.

D. Core Areas

As previously indicated, the Village and Lionshead Core Areas are the most intensely developed areas. These cores contain a mix of uses including hotels, condominiums,

offices, retail businesses and personal services, often all within the same building. Other types of uses such as pedestrian plaza areas, municipal services (town hall and fire station), semi-public uses (hospital and chapel), and multi-level parking structures are also found in the core areas. The two urban cores total 131.5 acres or 4% of the land area. This land use document did not analyze land use for these areas on a parcel or building-by-building level because of the in-depth study the Town has given these areas in the past (completion of the Lionshead Urban Design Plan and the Vail Village Master Plan currently being completed). As a consequence, land uses for these areas only addressed in a general way in this document.

E. Commercial Uses

Most of the commercial, business, retail, office and hotel uses have been traditionally located within the core areas. With the steady growth of the permanent population, Vail has experienced the need for diversification from tourist-based retail into a broader range of goods and services to serve both the needs of the local residents and the long-term visitor. These types of services, while found to some degree in the core, occur primarily in West Vail. These business and commercial areas make up a total of 16.4 acres, which is a very small proportion of the Town. In addition, there is an 8 acre site in use as hotel and accommodation units in West Vail. In terms of the more intensive commercial uses, which include mostly service stations, vehicle repair, maintenance and storage areas, and areas of commercial recreation (outside of the ski area); there are 11 acres altogether. The combined commercial areas make up a total of 27 acres, which is only 1% of the total land area. This small proportion, may be attributed to the fact that Vail is a ski-based community, therefore, the demand and the range of non-tourist related commercial uses in general is limited in Vail.

F. Interstate Right-of-Way

One of the most significant areas within the Town, is the Interstate 70 right-of-way. The right-of-way takes up an area of 505.5 acres or 15% of the land area, within the study area. This is the largest proportion in any one type of use.

G. National Forest Lands

An important aspect of the land use analysis was to assess National Forest lands adjacent to the Town boundaries, within the White River National Forest, which may be considered in the future for an alternate use other than public. It was determined by the Task Force, after discussions with the Forest Service, to assess areas that: 1) had been identified for disposal by the Forest Service; 2) could be feasibly accessed; and 3) contained acreage of 40% slope or less. These areas for the most part were small parcels along the corners of the Town on the south side, with two larger parcels identified north and east of the Potato Patch club area. These land areas came to a total of 125 acres, or 4% of the land within the study area.

Existing Land Use is shown on a large scale map available at Town of Vail offices. This map shows the configuration of land use within the Town, illustratively. Land-use categories have been generalized into broader categories such as residential, commercial, parks, open space and ski base and vacant for ease of illustration at this scale. A larger scale map (1"=400") is on file with the Community Development Department in both color and black and white, which shows land uses by parcel for the more detailed categories contained on Table 1.

TABLE 1: EXISTING LAND USE

LAND USE CATEGORY	ACRES	PERCENT
Single Family/Two Family (under 3 units per acre)	408.6	12
Multi-Family Medium Density (3-18 du/ac)	287.4	9
Multi-Family High Density (over 18 du/ac)	57.5	2
Village/Lionshead Core Areas (mixed-use areas)	131.5	4
Hotels, Lodges, Accommodation Units (units for lease or rent on regular basis)	8.0	0
Business Services (offices, clinics, banks)	3.5	0
Commercial/Retail (retail uses, restaurants, personal services)	12.9	0
Intensive Commercial (commercial recreation, service stations, vehicle repairs, storage)	11.0	0
Public/Semi-Public (schools, water & sewer service & storage facilities, communication facilities and municipal facilities)	56.6	2
Parks (designated parks and athletic fields)	259.1	8
Open Space (greenbelts, stream corridors, drainageways)	196.6	9
Ski Area Development (trails and ski base facilities)	43.6	1
Vacant/Platted (subdivided, undeveloped lots)	412.5	12
Vacant/Unplatted (unsubdivided, undeveloped land)	767.8	23
Interstate 70 Right-of-Way (within the limits of the Town)	505.5	15
Areas of Less than 40% slope outside of Town Boundary (National Forest Lands)	125.0	4
TOTAL	3,360.1	100%

CHAPTER V – SOCIOECONOMIC PROFILE

At the same time that they physical characteristics were being analyzed, the socioeconomic profile of Vail was being investigated. This process involved an in-depth analysis of the historical patterns of growth within the Town of Vail, Eagle County, and in the ski industry as a whole. This process required developing a clear understanding of the complexity of factors which have interacted to influence development over the years.

After assessing the historical growth characteristics, projections were developed for both the permanent and visitor populations to the year 2000. The Vail Mountain expansion plans were carefully studied because ski area growth is the single most important factor which drives growth within the Vail Valley. These projections were then utilized to determine overall demands for the different types of land use which would need to be accommodated within the proposed Land Use Plan.

These projections represents THK’s best professional forecast for growth within the Vail Valley over the next 15 years. The assumptions used in the forecasting model were carefully reviewed with the Task Force and the Community Development Department staff and were accepted to be the most appropriate data from which to make projections. The forecasting projections and assumptions should be analyzed and adjusted periodically as market conditions change throughout the life of the Plan.

Presented in this chapter is a summary of the methodology used to generate the projections of the most important findings of the analysis. The complete socioeconomic report is included in Appendices D and E.

For the purpose of analyzing the differing effects on housing and retail space demand², three ratios of destination (overnight) skiers were assessed. These varied from 50% to 60% up to 70% destination skiers, with the local percentage remaining fixed at 20%; while day skiers varied from 30% to 20%, to 10% respectively. As the percentage of destination skiers increases, the demand for housing and the amount of annual retail sales, and hence retail space, need to increase proportionately. For the purpose of fixing land use demand, the 60% destination skier scenario was chosen, because it most accurately represented the percentage of destination skiers visiting the Vail area in 1986. The other two scenarios are included in the Appendix and can be used to adjust projections for land use demand in the future, should Vail Associates reorient its marketing to increase or decrease the percentage of destination skiers.

Before presenting the projections, it is important to understand the methodology used to generate the numbers.

1. Forecasting Model

The Town of Vail Forecasting Model was prepared by THK Associates in order to assist the Department of Community Development in their efforts to develop a Master Plan for the Town of Vail. In general, the model utilizes estimated skier, population, housing and retail characteristics in order to project additional housing unit and retail space demands for the Town of Vail through the year 2000. All assumptions are based on existing studies and surveys available from the Department of Community Development, Vail Associates, Inc., Vail Resort Association, and Colorado Ski Country USA members. The following is a brief overview of the sources and methodology employed in the Town of Vail Forecasting Model.

The entire model keys off the projected design day³ skier visits made in the Vail Master Development Plan (VA, Inc. and RRC, 1985). From the design day skier visits, average day, peak day and total skier visits are calculated based on conversion formulas provided by VA, Inc. The design day skier visits are then allocated into day, destination and local skiers based on proportions available from The Vail Mountain/Gore Valley Capacity Study (Gage Davis Associates, 1980) and the Report of the Vail Economic Development Commission (1985). Although not activated in the model currently, the model has the capacity to allow an incremental change in the proportion of day, destination and local skiers over the length of the projection period, rather than a constant proportion throughout.

The day visitor and overnight visitor populations and permanent population are derived from different methodologies. The day skier visits and destination skier visits are adjusted upward to reflect non-skier members of a skiing party which results in the day visitor population and the overnight visitor population. The non-skier adjustment factors come from The Vail Mountain/Gore Valley Capacity Study, the "Village Study Assumptions" (RRC, 1985) and the Department of Community Development. The Town of Vail permanent population is based on the historical ratio of the permanent population (State Division of Local Government, 1985 and Department of Community Development) to the total skier visits. The number of households is then determined by dividing the overnight visitor population and permanent population by the weighted average number of persons per household in visitor lodging and permanent housing, respectively.

The additional housing unit demand projections incorporate numerous assumptions from several studies and surveys. Assumptions pertaining to the distribution of permanent population by housing unit type, the average number of persons³ per household by unit type, and the

² Office demand was not projected due to the lack of adequate inventory information.

³ "Design Day" is defined as that level of skier attendance which will be exceeded on only 10% of the days of the ski season.

occupancy rate are from the study Affordable Housing Eagle County – 1984 (Eagle County Community Development Department and RRC, 1984). Assumptions regarding the distribution of overnight visitors by housing unit type, the average number of persons per household by unit type, and the occupancy rate by unit type are from The Vail Mountain/Gore Valley Capacity Study, Department of Community Development and VRA. To calculate the additional housing units required by type each year, the additional overnight visitor households and permanent households per year are distributed according to the proportion of each unit type indicated by previous studies. Concurrently, additional units by type are adjusted upward by the appropriate occupancy rate.

The retail sales projections for the Town of Vail are based on average day skier visits rather than design day skier visits. Average day skier visits are used because the goal is to determine the total winter visitor sales over the entire five month ski season rather than looking at sales on a “one day” design day. Day skiers and destination skiers have different total dollar expenditures per day, and the allocation of their total expenditures among various retail categories is also different. The day skier and destination skier expenditure patterns are from The Contribution of Skiing to the Colorado Economy (CSCUSA, 1984 Update) and are adjusted upward to reflect the pricing structure of Vail (per Task Force discussion 7/17/86).

To arrive at the total winter visitor sales, the day skier and destination skier expenditures by retail category are aggregated. The “Town of Vail Monthly Retail Sales” (TOV, 1986) was utilized to determine the proportion of total winter sales made by the local population, the ratio of total winter sales to total annual sales, and the proportion of total annual sales made by the local population. Industry standards of dollar support per square foot of retail space are applied to the lodging, eating and drinking, and entertainment categories for the day and destination skiers and to the total annual sales to the local population category in order to translate the average annual additional dollar support into average annual additional square feet of retail space required.

It should be noted that the terms “local population” and “permanent population” do not define the same group. Retail purchases in the Town of Vail are made both by the permanent population of Vail and by residents of surrounding communities. Since it is the total additional dollar support in the Town of Vail which determines the total additional retail space required, it is irrelevant for the purposes of this remodel from where those dollars come. Therefore, the local population refers to both the permanent population of Vail and residents of surrounding communities who make retail purchases in the Town of Vail.

2. Summary of Forecasting Results

The following is a discussion of the specific tables which led to the development of the land use demand figures.

A. Projected Vail Area Skier Visits by Type (Table 2)

Total skier populations have been projected from the Vail Associates Master Plan, which then translates into skier numbers, broken down by day, destination, and local skiers. Table 2 shows average, design day⁴, and peak day skier population projections for all three skier groups projected to the year 2000. As can be seen from the table, by the year 2000, total skier visits are projected to be 1,617,000, up from 1,223,450 in the year 1985, with the total number of average skiers per day being 10,780 in the year 2000, up from 8,160 per day in 1985.

4 See “Design Day” definition in methodology section.

B. Projected Population and Households by Type (Table 3)

These numbers are then converted into population projections for overnight visitors, day visitors, and the permanent population. This table shows increases of approximately 25% for all three population groups. Day visitors increased from 2,670 in 1985 to 3,530 in the year 2000, overnight visitors increased from 9,200 to 12,150, and the permanent population goes from 4,400 in 1985 to 5,920 in the year 2000.

C. Projected Town of Vail Housing Unit Demand by Type (Table 4)

The household numbers from Table 3 are then assigned a person/household number and occupancy rates (based on historical occupancy ratios) and housing demand can then be estimated for the different types of residential housing and lodging, for both the overnight visitor and the permanent resident. This is reflected in Table 4 which shows the additional demand for housing each year by housing type. The total residential housing demand for both permanent and the overnight visitor by the year 2000 is 1,523 units and for lodging and the total demand is 395 units by the year 2000.

D. Projected Town of Vail Retail Sales by Category (Table 5)

Retail space demands were estimated based on annual retail sales projections. This is accomplished by converting annual sales (by looking at industry standards for sales per square foot) into future demand for retail space for visitor and locally oriented retail needs. This table shows total retail sales growing from \$173.8 million in 1985 to \$229.5 million in the year 2000. The estimated amount of sales attributed to the permanent population is 25% of the total annual sales.

TABLE 2: PROJECTED VAIL AREA SKIER VISITS BY TYPE, 1984-1985 TO 1999-2000

Projected Skier Visitor Characteristics											
Season	Calendar Year	Total	Average Day Skiers/Day	Design Day Skiers/Day	Peak Day Skiers/Day	Day	Percent	Destination	Percent	Local	Percent
1984-1985	1985	1,223,450	8,160	12,560	15,910	2,510	20.00%	7,540	60.00%	2,510	20.00%
1985-1986	1986	1,250,000	8,230	12,680	16,050	2,540	20.00%	7,610	60.00%	2,530	20.00%
1986-1987	1987	1,294,770	8,480	13,060	16,540	2,610	20.00%	7,840	60.00%	2,610	20.00%
1987-1988	1988	1,318,750	8,480	13,060	16,540	2,610	20.00%	7,840	60.00%	2,610	20.00%
1988-1989	1989	1,358,380	8,730	13,450	17,020	2,690	20.00%	8,070	60.00%	2,690	19.90%
1989-1990	1990	1,373,700	9,000	13,860	17,550	2,770	20.00%	8,320	60.00%	2,770	20.00%
1990-1991	1991	1,373,700	9,000	13,860	17,550	2,770	20.00%	8,320	60.00%	2,770	20.00%
1991-1992	1992	1,393,500	9,290	14,300	18,120	2,860	20.00%	8,580	60.00%	2,860	20.00%
1992-1993	1993	1,432,500	9,550	14,700	18,620	2,940	20.00%	8,820	60.00%	2,940	20.00%
1993-1994	1994	1,432,500	9,550	14,700	18,620	2,940	20.00%	8,820	60.00%	2,940	20.00%
1994-1995	1995	1,480,500	9,870	15,200	19,250	3,040	20.00%	9,120	60.00%	3,040	20.00%
1995-1996	1996	1,519,500	10,130	15,600	19,750	3,120	20.00%	9,360	60.00%	3,120	20.00%
1996-1997	1997	1,519,500	10,130	15,600	19,750	3,120	20.00%	9,360	60.00%	3,120	20.00%
1997-1998	1998	1,558,500	10,390	16,000	20,260	3,200	20.00%	9,600	60.00%	3,200	20.00%
1998-1999	1999	1,617,000	10,780	16,600	21,020	3,320	20.00%	9,960	60.00%	3,320	20.00%
1999-2000	2000	1,617,000	10,780	16,600	21,020	3,320	20.00%	9,960	60.00%	3,320	20.00%
Average Annual Change 1985-2000		26,240	170	270	340	50	18.50%	160	59.30%	50	18.50%

Source: THK Associates, Inc.

		POPULATION			HOUSEHOLDS	
Season	Calendar Year	Day Visitors	Overnight Visitors	Permanent	Overnight Visitors	Permanent
1984-1985	1985	2,670	9,200	4,400	2,560	1,600
1985-1986	1986	2,700	9,280	4,500	2,590	1,630
1986-1987	1987	2,780	9,560	4,670	2,660	1,700
1987-1988	1988	2,780	9,560	4,760	2,660	1,730
1988-1989	1989	2,860	9,840	4,910	2,740	1,780
1989-1990	1990	2,950	10,150	4,970	2,830	1,810
1990-1991	1991	2,950	10,150	4,970	2,830	1,810
1991-1992	1992	3,040	10,460	5,050	2,920	1,830
1992-1993	1993	3,130	10,760	5,200	3,000	1,890
1993-1994	1994	3,130	10,760	5,200	3,000	1,890
1994-1995	1995	3,230	11,120	5,390	3,100	1,960
1995-1996	1996	3,320	11,410	5,540	3,180	2,010
1996-1997	1997	3,320	11,410	5,540	3,180	2,010
1997-1998	1998	3,400	11,710	5,690	3,260	2,070
1998-1999	1999	3,530	12,150	5,920	3,390	2,150
1999-2000	2000	3,530	12,150	5,920	3,390	2,150
Average Annual Change: (1985-2000)		60	200	100	60	40

Sources: Gage Davis Assoc., VAIL MOUNTAIN/GORE VALLEY CAPACITY STUDY, (1980); Eagle County Planning Dept., EMPLOYEE HOUSING SURVEY, (1984); CSCUSA, THE CONTRIBUTION OF SKIING TO THE COLORADO ECONOMY, (Various 1982 to 1985); Vail Associates, Inc. & RRC, VAIL MASTER DEVELOPMENT PLAN, (1985) and THK Associates, Inc.

TABLE 4: PROJECTED TOWN OF VAIL HOUSING UNIT DEMAND BY TYPE, 1984-1985 TO 1999-2000

		Overnight Visitors						Permanent Households				Total			
Season	Calendar Year	Total	Single/Duplex	Town-home	Apt./Condo	Lodging	Total	Single/Duplex	Town-home	Apt./Condo	Total	Single/Duplex	Town-home	Apt./Condo	Lodging
1984-1985	1985														
1985-1986	1986	49	2	6	27	14	32	10	3	19	80	12	9	46	14
1986-1987	1987	114	4	14	63	33	74	24	6	43	188	27	20	106	33
1987-1988	1988	0	0	0	0	0	32	10	3	19	32	10	3	19	0
1988-1989	1989	130	4	16	72	38	53	17	4	31	183	21	20	103	38
1989-1990	1990	146	5	18	81	43	32	10	3	19	153	14	18	87	33
1990-1991	1991	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1991-1992	1992	146	5	18	81	43	21	7	2	12	167	11	20	93	43
1992-1993	1993	130	4	16	72	38	63	21	5	37	193	25	21	109	38
1993-1994	1994	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1994-1995	1995	163	5	20	90	48	74	24	6	43	236	29	26	133	48
1995-1996	1996	130	4	16	72	38	53	17	4	31	183	21	20	103	38
1996-1997	1997	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1997-1998	1998	130	4	16	72	38	63	21	5	37	193	25	21	109	38
1998-1999	1999	212	7	26	117	62	84	27	7	50	296	34	33	167	62
1999-2000	2000	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Average Annual Change:		90	3	11	50	26	39	13	3	23	129	15	14	73	26
1985-2000		100%	3.1%	12.3%	55.3%	29.3%	100%	32.5%	8.5%	59.0%	100%	11.9%	11.2%	56.4%	20.5%

Source: Gage Davis Assoc., VAIL MOUNTAIN/GORE VALLEY CAPACITY STUDY, (1980); Eagle County Planning Dept., EMPLOYEE HOUSING SURVEY, (1984); CSCUSA, THE CONTRIBUTION OF SKIING TO THE COLORADO ECONOMY, (Various 1982 to 1985); Vail Associates, Inc. & RRC, VAIL MASTER DEVELOPMENT PLAN, (1985) and THK Associates, Inc.

TABLE 5: PROJECTED TOWN OF VAIL RETAIL SALES BY CATEGORY, 1984-1985 TO 1999-2000

Season	Calendar Year	Average Daily Ski Season Population					Total Ski Season Retail Sales by Category												
		Average Day Skiers /Day	Day Skiers	Destination Skiers	Permanent Residents	Total	Lift Ticket (\$)	Ski School (\$)	Equip. Rental (\$)	Lodging (\$)	Eating & Drinking (\$)	Entertainment (\$)	Other Retail (\$)	Total Winter Visitor Sales (Exc. Lift Ticket Ski Sch. & Rental) (\$)	Total Winter Visitor Sales & Local Winter Sales (\$)	Local Winter Sales (\$)	Total Annual Retail Sales Total Visitors & Locals (\$)	Total Annual Retail Sales to Local Population	
1984-1985	1985	8,160	1,630	4,900	4,400	10,930	19,469,025	2,169,000	2,624,700	29,164,800	24,301,425	4,898,775	40,588,275	98,953,275	116,415,618	17,462,343	173,754,653	41,701,117	
1985-1986	1986	8,230	1,650	4,940	4,500	11,090	19,649,895	2,187,660	2,647,080	29,402,880	24,507,435	4,938,765	40,926,285	99,775,365	117,382,782	17,607,417	175,198,183	42,047,564	
1986-1987	1987	8,480	1,690	5,090	4,670	11,450	20,213,445	2,252,648	2,726,018	30,295,680	25,240,073	5,088,728	42,158,910	102,783,390	120,921,635	18,138,245	180,480,053	43,315,213	
1987-1988	1988	8,480	1,690	5,090	4,760	11,540	20,213,445	2,252,648	2,726,018	30,295,680	25,240,073	5,088,728	42,158,910	102,783,390	120,921,635	18,138,245	180,480,053	43,315,213	
1988-1989	1989	8,730	1,750	5,240	4,910	11,900	20,842,545	2,320,485	2,807,805	31,188,480	25,995,510	5,238,690	43,411,485	105,834,165	124,510,782	18,676,617	185,836,989	44,600,877	
1989-1990	1990	9,000	1,800	5,400	4,970	12,170	21,467,700	2,390,850	2,893,050	32,140,800	26,785,350	5,398,650	44,733,600	109,058,400	128,304,000	19,245,600	191,498,507	45,959,642	
1990-1991	1991	9,000	1,800	5,400	4,970	12,170	21,467,700	2,390,850	2,893,050	32,140,800	26,785,350	3,698,650	44,733,600	109,058,400	128,304,000	19,245,600	191,498,507	45,959,642	
1991-1992	1992	9,290	1,860	5,570	5,050	12,480	22,154,460	2,466,593	2,984,603	33,152,640	27,632,393	5,568,608	46,145,205	112,498,845	132,351,582	19,852,737	197,539,675	47,409,522	
1992-1993	1993	9,550	1,910	5,730	5,200	12,850	22,779,615	2,536,958	3,069,848	34,104,960	28,422,233	5,728,568	47,467,320	115,723,080	136,144,800	20,421,720	203,201,194	48,768,287	
1993-1994	1994	9,550	1,910	5,730	5,200	12,840	22,779,615	2,536,958	3,069,848	34,104,960	28,422,233	5,728,568	47,467,320	115,723,080	136,144,800	20,421,720	203,201,194	48,768,287	
1994-1995	1995	9,870	1,970	5,920	5,390	13,280	23,524,035	2,620,605	3,171,165	35,235,840	29,360,880	5,918,520	49,037,955	119,553,195	140,650,818	21,097,623	209,926,594	50,382,382	
1995-1996	1996	10,130	2,030	6,080	5,540	13,650	24,181,965	2,692,395	3,257,835	36,188,160	30,162,120	6,078,480	50,370,045	122,798,805	144,469,182	21,670,377	215,625,645	51,750,155	
1996-1997	1997	10,130	2,030	6,080	5,540	13,650	24,181,965	2,692,395	3,257,835	36,188,160	30,162,120	6,078,480	50,370,045	122,798,805	144,469,182	21,670,377	215,625,645	51,750,155	
1997-1998	1998	10,390	2,080	6,230	5,690	14,000	24,778,290	2,758,808	3,338,198	37,080,860	30,906,158	6,228,443	51,612,645	125,828,205	148,033,182	22,204,977	220,945,048	53,026,812	
1998-1999	1999	10,780	2,160	6,470	5,920	14,550	25,732,410	2,865,068	3,466,778	38,509,440	32,096,618	6,468,383	53,600,805	130,675,245	153,735,582	23,060,337	229,456,093	55,069,462	
1999-2000	2000	10,780	2,160	6,470	5,920	14,550	25,732,410	2,865,068	3,466,778	38,509,440	32,096,618	6,468,383	53,600,805	130,675,245	153,735,582	23,060,337	229,456,093	55,069,462	
Average Annual Change: 1985-2000		170	40	100	100	240	\$417,560	\$46,400	\$56,140	\$622,980	\$519,680	\$104,640	\$746,300	\$2,114,800	\$2,488,000	\$373,200			

Source: THK Associates, Inc.

E. Statistical Summary – Skier Visitors / Population / Housing / Retail Sales (Table 6)

This table is a composite of the four preceding tables showing projections by five year increments. As the table indicates, total population for both the visitors and permanent groups is projected to be 21,600 by the year 2000 generating a need for 1,534 residential units and 395 lodging units. Retail sales will increase 24% over the 15 year time period.

3. Land Use Demand

These housing unit and retail sales numbers are then converted to additional acreage demands and broken down as shown in Table 7.

The results of the projected unit and retail space demands then become the amount of growth which is expected by the year 2000. This growth may be accommodated in several ways: 1) by adding additional dwelling and lodging units and commercial space; 2) by increasing the occupancy rate for dwelling units and lodging units; 3) by directing growth down valley, outside of the Town of Vail; and / or 4) through a combination of the three alternatives above.

The ability of the Town to meet the growth demand will be defined by the physical constraints such as geologic hazards, steep slopes, floodplain areas, the availability of undeveloped land and the development policies of the Town. The land use plan has been developed keeping these factors in mind.

The projected growth is moderate overall and necessarily follows an average of 3% ski area visitor growth (with some peaks and valleys occurring in certain years). Due to the existing inventory of approved and undeveloped lots, a majority of the residential and lodging units may be accommodated through development in these already approved subdivisions and development projects. The Town of Vail has the following number of units already approved, but unbuilt as shown in Table 8.

TABLE 6: STATISTICAL SUMMARY
Skier Visits / Population / Housing / Retail Sales – 60% Destination Skiers

	1985	1990	1995	2000	TOTAL
A. SKIER VISITS					
1. Average Skiers/Day	8,160	9,000	9,870	10,780	
2. Design/Skiers/Day	12,560	13,860	15,200	16,600	
3. Peak Skiers/Day	15,910	17,550	19,250	21,020	
B. POPULATION PROJECTIONS					
1. Overnight Visitors (Winter Only)	9,200	10,150	11,120	12,150	
2. Day Visitors (Winter only)	2,670	2,950	3,230	3,530	
3. Permanent	4,400	4,970	5,390	9,920	
TOTAL POP- 2000				21,600	
C. ADDITIONAL HOUSING UNITS					
1. Residential Units	67	465	467	535	1,534
2. Lodging Units	14	114	129	138	395
TOTAL UNIT DEMAND- 2000					1,929
D. RETAIL SALES (millions)	\$173.8	\$191.5	\$209.9	\$229.5	

Source: THK Associates, Inc., June 21, 1986.

TABLE 7: LAND USE DEMAND- YEAR 2000

LAND USE TYPE	DEMAND	ACREAGE DEMAND
1. <u>Single Family / Duplex</u>	232 du	78 acres+/-
2. <u>Multi-family</u>		
a. Townhouses	214 du	22 acres ¹
b. Apartments / Condos	<u>1,088 du</u>	<u>78 acres</u> ²
Subtotal Multi-family	1,302 du	95 acres
Total Residential	1,534 du	173 acres
3. <u>Lodging: Hotels, lodges, accommodation units</u>	395 du	8 acres ³
4. <u>Commercial / Retail</u>		
a. Ski Related Demand	131,850 sq. ft.	
b. Local Demand	<u>89,122 sq. ft.</u>	
Total Retail Demand	220,972 sq. ft.	

¹ Demand at 10 du/acre.

² Demand at 15 du/acre.

³ Demand at 50 du/acre

These densities were chosen to reflect average existing densities within the Town of Vail.

TABLE 8: APPROVED UNITS / UNBUILT

LAND USE CATEGORY	NUMBER OF UNITS
1. <u>Single Family / Duplex</u>	1,080
2. <u>Townhomes / Apartments / Condos</u>	<u>879</u>
Total Residential Units	1,959
3. <u>Lodging</u>	447

These numbers include all residential lots and projects presently approved within the Town of Vail, including those which have development constraints and would most likely never be built upon. Further analysis to determine how many of these are actually buildable was undertaken and is discussed in the next chapter, Proposed Land Use. However, these numbers indicate that a substantial amount of the projected land use demand may be accommodated through infill within existing platted projects.

CHAPTER VI – PROPOSED LAND USE

The proposed Land Use Map was developed through utilization of:

- Public input at the three meetings;
- Analysis of existing land use conditions;
- Analysis of opportunities and constraints; and
- Projected market demands for residential, lodging, and retail uses.

1. Land Use Plan Alternatives

For the purpose of initial discussion, three land use alternatives were developed.

A. The first alternative was one which showed all areas containing constraints as undeveloped open space. These constraint areas covered parcels within already platted subdivisions. This alternative was essentially a “No Growth” option, allowing for only limited infill in unconstrained areas.

- B. The second alternative was called the “Existing Trends” alternative which took constraints into consideration but would allow for continued infill within already approved subdivisions, so long as existing Town land use regulations could be met, with respect to slopes and hazards. Some areas of increased density were shown as a way to meet market demand for multi-family during the planning period.
- C. The third option showed new development outside of existing developed areas, irrespective of constraint areas.

These options were reviewed with the Task Force and the “Existing Trends Alternative” was chosen as the preferred alternative. Option A, the “No Growth” option was eliminated because: 1) it would have required a change in policy by the Town to prohibit future development within existing platted areas; and 2) it would not have provided enough areas for new growth, needed to accommodate projected market demands throughout the planning period.

Results of the first public meeting indicated the importance of accommodating “balanced” growth to meet the needs generated by expansion of the ski mountain. It was generally recognized that growth of the ski mountain. It was generally recognized that growth of the ski areas was tied to the economic stability of the Town and growth should be accommodated, preventing major sources of revenue going outside the Town, down valley,

Option C, the “Unconstrained” alternative was not chosen as the preferred alternative due to:

1. the fact that development of hazard areas would have required major changes to development regulations in the Town.
2. The market projections, combined with available undeveloped land did not indicate a need to develop highly sensitive areas. The land use analysis showed that most of the new demand could be accommodated within existing platted projects.
3. The opinions expressed by the public about development of hazard areas. The consensus was that development should not occur within high hazard areas.

The “Existing Trends” alternative thus became the preferred option. This alternative most accurately reflected the market demands and the desires of the citizenry. The public input had shown a general satisfaction with the location of existing land uses, which was used as the foundation for the preferred alternative.

2. Key Goals

The most important goals culled from the public meetings were used to formulate the Trends Alternative. These key goals are as follows:

A. Commercial Uses

1. Commercial strip development should be avoided.
2. Commercial growth should be concentrated primarily in existing commercial areas to accommodate both local and visitor needs.
3. New hotels should continue to be located primarily in the Village and Lionshead areas.

B. Residential Uses

1. Additional residential growth should continue to occur primarily in existing, platted areas.

2. New subdivisions should not be permitted in proven high geologic hazard areas.
3. Development proposals on the hillsides may be appropriate, in a limited number of cases, for low density residential uses. These proposals would need to be evaluated on a case-by-case basis, with development being carefully controlled as to sensitivity to the environment and visibility from the Valley floor.

C. Village / Lionshead Core Areas

1. Increased density for commercial, residential and lodging uses in the Core areas would be acceptable so long as the existing character of each area is being preserved.
2. The connection between the Village Core and Lionshead should be strengthened, through the creation of a natural pedestrian corridor which could contain garden areas and sculpture plazas.

D. Parks and Open Space

1. While an additional golf course was identified as being necessary, no site within the Town was pinpointed as a desirable site.
2. The preservation of open space was determined to be a high priority. The improvement of existing parks and open space areas, in concert with continued purchase of open space by the Town were both identified as priorities.

E. General Growth and Development

1. Vail should continue to grow in a controlled environment, maintaining a balance between residential, commercial and recreational uses to serve both the visitor and the permanent resident.
2. The quality of the environment should be protected as the Town grows.
3. Recreational and public facility development on National Forest lands could be appropriate if:
 - a. No high geologic hazards exist;
 - b. Community objectives are being met with the proposal (as articulated in the Comprehensive Plan);
 - c. The parcel has adequate access and is adjacent to Town boundaries; and
 - d. The affected neighborhood could be involved in the decision-making process.
4. The existing condition and use of National Forest Land (USFS) which is exchanged, sold, or otherwise falls into private ownership should remain unchanged. A change in the existing condition and use may be considered if the change substantially complies with the Vail Comprehensive Plan and achieves a compelling public benefit which furthers the public interest, as determined by the Town Council. (Res. 2 (2003) §1)
5. Development may also be appropriate on Town-owned lands by the Town of Vail (other than park and open space) where:
 - a. No high geologic hazards exist; and
 - b. Such development is for public use.

3. Land Use Plan Assumptions

With the consideration of these goals, the following parameters were established for the Trends plan.

- A. New development would for the most part, occur within and adjacent to already developed areas.
- B. No new commercial districts would be created, but commercial activities would take place adjacent to or within existing commercial areas.
- C. That substantial areas of open space would remain in the Town.
- D. That constraint areas should be considered in the designation of areas for future development.
- E. That National Forest lands should continue to remain as open space, accommodating only public facilities or recreational uses.
- F. That hillsides should also be assessed, taking constraints into consideration.
- G. That the Village and Lionshead Core Areas would remain essentially the same, with the addition of a transition area to strengthen the connection between the two core areas. Several new land use categories aimed at strengthening hotel and other tourist-oriented uses were also added.

4. Proposed Land Use Categories

New land use categories were defined to indicate general types of land uses which should occur within the Town during the planning period. These categories were varied from the existing land use categories to reflect the goals of the community more accurately. The specific land uses are listed as examples and are not intended to reflect an all-inclusive lists of uses. Uses would be controlled by zoning. These categories are indicated below.

LDR Low Density Residential

This category includes single-family detached homes and two-family dwelling units. Density of development within this category would typically not exceed 3 structures per buildable acres. Also within this area would be private recreation facilities such as tennis courts, swimming pools and club houses for the use of residents of the area. Institutional / public uses permitted would include churches, fire stations, and parks and open space related facilities.

MDR Medium Density Residential

The medium density residential category includes housing which would typically be designed as attached units with common walls. Densities in this category would range from 3 to 14 dwelling units per buildable acre. Additional types of uses in this category would include private recreation facilities, private parking facilities and institutional / public uses such as parks and open space, churches and fire stations.

HDR High Density Residential

The housing in this category would typically consist of multi-floored structures with densities exceeding 15 dwelling units per buildable acre. Other activities in this category would include private recreational facilities, and private parking facilities and institution/ public uses such as churches, fire stations and parks and open space facilities.

HR Hillside Residential

This category would allow for single family dwelling units at densities no more than two dwelling units per buildable acre. Also permitted would be typical single family accessory uses such as private recreational amenities, attached caretaker units, or employee units and garages. Institutional / public uses would also be permitted. These areas would require sensitive development due to slopes, access, visibility, tree coverage and geologic hazards. Minimum buildable area of 20,000 square feet would be required per dwelling unit. (See Chapter VIII for more specific discussion of implementation.)

LRMP Lionshead Redevelopment Master Plan

Included in this category are those properties which are identified as being included in the Lionshead Redevelopment Master Plan boundaries. Properties located within this land use category shall be encouraged to redevelop, per the Master Plan recommendations, as it has been found that it is necessary in order for Vail to remain a competitive four-season resort. Uses and activities for these areas are intended to encourage a safe, convenient and an aesthetically-pleasing guest experience. The range of uses and activities appropriate in the Lionshead Redevelopment Master Plan (LRMP) land use category may include skier and resort services, ski lifts, ski trails, base facilities, public restrooms, ticket sales, clubs, public plazas, open spaces, parking and loading/delivery facilities/structures, public utilities, residential, lodges, accommodation units, deed restricted employee housing, retail businesses, professional and business offices, personal services, and restaurant uses.

RAS Resort Accommodations and Service

This area includes activities aimed at accommodating the overnight and short-term visitor to the area. Primary uses include hotels, lodges, service stations, and parking structures (with densities up to 25 dwelling units or 50 accommodation units per buildable acre).

CC Community Commercial

This area includes activities aimed at accommodating the overnight and short-term visitor to the area. Primary uses include hotels, lodges, service stations, and parking structures (with densities up to 25 dwelling units or 50 accommodation units per buildable acre). These areas are oriented toward vehicular access from I-up, with other support commercial and business services included. Also allowed in this category, would be institutional uses and various municipal uses.

CO Community Office

This area is to include primarily office uses of all types. Some limited commercial uses, such as retail businesses; including general merchandise, apparel and accessories and auto service facilities would also be permitted.

T Transition

The transition designation applies to the area between Lionshead and the Vail Village. The activities and site design of this area is aimed at encouraging pedestrian flow through the area and strengthening the connection between the two commercial cores. Appropriate activities include hotels, lodging and other tourist oriented residential units, ancillary retail and restaurant uses, museums, areas of public art, nature exhibits, gardens, pedestrian plazas, and other types of civic and culturally oriented uses, and the adjacent properties to the north. This designation would include the right-of-way of West Meadow Drive and the adjacent properties to the north.

PSP Public / Semi-Public

The public and semi-public category includes schools, post office, water and sewer service and storage facilities, cemeteries, municipal facilities, and other public institutions, which are located throughout the community to serve the needs of residents.

P Parks

Included in this category are town owned parcels intended for both active recreation activities such as athletic fields, golf courses and playgrounds, as well as areas for various passive recreation activities.

OS Open Space

Passive recreation areas such as greenbelts, stream corridors and drainageways are the types of areas in this category. Hillside areas which were classified as undevelopable due to high hazards and slopes over 40% are also included in this area. These hillside areas would still be allowed types of development permitted by existing zoning, such as one unit per 35 acres, for areas in agricultural zoning. Also, permitted in this area would be institutional / public uses.

SB Ski Base

Ski base areas are designated at the main mountain portals found within the Town. Uses and activities for these areas are intended to encourage a safe, convenient and aesthetically-pleasing transition between the ski mountain and surrounding land use categories. The range of uses and activities appropriate in the Ski Base (SB) land use category may include skier and resort services, ski lifts, ski trails, base facilities, public restrooms, ticket sales, clubs, public plazas, open spaces, parking and loading/delivery facilities, and residential, retail, and restaurant uses.

I-70 Interstate 70 Corridor

This category includes the right-of-way devoted to Interstate 70 and would be reserved for permanent public use as a roadway.

NF National Forest Lands

National Forest lands not designated within the Land Use Plan boundary are assumed to remain as open space due to steep slopes, inaccessibility, high hazards and not having adjacency to the town.

CMP Chamonix Master Plan Area

Included in this category are those properties which are identified as being included in the Chamonix Master Plan boundaries. Properties located within this land use category shall be encouraged to develop, per the Master Plan recommendations, as it has been found necessary in order for Vail to remain a successful resort community. Uses and activities for these areas are intended to encourage a safe, convenient and pleasant resident experience. The range of uses and activities appropriate in the Chamonix Master Plan (CMP) land use category may include deed restricted employee housing, private recreation facilities, private parking facilities, and institutional/public uses such as a fire station and other municipal facilities to serve the needs of residents.

5. “Preferred Plan” Land Use Pattern

The “Existing Trends” alternative was chosen as the preferred land-use plan and was carefully reviewed area by area to assess feasibility and compatibility with adjacent existing land uses. Some modifications were then made in proposed new areas of medium and high density because of potential land use and neighborhood conflicts. The pattern which is reflected on the “Preferred Plan” is discussed below.

A. Residential Uses

1. Low Density Uses

Low density residential uses are now planned for a total of 699.0 acres, or about 21% of the land in the plan area, which is an increase of 8% over the area presently in low density residential use. These areas reflect the completion of existing platted projects, with some additional areas added adjacent to the single family areas at low densities. The 8% increase reflects the large number of undeveloped, platted lots already existing in Vail.

2. Medium and High Density Uses

Medium and high density residential areas now account for a total of approximately 15% of the land in the plan area, with 421 acres in the medium density category and 68.5 acres in the high density category. This is a 4% increase in land area devoted to these two land use designations, reflecting a need to accommodate additional market demand for multi-family uses. For the most part, these multi-family areas have been kept consistent with the pattern of existing land use with additional multi-family occurring within unfinished projects and adjacent to these multi-family areas. Some new areas of high density residential have been added, specifically in East Vail between the Frontage Road and I-70, where access is good and surrounding land uses would be compatible for this type of use. Other areas, north of I-70 where existing land uses are mixed containing both low and medium density uses have been shown as medium density to meet the demand for additional multi-family dwelling units within the 15-year planning period.

3. Hillside Residential

The new category of land use types “Hillside Residential” covers a portion of two large parcels. These parcels account for 33.3 acres or a total of 1.0% of the land use area within the plan area.

These parcels were designated in this category to allow the possibility for limited development if certain criteria could be met. Any development proposed would require the evaluation on a case-by-case basis, accompanied by an in-depth analysis, to assure sensitivity to constraints, provision of adequate access, minimization of visibility from the Valley floor, and compatibility with surrounding land uses. Any such development would be required to meet all applicable Town ordinances and regulations. (See Chapter VIII for more specific information on implementation.)

B. Commercial Uses

1. Vail Village

The Vail Village areas has been designated separately as a mixed-use area and accounts for 77 acres or about 2% of the plan area. This area has not been analyzed in this Plan document because the “Vail Village Master Plan” study has addressed this area specifically in more detail.

2. Tourist Commercial

The area planned for commercial uses oriented toward products and services for the tourist includes the Lionshead commercial area and totals 16 acres or .5% of the land within the plan area.

3. Resort Accommodation Services

This area has been designated for the area which extends from the Lionshead hotel / accommodation unit area east along the Frontage Road to Vail Road. Cascade village has also been designated as Resort Accommodation. These are the areas where hotel uses will be concentrated during the planning period, reflecting the community goals to concentrate hotels within the core areas. These areas total 52 acres, or about 2% of the land area studied.

4. Community Commercial

This new category has been designated for the West Vail commercial area, which is primarily oriented to serve the needs of the permanent resident and the long-term visitor. Because the community expressed the desire to concentrate commercial uses within existing commercial nodes, no new commercial areas have been designated. The CC land use area contains 24 acres or 1% of the land area

5. Community Office

This area has been designated a mixture of office and support retail uses and is located to the west of the Lionshead RAS area. These areas will affect a transition from the more intense commercial and resort uses to less intense uses outside of these areas. There is a total of 16 acres (about 1%) in this land use category.

C. Transition Area

A transition area has been designated for the area to the north of West Meadow Drive (including the roadway) between the RAS area to the north and the medium density residential area to the south, between Vail Road and the Lionshead Tourist Commercial Area. This area is intended to

provide a strengthened pedestrian link between Lionshead and Vail Village. There are 11 acres (.3%) shown in this land use category.

D. Parks and Open Space

Parks, open space, greenbelts and stream corridor areas account for 1,278 acres or approximately 38% of the land area within the plan boundary. The area designated as parks has stayed consistent with the areas shown on the Existing Land Use Map and include major and minor parks owned by the Town along with the golf course. This makes up a total of 266 acres. Open space areas have increased significantly from 297 acres to 1,022 acres reflecting the community goals of preserving open space in sensitive environmental areas on the hillsides. Areas shown as open space include both public and private land ownership patterns.

E. Public / Semi-Public Land Uses

These areas, scattered throughout the Town, are consistent with the existing land use pattern. The acreage has increased from 57 acres to 72 acres or 2% of the total land area due to the inclusion of a possible cemetery site in East Vail.

F. Ski Base Area

This area has remained consistent with the location of the existing ski facilities. New areas have been added at Cascade Village and Lionshead for planned ski-related improvements, bringing the ski base acreage from 44 acres up to 86 acres (about 3% of the land area).

G. Interstate 70 Corridor

This acreage remained fixed, although the new access point west of Lionshead is shown on the Plan. The corridor accounts for 505.5 acres or 15% of the land use in Vail. This area is intended to remain as right-of-way during the planning period.

All National Forest lands outside the plan boundary are assumed to be open space, with the best use considered to be National Forest.

Table 9 shows the acreage breakdown of the proposed Land Use Plan. Figure 4 "Land Use Plan" shows the configuration of the proposed land use plans illustratively. A larger map (1"=400') also hereby adopted shows proposed land use in more detail. This is available at the Community Development Department and should be consulted prior to time of preparation of development proposals.

6. "Preferred Land Use Plan" Analysis

The "Preferred Plan" acreages were then compared with projected demands to the year 2000 for permanent housing, lodging units, commercial and office square footage. The resulting figures are shown in Table 10. This table compares the demand in units or acres with the supply of undeveloped land both platted and unplatted, which is unconstrained. Unconstrained lands are those areas which do not contain high hazard avalanche and geologic areas, floodplains or slopes over 40%. This table shows that the Preferred Plan will be able to provide enough lots / land area for all of the projected demand for single family and duplex lots, with a surplus remaining of 326 dwelling units.

There will be a shortfall of area for multi-family dwelling units of 17 acres, which may be accommodated through increasing the occupancy rate of existing multi-family units or

encouraging the down valley communities to supply a portion of this demand. This shortfall occurred because of 1) the need to assure that new areas designated for multi-family were compatible with surround land uses; 2) the desire of the community to discourage development in sensitive, undeveloped lands; and, 3) the general satisfaction of the community with the existing land use pattern. It was thus decided that it would not be appropriate to increase densities in unsuitable areas just to completely fill market demands.

TABLE 9: PROPOSED LAND USE – “PREFERRED LAND USE PLAN”

LAND USE CATEGORY	ACRES	PERCENT
Low Density Residential	698.8	20.8
Medium Density Residential	420.8	12.5
High Density Residential	68.5	2.0
Hillside Residential	33.3	1.0
Village Master Plan	77.0	2.3
Tourist Commercial	15.8	.05
Resort Accommodation Services	51.9	1.6
Transition Area	11.4	0.3
Community Commercial	24.4	0.7
Community Office	15.6	0.5
Park	255.9	7.6
Open Space	1,022.9	30.5
Public and Semi-public	72.0	2.1
Ski Base	86.3	2.6
Interstate 70 Right-of-Way	<u>505.5</u>	<u>15.0</u>
TOTAL	3,360.1	100.0

This table also shows that there will be a deficit of 70,272 square feet or approximately 3.3 acres of land for commercial / retail uses. This may be accommodated through: 1) increasing intensities of use within the core areas; 2) adding commercial square footage within Lionshead through the relocation of the Gondola building and possible addition of commercial space to the parking structure. These are both options being discussed but are not yet quantified. These two options could then provide the additional 51,850 square feet of skier-related retail space; 3) addition of support retail outside of the core areas within the Community Office land use area; and, 4) increased intensity of use in the West Vail Community Commercial undeveloped area. These two options could be utilized to accommodate the 18,422 square foot shortfall of local related retail space. It was decided to rely on the marketplace to accommodate this additional retail demand through these types of options, rather than designating new commercial areas away from existing nodes, which would have been contrary to the desires expressed by the community at large.

In summary, the Preferred Land Use Plan reflects a balancing of existing conditions, community opinion, opportunities and constraints, and projected growth demands.

This Land Use Plan, adopted as a part of this document and shown as a graphic representation in Figure 3 is intended to be used along with the goal statements, as a general guide for the review of new development projects which may be proposed in Vail. The Land Use Plan illustrates in a general way the categories of land use which would be appropriate throughout the town. The small scale (1"=1,000') map contained herein should not be used to determine the suitability of uses on a parcel by parcel basis. The larger scale map (1"=400') is also hereby adopted and is on file with the Town of Vail Community Development Department. This larger map is more suitable for identifying specific parcels, though this map does not determine land use based on property boundaries.

TABLE 10: PREFERRED LAND USE PLAN ANALYSIS

TYPE OF USE	DEMAND: LOTS/ACRE	PLAN- UNCONSTRAINED PLATTED/UNDEVELOPED LOTS/ACRE	PLAN- UNCONSTRAINED VACANT/UNDEVELOPED ACRES	BALANCE SURPLUS/DEFICIT
1. Single family/Duplex	232 du/78 ac	234 lots (55 sf du 358 duplex du) 413 du total	60.0 Acres (will accommodate 145 du) = 558 du	+326 du (413+145=558 558-232=+326
2. Multi-family				
a. townhouses	214 du/22 ac ¹	MDR – 49.9 ac	11.2 ac	
b. apt/condo	1,088 du/73 ac ²	HDR – 16.4 ac	0.0 ac	
TOTAL MF	1,302 du/95 ac	66.3 ac	11.2 ac total 77.5 ac	-17 acres (66.3 + 11.2 = 77.5; 78-95= -17)
3. Lodging	395 au/ 8 ac ³	447 approved au	N/A	+ 52 au (447-395 = +52)
4. Commercial/Retail				
a. Ski Related	131,850 sq. ft.	<u>Approved/Unbuilt (Core Areas)</u> 27,000 sq.ft. <u>Allowed in Master Plan (Core Areas)</u> 53,000 sq.ft. Total Village & Lionshead Core Potential 80,000 sq.ft.		<u>Core Areas</u> -51,850 sq.ft. (80,000-131,850= -51,850
b. Local	89,122 sq.ft. 220,972 sq.ft.	<u>Approved/Unbuilt (Outside Core)</u> 70,700 sq.ft. <u>Total Approved/Planned</u> 150,700 sq.ft.		<u>Outside Cores</u> -18,422 sq.ft. (70,700-89,122 = 18,422)
				Total Deficit – 70,272 sq.ft. or 3.3 acres at .5 F.A.R (150,700-220,972 = -70,272)

1. Demand at 10 DU/acre
2. Demand at 15 DU/acre
3. Demand at 50 DU/acre

CHAPTER VII – COMMUNITY FACILITIES

1. Inventory and Assessment of Town Owned Property

The initial section of the study provides a general evaluation of the suitability of the numerous town owned sites to accommodate development. The term development is used in its generic sense in that land which may currently be void of any activity or could be improved or developed to accommodate a public or private use.

An initial screening of the properties is presented in which the site and location is presented. The physical character of the site is briefly described as is its current use. Finally, an assessment of the suitability of a site is based on a number of factors including the following:

- **Size** The site may be too small to accommodate any active or passive function.
- **Physical constraints** The site may be subject to flooding, may contain geologic hazards or severe slope conditions.
- **Accessibility** The site may contain significant limitations on access which may suggest only certain types of use.

Existing Use

There may be an existing public use on the site which is providing a valuable service to the community and likely not to change. (Note: for purposes of this assessment, the planning horizon of the Year 2000 is used as the basis for commenting on future needs of the community.)

Restrictions on Use

A number of parcels of land which have been deeded to the Town of Vail contain covenant restrictions as to their use. These restrictions could preclude certain activities and dictate site utilization.

This initial evaluation would be termed a coarse screening of the town properties. The intent is to identify those parcels which are likely not to change from their current use or activity and to eliminate them from further discussion. Conversely, those tracts of land which do represent opportunities for change or development will be analyzed further for their potential.

Coarse Screen of Sites

Following is a listing of identified Town of Vial owned properties and comments as to their character and suitability. The parcels are numbered generally from the east part of the community to the west and are located on Figure 4 – Inventory of Town Properties.

Tract 1 – Bighorn Park

This 6.43 acre parcel of land is improved as an athletic field and playground for younger children. It serves as a neighborhood park for area residents and will continue as a park and recreation site.

Tract 2 – King Arthur's Court

This site is located across Meadow Drive from Bighorn Park. The site provides public pedestrian access to the mountain side on Forest Service lands to the south. The site is identified as being an area of high environmental constraints and would appear to be most suitable for park and open space activities.

Tract 3 East Vail Fire Station

Located on Columbine Drive in the Bighorn Subdivision, the station provides for the fire protection needs of the East Vail area.

Tract 4 – Bighorn Subdivision, Third Addition

This area is north of Interstate 70 in the Pitkin Creek area. The tract of land had been subdivided into 18 lots, a dedicated road and a 5.73 acre unplatted parcel. The parcel has limited access and it is located in an area of high environmental constraints. No covenant restrictions have been identified with the site, however, its inaccessibility and development limitations suggest that open space is its most appropriate use.

Tract 5 – Pitkin Creek Stream Tract

This is the streambed and associated floodplain area of the Pitkin Creek located between I-70 and Bighorn Road. It is also the site of the Historic Circle K ranch house which is used as a bus shelter. The open space character of Pitkin Creek should remain as would the historic site and thus no change is anticipated.

Tract 6 – Katsos Ranch

This parcel of land has been the subject of much community-wide discussion since its purchase by the Town of Vail in 1977. The tract contains 146 acres and lies immediately east of the Vail Golf Course and south of Gore Creek. A study was prepared in 1978 to examine the impacts of alternative development scenarios for the property. The alternatives ranged from a “do nothing” or “no development” scenario to the construction of an executive style golf course. The study concluded that a moderate level of development is the most desirable for the site. This level of development would include a bike trail, running trail, cross-country skiing trails and picnic areas. Many of these improvements have been constructed and are used by area residents and tourists alike. Based on this expression it is assumed that passive open space is the acceptable and appropriate use for the parcel.

Tract 7 – East of Booth Falls Road

This area consists of three separate tracts of land which were dedicated to the Town of Vail for open space as part of subdividing. Of the separate tracts of land that have been dedicated, Tract C has little in the way of development constraints. Its location at the intersection of Katsos Ranch Road and the East Frontage Road has good proximity to roads and utilities. There are other public and private recreation facilities in Booth Creek and the site offers no apparent unique visual or environmental benefits. This is a possible site for disposition by the Town. However, it should be noted that there has been no confirmation of covenants or deed restrictions associated with the property. No alternate use has been identified for this site at this time.

Tract 8 – West of Booth Falls Road

This area is similar in formation to Tract 7 in that individual parcels of land were dedicated to the town of Vail as part of park and open space requirements. Two of the parcels are within high environmental hazard areas and are likely to remain as open space areas. The third parcel of land in the subdivision has frontage along I-70 and backs up to the residential area along Bald Mountain Road. This parcel is attractive for development because of its visibility, access to the frontage road, relative large size (14 acres) and only a portion of the property is within a moderate environmental hazard area. There is, however, some question as to the covenant restrictions on the property which may limit the use to open space. This tract has been discussed in the past as a possible location for an executive par 3 golf course, however it is not large enough to accommodate such a use. A well-planned, 18-hole par 3 course requires 50 to 60 acres. A 9-hole par 3 course could possibly be accomplished on as little as 20 acres, however this site is only 14 acres and therefore would not accommodate “executive” type

course very adequately.⁵ While it is a possible candidate for some type of development, there are not current public facility needs which could be accommodated at this site.

Tract 9 – East of Sunburst Drive

This site contains just over 28 acres and is located south of the Vail Golf Course. The site is entirely within a high hazard area and is viewed as designated open space for the community. Just to the south of Sunburst Drive are several small parcels which are avalanche chutes, scheduled to remain as open space.

Tract 10 – Vail Golf Course

The Vail Golf Course comprises just over 94 acres of land along Gore Creek in the east-central part of the community. A portion of the course winds through a residential area along Vail Valley Drive. No change is anticipated in the function and extent of the area.

Tract 11 – Bus Barn, Public Works

The Town of Vail bus barn and public works shops are located on a 17.3 acre site north of I-70 in the vicinity of the golf course. There is no change anticipated in this area and there appears to be sufficient room for expansion of the facility. This site is a potential candidate for the location of a limited use, special event oriented heliport.

Tract 12 – Ptarmigan Road Avalanche Chute

A 1.15 acre area has been designated as a safety area to accommodate potential avalanches. The site would remain as open space in the community.

Tract 13 – Fairway Drive Avalanche Chutes

A 2.16 acre site to accommodate avalanche hazards has been dedicated to the town along Fairway Drive in the Vail Village 10th Filing. This site provides a safety area and would remain as open space for the community.

Tract 14 – Ford Park

The Ford Park is the focus of outdoor summer recreation activities in the community. It contains athletic fields for softball, soccer and lacrosse, tennis courts, a picnic pavilion, barbecue grills, bike paths and a nature center. A Master Plan was recently adopted for the park and an amphitheatre is currently under construction. During the past winter seasons, the athletic fields of the upper bench of the park has served as a day use parking area for skiers. The use of special WWII vintage landing mats have been used to protect the turf from damage. There is no change, other than on-going facility development for the park. Specifically, a community indoor swimming pool has been proposed for the east end of the site.

Tract 15 – Golden Peak Athletic Field

This five acre athletic field accommodates soccer, rugby and lacrosse activities during the summer. This athletic field is anticipated to continue to serve as a site for active recreation functions in the community.

Tract 16 – Vorlaufer Park, aka Roger Staub Park

The small .5 acre open area is located off of Gore Creek Drive in Vail Village serves as a passive pocket-park adjacent to Gore Creek. This passive area is landscaped and contains boulders for resting and provides a pleasant relief from the dense built-up nature of the Village. It is viewed as a positive attribute likely to continue to function as such.

⁵ DeChaiara, Joseph and Lee Koppelman, Urban Planning and Design Criteria, pg 380; and THK Associates, Inc.

Tract 17 – Mill Creek Stream Tract

This area extends from Hanson Ranch Road to Gore Creek Drive in back of the Red Lion Building. The tract serves as a drainageway and should be preserved in its open state. Development along Bridge Street has turned their back to the stream and rehabilitation and/or renovation in the area should be encouraged to take advantage of this pleasant open area.

Tract 18 – Gore Creek Stream Tract

The stream tract extends from Ford Park in the east to Forest Road on the west and consists of a series of dedicated parcels as development progressed within the Town . The area serves as an invaluable environmental and aesthetic component to the Village core. The primary uses of this area are linear open space and recreational paths.

Tract 19 – Slifer Square

Slifer Square consists of the covered bridge, the landscaped plaza and the “vest pocket” park between the Village parking structure and the bridge. The area serves as an entryway to the Village core and is unlikely to change. It has also been identified as a possible site for the Town of Vail Christmas Tree.

Tract 20 – Village Parking Structure

The site of the parking structure contains just over 5.5 acres of land not all of which is occupied by the three level parking structure. The top of the structure serves as the Vial Transportation Center and is the focus for regional and town-wide bus routes. The east of the structure is undeveloped and this area represents an opportunity for development.

Tract 21 – Pirate Ship Park

This facility is located along Mill Creek in the vicinity of the Vista Bahn chairlift. The tot lot and playground serve the recreational needs of smaller children in the community and would likely remain unchanged.

Tract 22 – Willow Circle Landscaped Area

This 3.8 acre area serves as an open relief for residences which surround it and would remain as such.

Tract 23 – Ski Museum

Located at the intersection of Vail Road and West Meadow Drive, this 1.23 acre site serves as one of the many tourist attractions in the community. The site is at one of the more congested vehicular intersections in town and there are numerous vehicular / pedestrian conflicts in the area. There are approved plans (related to the Vail Village Inn Special Development District) for the relocation of the museum. The plan calls for this site to become a small park / open space with opportunities for public art, to serve as a window into the transition area, between Vail Village and Lionshead. The plans for this site may be modified in the future, with the intersection improvements noted in the Vail Village Master Plan.

Tract 24 - Village Fire Station

The station site is likely to remain unchanged.

Tract 25 – Interfaith Chapel

Land south and west of the chapel is owned by the town and currently is used for parking for the chapel. Unless there is a change in the chapel activity then there appears to be no need to affect this tract.

Tract 26 – Municipal Building and Post Office

This site contains 2.81 acres and is located along the frontage road west of the Vail interchange. There are numerous options available for change in use of this site which are discussed later in this study.

Tract 27 – Dobson Ice Arena and Adjacent Lot to East

The site and use appears to be fairly well fixed for the neat future. There have been discussions about expansion and/or modification of the building to accommodate small conventions. To date, no firm plans have been identified, and thus there is no change expected for the arena site. As possible use of the adjacent lot may be an outdoor ice arena. The lot is now planned to accommodate additional hospital parking needs.

Tract 28 – Vail Library and Adjacent Park Area

The library is located south of the Dobson Ice Arena and like the arena there are no known expansion plans or relocation plans which would affect the site. There is a small park area adjacent to the library, which will remain in its present use.

Tract 29 – Lionshead Parking Structure

The Lionshead parking structure site is one which offers an opportunity to include some additional activities. The structure presently contains a number of uses including the Teen Center. The types of activities are tied in with the options which may results from activities at the municipal center.

Tract 30 – Pedestrian Overpass

The landing areas for the pedestrian overpass which connects Red Sandstone Elementary School and Lionshead are the two sites of this tract. No change is expected for this are, other than realigning the south approach.

Tract 31 – Lionshead Entryway / Right-of-Way

This “tract” is actually a series of parcels in and around Lionshead which are entryways and landscaped bus turnarounds. No change is expected in this area.

Tract 32 – Lionshead Mall

The pedestrian mall of the Lionshead commercial area is the site of this tract. The tract winds in and around the mall and connects the parking structure with Lionshead Circle. The “Urban Design Guide Plan” addresses potential changes in this area.

Tract 33 – Lionshead Centre

This site is located directly south of the Lionshead Centre building adjacent to the Gore Creek stream tract. It currently is part of the open space and trail system in the are and no changes are likely.

Tract 34 – Old Town Shops

This site is used for Town of Vail recreational programs and for storage. This site may have some potential for redevelopment at the time the new access to I-70 becomes a reality.

Tract 35 – Mountain Bell

The Mountain Bell microwave facility and two daycare center are located on a 25 acres site owned by the Town of Vail which is north of I-70. A portion of this site under the microwave facility, is owned by Mountain Bell. Part of the entire site is located in an area of medium environmental hazards and should continue to remain in its present use, with possible expansions of the day care centers. It may also be an option for the cemetery, further discussed later.

Tract 36 – Red Sandstone Elementary School

The Town of Vail leases the site to the Eagle County School District for educational purposes. This arrangement will likely continue through the planning period.

Tract 37 – Potato Patch

An irregular shaped area above Red Sandstone Elementary School was dedicated to the Town as open space. This area has a variety of high and medium environmental constraints as well as some areas with no identifiable development constraints. There are no apparent deed restrictions for use of the property, however, the site is relatively difficult to access and seems to be most appropriately left in open space.

Tract 38 – Lion’s Ridge

The Lion’s Ridge parcel is designated as open space and because of the severe topographic and environmental conditions is not suitable for other uses.

Tract 39 – Cascade Village Stream Tract

This is an area along Gore Creek in the vicinity of the Westin Hotel which serves as flood protection and provides some open space for this area.

Tract 40 – Donovan Park

The undeveloped park consists of a 12-acre lower bench area north of Gore Creek and a 39-acre upper bench south of the Matterhorn Subdivision. The park has been the subject of a Master Plan which outlined the proposed park facilities for the site. The community intends to proceed with development of the project as funding becomes available. The upper bench has also been identified as a potential cemetery site.

Tract 41 – Buffehr Creek

A site of approximately one acre in size has been identified as a park site for neighborhood residents. The use of this site is likely to continue throughout the projection period.

Tract 42 – Stephens Property

This is a ten acre parcel of land located along Gore Creek in the Intermountain area of West Vail. The tract is currently undeveloped and could be a possible cemetery site.

Tract 43 -Chamonix Parcel

The 3.6 acre Chamonix Parcel has been identified for the location of a future high density, for-sale, deed-restricted employee housing development consisting of approximately 58 dwelling units *16 to 17 dwelling units per acre). A Land Use Plan depicting the uses has been prepared as the result of a comprehensive public planning process and is included as Appendix F of this document.

Tract 44 – West Vail Fire Station

The 1.25 acre West Vail Fire Station Parcel has been identified for the location of a new fire station in West Vail. A Land Use Plan depicting the location of the new fire station on the parcel has been prepared and is included as Appendix F of this document.

2. Facility / Service Requirements

In this section of the study the existing facilities used by the Town of Vail’s service providers will be discussed. In general, a majority of the municipal sources offered by the town are well situated to serve the growth needs of the community. However, as the community grows and matures there are likely to be demands for additional services and/or facilities. For example there has been an expressed need for an indoor aquatic center in the community. This facility

would be difficult to justify under normal measures of demand (one pool per 25,000 population is a typical National Park and Recreation standard). However, community interest is extremely high in a facility of this type due to the higher recreational participation rates and the higher guest populations found in Vail and a site is recommended for its development. Following then is a brief discussion of status of existing services / facilities. (Note: a significant amount of information reported in this section is a results of a Space Needs Study conducted for the town in December of 1984.)

Vail Police Department

The Vail Department of Police is currently housed in the Municipal Building. The department occupies a portion of upper and lower levels of the building with approximately one-third of the structure needed for the law enforcement function. The department is in need of additional space for personnel, facilities and storage. The 1984 study indicates that between 1,500 and 2,000 square feet of additional space is needed.

Fire Protection

Currently, two fire stations are serving the community: The East Vail Station on Columbine Drive in the Bighorn subdivision; and the Central Station on east Meadow Drive which is adjacent to the Village. The determination of fire protection adequacy involved a complex formula which incorporate construction type, building height, water flow rate, response time and service radius. The American Insurance Association (formerly the National Board of Fire Underwriters) prepares the evaluation. A rule of thumb for protection of residential areas is a radius of one and one-half miles for engine companies and two miles for ladder. Applying this standard suggests that an additional station could be proposed to serve the West Vail area.

Library

The library is housed in a new facility with apparent adequate space to accommodate the present and near future needs of community residents.

Public Works

The Public Works / Transportation Department is housed at the Town of Vail shop property which is located north of I-70 in the vicinity of the golf course. The Public Works Town Shops may need to be expanded to accommodate future space needs to allow for additional services to be located at the shops. Also, in the previous space use study, it was recommended that a small satellite facility to accommodate under storage and a snowplow be developed in West Vail.

Recreation

The administrative function of the recreation department is currently located in the lower level of the library. There has been no indication that the current space is inadequate and thus it is assumed that the near term space needs of the department are satisfied.

The second component of the recreation function is the land and/or facilities required to meet the recreational needs of community residents. This investigation has not included a parks and recreation master plan which would examine in some degree of detail these needs. However, there are some general indications of recreational desires as expressed by residents involved in the public meetings associated with the Land Use Plan project and during the completion of the Master Plans for the Ford and Donovan Parks.

Park and recreation standards have historically been the means by which park requirements for future population have been estimated. The application of a ratio, typically expressed in acres per 1,000 population is often the point of beginning in projecting needs for a community. Also, these standards tend to be based on national trends as monitored by the National Park and

Recreation Association. Often these national standards are not applicable to a community's situation – in the case of Vail, this is most certainly true. The unique location of the community and its recreation / tourist base tends to skew the national standards. However, using a ratio as expression of future requirements is a technique which has some validity in this case.

The results of the survey conducted as part of the land use plan indicated that there are over 555 acres of land in the area devoted to park and open space use. A further breakdown indicates that 296 acres of the 555 acres are classified as open space and the remaining 259 acres are used for park purposes (improved parks and athletic fields). A major component of the parks acreage is devoted to the golf course which is just over 94 acres of land. The current permanent population in the community is estimated to be 4,500 persons. Applying this population to the current park and open space acreage results in the following:

1. Open Space Land = 65.8 acres per 1,000 population
 2. Park Land (including golf course) = 57.6 acres per 1,000 population
 3. Park Land (excluding golf course) = 36.7 acres per 1,000 population
- Total Park & Open Space Lane (1+2) = 123.3 acres per 1,000 population

As a means of comparison, the most frequently used ratio in expressing the requirement for park needs for urban conditions amounts to 25 acres per 1,000 population. The Town of Vail far exceeds this “normal” standard to the provision of park and recreation space.

Throughout the public meetings associated with the land use plan and the results of a community services questionnaire, there appeared to be general satisfaction with the level and amount of park and recreation facilities and areas. (A notable exception is the desire for an indoor aquatics center.) Thus, as one measure of the future needs in the community, today's standards of providing park areas could be used to determine future demands.

The year 2000 population projections for the community indicate that the permanent population is 5,920 persons, or an increase of 1,420 persons above current levels. Using the existing ratio of park land now provided to the increase in population results in the following:

In the future, the Town may desire to annex National Forest lands for the purpose of recreational and/or public facility development. This will involve close coordination with the Forest Service. The use and existing conditions of National Forest Land which is exchanged, sold, or otherwise falls into private ownership should remain unchanged. A change in existing condition and use may be considered if the change substantially complies with the Vail Comprehensive Plan and achieves a compelling public benefit which furthers the public interest, as determined by the Town Council. (Res. 2 (2003) §1)

Additional Park and Open Space Land Required

Open Space Land (65.8 acres x 1.42)*	= 93 acres
Parkland – Excluding Gold Course (36.7 acres x 1.42)	= <u>52 acres</u>
Total	= 145 acres

(*Note: the ratio which excludes the golf course was used because there are no additional areas which could accommodate a golf facility in the planning are.)

Using the above stated assumptions on level of service, one could anticipate an additional need for 52 acres in parks and 93 acres in open space. This is only a general indication of need – it does not include important factors such as location, down-valley activities, or the availability of private recreation facilities in the community.

This aspect of community facilities will be the subject of further study by the Town as a separate component of the Comprehensive Plan. This will be accomplished through completing a "Recreational Strategic Plan" which will study needs for all types of recreational and parks amenities and identify locations for such needs. This effort will complement the already completed Master Plans for Ford and Donovan Parks, which programmed specific uses and locations for recreational facilities in each park.

Cemetery

A cemetery site has been identified as a high priority item for the community. In the process of identifying potential sites, contacts were made with agencies that may have regulations affecting the siting of such a facility. The Colorado State Department of Health was contacted and there are no regulations from their prospective which would affect siting of a cemetery. The only agency which does have an affect on cemetery operations is the Colorado State Division of Insurance, which is concerned with internment, general maintenance of the facility, and administration organization necessary to operate the facility. There are several key considerations in site criteria for a cemetery including: 1) the suitability of the terrain for internment such as the nature of the subsoil; 2) drainage; 3) proximity to community water sources; and, 4) accessibility. Also, there is the sensitive issue of the "feeling" of death that is associated with a cemetery and the inclination on the part of some people to avoid living in the vicinity of a cemetery. Finally, it is likely that a cemetery site will be used in perpetuity. Burial grounds are rarely moved due both to the practical and legal difficulties involved. Four sites have been identified as meeting the above outlined criteria; there are, however, some resolved questions with each.

Parcel H

This tract of land is located I East Vial under an elevated section of Interstate 70. The portion of the site appropriate to internment is north of Gore Creek and has direct access from Bighorn Road. Utilities, specifically water service, is available in the area. The site is presently within the White River National Forest and acquisition of the tract would have to conform to a complicated and lengthy set of procedures. Also, it is unknown at this time what rights the Colorado State Highway Department may have on the tract. Even though I-70 is elevated as it transverses the parcel, there may be some restrictions on the use of the space under the freeway.

Mountain Bell Tract

The 25-acre tract of land, currently owned by the Town of Vail, with a portion owned by Mountain Bell, which houses the telephone microwave transmitting facility, is recommended as a second potential cemetery site. The site has many positive attributes including access, availability of utilities and isolation. The one negative factor of the site is the terrain type. Presently, a portion of the area is identified as having moderate environmental constraints. It does appear that a carefully designed site plan could adequately overcome some of these constraints and provide a suitable cemetery site. This site is also intended to continue to be used by the two day-care centers with additional area to accommodate necessary expansion of these centers.

Stephen's Property

The Stephen's Property, West Vail, is the third site which has been identified as a possible cemetery. Gore Creek transverses this triangular shaped tract of land with the south portion being more flood prone and subject to moderate environmental constraints. As suitable as the site is it may face competition for use from the recreational requirement to meet future demands.

Donovan Park

A portion of the upper bench of Donovan Park was also previously identified as a possible cemetery site through the Mast Parks Plan process for Donovan Park.

General Governmental Services

General governmental services include those municipal functions such as town administration, community development, finance and personnel. The previously cited space needs study indicated that, with the exception of the Police Department, department needs are primarily in the area of additional storage. The individual needs of the departments are comparatively minor, however when they are added to the Police Department requirements and the current site constraints of the municipal building and post office site there becomes a cumulative effect and/or requirement which is discussed in a latter section of this report.

Schools

While education services are not provided by the Town, it is important to address the question of whether or not new sites for schools should be planned. According to conversations with Dr. Charles Schwann, Superintendent of School District RE50J, there are not projected needs for additional school sites with the Town of Vial. There are currently several school sites in Avon and Edwards which have been dedicated to the district. Due to the projected population distribution, in combination with the bus circulation routes, it is anticipated that needs for new schools will be met through the placement of facilities on these sites.

3. Locations for Other Facilities

During the course of this investigation there have been a number of special facilities or conditions which have been identified as being appropriate for comment. These items along with a summary of the key findings of the previous sections are presented as follows.

Aquatic Center

Concurrent with this investigation the Department of Community Development conducted an evaluation of alternative sites for an aquatic center. The evaluation used a checklist of seventeen different items which were applied to six separate sites in the community. The analysis resulted in an area at the east end of Ford Park as scoring the highest in almost all of the evaluation categories. The results of the evaluation confirms the recommendations which were made as part of the Ford Park Master Planning process. Therefore, should plans proceed for such a facility it would be most appropriately located at the east end of Ford Park.

Golf Course

The only site in the community large enough to accommodate an executive style, Par 3 course is a portion of the Katsos Ranch property as a well-planned 18-hole par 3 course requires 50 to 60 acres of land. As mentioned previously in the discussion of tract 8, a 9-hole par 3 course could possibly be built on approximately 20 acres. Tract 8 in the Booth Falls area could not accommodate this acreage requirement.⁶ At the public meetings held during the development of this plan, there was overwhelming community opposition to the use of the Katsos property to accommodate a golfing facility.

Seasonal Surface Parking Areas

In support of the impact assessment of the Vail Mountain Master Plan, a parking and bus utilization analysis was conducted. This analysis identified the magnitude of the increase associated with skier expansion, as well as the internal shift in ski portal use because of the

⁶ DeChaira, Joseph and Lee Koppelman, Urban Planning and Design Criteria, pg. 380; and THK Associates, Inc.

location of mountain expansion. It was projected that a shortfall of 597 public parking spaces would occur in the Village / Golden Park area while a surplus of spaces would result in the Lionshead / Cascade Village area. A variety of solutions to the projected shortfall were identified including:

- Expansion of the Transportation Center by 450 spaces
- Relocation of the rental car operation to free up spaces in the Transportation Center
- Increased parking as part of the Golden Peak base facility redevelopment
- Expanded parking at Ford Park
- Increased use of remote parking facilities such as the golf course lot
- Leasing of private spaces by employees
- Greater utilization of the bus system

The variety of option available to accommodate this growth suggests that there is likely no need to immediately look for additional surface parking areas. The experience with using Ford Park as a temporary solution has not been fully evaluated. However, from the community's perspective, there was no significant opposition to use of the upper bench of the park, as a temporary solution to the parking problem.

One of the concluding recommendations of the parking and bus utilization study involved the on-going activities of the Parking Task Force which would continue to monitor and document the adequacy of the parking system in the peak February-March period.

Village Parking Structure

The Village parking structure was previously mentioned as being one means by which to partially meet the additional parking requirements generated by the mountain expansion plan. The east end of the parking structure site is undeveloped. This area has been viewed as a possible site for numerous activities. It is recommended that since the parking structure has been designed for expansion and that the Village / Golden Peak ski portals are to be the focus of mountain expansion. Extending the existing parking structure would create a building area of 31,250 square feet on top of the structure (the length extends 250 feet, which is 50 feet short of the west pavement line of the Vail Valley Drive and the width is held at the current 125 feet). This area could then be utilized for some other type of use.

The landscaped slope facing south of the existing structure, along East Meadow Drive, has been discussed as possibly having some redevelopment potential. During the public meetings held to review this plan, the residents expressed a desire to keep this area in its present use, as permanent open space.

Lionshead Parking Structure

The Lionshead parking structure offers some of the same opportunities for joint use development as those of the Village structure. The types of activities and possible joint uses are somewhat different, however. The east end of the parking structure site is currently not developed as a parking structure but is utilized for parking for large recreational vehicles or buses. This area has been suggested as a possible site for a new municipal building or town hall. The site could easily accommodate a building of 20,000 square feet in a single or multi-level structure and could use either the existing parking for employee and/or business parking or could incorporate structured parking of its own. This potential building, along with the adjacent Dobson area and library, could form the components of a municipal center or complex, along with the existing Teen Center in the structure.

Another potential joint use for the site would be an extension of the commercial space along the south face of the structure. There is currently 5,000 square feet of commercial / office space and some additional square footage of space could be incorporated in the structure. Unlike the Village structure, however, the depth of the space (i.e., from street R.O.W. to parking structure) is relatively shallow. Commercial uses requiring a more square rather than rectangular shape may have to extend into the parking structure. The deed of transfer from Vail Associates to the Town of Vail specifically prohibits nonpublic uses for the structure. It should be noted, however, that existing commercial space is not physically attached to the structure – they are two separate buildings which may be a means to be in compliance with the deed restrictions. The restriction may preclude any extension of commercial space into the structure site.

In the discussion of using the east end of the parking structure as a building site, it should also be noted that the parking structure itself has been designed to accommodate additional roof-top loads. This a new building could almost be placed anywhere on the parking structure site.

The future use of both parking structures is now the subject of further investigation by the Town. A feasibility study has been initiated to address whether the structures should remain in their present use or be positioned for the addition of commercial, office and/or parking uses.

Municipal Building / Post Office Site

The suggestion that municipal functions be relocated, as discussed in the previous section, would then make available the municipal building and municipal building site. Added to this is the desire of the post office to relocate its distribution function to an outlying location (the community would like to maintain a “retail” function in Commercial Core I or II however) could possibly “free up” both buildings as well as the site. Some of the possible scenarios for site and activities include the following:

A. Municipal Function Relocated:

1. Use of the eastern part of the existing municipal building as a visitor’s center. This portion of the building (police department) has good visibility as well as parking. As a supplement to the visitor center, a historical display area and/or the ski museum could also be provided. The post office could operate its retail presence in the building it presently occupies.
2. Another general option would be to abandon the existing structures and develop a multi-purpose community building to accommodate the visitor center, Vail Resort Association, as well as space for other community service organizations.
3. Along the same lines as 2 above, the private sector could be encouraged to participate by offering the parcel for development, in exchange for the provision of a visitor center in the development.

The combination of uses are almost too numerous to list. Also, there needs to be some assessment of the size requirement of these facilities and whether any specific types of space are needed, as well as additional parking requirements.

B. Municipal Function Remains

1. If the municipal functions remain at the current site, then there would likely be a reallocation of uses among the two buildings. The Police Department’s need for additional space plus their need for communication equipment suggest that they remain in the existing municipal building. The post office building could become an “annex” to

the main building in which some municipal functions could be housed. The post office retail function would probably have to find a new facility.

2. A variation to the above would be to demolish the post office building and build and addition to the existing municipal building.
3. Another variation could demolish both buildings and construct a new municipal complex.

Locations for Public Art

The presence of public art in a community adds to the quality of life of its citizens. Public art can be commemorative by reminding the viewer of an individual or event of significance in the community or it can be created to evoke an emotional response on the part of the viewer. Because of the diversity of the types of public art, it is difficult to prescribe specific locations which are appropriate and suitable for all objects of art. Thus, the following items of consideration and suitable for all objects of art. Thus, the following items of consideration are provided as a means to review each proposal for the siting of a piece of public art, as further discussed following.

The piece of art proposed for public viewing has characteristics and qualities which should be examined prior to its siting. The following should be examined:

- Size and Scale: Is the physical size of the piece of art such that it requires a certain amount of distance for the object for proper viewing? For example, a kinetic sculpture the size of a small vehicle would likely require a pedestrian plaza area.
- Shape and Form: Whether the piece of art has a symmetrical shape or has a free-form has an influence on the most appropriate area from which to view it.
- Material: The material of the piece of art should be considered. For example, a high-tech material of glass or polished metal may be out of place in a natural setting along a streambed or in a forested area. Conversely, this type of material may provide a dramatic contrast to a natural forested setting.
- Mass and Density: The bulk and volume of a piece of art is also a factor which should be evaluated. There is a natural affinity between the mountainous terrain features of the area and a sculptural piece which expresses the mass and bulk.

In addition to aesthetic and design concerns associated with individual pieces of art, there are some very practical questions which should be addressed. The placement of a piece of art in a public place should be evaluated as to its effect on public health, safety and welfare. The types of issues include the **safety** of the piece of art from the standpoint of the viewer. Are there any sharp edges or delicate construction techniques which have the potential to cause injury to the viewer? Is the piece of art **secure** and well fastened to its viewing area, not subject to easy removal? Is there some measure of protection against **vandalism** associated with the piece? Can the piece be easily defaced, or should vandalism occur, can the defacing be easily removed? Finally, how does the piece of public art and its location relate to the **public works** function of the town? Specifically, are there any conflicts with snow removal, emergency service access and bus transit routes?

The above criteria are suggested as a means to evaluate individual pieces of art. There are, however, general locations which are more appropriate for public art. Within the Vail Village Master Plan, specific locations have been identified. Beyond the village area, locations should focus around pedestrian concentrations or movement. Bus stops make excellent location for art

because of the congregation of people. Similarly, formal plaza areas and areas where pedestrian pathways intersect are suitable locations. Siting areas along the pedestrian pathways associated with Gore Creek also are appropriate. In any of the above areas, the piece of public art should be selected and placed to compliment the urban or natural setting and should act as a magnet to draw people to an area.

CHAPTER VIII – IMPLEMENTATION

The Land Use Plan developed as a result of this effort will become a part of the Vail Comprehensive Plan, which in its entirety will serve to guide growth within the Town of Vail for the next 15 years. The Land Use Plan is not intended to be regulatory in nature but is intended to provide a general framework to guide decision making. Specific implementation measures should be undertaken to assure that the intent of the Plan is carried forward throughout the life of the Plan.

Such measures should include changes to ordinances and regulations or policies adopted by the Town. These measures should also include developing a system by which the Plan may be continuously monitored and periodically amended. This is important because the planning process is one of continuous evolution with data, public opinion and market forces changing over time.

1. Land Use Regulation Analysis

The zoning and subdivision regulations should be analyzed carefully to assure that objectives of the Land Use Plan may be met. While an in-depth analysis of these regulations is not within the scope of this project, some general recommendations may be made concerning new land use categories developed for the Land Use Plan. The following categories should be reviewed for compatibility with the zoning regulations.

A. Hillside Residential

This new category will require the adoption of a new zoning category, which would allow for single-family residential units at a maximum density of two per acre, with a minimum buildable area of 20,000 square feet of contiguous area per unit. Allowance should also be made for an employee or guest housing unit to be built as an accessory unit attached to the primary living unit or garage. The existing regulations for access to subdivisions and for control of hazard areas should still be applicable.

B. Community Office

This category would require a review of the Arterial Business District zoning category to ensure that permitted and conditional uses were broad enough to be consistent with the objectives established with the Land Use Plan.

C. Transition

This area would require an analysis of the actual zoning along West Meadow Drive to ensure that the purposes of the transition district could be met.

D. High Density Residential

The actual location of the parcels of high density residential should be analyzed to determine a suitable minimum lot area permissible for high density development. The present high density zone district has the requirement of a minimum lot size of 10,000 square feet of buildable area. It is conceivable that this minimum would not be adequate in some cases and may need to be increased to 20,000 square feet.

2. Procedural Method of Implementation

The general method of developing implementation measure should be as follows:

A. Define Plan / Zoning Differences

Compare Land Use Plan Map with Zoning Map and identify areas of conflict between categories as described in the Plan and the Zoning Ordinance.

B. Evaluate Zoning Ordinance

Begin evaluating the zoning ordinance as compared with the Land Use Categories adopted in this document and develop new categories or wording / use changes to bring the zoning document into conformance with general spirit of the Plan.

C. Refine Plan

It is anticipated that after the Plan has been adopted and has been used as a working document for some time, the Town may identify refinements which will need to be made to the Land Use Categories, Map and Goal Statements. These should be undertaken after the zoning code and revisions and other implementation documents have been prepared and are ready for adoption to “fine-tune” the Plan. It is recommended that these changes take place within the first year after adoption and occur as an amendment to the Plan, initiated by the Town. Amendment procedures are described on page 62.

D. Rezoning

The Town may wish to consider initiating select rezonings, when the community interests would be met through bringing areas into conformance with the Plan.

Where conflicts arise between existing zoning and proposed land use categories (and changes have not been made in the development of the implementation measures described herein) existing zoning shall control. When new applications for zoning or rezoning are made and the requested zoning is not consistent with the adopted Plan, this nonconformance shall be addressed by the applicant. It will be the responsibility of the applicant to clearly demonstrate how conditions have changed since the plan was adopted, how the Plan is in error or how the addition, deletion or change to the Plan is in concert with the Plan in general. Such nonconformance shall then become a factor for consideration in the rezoning process, along with all other factors considered in such cases, with respect to Town ordinances and policies.

E. Annexation of National Forest Lands

In the future, the Town may desire to annex National Forest lands for the purposes of recreational and/or public facility development. This will involve close coordination with the

Forest Service. However, National Forest land which is exchanged, sold or otherwise falls into private ownership should remain as open space and not be zoned for private development.

F. Parks and Open Space

Consideration should be given by the Town to amending the ordinance which regulate the real estate transfer tax to allow funds to be utilized for the development of parks and open space, in addition to the purchase of these lands.

3. **Amendment Process**

The amendment process is one which is intended to assure the Plan's effectiveness with periodic updates to reflect current thinking and changing market conditions. The process includes amendments which may be initiated in any of the following three ways:

- A. By the Community Development Department
- B. By the Planning and Environmental Commission or Town Council
- C. By the private sector

A. Community Development Department Amendments

The Community Development Department should update and revise the Plan every three to five years, whenever possible. However, if the plan is not updated within such time frame, this shall not jeopardize the validity of the plan. This should include analysis of the goals and policies; update of the forecasting model and review and revision of the Land Use Plan map. The Community Development Department would then make recommendation for proposed changes to the Planning and Environmental Commission where these changes would then be considered in a public hearing format. The Planning and Environmental Commission would then make recommendations to the Town Council, which would also hold a public hearing on the proposed changes. If adopted, the changes would then become a part of the Plan.

B. Planning and Environment Commission or Town Council Amendments

These entities could also initiate plan amendments periodically, as deemed appropriate. These amendments would also require public hearings with both the Commission and the Council, and upon adoption then become a part of the Plan.

C. Private Sector Amendments

The private sector may also initiate amendment requests. These should be initiated in the following way:

1. Make application with the Community Development Department. Applications may be made by either a registered voter, a property owner or a property owner's authorized representative. Such application may be made at any time.
2. Such applications will then be considered at a meeting with the PEC. At the Planning and Environmental Commission hearing, a recommendation shall be made to the Town Council, whereupon a decision shall then be rendered. To change the Plan by this procedure, it will be the responsibility of the applicant to clearly demonstrate how conditions have change since the Plan was adopted, how the Plan is in error or how the addition, deletion or change to the Plan is in concert with the Plan in general. Such decisions may include approval, approval with conditions or denial. Amendments may

be requested for change to the goals and policies and/or Land Use Plan map. If such request is approved, such change shall be made to the Plan document and/or map. If such request is denied, no such request that is substantially the same as that previously denied shall be considered for a period of one year.

4. Use of the Land Use Plan Map

The Land Use Plan map and the goal statements are intended to serve as the primary focus for the review of development proposals, along with Town ordinances and regulations. The Plan Map and goal statements are founded upon the supporting information and data contained in this document and therefore should not be utilized as the sole instrument for analysis of a project. Any project should be reviewed within the context of the intent of the overall Plan Document. The Community Development Department, along with the Planning and Environmental Commission and Town Council will be responsible for the interpretation and implementation of the Plan.

Where the 400 scale Land Use Plan map (adopted by reference herein) does not adequately define a land use category boundary, the boundary shall be interpreted by the Community Development Staff. It should be noted that the boundaries established on the Plan Map are general in nature and were not determined based on parcel by parcel property boundaries. When ambiguity exists, generally, roadways, natural barriers and property edges shall define such boundaries. When a property in single ownership is divided by a land use category such that the property cannot be developed in a feasible and logical way for either land use, the staff may determine which use is appropriate, based on compatibility of surrounding land uses, both existing and proposed, and physical site characteristics. Where a disagreement between the staff and the applicant occurs, appeals may be made to the Planning and Environmental Commission.

In conjunction with the use of the Plan Map, the constraint maps adopted by the Town for geologic hazards, snow avalanche and flood plains referenced herein shall also be utilized in the review of any development proposal. Areas which may fall with the I-70 corridor shall be determined by consulting the Town right-of-way maps also referenced herein.

LAND USE DESIGNATIONS

- Hillside Residential
- Low Density Residential
- Medium Density Residential
- High Density Residential
- Resort Accommodations and Services
- Community Office
- Village Master Plan
- LionsHead Redevelopment Master Plan
- Community Commercial
- Transition Area
- Public/Semi-Public
- Ski Base
- Park
- Open Space
- Not Designated
- Ski Portal
- Gore Creek
- Town Boundary

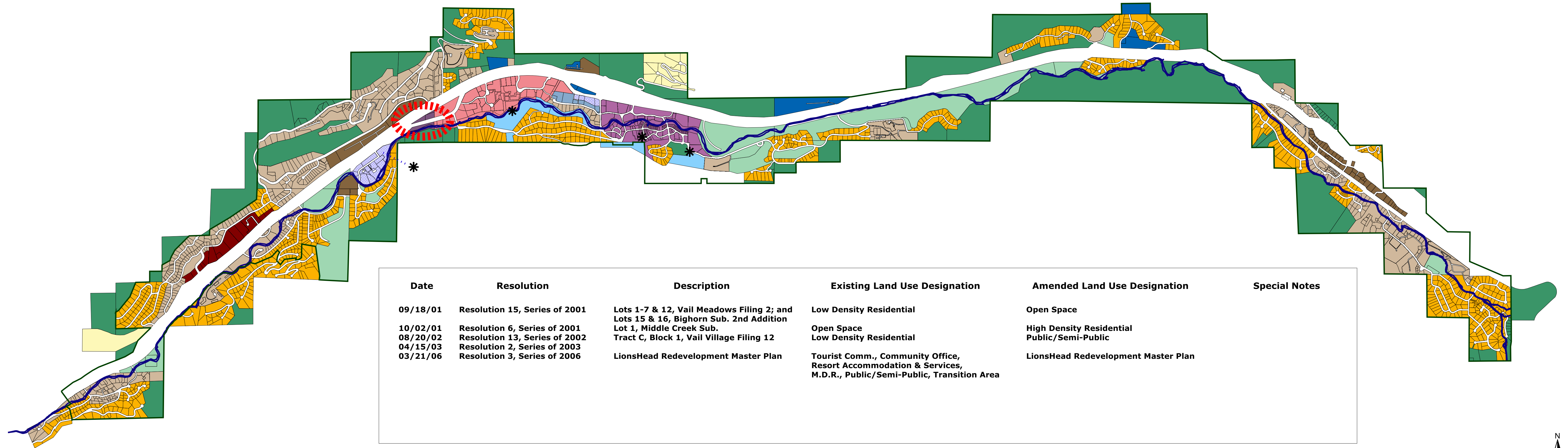
This is to certify that this is the Official Land Use Map of the Town of Vail, Colorado as adopted by Council on February 6, 2001 in accordance with Resolution No. 1, Series of 2001.

Official Land Use Map

Town of Vail, Colorado

Rudolph Klein
Mayor, Town of Vail

Lynelle Donaldson
Attest: Town Clerk, Town of Vail



**VAIL LAND USE PLAN
APPENDICES**

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APPENDIX A – VAIL COMMUNITY QUESTIONNAIRE – SUMMARY RESULTS

<u>Total</u>	<u>Strong Agree</u>	<u>Agree</u>	<u>Neutral</u>	<u>Disagree</u>	<u>Strongly Disagree</u>	
1. Growth can be accommodated in a variety of ways. Which of the following area or areas do you consider? Most appropriate?						
a. In the Village Core area thru redevelopment, if necessary.	9	6	3	2	2	22
b. On vacant land in already developed subdivisions	6	10	4	-	1	21
c. On vacant land at the edge of the built-up area.	2	4	6	3	4	19
d. On land suitable for development regardless of ownership.	<u>2</u>	<u>6</u>	<u>1</u>	<u>5</u>	<u>7</u>	<u>21</u>
Total	19	26	14	10	14	83
e. Other: hillsides (no growth on) limit growth and improve what we have Village, Lionshead, Westin down valley leave softball fields alone						
2. What type of growth should be encouraged?						
a. Hotel/lodge rooms.	8	5	5	2	2	22
b. Condominium (short-term rental or long-term	2	2	4	7	6	21
c. Townhomes.	1	8	7	5	1	22
d. Single family/duplex residences.	4	7	7	3	1	22
e. Commercial uses.	<u>5</u>	<u>7</u>	<u>4</u>	<u>1</u>	<u>1</u>	<u>18</u>
Total	20	29	27	18	11	105
f. Other: limit growth, focus on improving what we affordable family living space more time-share condos recreation facilities low cost housing for locals						

3. What do you like about the Town of Vail?

Ambiance

ambiance of village core
natural setting
friendliness of locals
mountain character
well kept and prosperous
people scale-public areas are accessible and naturally landscaped
everything
freedom
the people
surroundings – mountains
climate
mountain location
the look of the Vail area
neighborhood – community
ambiance
rural character
setting, location, variety of people and interests
summers
it's clean, scenic, well planned
small town flavor with cosmopolitan flavor
its location
natural setting
atmosphere
design and location
original and architecture

Recreation

availability from village to ski mountain (summer and winter)
skiing
community support for conservation of open spaces
skiing
recreation (paths and facilities)
proximity to nature
cultural activity
open space (what little there is)
library, ford park, tennis

Village Core/Lionshead

pedestrian core
pedestrian areas and Tyrolean design
excellent landscaping
like pedestrian streets when there are no trucks
good atmosphere for tourist business
flowers in summer
shopping

General Growth/Development

size and variety
economic viability
controls to keep greedy under control
growth potential

Government/Public Services

free bus
management
good building codes

4. What do you find undesirable about Vail as it now exists?

Commercial

economics of commercial areas
lower cost restaurants
expensive shops
high rents for retail shop owners
restaurants too expensive

Roads/Parking/Traffic

4-way intersections with bad visibility
poor road conditions (Beaver Dam and Forest Road for example)
parking in winter
traffic control
4-way stop
parking
commercial vehicles in CCI
cars in core
lack of traffic organization
lack of core parking in Village for work force

Village Core/Lionshead

quality diminishing – need for upgrade of structures
high – rise buildings near ski mountain
growing congestion
no activity in Lionshead – need vendor carts, night life
no cohesion between Vail Village and Lionshead
too much core construction during summer months
Lionshead over built
high rises in old Vail
quit tearing up town in summer
village activities lack variety

Residential

Family living space (owner occupied)
Housing too expensive

Recreation

night time recreation
emphasis on adult rather than youth activities
teens drinking and disorderly
no swimming pool

Government/Public Services

public rest facilities
no rest rooms in
restrictions of governmental bureaucracy
the willingness of council to grant variances
overbearing of fire and police
I-70 – too many cops

General Growth/Development

Too many opportunist wishing to make fast buck and leave the area before many of the problems of overdevelopment occur

Not growing

Being all things to all people – sports vs. culture

If old Vail goes like Lionshead – it will be a disaster. Hi rises and overbuilding thru variations will ultimately hurt the image and experience of visitors. Stability and control is necessary – looseness in the planning – zoning – variations is bad. As a condo owner in old Vail, we must keep the open areas open for summer fall and winter use.

Because Vail has grown at an unusually fast rate and because many developers wanted a fast buck, it seems that the focus on growth should begin improving what we already have. This concept would help to better utilize our limited space as well as make our town more attractive and cohesive. What has become of the original architecture and standards of building? Lionshead, in my opinion, will never reach its potential as a town center, a retail center or an arts center. Vail Village looks like its seen its hay day as the quality of some of the older buildings deteriorates and the new ones, like Lionshead, just don't fit in to the warmth our village is supposedly portraying.

As a potential shop owner myself, I am sorry I can't say that the rents they are asking in town for store space are worth it. I've seen too many good business people run out of town because of the high costs here. If Town of Vail would realize it's the little people who have made a commitment to live and work here who count, we'd be making progress in the right direction.

General

eye sores
signage
dogs loose
large groups with special rates who feel they can control the village to their liking
no major complaints
details need attention for quality – the last 10%
don't take care of everyone's needs – just the "haves"
tourists

	<u>Satisfied</u>	<u>Neutral</u>	<u>Dissatisfied</u>	<u>Total</u>
5. Please indicate your satisfaction with the following services or facilities.				
Public Facilities and Services:				
Sidewalks and Street Maintenance	8	4	10	22
Roads and Highways	8	3	13	24
Water Service	12	8	3	23
Fire Protection	16	5	1	22
Sewer System	14	7	-	21
Parks and Recreational Facilities and Programs	14	5	4	23
Law Enforcement	7	13	2	22
Traffic Control	4	6	13	23
Animal Control	5	11	7	23
Insect Control	5	13	2	20
Library Facilities	19	2	-	21
Other Community Facilities and Services				
Sanitary Land Fills	4	14	3	21
Telephone Service	10	10	2	22
Utility Services	8	10	3	21
Shopping Facilities	10	4	8	22
Professional Services (physicians, lawyers)	13	7	2	22
Restaurants	<u>20</u>	<u>1</u>	<u>1</u>	<u>22</u>
Total	177	123	74	374

6. Of the categories of public and community facilities and services above, which do you consider to be the most important to you?

Public Facilities and Services

traffic at peak periods
road maintenance
snow plowing – street repair
maintain pedestrian core with delivery access
bike paths, walking paths
parks and recreation facilities
more golf
open space along base of ski mountain
more golf
more community facilities – parks, swimming pool, etc.
library
fire and police protection
animal control

Other Community Facilities and Services

utility services
restaurants
professional
more shopping facilities are needed but not big mall
professional services
V.A. (the mountain)

APPENDIX B: ADDITIONAL GOALS
(Related to Other Elements of the Comprehensive Plan)

Parks/Open Space

1. Vail should develop the parks system.
2. Forest Service properties should remain as open space or may be used for public or recreational facility development; where appropriate.
3. More bike paths, which are separated from walking trails, should be developed.
4. Open space areas and Gore Creek should be preserved and left underdeveloped.
5. High quality landscaping should be encouraged in all development projects.

Recreation Facilities

1. More youth activities should be provided by the Town.
2. Construction of a public pool should be a high priority for the Town.
3. Non-skier, family activities should be encouraged.
4. Cultural experiences should be enhanced.
5. Construction of a visitor center should be a high priority for the Town.

Transportation

1. Vail should improve opportunities for group transportation from Denver to Vail.
2. Parking and bus service should be improved.
3. Adequate parking should be provided to accommodate day skier growth.
4. The traffic flow, especially obstructions caused by truck traffic, should be improved in the core.
5. Pedestrian/vehicle conflicts should be reduced through transportation improvements.
6. Surface parking should be reduced and provided underground where possible.
7. Construction of a people mover should be a high priority for the Town.

Economic Development

1. The community should help create a business environment which can serve middle income clientele and accommodate affordability for small businesses.
2. New growth should also be made affordable for families living and working in Vail.
3. The Town of Vail should consider developing some type of mechanism to control tenant mix, so that a balance between tourist and convenience type of commercial uses is maintained.

APPENDIX C – ADDITIONAL SOURCES STUDIED
IN THE PREPARATION OF THIS REPORT

1. "The Vail Village – Urban Design Guide Plan", June 1980.
2. "Vail Village Design Consideration", June 1980.
3. "The Vail Lionshead – Urban Design Guide Plan", June 1980.
4. "Vail Lionshead Design Consideration", June 1980.
5. "Lionshead Improvement District – Economic Benefit Analysis Addendum" – Larry Smith & Company, LTD., February 1983.
6. Zoning Code & Official Zoning Map – Town of Vail, 1985.
7. Land Transfer Tax Ordinance – Town of Vail.
8. "Park and Recreation Feasibility Analysis" – Community Development Dept., 1984.
9. "Vail Bikeway Plan" – Recreation Dept., 1984.
10. "Vail Traffic Counts" – Centennial Engineering, Inc., March 1986.
11. "Final Report I-70/Vail Feasibility Study" – Centennial Engineering, Inc., April 1984.
12. "Transit Development Plan 1978-1983 – Summary Report" – Community Development Dept., 1978
13. "Transit Development Plan 1987-1991 – Summary Report" – Community Development Dept., 1986
14. "Statement of Reasons of Town of Vail Appeal – Vail Land Exchange Proposal" – Town of Vail, 1986.
15. "Vail Master Development Plan" – Vail Associates, Inc. and Rosall, Remmen & Cares, Inc., October 1985
16. "Transportation Work Program: Vail Master Plan" – Rosall, Remmen & Cares, July 1985.
17. Parking and Bus Utilization – Vail Mountain Master Plan Update" – Rosall, Remmen, Cares, January 1986.
18. Air Quality Analysis – Expansion of Vail Mountain and Development of the Valley – 1986 to 1993", Air Sciences, Inc., October 1985.

APPENDIX D: ECONOMIC AND DEMOGRAPHIC OVERVIEW OF THE TOWN OF VAIL

INTRODUCTION

From its opening season in 1962 – 1963, the ski industry has fueled and shaped the growth and development of the Town of Vail. Today, Vail is the largest ski resort in the State of Colorado. Although composed of only one-fourth of the total permanent population of Eagle County, Vail provides approximately 60% of all jobs and accounts for approximately 50% of all retail sales in the county. Vail is clearly the center and driving force of economic activity in Eagle County.

The following economic and demographic overview begins with the review of historical skier visits to Vail, Beaver Creek and the State of Colorado. Next, historical population and household growth trends as well as housing and household characteristics in Vail and Eagle County are examined. Finally, the economy of Vail and Eagle County is analyzed through historical employment, income, business development and retail data.

Skier Visits

Skier visits are the leading indicator of the Vail economy. From 55,000 skier visits during the 1962 -1963 opening season, Vail experienced nearly 1.3 million skier visits over the past 1985 – 1986 season as presented in Table 1. This increase represents a substantial 14.5% annual growth rate over Vail's twenty-three year history. With increased competition, varying snow conditions and changing skier demographics, Vail's skier visits have fluctuated over the past decade, 2.7% over the past four seasons, and 2.2% since last season.

Vail consistently increased its share of skier visits to the State of Colorado from 10.0% in 1962 – 1963 to 18.8% in 1976 to 1977. Since the 1976-1977 season, however, Vail's share has declined over time to 13.7% by the 1985 – 1986 season. Much of this decreased share can be directly attributed to the opening of the nearby Beaver Creek ski resort during the 1980 – 1981 season. When combined, Vail and Beaver Creek have captured between 17.4% and 19.0% of the State's skier visits over the past six seasons. Therefore, a significant proportion of State skier visits continue to occur in the Vail Valley, but no longer exclusively at Vail Mountain.

Table D-1: HISTORICAL SKIER VISITS TO VAIL, BEAVER CREEK AND THE STATE OF COLORADO, 1962-1963 TO 1985-1986

Season	State of Colorado	Vail	Vail as Percent of Colorado	Beaver Creek	Beaver Creek as percent of Colorado	Vail and Beaver Creek Combined	Vail and Beaver Creek Combined as Percent of Colorado
1962-1963	549,151	54,984	10.00%			54,984	10.0%
1963-1964	801,631	84,822	10.60%			84,822	10.6%
1964-1965	1,102,690	146,389	13.30%			146,389	13.3%
1965-1966	1,168,159	189,593	16.20%			189,593	16.2%
1966-1967	1,411,577	235,897	16.70%			235,897	16.7%
1967-1968	1,813,210	273,000	15.10%			273,000	15.1%
1968-1969	2,329,546	360,000	15.50%			360,000	15.5%
1969-1970	2,741,101	433,178	15.80%			433,178	15.8%
1970-1971	2,999,453	481,019	16.00%			481,019	16.0%
1971-1972	3,260,510	545,602	16.70%			545,602	16.7%
1972-1973	3,974,250	617,710	15.50%			617,710	15.5%
1973-1974	4,304,787	673,178	15.60%			673,178	15.6%
1974-1975	5,194,720	815,123	15.70%			815,123	15.7%
1975-1976	5,965,172	1,026,088	17.20%			1,026,088	17.2%
1976-1977*	3,653,409	687,000	18.80%			687,000	18.8%
1977-1978	6,648,866	1,058,000	15.90%			1,058,000	15.9%
1978-1979	7,215,316	1,182,000	16.40%			1,182,000	16.4%
1979-1980	7,887,181	1,285,000	16.30%			1,285,000	16.3%
1980-1981*	5,498,962	932,000	16.90%	112,000	2.00%	1,044,000	19.0%
1981-1982	7,622,182	1,125,000	14.80%	218,562	2.90%	1,343,562	17.6%
1982-1983	8,200,422	1,255,626	15.30%	229,573	2.80%	1,485,199	18.1%
1983-1984	6,717,318	1,264,621	14.70%	343,371	4.00%	1,607,992	18.7%
1984-1985	9,041,461	1,223,446	13.50%	363,647	4.00%	1,587,093	17.6%
1985-1986	9,118,751	1,250,000	13.70%	340,000	3.70%	1,590,000	17.4%

Average Annual Change

1962-1963 to 1985-1986

(23 years)

Number	372,590	51,960	13.90%	--	--	66,740	17.9%
Growth Rate**	13.0%	14.5%	--	--	--	15.8%	--

1975-1976 to 1985-1986

(10 years)

Number	315,360	22,390	7.10%	--	--	56,390	17.9%
Growth Rate**	4.3%	2.0%	--	--	--	4.5%	--

1981-1982 to 1985-1986

(4 years)

Number	374,140	31,250	8.40%	30,360	8.10%	61,610	16.5%
Growth Rate**	4.6%	2.7%	--	11.7%	--	4.3%	--

* Poor snow conditions.

** Compound annual rate of change.

Source: Vail Associates, Inc., U.S. Forest Service, Colorado Ski Country U.S.A. and THK Associates, Inc.

Population and Households

Typical of many Western Slope ski resort communities, Vail has experienced rapid population and household growth since 1970. As shown in Table 2, from a permanent population increased to 2,261 by 1980 and is currently estimated at 4,500 in 1986. These figures represent an increase of 250 persons per year, or a 14.9% annual growth rate, over the sixteen year period and 370 persons per year, or a 12.2% annual growth rate, over the most recent six year period. Households in Vail have also increased at a rapid pace from 191 in 1970 to 988 in 1980 to the current estimate of 1,630 in 1986. These increases represent 90 additional households per year, or a 14.3% annual growth rate, over the sixteen year period and 110 additional households per year, or a 8.7% annual growth rate, over the most recent six year period.

The slower growth rate of households in recent years reflects the increase in the average household size in Vail. Although both state and national trends show a continuous decline in the average household size since 1970, an increase in the average household size is not unusual in a resort community such as Vail. More persons per household portrays the preference of employees to live in Vail but the reality of a limited supply of affordable employee housing.

Eagle County has also experienced strong population and household growth since 1970 although not at the same pace as the Town of Vail. The population of Eagle County increased at a 5.7% annual rate from 7,498 in 1970 to an estimated 18,200 in 1986. This growth was, nevertheless, significantly faster than the State of Colorado growth rate of 2.6% over the same period. Households in Eagle County increased from 2,302 in 1970 to an estimated 6,230 in 1986, representing a 6.4% annual growth rate. As in Vail, the average household size in Eagle County decreased over the 1970 to 1980 period, but increased over the 1980 to 1986 period.

The Town of Vail has substantially increased its share of the population and households in Eagle County from 1970 to 1986. Vail's permanent population comprised 6.5% of Eagle County's total population in 1970 but rose to 24.7% by 1986. Similarly, Vail's households accounted for 7.0% of Eagle County's total households in 1970 but rose to 26.2% by 1986. In recent years, approximately one-half of all growth in Eagle County has occurred in Vail.

TABLE D-2: HISTORICAL POPULATION AND HOUSEHOLD GROWTH TRENDS
IN VAIL AND EAGLE COUNTY, 1970-1986

	1970 (April 1)	1980 (April 1)	1986* (April 1)	Average Annual Change	
				1970-1986 (16 Years)	1980-1986 (6 Years)
<u>Vail</u>					
Permanent Population	485	2,261	4,500	250	370
Permanent Households	191	988	1,630	90	110
Average Persons per Household	2.54	2.28	2.76		
<u>Eagle County</u>					
Permanent Population	7,498	13,320	18,200	670	810
Permanent Households	2,302	5,217	6,230	250	170
Average Persons per Household	3.25	2.54	2.92		
<u>Vail as a Percentage of Eagle County</u>					
Permanent Population	6.5%	17.0%	24.7%	37.3%	45.7%
Permanent Households	7.0%	18.9%	26.2%	36.0%	64.7%

*Estimate.

Source: U.S. Department of Commerce, Bureau of the Census; Colorado State Department of Local Affairs, Division of Local Government; Eagle County Planning Office; Town of Vail, Department of Community Development; and THK Associates, Inc.

The housing stock and households of Vail and Eagle County are characteristic of communities and counties dominated by the tourism industry. Table 3 indicates that second-home households comprise a significant proportion of the total year-round housing stock in both Vail and Eagle County. Whereas in the State of Colorado only 1.9% of the total year-round housing stock is classified as second homes, in Vail 65.7% and in Eagle County 33.7% of the total year-round housing stock are in the second-home category. Both Vail and Eagle County have high proportions of renter-occupied households with 59.5% and 43.1%, respectively. In comparison, in the State 35.5% of households are renter-occupied. The generally young and mobile population attracted to ski resort communities results in a high proportion of non-family households. In Vail, 57.4% of households are non-family whereas in Eagle County 43.1% are non-family. Only 30.0% of households in the State, however, are non-family.

TABLE D-3: HOUSING AND HOUSEHOLD CHARACTERISTICS
OF VAIL AND EAGLE COUNTY, 1970-1980

	<u>Eagle County</u>				<u>Vail</u>	
	<u>1970</u>		<u>1980</u>		<u>1980</u>	
	<u>Number</u>	<u>Percent</u>	<u>Number</u>	<u>Percent</u>	<u>Number</u>	<u>Percent</u>
<u>Total Housing Units</u>	3,257	100.0%	11,060	100.0%	5,029	100.0%
Seasonal and Migratory	445	14.0%	389	3.5%	197	3.9%
Year-round	2,802	86.0%	10,671	96.5%	4,832	96.1%
<u>Year-Round Housing Units</u>	2,802	100.0%	10,671	100.0%	4,832	100.0%
Permanent Households	2,302	82.2%	5,223	49.0%	990	20.5%
Second-home Households*	295	10.5%	3,599	33.7%	3,174	65.7%
Other	205	7.3%	1,849	17.3%	668	13.8%
<u>Permanent Households</u>	2,302	100.0%	5,223	100.0%	990	100.0%
Family Households	1,828	79.4%	2,973	56.9%	422	42.6%
Non-family Households	474	20.6%	2,250	43.1%	568	57.4%
Average Persons per Household	3.25		2.54		2.28	
<u>Permanent Households</u>	2,302	100.0%	5,223	100.0%	990	100.0%
Owner-occupied	1,269	55.1%	2,973	56.9%	401	40.5%
Renter-occupied	1,033	44.9%	2,250	43.1%	589	59.5%

*Second-home households are defined as housing units held for occasional use regardless of the annual periods of occupancy.

Source: U.S. Department of Commerce, Bureau of the Census and THK Associates, Inc.

The Economy

The driving force of a local economy is those industries, known as basic industries, which derive their support from non-local dollars. These new dollars brought into the community generate income in the wholesale/retail trade, services, construction, transportation, communications, public utilities, real estate and finance sectors. In most rural economies, agriculture, mining, manufacturing and tourism account for the great majority of basic economic activity. Within Eagle County, basic economic activity is centered almost exclusively in tourism led by the ski industry of Vail.

Reflecting the rapid growth of the ski industry in Vail, Table 4 shows the substantial increase in the Eagle County employment base from 1975 to 1985. Over this period, the average annual employment increased from 4,124 in 1975 to 11,085 in 1985, representing a significant annual growth rate of 10.4% or 700 new jobs per year. New jobs in Eagle County formed at the rate of 740 per year over the 1982 to 1985 period and 800 over the 1984 to 1985 period, reflecting continued healthy economic growth.

The dominance of the tourism economy in Eagle County is evidenced by the composition of employment. The services and retail trade sectors have consistently provided the majority of jobs in Eagle County with 73.1% in 1975, 62.5% in 1980 and 61.4% in 1985. The finance, insurance and real estate, government and construction sectors all place a distant second, each sector with approximately 10% of all jobs in 1985. Approximately 80% of all jobs in Eagle County are estimated to be either directly or indirectly related to the ski industry.*

The center of economic activity in Eagle County is the Town of Vail. Over the 1975 to 1985 period, approximately 60% of all jobs in Eagle County were located in Vail. As presented in Table, Vail's employment base increased from 2,470 in 1975 to 6,870 in 1985 for an annual growth rate of 10.8%, or 440 jobs per year. Over the 1982 to 1985 period, new jobs in Vail formed at the rate of 460 per year while nearly 500 new jobs were created over the 1984 to 1985 period. Although data by industry were not available for the Town of Vail, it is expected that the proportion of services and retail trade sector employment is higher in Vail than Eagle County as a whole.

Personal income data also reflect the dominance of tourism in the Eagle County economy. Table 6 indicates that personal income in Eagle County increased from \$39.5 million in 1974 to \$198.5 million in 1984. Approximately 80% of total personal income in Eagle County is estimated to be derived either directly or indirectly from the ski industry.* The majority of personal income has consistently been derived from the services and retail trade sectors with 43.4% in 1974, 47.4% in 1979 and 50.9% in 1984. The emergence of Vail as a "mature resort" is evidenced by the decline in the proportion of construction sector income and the increase in the proportion of services sector income in recent years. In 1979, construction represented 21.4% of personal income; by 1984, this proportion had declined to 17.5%. In contrast, services accounted for 27.9% of personal income in 1979; by 1984, this proportion had increased to 31.5%.

*CSCUSA, The Contribution of Skiing to the Colorado Economy: Eagle County Case Study, 1982, p.v.

TABLE D-4: HISTORICAL EAGLE COUNTY AVERAGE ANNUAL EMPLOYMENT BY INDUSTRY AND PLACE OF WORK, 1975-1985

Industry	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	Average Annual Change			
												1975- 1985 (10 Years)	1980- 1985 (5 years)	1982- 1985 (3 Years)	1984- 1985 (1 Year)
Agriculture, Forestry, Fisheries	29	30	32	36	31	56	60	89	76	88	89	6	7	0	1
Mining	12	14	15	17	20	21	23	22	28	16	22	1	0	0	6
Construction	375	426	606	657	852	809	1,035	1,008	1,042	1,032	1,109	73	60	34	77
Transportation and Utilities	62	72	94	113	150	159	156	184	210	280	299	24	28	38	19
Wholesale Trade	25	29	29	41	56	69	81	90	94	135	144	12	15	18	9
Retail Trade	1,460	1,666	1,708	2,080	2,298	2,497	2,588	2,797	2,856	3,082	3,326	187	166	176	244
Finance, Insurance, Real Estate	322	368	365	410	526	572	746	761	823	1,091	1,175	85	121	138	84
Services	1,554	1,770	1,838	2,023	2,302	2,471	2,402	2,635	2,778	3,232	3,481	193	202	282	249
Government*	66	77	88	771	880	1,055	1,016	1,020	1,074	1,056	1,142	108**	17	41	86
County Total	4,124	4,702	5,018	6,403	7,354	7,969	8,377	8,865	9,246	10,286	11,085	696**	623	740	799

*1974—1977: Government includes only federal employees.

1978: Government includes only federal and local employees

1979-1985: Government includes federal, state and local employees.

**Higher than actual annual average due to the exclusion of state and local government employees in the 1975 employment data.

Source: Colorado Department of Labor and Employment: Town of Vail, Department of Community Development; and THK Associates, Inc.

TABLE D-5: HISTORICAL AVERAGE ANNUAL EMPLOYMENT BY PLACE OF WORK FOR VAIL AND EAGLE COUNTY, 1975-1985

<u>Year</u>	<u>Eagle County</u>	<u>Vail</u>
1975	4,120	2,470
1976	4,700	2,820
1977	5,020	3,010
1978	6,400	3,840
1979	7,350	4,410
1980	7,970	4,780
1981	8,380	5,190
1982	8,870	5,500
1983	9,250	5,730
1984	10,290	6,380
1985	11,090	6,870
 <u>Average Annual Change</u>		
1975-1985 (10 Years)	700*	440*
1980-1985 (5 Years)	620	420
1982-1985 (3 Years)	740	460
1984-1985 (1 Year)	800	490

*Higher than actual annual average due to the exclusion of state and local government employees in the 1975 employment data.

Source: Colorado Department of Labor and Employment ; Town of Vail, Department of Community Development, Transit Development Plan 1978-1983; Rosall Remmen and Cares, Inc.; Transportation Work Program V.A. Master Plan, July 1985; and THK Associates, Inc.

TABLE D-6: HISTORICAL EAGLE COUNTY PERSONAL INCOME BY INDUSTRY AND PLACE OF WORK (\$000's), 1974-1984

Earnings by Industry	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	Average Annual Change			
												1974-1984 (10 Years)	1979-1984 (5 Years)	1981-1984 (3 years)	1983-1984 (1 year)
Farm	\$1,360	\$2,282	\$563	\$421	\$1,081	\$987	\$922	\$826	\$757	\$757	\$778	(\$58)	(\$42)	(\$48)	\$21
Non-Farm	\$38,165	\$43,793	\$55,373	\$65,726	\$79,797	\$103,603	\$121,367	\$141,572	\$155,480	\$168,217	\$197,769	\$15,960	\$18,833	\$18,732	\$29,552
Private	\$33,361	\$38,010	\$48,609	\$57,770	\$70,789	\$92,809	\$108,795	\$125,993	\$137,227	\$147,819	\$175,792	\$14,243	\$16,597	\$16,600	\$27,973
Agriculture, Forestry, Fisheries	ND	\$473	\$1,179	ND	ND	ND	\$1,939	\$2,984	\$3,221	\$3,071	\$3,241	\$324	\$648	\$86	\$170
Mining	ND	\$3,384	\$3,442	ND	ND	ND	ND	ND	(\$157)	\$241	(\$198)	(\$20)	(\$40)	(\$66)	(\$439)
Construction	\$5,713	\$5,341	\$8,321	\$13,908	\$16,718	\$22,365	\$23,119	\$30,425	\$29,251	\$31,163	\$34,704	\$2,899	\$2,468	\$1,426	\$3,541
Manufacturing	\$1,793	\$2,310	\$2,783	\$3,075	\$3,759	\$4,123	\$5,084	\$6,063	\$6,543	\$6,146	\$6,575	\$478	\$490	\$171	\$429
Transportation and Utilities	\$1,857	\$1,843	\$2,285	\$2,598	\$3,345	\$4,863	\$4,425	\$5,278	\$7,802	\$8,678	\$10,413	\$856	\$1,110	\$1,712	\$1,735
Wholesale Trade	\$283	\$482	\$473	\$447	\$790	\$1,181	ND	\$1,708	\$1,658	\$2,115	\$2,702	\$242	\$304	\$331	\$587
Retail Trade	\$6,453	\$8,265	\$10,378	\$11,508	\$15,402	\$20,405	\$25,566	\$28,006	\$31,918	\$34,601	\$38,511	\$3,206	\$3,621	\$3,502	\$3,910
Finance, Insurance, Real Estate	\$2,357	\$2,418	\$3,504	\$4,272	\$6,016	\$8,304	\$9,465	ND	\$9,613	\$12,122	\$17,487	\$1,513	\$1,837	\$5,829	\$5,365
Services	\$10,697	\$13,494	\$16,244	\$16,994	\$22,136	\$29,148	\$37,072	\$41,140	\$47,378	\$49,682	\$62,557	\$5,186	\$6,682	\$7,139	\$12,875
Government	\$4,804	\$5,783	\$6,764	\$7,956	\$9,008	\$10,794	\$12,842	\$15,579	\$18,253	\$20,398	\$21,977	\$1,717	\$2,237	\$2,133	\$1,679
County Total	\$39,525	\$46,075	\$55,936	\$66,147	\$80,878	\$104,590	\$122,236	\$142,494	\$156,306	\$168,974	\$198,547	\$15,902	\$18,791	\$18,684	\$29,573

Source: U.S. Department of Commerce, Bureau of Economic Analysis and THK Associates, Inc.

The growth and composition of business establishments in Eagle County is another indication of the strength and orientation of the area's economy. Table 7 shows that in 1974, there were 365 firms in Eagle County. The number of firms increased to 695 by 1980 and reached 1,022 by 1984, or 657 new business establishments over the ten year period. Reflecting the tourism orientation of the economy, retail trade and service business establishments dominate, accounting for 58.8% (530 firms) in 1984. Although the proportion of retail trade and service firms has declined slightly over the ten year period, it has been offset by a significant increase in the proportion of finance, insurance and real estate firms from 9.6% (35 firms) in 1974 to 13.8% (141 firms) in 1984.

The vast majority of business establishments in Eagle County are small; nearly 90% of all firms employ fewer than 20 persons. The largest employer in the county is Vail Associates, Inc. with peak employment of over 2,000. Other major employers (100-500 employees) are concentrated in the lodging, restaurant and real estate industries and the Vail Valley Medical Center.

The cyclical nature of a tourism economy based on the winter ski season is clearly demonstrated in Table 8. Over the 1975 to 1985 period, two-thirds of total retail sales in Vail consistently occurred during the five month winter ski season of November through March with the remaining one-third occurring during the seven month off season. Overall, Vail has consistently accounted for approximately one-half of total retail sales in Eagle County on an annual basis. As expected, this proportion is substantially higher during the ski season and substantially lower during the off season.

The influence of the ski industry on Eagle County retail sales is profound. Approximately 90% of total retail sales in Eagle County are estimated to be either directly or indirectly related to the ski industry.* The high level of summer tourism in Vail, for example, is generated by the ski-oriented amenities, lodging, second-home industry, retail shops and marketing base.

*CSCUSA, p.v.

TABLE D-7: HISTORICAL EAGLE COUNTY BUSINESS ESTABLISHMENTS BY INDUSTRY AND EMPLOYMENT-SIZE CLASS, 1974-1984

Industry Category	Business Establishments by Industry, 1974-1984										Business Establishments by Employment-Size Class, 1984									
	1974		1980		1984		Change in Total Firms, 1974-1984		Change in Total Firms, 1980-1984		Total	1-4	5-9	10-19	20-49	50-99	100-249	250-499	500-999	1000+
	#	%	#	%	#	%	#	%	#	%										
Agriculture, Forestry, Fisheries	1	0.3%	8	1.2%	12	1.2%	11	1.7%	4	1.2%	12	11	1	0	0	0	0	0	0	0
Mining	3	0.8%	4	0.6%	5	0.5%	2	0.3%	1	0.3%	5	1	3	0	0	0	0	0	0	0
Construction	52	14.2%	142	20.4%	169	16.5%	117	17.8%	27	8.3%	169	110	36	13	10	0	0	0	0	0
Manufacturing	9	2.5%	12	1.7%	21	2.1%	12	1.8%	9	2.8%	21	11	5	3	1	1	0	0	0	0
Transportation and Utilities	13	3.6%	14	2.0%	28	2.7%	15	2.3%	14	4.3%	28	13	9	2	3	1	0	0	0	0
Wholesale Trade	9	2.5%	14	2.0%	22	2.2%	13	2.0%	8	2.4%	22	15	5	1	1	0	0	0	0	0
Retail Trade	134	36.7%	228	32.8%	310	30.3%	176	26.8%	82	25.1%	310	122	80	48	48	9	3	0	0	0
Bldg. Materials and Garden Supplies	NA	0.0%	10	1.4%	17	1.7%	17	2.6%	7	2.1%	17	7	6	4	0	0	0	0	0	0
Food Stores	12	3.3%	20	2.9%	29	2.8%	17	2.6%	9	2.8%	29	12	11	2	2	2	0	0	0	0
Automotive Dealers and Service Stations	13	3.6%	17	2.4%	15	1.5%	2	0.3%	-2	-0.6%	15	6	7	1	1	0	0	0	0	0
Apparel and Accessory Stores	NA	0.0%	23	3.3%	25	2.4%	25	3.8%	2	0.6%	25	10	11	3	1	0	0	0	0	0
Furniture and Home Furnishings Stores	NA	0.0%	NA	0.0%	18	1.8%	18	2.7%	18	5.5%	18	13	5	0	0	0	0	0	0	0
Eating and Drinking Places	45	12.3%	65	9.4%	101	9.9%	56	8.5%	36	11.0%	101	22	11	25	36	4	3	0	0	0
Miscellaneous Retail	39	10.7%	75	10.8%	101	9.9%	62	9.4%	26	8.0%	101	50	28	13	8	2	0	0	0	0
Finance, Insurance, Real Estate	35	9.6%	85	12.2%	141	13.8%	106	16.1%	56	17.1%	141	92	22	10	12	2	2	1	0	0
Services	81	22.2%	132	19.0%	220	21.5%	139	21.2%	88	26.9%	220	136	37	26	12	2	5	1	0	1
Hotels and Other Lodging Places	28	7.7%	26	3.7%	33	3.2%	5	0.8%	7	2.1%	33	5	5	10	6	2	4	1	0	0
Personal Services	8	2.2%	16	2.3%	16	1.6%	8	1.2%	0	0.0%	16	8	4	4	0	0	0	0	0	0
Business Services	NA	0.0%	21	3.0%	40	3.9%	40	6.1%	19	5.8%	40	28	5	4	3	0	0	0	0	0
Amusement and Recreation Services	5	1.4%	10	1.4%	16	1.6%	11	1.7%	6	1.8%	16	11	2	1	1	0	0	0	0	0
Health Services	9	2.5%	13	1.9%	27	2.6%	18	2.7%	14	4.3%	27	22	2	1	1	0	1	0	0	0
Membership Organizations	NA	0.0%	NA	0.0%	16	1.6%	16	2.4%	16	2.4%	16	12	1	2	1	0	0	0	0	0
Miscellaneous Services	NA	0.0%	18	2.6%	24	2.3%	24	3.7%	6	1.8%	24	14	9	1	0	0	0	0	0	0
Nonclassified Establishments	28	7.7%	56	8.1%	94	9.2%	66	10.0%	38	11.6%	94	81	10	0	3	0	0	0	0	0
Total	365	100.0%	695	100.0%	1022	100.0%	657	100.0%	327	100.0%	1022	592	208	103	90	16	10	2	0	1

Source: U.S. Department of Commerce, Bureau of the Census, County Business Partners, Colorado, 1974, 1980 and 1984 and THK Associates, Inc.

TABLE D-8: HISTORICAL RETAIL SALES BY MONTH IN VAIL AND EAGLE COUNTY (\$000'S), 1975-1985

Month	1975					1980					1985				
	Number	Percent	Number	Percent	Vail as a Percent of Eagle Co.	Number	Percent	Number	Percent	Vail as a Percent of Eagle Co.	Number	Percent	Number	Percent	Vail as a Percent of Eagle Co.
January	8,803	11.2%	5,781	14.1%	65.7%	23,039	10.8%	15,453	15.2%	67.1%	34,134	10.5%	21,076	13.0%	61.7%
February	8,085	10.2%	6,104	14.9%	75.5%	23,052	10.8%	15,412	15.2%	66.9%	33,982	10.5%	22,369	13.8%	65.8%
March	8,268	10.5%	7,258	17.7%	87.8%	26,170	12.3%	17,754	17.5%	67.8%	48,443	14.9%	30,624	18.9%	63.2%
April	10,378	13.1%	2,111	5.1%	20.3%	12,228	5.7%	6,481	6.4%	53.0%	24,167	7.5%	13,186	8.1%	54.6%
May	4,401	5.6%	733	1.8%	16.7%	8,163	3.8%	2,256	2.2%	27.6%	12,687	3.9%	3,533	2.2%	27.8%
June	3,470	4.4%	1,575	3.8%	45.4%	13,492	6.3%	4,264	4.2%	31.6%	19,475	6.0%	7,266	4.5%	37.3%
July	4,653	5.9%	2,559	6.2%	55.0%	16,266	7.6%	6,399	6.3%	39.3%	22,995	7.1%	10,333	6.4%	44.9%
August	6,593	8.4%	3,146	7.7%	47.7%	16,890	7.9%	6,888	6.8%	40.8%	24,925	7.7%	11,354	7.0%	45.6%
September	5,783	7.3%	1,874	4.6%	32.4%	15,776	7.4%	4,441	4.4%	28.2%	24,219	7.5%	7,856	4.9%	32.4%
October	3,714	4.7%	1,217	3.0%	32.8%	13,052	6.1%	3,298	3.3%	25.3%	15,713	4.8%	4,363	2.7%	27.8%
November	4,561	5.8%	1,995	4.9%	43.7%	13,366	6.3%	3,481	3.4%	26.0%	17,330	5.3%	5,693	3.5%	32.9%
December	10,218	12.9%	6,735	16.4%	65.9%	31,334	14.7%	15,340	15.1%	49.0%	46,125	14.2%	24,218	15.0%	52.5%
Total	78,927	100.0%	41,088	100.0%	52.1%	212,828	100.0%	101,467	100.0%	47.7%	324,195	100.0%	161,871	100.0%	49.9%

APPENDIX E: TOWN OF VAIL FORECAST METHODOLOGY

Forecasts for the Town of Vail were prepared by THK Associates in order to assist the Department of Community Development in their efforts to develop a Master plan for the Town of Vail. In general, the methodology utilizes estimated skier, population, housing and retail characteristics in order to project additional housing unit and retail space demands for the Town of Vail through the year 2000. All assumptions are based on existing studies and surveys available from the Department of Community Development, Vail Associates, Inc., Vail Resort Association, and Colorado Ski Country USA with adjustments made based on review and discussion with the Vail Land Use Plan Task Force members. Note that all estimates utilized in this approach represent current conditions in the Town of Vail; no attempt is made to adjust current conditions to reflect subjective "preferred" conditions. The following is a brief overview of the sources and methodology employed in the Town of Vail forecasts.

The methodology keys off the projected design day* skier visits made in the Vail Master Development Plan (VA, Inc. and RRC, 1985). From the design day skier visits, average day, peak day and total skier visits are calculated based on conversion formulas provided by VA, Inc. The design day skier visits are then allocated into day, destination and local skiers based on proportions available from The Vail Mountain/Gore Valley Capacity Study (Gage Davis Associates, 1980) and the Report of the Vail Economic Development Commission (1985).

The day visitor and overnight visitor populations and permanent population are derived from different methodologies. The day skier visits and destination skier visits are adjusted upward to reflect non-skier members of a skiing party. These adjustments result in the day visitor population and the overnight visitor population. The non-skier adjustment factors come from The Vail Mountain/Gore Valley Capacity Study, the "Village Study Assumption" (RRC, 1985) and the Department of Community Development. The town of Vail permanent population (State Division of Local Government, 1985 and Department of Community Development) is related to the total skier visits. The number of households is then determined by dividing the overnight visitor population and the permanent population by the weighted average number of persons per household in visitor lodging and permanent housing, respectively.

The additional housing unit demand forecasts incorporate numerous assumptions from several studies and surveys. Assumptions pertaining to the distribution of permanent population by housing unit type, the average number of persons per household by unit type, and the occupancy rate are from the study Affordable Housing Eagle County-1984 (Eagle County Community Development Department and RRC, 1984). Assumptions regarding the distribution of overnight visitors by housing unit type, the average number of persons of household by unit type, and the occupancy rate by unit type are from The Vail Mountain/Gore Valley Capacity Study, Department of Community Development and VRA. To calculate the additional housing units required by type each year, the additional overnight visitor households and permanent households per year are distributed according to the proportion of each unit type indicated by previous studies. Concurrently, additional units by type are adjusted upward by the appropriate occupancy rate.

*"Design Day" is defined as that level of skier attendance which will be exceeded on only 10% of the days of the ski season.

The retail sales forecast for the Town of Vail are based on average day skier visits rather than design day skier visits. Average day skier visits are used because the goal is to determine the total winter visitor sales over the entire five month ski season rather than looking at sales on a “one day” design day. Day skiers and destination skiers have different total dollar expenditures per day, and the allocation of their total expenditures among various retail categories is also different. The day the skier and destination skier expenditure patterns are from The Contribution of Skiing to the Colorado Economy (CSCUSA, 1984 Update) and are adjusted upward to reflect the pricing structure of Vail (per Vail Land Use Plan Task Force discussion 7/17/86).

To arrive at the total winter visitor sales, the day skier and destination skier expenditures by retail category are aggregated. The “Town of Vail Monthly Retail Sales” (TOV, 1986) was utilized to determine the proportion of total winter sales made by the local population, the ratio of total winter sales to total annual sales, and the proportion of total annual sales made by the local population. Industry standards of dollar support per square foot of retail space are applied to the lodging, eating and drinking, and entertainment categories for the day and destination skiers and amount to total annual sales to the local population category in order to translate the average annual additional dollar support into average annual additional square feet of retail space required.

It should be noted that the terms “local population” and “permanent population” do not define the same group. Retail purchases in the Town of Vail are made both by the permanent population of Vail and by residents of surrounding communities. Since it is the total additional dollar support in the Town of Vail which determines the total additional retail space required, it is irrelevant for the purposes of these forecast from where those dollars come. Therefore, the local population refers to both the permanent population of Vail and residents of surrounding communities who make retail purchase in the Town of Vail.

The following tables present the quantitative assumptions incorporated into the methodology and the results of the three series of forecasts. Since it is the destination skier which has the greatest impact on the Town of Vail in terms of lodging and retail requirements, three different proportions of destination skiers were utilized in order to determine a range of values for planning purposes.

Table 1-A shows the quantitative assumptions used in the methodology. Note that the only variables which change in the three scenarios are the proportions of destination skiers and day skiers. Tables 1-50 to 4-50 present the results of the 50% proportion of destination skiers scenario, Tables 1-60 to 4-60 present the results for the 60% proportion of destination skiers scenario, and Tables 1-70 to 4-70 present the results of the 70% proportion of destination skiers scenario. For each scenario, forecasts of skier visits by type, population and households by type, housing units by type, and retail expenditures by category are made.

TABLE 1-A: TOWN OF VAIL FORECAST ASSUMPTIONS

Season	Calendar Year	Design Day Skiers/Day	Skier Characteristics:	Persons per Unit	Type of Housing				Lodging	Total
					Single/Duplex	Town-home	Apt./Condo			
1984-1985	1985	12,560	Permanent	2.753	0.325	0.085	0.59	0	1	
1985-1986	1986	12,680	Pop./Unit		3.2	2.8	2.5	0		
1986-1987	1987	13,060	Day							
1987-1988	1988	13,060	Destination	3.588	0.03	0.12	0.54	0.31	1	
1988-1989	1989	13,450	Pop./Unit		5.2	5.2	5.2	2.42		
1989-1990	1990	13,860								
1990-1991	1991	13,860								
1991-1992	1992	14,300								
1992-1993	1993	14,700								
					Market Share					
			Skier Characteristics:	Current Share	Annual Increase	Max/Min Share				
1993-1994	1994	14,700	Permanent		0.2					
1994-1995	1995	15,200	Pop./Unit							
1995-1996	1996	15,600	Day		0.2	0	0.2			
1996-1997	1997	15,600	Destination		0.6	0	0.6			
1997-1998	1998	16,000	Pop./Unit							
1998-1999	1999	16,600								
1999-2000	2000	16,600								
Skier Conversions:			Occupancy:	Visitor	Permanent					
Design Day	1.54		Single	0.55	0.95					
Average Day	0.6494		Townhome	0.55	0.95					
Peak Day	1.95		Apt./Condo	0.55	0.95					
Total Days	150		Lodging	0.65						
Non-skier day	0.06									
Dest.	0.018									
Permanent Pop.	0.0036	0.0039								
Skier Retail Sales Characteristics:	Average Daily Expenses	Lift Ticket	Ski School	Equip. Rental	Lodging	Eating & Drinking	Enter-tainment	Other Retail		
Local/Annual	0.24									
Day	\$38.00	0.575	0.025	0.025	0	0.2	0	1.75		
Destination	\$155.00	0.124	0.017	0.021	0.256	0.197	0.043	0.342		
Winter/Annual	0.67									

Source: Town of Vail, Department of Community Development; Vail Associates, Inc.; Vail Resort Association; Vail Land Use Plan Task Force; Colorado Department of Local Affairs, Division of Local Government; VA, Inc. and RRC, VAIL MASTER DEVELOPMENT PLAN, 1985; Gage Davis Associates, THE VAIL MOUNTAIN/GORE VALLEY CAPACITY STUDY, 1980; RRC, VILLAGE STUDY ASSUMPTIONS, 1985; REPORT OF THE VAIL ECONOMIC DEVELOPMENT COMMISSION, 1985; Eagle County Community Development Department and RRC, AFFORDABLE HOUSING EAGLE COUNTY, 1984; CSCUSA,

TABLE 1-50: PROJECTED VAIL AREA SKIER VISITS BY TYPE, 1984-1985 TO 1999-2000

Projected Skier Visitor Characteristics

Season	Calendar Year	Total	Average Day Skiers/Day	Desin Day Skiers/Day	Peak Day Skiers/Day	Day	Percent	Dest-ination	Percent	Local	Percent
1984-1985	1985	1,223,450	8,160	12,560	15,910	3,770	30.0%	6,280	50.0%	2,510	20.0%
1985-1986	1986	1,250,000	8,230	12,680	16,050	3,800	30.0%	6,340	50.0%	2,540	20.0%
1986-1987	1987	1,294,770	8,480	13,060	16,540	3,920	30.0%	6,530	50.0%	2,610	20.0%
1987-1988	1988	1,318,750	8,480	13,060	16,540	3,920	30.0%	6,530	50.0%	2,610	20.0%
1988-1989	1989	1,358,380	8,730	13,450	17,020	4,040	30.0%	6,730	50.0%	2,680	19.9%
1989-1990	1990	1,373,700	9,000	13,860	17,550	4,160	30.0%	6,930	50.0%	2,770	20.0%
1990-1991	1991	1,373,700	9,000	13,860	17,550	4,160	30.0%	6,930	50.0%	2,770	20.0%
1991-1992	1992	1,393,500	9,290	14,300	18,120	4,290	30.0%	7,150	50.0%	2,860	20.0%
1992-1993	1993	1,432,500	9,550	14,700	18,620	4,410	30.0%	7,350	50.0%	2,940	20.0%
1993-1994	1994	1,432,500	9,550	14,700	18,620	4,410	30.0%	7,350	50.0%	2,940	20.0%
1994-1995	1995	1,480,500	9,870	15,200	19,250	4,560	30.0%	7,600	50.0%	3,040	20.0%
1995-1996	1996	1,519,500	10,130	15,600	19,750	4,680	30.0%	7,800	50.0%	3,120	20.0%
1996-1997	1997	1,519,500	10,130	15,600	19,750	4,680	30.0%	7,800	50.0%	3,120	20.0%
1997-1998	1998	1,558,500	10,390	16,000	20,260	4,800	30.0%	8,000	50.0%	3,200	20.0%
1998-1999	1999	1,617,000	10,780	16,600	21,020	4,980	30.0%	8,300	50.0%	3,320	20.0%
1999-2000	2000	1,617,000	10,780	16,600	21,020	4,980	30.0%	8,300	50.0%	3,320	20.0%
Average Annual Change: (1985-2000)		26,240	170	270	340	80	29.6%	130	48.1%	50	18.5%

Source: THK Associates, Inc.

TABLE 2-50: PROJECTED TOWN OF VAIL POPULATION AND HOUSEHOLDS
BY TYPE, 1984-1985 TO 1999-2000

Season	Calendar Year	Population			Households	
		Day Visitors	Overnight Visitors	Permanent	Overnight Visitors	Permanent
1984-1985	1985	4,010	7,660	4,400	2,130	1,600
1985-1986	1986	4,040	7,730	4,500	2,150	1,630
1986-1987	1987	4,170	7,960	4,670	2,220	1,700
1987-1988	1988	4,170	7,960	4,760	2,220	1,730
1988-1989	1989	4,300	8,210	4,910	2,290	1,780
1989-1990	1990	4,430	8,450	4,970	2,360	1,810
1990-1991	1991	4,430	8,450	4,970	2,360	1,810
1991-1992	1992	4,560	8,720	5,050	2,430	1,830
1992-1993	1993	4,690	8,960	5,200	2,500	1,890
1993-1994	1994	4,850	9,270	5,390	2,580	1,960
1994-1995	1995	4,850	9,270	5,390	2,580	1,960
1995-1996	1996	4,980	9,510	5,540	2,650	2,010
1996-1997	1997	4,980	9,510	5,540	2,650	2,010
1997-1998	1998	5,110	9,760	5,690	2,720	2,070
1998-1999	1999	5,300	10,120	5,920	2,820	2,150
1999-2000	2000	5,300	10,120	5,920	2,820	2,150
Average Annual Change: (1985-2000)		90	160	10	50	40

Source: THK Associates, Inc.

Table 3-50: PROJECTED TOWN OF VAIL HOUSING UNIT DEMAND BY TYPE, 1984-1985 TO 1999-2000

Season	Calendar Year	Overnight Visitors					Permanent Households					Total			
		Total	Single/ Duplex	Town- home	Apt./ Condo	Lodging	Total	Single/ Duplex	Town- home	Apt./ Condo	Total	Single/ Duplex	Town- home	Apt./ Condo	Lodging
1984-1985	1985														
1985-1986	1986	35	1	4	20	10	32	10	3	19	66	11	7	38	10
1986-1987	1987	121	4	15	69	33	74	24	6	43	195	28	22	112	33
1987-1988	1988	0	0	0	0	0	32	10	3	19	32	10	3	19	0
1988-1989	1989	121	4	15	69	33	53	17	4	31	174	21	20	100	33
1989-1990	1990	121	4	15	69	33	32	10	3	19	153	14	18	87	33
1990-1991	1991	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1991-1992	1992	121	4	15	69	33	21	7	2	12	142	11	17	81	33
1992-1993	1993	121	4	15	69	33	63	21	5	37	184	24	21	106	33
1993-1994	1994	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1994-1995	1995	139	4	17	79	38	74	24	6	43	212	28	24	122	38
1995-1996	1996	121	4	15	69	33	53	17	4	31	174	21	20	100	33
1996-1997	1997	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1997-1998	1998	121	4	15	69	33	63	21	5	37	184	24	21	106	33
1998-1999	1999	173	5	22	98	48	84	27	7	50	257	33	29	148	48
1999-2000	2000	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Average Annual Change: (1985-2000)		80	3	10	45	22	39	13	3	23	118	15	13	68	22
		100.0%	3.2%	12.6%	56.7%	27.5%	100.0%	32.5%	8.5%	59.0%	100.0%	12.7%	11.3%	57.5%	18.6%

Source: THK Associates, Inc.

Table 4-50: PROJECTED TOWN OF VAIL RETAIL SALES BY CATEGORY, 1984-1985 TO 1999-2000

Average Daily Ski Season Population Total Ski Season Retail Sales by Category (In DOLLARS \$)

Season	Calendar Year	Average Day Skiers/Day	Day Skiers	Destination Skiers	Permanent Residents	Total	Lift Ticket	Ski School	Equip. Rental	Lodging	Eating & Drinking	Entertainment	Other Retail	Total Winter Visitor Sales (Exc. Lift Ticket Sch. & Rental)	Total Winter Visitor Sales & Local Winter Sales	Local Winter Sales	Total Annual Retail Sales Total Visitors & Locals	Total Annual Retail Sales to Local Population
1984-1985	1985	8,160	2,450	4,080	4,400	10,930	19,792,515	1,961,745	2,341,185	21,480,420	21,480,420	4,078,980	34,885,995	84,729,555	99,681,829	14,952,274	48,778,850	35,706,924
1985-1986	1986	8,230	2,470	4,120	4,500	11,090	19,973,385	1,980,405	2,363,565	24,522,240	21,686,430	4,118,970	35,224,005	85,551,645	100,657,994	15,097,349	150,222,379	36,053,371
1986-1987	1987	8,480	2,550	4,240	4,670	11,460	20,581,545	2,039,235	2,344,555	25,236,480	22,327,260	4,238,940	36,257,985	88,060,665	103,600,782	15,540,117	154,628,033	37,110,728
1987-1988	1988	8,480	2,550	4,240	4,760	11,550	20,581,545	2,039,235	2,433,555	25,236,480	22,317,260	4,238,940	36,257,985	88,060,665	103,600,782	15,540,117	154,628,033	37,110,728
1988-1989	1989	8,730	2,620	4,370	4,910	11,900	21,185,760	2,100,593	2,507,000	26,010,240	23,002,493	4,368,908	37,361,505	90,743,145	106,756,641	16,013,496	159,338,270	38,241,185
1989-1990	1990	9,000	2,700	4,500	4,970	12,170	21,822,750	2,163,375	2,581,875	26,784,000	23,689,125	4,498,875	38,475,000	93,447,000	109,937,647	16,490,647	164,086,040	39,380,650
1990-1991	1991	9,000	2,700	4,500	4,970	12,170	21,822,750	2,163,375	2,581,875	26,784,000	23,689,125	4,498,875	38,475,000	93,447,000	109,937,647	16,490,647	164,086,040	39,380,650
1991-1992	1992	9,290	2,790	4,650	5,050	12,490	22,550,175	2,235,488	2,667,938	27,676,800	24,478,763	4,648,838	39,757,500	96,561,900	113,602,235	17,040,335	16,955,575	40,693,338
1992-1993	1993	9,550	2,870	4,780	5,200	12,850	23,187,165	2,298,270	2,742,810	28,450,560	25,165,395	4,778,805	40,870,995	99,265,755	116,783,241	17,517,486	174,303,345	41,832,803
1993-1994	1994	9,550	2,870	4,780	5,200	12,850	23,187,165	2,298,270	2,742,810	28,450,560	25,165,395	4,778,805	40,870,995	99,265,755	116,783,241	17,517,486	174,303,345	41,832,803
1994-1995	1995	9,870	2,960	4,940	5,390	13,290	23,943,420	2,374,335	2,833,755	29,402,880	26,000,835	4,938,765	42,233,010	102,575,490	120,677,047	18,101,557	180,114,996	43,227,599
1995-1996	1996	10,130	3,040	5,070	5,540	13,650	24,580,410	2,437,118	2,908,628	30,176,640	26,687,468	5,068,733	43,346,505	105,279,345	123,858,053	18,578,708	184,862,766	44,367,064
1996-1997	1997	10,130	3,040	5,070	5,540	13,650	24,580,410	2,437,118	2,908,628	30,176,640	26,687,468	5,068,733	43,346,505	105,279,345	123,858,053	18,578,708	184,862,766	44,367,064
1997-1998	1998	10,390	3,120	5,200	5,690	14,010	25,217,400	2,499,900	2,983,500	30,950,400	27,374,100	5,198,700	44,460,000	107,983,200	127,039,059	19,055,859	189,610,536	45,506,529
1998-1999	1999	10,780	3,230	5,390	5,920	14,540	26,125,695	2,590,673	3,091,943	32,081,280	28,369,748	5,388,653	46,080,510	111,920,190	131,670,812	19,750,622	196,523,600	47,165,664
1999-2000	2000	10,780	3,230	5,390	5,920	14,540	26,125,695	2,590,673	3,091,943	32,081,280	28,369,748	5,388,653	46,080,510	111,920,190	131,670,812	19,750,622	196,523,600	47,165,664

Average Annual Change:

(1985-2000)	170	50	90	100	240	\$422,210	\$41,930	\$50,050	\$519,810	\$459,290	\$87,310	\$746,300	\$1,812,710	\$2,132,600	\$319,890	\$3,182,980	\$763,920
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Source: THK Associates, Inc.

TABLE 1-60: PROJECTED VAIL AREA SKIER VISITS BY TYPE, 1984-1985 TO 1999-2000

Projected Skier Visitor Characteristics											
Season	Calendar Year	Total	Average Day Skiers/Day	Design Day Skiers/Day	Peak Day Skiers/Day	Day	Percent	Destination	Percent	Local	Percent
1984-1985	1985	1,223,450	8,160	12,560	15,910	2,510	20.0%	7,540	60.0%	2,510	20.0%
1985-1986	1986	1,250,000	8,230	12,680	16,050	2,540	20.0%	7,610	60.0%	2,530	20.0%
1986-1987	1987	1,294,770	8,480	13,060	16,540	2,610	20.0%	7,840	60.0%	2,610	20.0%
1987-1988	1988	1,318,750	8,480	13,060	16,540	2,610	20.0%	7,840	60.0%	2,610	20.0%
1988-1989	1989	1,358,380	8,730	13,450	17,020	2,690	20.0%	8,070	60.0%	2,690	20.0%
1989-1990	1990	1,373,700	9,000	13,860	17,550	2,770	20.0%	8,320	60.0%	2,770	20.0%
1990-1991	1991	1,373,700	9,000	13,860	17,550	2,770	20.0%	8,320	60.0%	2,770	20.0%
1991-1992	1992	1,393,500	9,290	14,300	18,120	2,860	20.0%	8,580	60.0%	2,860	20.0%
1992-1993	1993	1,432,500	9,550	14,700	18,620	2,940	20.0%	8,820	60.0%	2,940	20.0%
1993-1994	1994	1,432,500	9,550	14,700	18,620	2,940	20.0%	8,820	60.0%	2,940	20.0%
1994-1995	1995	1,480,500	9,870	15,200	19,250	3,040	20.0%	9,120	60.0%	3,040	20.0%
1995-1996	1996	1,519,500	10,130	15,600	19,750	3,120	20.0%	9,360	60.0%	3,120	20.0%
1996-1997	1997	1,519,500	10,130	15,600	19,750	3,120	20.0%	9,360	60.0%	3,120	20.0%
1997-1998	1998	1,558,500	10,390	16,000	20,260	3,200	20.0%	9,600	60.0%	3,200	20.0%
1998-1999	1999	1,617,000	10,780	1,600	21,020	3,320	20.0%	9,960	60.0%	3,320	20.0%
1999-2000	2000	1,617,000	10,780	1,600	21,020	3,320	20.0%	9,960	60.0%	3,320	20.0%
Average Annual Change:											
(1985-2000)		26,240	170	270	340	50	18.5%	160	59.3%	50	18.5%
Source: THK Associates, Inc.											

TABLE 2-60: PROJECTED TOWN OF VAIL POPLUATION AND HOUSEHOLDS
BY TYPE, 1984-1985 TO 1999-2000

Season	Calendar Year	Population			Households	
		Day Visitors	Overnight Visitors	Permanent	Overnight Visitors	Permanent
1984-1985	1985	2,670	9,200	4,400	2,560	1,600
1985-1986	1986	2,700	9,280	4,500	2,590	1,630
1986-1987	1987	2,780	9,560	4,670	2,660	1,700
1987-1988	1988	2,780	9,560	4,760	2,660	1,730
1988-1989	1989	2,860	9,840	4,910	2,740	1,780
1989-1990	1990	2,950	10,150	4,970	2,830	1,810
1990-1991	1991	2,950	10,150	4,970	2,830	1,810
1991-1992	1992	3,040	10,460	5,050	2,920	1,830
1992-1993	1993	3,130	10,760	5,200	3,000	1,890
1993-1994	1994	3,130	10,760	5,200	3,000	1,890
1994-1995	1995	3,230	11,120	5,390	3,100	1,960
1995-1996	1996	3,320	11,410	5,540	3,180	2,010
1996-1997	1997	3,320	11,410	5,540	3,180	2,010
1997-1998	1998	3,400	11,710	5,690	3,260	2,070
1998-1999	1999	3,530	12,150	5,920	3,390	2,150
1999-2000	2000	3,530	12,150	5,920	3,390	2,150
Average Annual Change:						
(1985-2000)		60	200	100	60	40

Source: THK Associates, Inc.

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Table 3-60: PROJECTED TOWN OF VAIL HOUSING UNIT DEMAND BY TYPE, 1984-1985 TO 1999-2000

Season	Calendar Year	Overnight Visitors						Permanent Households				Total			
		Total	Single/ Duplex	Town- home	Apt./ Condo	Lodg ing	Total	Single/ Duplex	Town- home	Apt./ Condo	Total	Single/ Duplex	Town- home	Apt./ Condo	Lodging
1984-1985	1985														
1985-1986	1986	49	2	6	27	14	32	10	3	19	80	12	9	46	14
1986-1987	1987	114	4	14	63	33	74	24	6	43	188	27	20	106	33
1987-1988	1988	0	0	0	0	0	32	10	3	19	32	10	3	19	0
1988-1989	1989	130	4	16	72	38	53	17	4	31	183	21	20	103	38
1989-1990	1990	146	5	18	81	43	32	10	3	19	178	15	21	100	43
1990-1991	1991	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1991-1992	1992	146	5	18	81	43	21	7	2	12	167	11	20	93	43
1992-1993	1993	130	4	16	72	38	63	21	5	37	193	25	21	109	38
1993-1994	1994	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1994-1995	1995	163	5	20	90	48	74	24	6	43	236	29	26	133	48
1995-1996	1996	130	4	16	72	38	53	17	4	31	183	21	20	103	38
1996-1997	1997	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1997-1998	1998	130	4	16	72	38	63	21	5	37	193	25	21	109	38
1998-1999	1999	212	7	26	117	62	84	27	7	50	296	34	33	167	62
1999-2000	2000	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Average Annual Change: (1985-2000)		90	3	11	50	26	39	13	3	23	129	15	14	73	26
		100.0%	3.1%	12.3%	55.3%	29.3%	100.0%	32.5%	8.5%	59.0%	100.0%	11.9%	11.2%	56.4%	20.5%

Source: THK Associates, Inc.

Table 4-60: PROJECTED TOWN OF VAIL RETAIL SALES BY CATEGORY, 1984-1985 TO 1999-2000

Average Daily Ski Season Population Total Ski Season Retail Sales by Category

Season	Calendar Year	Average Day Skiers /Day	Day Skiers	Destination Skiers	Permanent Residents	Total	Lift Ticket	Ski School	Equip. Rental	Lodging	Eating & Drinking	Entertainment	Other Retail	Total Winter Visitor Sales (Exc. Lift Ticket Ski Sch. & Rental)	Total Winter Visitor Sales & Local Winter Sales	Local Winter Sales	Total Annual Retail Sales Total Visitors & Locals	Total Annual Retail Sales to Local Population
1984-1985	1985	8,160	1,630	4,900	4,400	10,930	19,469,025	2,169,000	2,624,700	29,164,800	24,301,425	4,898,775	40,588,275	98,953,275	116,415,618	17,462,343	173,754,653	41,701,117
1985-1986	1986	8,230	1,650	4,940	4,500	11,090	19,649,895	2,187,660	2,647,080	29,402,880	24,507,435	4,938,765	40,926,285	99,775,365	117,382,782	17,607,417	175,198,183	42,047,564
1986-1987	1987	8,480	1,690	5,090	4,670	11,450	20,213,445	2,252,648	2,726,018	30,295,680	25,240,073	5,088,728	42,158,910	102,783,390	120,921,635	18,138,245	180,480,053	43,315,213
1987-1988	1988	8,480	1,690	5,090	4,670	11,450	20,213,445	2,252,648	2,726,018	30,295,680	25,240,073	5,088,728	42,158,910	102,783,390	120,921,635	18,138,245	180,480,053	43,315,213
1988-1989	1989	8,730	1,750	5,240	4,910	11,900	20,842,545	2,320,485	2,807,805	31,188,480	25,995,510	5,238,690	43,411,485	105,834,165	124,510,782	18,676,617	185,836,989	44,600,877
1989-1990	1990	9,000	1,800	5,400	4,970	12,170	21,467,700	2,390,850	2,893,050	32,140,800	26,785,350	5,398,650	44,733,600	109,058,400	128,304,000	19,245,600	191,498,507	45,959,642
1990-1991	1991	9,000	1,800	5,400	4,970	12,170	21,467,700	2,390,850	2,893,050	32,140,800	26,785,350	5,398,650	44,733,600	109,058,400	128,304,000	19,245,600	191,498,507	45,959,642
1991-1992	1992	9,290	1,860	5,570	5,050	12,480	22,154,460	2,466,593	2,984,603	33,152,640	27,632,393	5,568,608	46,145,205	112,498,845	132,351,582	19,852,737	197,539,675	47,409,522
1992-1993	1993	9,550	1,910	5,730	5,200	12,840	22,779,615	2,536,958	3,069,848	31,104,960	28,422,233	5,728,568	47,467,320	115,723,080	136,144,800	20,421,720	203,201,194	48,768,287
1993-1994	1994	9,550	1,910	5,730	5,200	12,840	22,779,615	2,536,958	3,069,848	31,104,960	28,422,233	5,728,568	47,467,320	115,723,080	136,144,800	20,421,720	203,201,194	48,768,287
1994-1995	1995	9,870	1,970	5,920	5,390	13,280	23,524,035	2,620,605	3,171,165	35,235,840	29,360,880	5,918,520	49,037,955	119,553,195	140,650,818	21,067,623	209,926,594	50,382,382
1995-1996	1996	10,130	2,030	6,080	5,540	13,650	24,181,965	2,692,395	3,257,835	36,188,160	30,162,120	6,078,480	50,370,045	122,798,805	144,469,182	21,670,377	215,625,645	51,750,155
1996-1997	1997	10,130	2,030	6,080	5,540	13,650	24,181,965	2,692,395	3,257,835	36,188,160	30,162,120	6,078,480	50,370,045	122,798,805	144,469,182	21,670,377	215,625,645	51,750,155
1997-1998	1998	10,390	2,080	6,230	5,690	14,000	24,778,290	2,758,808	3,338,198	37,080,960	30,906,158	6,228,443	51,612,645	125,828,205	148,033,182	22,204,977	220,945,048	53,026,812
1998-1999	1999	10,780	2,160	6,470	5,920	14,550	25,732,410	2,865,068	3,466,778	38,509,440	32,096,618	6,468,383	53,600,805	130,675,245	153,735,582	23,060,337	229,456,093	55,069,462
1999-2000	2000	10,780	2,160	6,470	5,920	14,550	25,732,410	2,865,068	3,466,778	38,509,440	32,096,618	6,468,383	53,600,805	130,675,245	153,735,582	23,060,337	229,456,093	55,069,462

Average Annual Change:

(1985-2000)	1	4	0	1	0	1	0	2	4	0	\$417,560	\$46,400	\$56,140	\$62,980	\$519,680	\$104,640	\$867,500	\$2,114,800	\$2,488,000	\$373,200	\$3,713,430	\$891,220
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Source: THK Associates, Inc.

TABLE 1-70: PROJECTED VAIL AREA SKIER VISITS BY TYPE, 1984-1985 TO 1999-2000

Projected Skier Visitor Characteristics

Season	Calendar Year	Total	Average Day Skiers/Day	Desin Day Skiers/Day	Peak Day Skiers/Day	Day	Percent	Dest-ination	Percent	Local	Percent
1984-1985	1985	1,223,450	8,160	12,560	15,910	1,260	10.0%	8,790	70.0%	2,510	20.0%
1985-1986	1986	1,250,000	8,230	12,680	16,050	1,270	10.0%	8,880	70.0%	2,530	20.0%
1986-1987	1987	1,294,770	8,480	13,060	16,540	1,310	10.0%	9,140	70.0%	2,610	20.0%
1987-1988	1988	1,318,750	8,480	13,060	16,540	1,310	10.0%	9,140	70.0%	2,610	20.0%
1988-1989	1989	1,358,380	8,730	13,450	17,020	1,350	10.0%	9,420	70.0%	2,680	19.9%
1989-1990	1990	1,373,700	900	13,860	17,550	1,390	10.0%	9,700	70.0%	2,770	20.0%
1990-1991	1991	1,373,700	900	13,860	17,550	1,390	10.0%	9,700	70.0%	2,770	20.0%
1991-1992	1992	1,393,500	9,290	14,300	18,120	1,430	10.0%	10,010	70.0%	2,860	20.0%
1992-1993	1993	1,432,500	9,550	14,700	18,620	1,470	10.0%	10,290	70.0%	2,940	20.0%
1993-1994	1994	1,432,500	9,550	14,700	18,620	1,470	10.0%	10,290	70.0%	2,940	20.0%
1994-1995	1995	1,480,500	9,870	15,200	19,250	1,520	10.0%	10,640	70.0%	3,040	20.0%
1995-1996	1996	1,519,500	10,130	15,600	19,750	1,560	10.0%	10,920	70.0%	3,120	20.0%
1996-1997	1997	1,519,500	10,130	15,600	19,750	1,560	10.0%	10,920	70.0%	3,120	20.0%
1997-1998	1998	1,558,500	10,390	16,000	20,260	1,600	10.0%	11,200	70.0%	3,200	20.0%
1998-1999	1999	1,617,000	10,780	1,600	21,020	1,660	10.0%	11,620	70.0%	3,320	20.0%
1999-2000	2000	1,617,000	10,780	1,600	21,020	1,660	10.0%	11,620	70.0%	3,320	20.0%
Average Annual Change:											
(1985-2000)		26,240	170	270	340	30	11.1%	190	70.4%	50	18.5%

Source: THK Associates, Inc.

TABLE 2-70: PROJECTED TOWN OF VAIL POPLUATION AND HOUSEHOLDS
BY TYPE, 1984-1985 TO 1999-2000

Season	Calendar Year	Population			Households	
		Day Visitors	Overnight Visitors	Permanent	Overnight Visitors	Permanent
1984-1985	1985	1,340	10,720	4,400	2,990	1,600
1985-1986	1986	1,350	10,830	4,500	3,020	1,630
1986-1987	1987	1,390	11,150	4,670	3,110	1,700
1987-1988	1988	1,390	11,150	4,760	3,110	1,730
1988-1989	1989	1,440	11,490	4,910	3,200	1,780
1989-1990	1990	1,480	11,830	4,970	3,300	1,810
1990-1991	1991	1,480	11,830	4,970	3,300	1,810
1991-1992	1992	1,520	12,210	5,050	3,400	1,830
1992-1993	1993	1,560	12,550	5,200	3,500	1,890
1993-1994	1994	1,560	12,550	5,200	3,500	1,890
1994-1995	1995	1,620	12,980	5,390	3,620	1,960
1995-1996	1996	1,660	13,320	5,540	3,710	2,010
1996-1997	1997	1,660	13,320	5,540	3,710	2,010
1997-1998	1998	1,700	13,660	5,690	3,810	2,070
1998-1999	1999	1,770	14,170	5,920	3,950	2,150
1999-2000	2000	1,770	14,170	5,920	3,950	2,150
Average Annual Change:						
(1985-2000)		30	230	100	60	40

Source: THK Associates, Inc.

Table 3-70: PROJECTED TOWN OF VAIL HOUSING UNIT DEMAND BY TYPE, 1984-1985 TO 1999-2000

Season	Calendar Year	Overnight Visitors					Permanent Households					Total				
		Total	Single/ Duplex	Town- home	Apt./ Condo	Lodging	Total	Single/ Duplex	Town- home	Apt./ Condo	Lodging	Total	Single/ Duplex	Town- home	Apt./ Condo	Lodging
1984-1985	1985															
1985-1986	1986	52	2	7	29	14	32	10	3	19	84	12	9	48	14	
1986-1987	1987	156	5	20	88	43	74	24	6	43	230	29	26	132	43	
1987-1988	1988	0	0	0	0	0	32	10	3	19	32	10	3	19	0	
1988-1989	1989	156	5	20	88	43	53	17	4	31	208	22	24	119	43	
1989-1990	1990	173	5	22	98	48	32	10	3	19	205	16	25	117	48	
1990-1991	1991	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1991-1992	1992	173	5	22	98	48	21	7	2	12	194	12	24	111	48	
1992-1993	1993	173	5	22	98	48	63	21	5	37	236	26	27	135	48	
1993-1994	1994	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1994-1995	1995	208	7	26	118	57	74	24	6	43	281	30	32	161	57	
1995-1996	1996	156	2	20	88	43	53	17	4	31	208	22	24	119	43	
1996-1997	1997	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1997-1998	1998	173	5	22	98	48	63	21	5	37	236	26	27	135	48	
1998-1999	1999	242	8	31	137	67	84	27	7	50	327	35	38	187	67	
1999-2000	2000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Average Annual Change: (1985-2000)		111	3	14	63	31	39	13	3	23	149	16	17	86	31	
		100.0%	3.2%	12.6%	56.7%	27.5%	100.0%	32.5%	8.5%	59.0%	100.0%	10.7%	11.5%	57.3%	20.4%	

Source: THK Associates, Inc.

Table 4-70: PROJECTED TOWN OF VAIL RETAIL SALES BY CATEGORY, 1984-1985 TO 1999-2000

Average Daily Ski Season Population

Total Ski Season Retail Sales by Category

Season	Calendar Year	Average Daily Ski Season Population				Total Ski Season Retail Sales by Category									Total Winter Visitor Sales (Exc. Lift Ticket Sch. & Rental)	Total Winter Visitor Sales & Local Winter Sales	Local Winter Sales	Total Annual Retail Sales Total Visitors & Locals	Total Annual Retail Sales to Local Population
		Average Day Skiers /Day	Day Skiers	Destination Skiers	Permanent Residents	Total	Lift Ticket	Ski School	Equip. Rental	Lodging	Eating & Drinking	Entertainment	Other Retail						
1984-1985	1985	8,160	820	5,710	4,400	10,930	19,149,480	2,373,728	2,904,758	33,985,920	27,088,028	5,708,573	46,221,015	113,003,535	132,945,335	19,941,800	198,425,874	47,622,210	
1985-1986	1986	8,230	820	5,760	4,500	11,080	19,293,630	2,393,490	2,929,170	34,283,520	27,317,040	5,758,560	46,618,590	113,977,710	134,091,424	20,113,714	200,136,453	48,032,749	
1986-1987	1987	8,480	850	5,930	4,670	11,450	19,882,065	2,464,958	3,016,448	35,295,360	28,129,883	5,928,518	48,000,270	117,354,030	138,063,565	20,709,535	206,065,022	49,455,605	
1987-1988	1988	8,480	850	5,930	4,670	11,450	19,882,065	2,464,958	3,016,448	35,295,360	28,129,883	5,928,518	48,000,270	117,354,030	138,063,565	20,709,535	206,065,022	49,455,605	
1988-1989	1989	8,730	880	6,110	4,910	11,900	20,499,330	2,540,378	3,108,608	36,366,720	28,988,528	6,108,473	49,461,465	120,925,185	142,264,924	21,339,739	212,335,707	50,960,570	
1989-1990	1990	9,000	900	6,300	4,970	12,170	21,112,650	2,618,325	3,204,225	37,497,600	29,881,575	6,298,425	50,992,200	124,669,800	146,670,353	22,000,553	218,910,975	52,538,634	
1990-1991	1991	9,000	900	6,300	4,970	12,170	21,112,650	2,618,325	3,204,225	37,497,600	29,881,575	6,298,425	50,992,200	124,669,800	146,670,353	22,000,553	218,910,975	52,538,634	
1991-1992	1992	9,290	930	6,500	5,050	12,480	21,787,575	2,701,650	3,306,150	38,688,000	30,831,825	6,498,375	52,612,425	128,630,625	151,330,147	22,699,522	225,865,891	54,207,814	
1992-1993	1993	9,550	960	6,690	5,200	12,850	22,433,670	2,781,023	3,403,193	39,818,880	31,736,273	6,688,328	54,153,135	132,396,615	155,760,724	23,364,109	232,478,692	55,794,886	
1993-1994	1994	9,550	960	6,690	5,200	12,850	22,433,670	2,781,023	3,403,193	39,818,880	31,736,273	6,688,328	54,153,135	132,396,615	155,760,724	23,364,109	232,478,692	55,794,886	
1994-1995	1995	9,870	990	6,910	5,390	13,290	23,166,255	2,872,253	3,514,883	41,128,320	32,778,128	6,908,273	55,932,390	136,747,110	160,878,953	24,131,843	240,117,840	57,628,282	
1995-1996	1996	10,130	1,010	7,090	5,540	13,640	23,750,745	2,946,248	3,605,618	42,199,680	33,625,373	7,088,228	57,383,610	140,296,890	165,055,165	24,758,275	246,350,992	59,124,238	
1996-1997	1997	10,130	1,010	7,090	5,540	13,640	23,750,745	2,946,248	3,605,618	42,199,680	33,625,373	7,088,228	57,383,610	140,296,890	165,055,165	24,758,275	246,350,992	59,124,238	
1997-1998	1998	10,390	1,040	7,270	5,690	14,000	24,368,010	3,021,668	3,697,778	43,271,040	34,484,018	7,268,183	58,844,805	143,868,045	169,256,524	25,388,479	252,621,677	60,629,202	
1998-1999	1999	10,780	1,080	7,550	5,920	14,550	25,306,350	3,138,038	3,840,188	44,937,600	35,812,088	7,548,113	61,111,125	149,408,925	175,775,206	26,366,281	262,351,054	62,964,253	
1999-2000	2000	10,780	1,080	7,550	5,920	14,550	25,306,350	3,138,038	3,840,188	44,937,600	35,812,088	7,548,113	61,111,125	149,408,925	175,775,206	26,366,281	262,351,054	62,964,253	

Average Annual Change:

(1985-2000)	170	20	120	100	240	\$410,460	\$50,950	\$62,360	\$730,110	\$581,600	\$122,640	\$992,670	\$2,427,030	\$2,855,320	\$428,300	\$4,261,680	\$1,022,800
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Source: THK Associates, Inc.

Chamonix Master Plan



6 January 2009

Adopted by Resolution No. 2,

Series of 2009

Prepared For the Town of Vail by



STAN CLAUSON ASSOCIATES INC
landscape architecture. planning. resort design

Drexel, Barrell & Co.



S T U D I O B
a r c h i t e c t s

Acknowledgements

The Chamonix Area Master Plan Amendment is the result of over a year of work on the part of many individuals. Without the effort of the Vail Town Council, the Chamonix Advisory Committee, the Planning and Environmental Commission, the Vail Local Housing Authority, and Town of Vail Staff the Chamonix Area Master Plan would not have been completed.

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1. PROJECT SCOPE

The proposed design schemes for the Chamonix Master Plan Area were directed by the stated goals and objectives developed early in the community participation process. The consultant team of Stan Clauson Associates, Inc., Studio B Architects, and Drexel, Barrell & Co. identified a variety of opportunities and constraints from the unique physical



characteristics of the Chamonix site. The inclusion of a fire station and student dormitory further complicated the layout and programmatic elements of the site design.

The Master Plan Area is generally south facing and sloped and occupies a highly visible location off of the west Vail exit (Exit No. 173) from I-70. Highway commercial and strip mall commercial

development characterizes the uses off of the frontage road and Chamonix Road, with residential neighborhoods characterizing the use patterns off of Chamonix Lane. The Chamonix Master Plan Area is located near to bus stops on both the West Vail Red and Green Loop transit lines. Commercial and employment opportunities are located in the commercial areas within walking distance of the site.

The Town Council identified eleven development goals to direct the master planning process. These goals were:

- The site is to be used for development of a fire station and employee housing.
- Housing for student fire department employees should be considered in the design of the fire station.
- An ambulance substation could be an ancillary use on the site.
- Energy-efficient and sustainable design and construction techniques are important. Certification by a particular program (LEED, Green Globes) is to be investigated, although not mandatory.

- 100 percent of housing developed should be deed-restricted, for-sale employee housing, with a mix of one-, two-, and three-bedroom units.
- The site should be optimized to provide the greatest amount of employee housing.
- Re-zoning the site to Housing (H) District is preferred to allow flexibility in design and development.
- Additional traffic onto Chamonix Lane should be limited.
- One-story of development along Chamonix Lane is acceptable.
- All financing and phasing options will be considered.
- New pedestrian circulation and access routes should be provided around the site, along Chamonix Road and/or Lane, to ensure connectivity of the surrounding neighborhood to other areas within West Vail. Existing pedestrian paths through the site are to be limited.

The charge made by the Vail Town Council to “optimize the site” required that the planning concepts developed by the design team be evaluated in the context of adjacent uses. The ultimate goal was to provide a plan for the Chamonix Master Plan Area that balanced the concepts of density, neighborhood impact, and traffic and parking concerns with aesthetics, sustainability, and value in a way that would address the community need for additional affordable housing in a contextually appropriate way.

The target group for the Chamonix development was families. The target group income was determined to fall within 60-120% of the Area Median Income (AMI) range for Eagle County, with a possible inclusion of incomes up to 140% of AMI. In current dollars, this equated to a household income range of \$47,000 to \$94,000, with a possible excursion to \$110,000.

An important component to the site plan for the Chamonix Master Plan Area was the inclusion of a new fire station. Members of the Town Council recommended the fire station be segregated from the residential use of the Chamonix development for safety and noise reasons. Dedicated access for emergency equipment was requested, as was the incorporation of a community room for public gathering. A student dormitory, to help alleviate the cramped conditions experienced by fire department recruits, was also requested. Finally, provisions for possible Ambulance District participation were to be considered.

2. PROCESS

A. History of Chamonix Master Plan Area

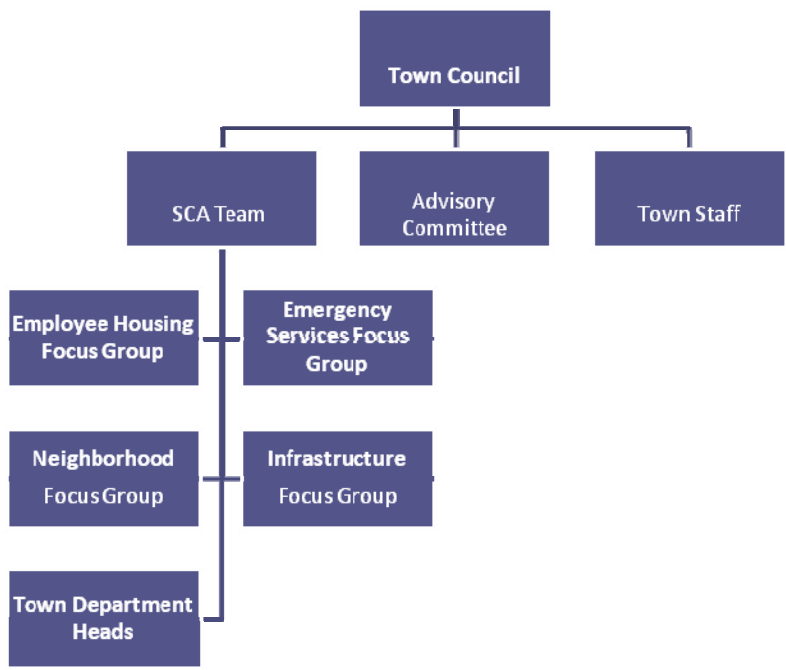
The Town of Vail acquired the 3.6-acre "Chamonix Parcel" in October, 2002, for the purpose of constructing a fire station, employee housing and land banking. To achieve the Town's goals the Town of Vail adopted the Chamonix Master Plan in 2005. The Master Plan outlined development areas for a fire station, employee housing and open space.

In 2007, the Town of Vail was able to acquire the adjacent former Wendy's Site. It was determined the former Wendy's Site was a more optimal location, from an emergency services perspective, for a future West Vail Fire Station. Based upon the acquisition of the new property, the Town of Vail determined it could better utilize the two parcels if a new, comprehensive master plan process was completed. A Request for Proposals to hire a new consultant team was issued in September, 2007. The Team of Stan Clauson Associates, Inc., Studio B Architects, and Drexel, Barrell & Co. were retained by the Town of Vail to develop this new Chamonix Master Plan.

B. Overview

During a period of six months, the consulting team developed three schemes. The three schemes, titled Neighborhood Block, Neighborhood Cluster, and Village Neighborhood, explored varying densities and internal character. Development of the three schemes benefited from informal and formal meetings with stakeholders and Town staff and from responses to a survey distributed to potential residents. Members of the consultant team also attended the *Fire Chief Magazine* "Station Style Design Conference" in Phoenix to broaden their understanding of current fire station design trends. Revisions to the three schemes were periodically presented to the Advisory Committee for additional input and direction, and these refinements were subsequently presented to the Town Council.

Information from the Town department heads was considered in the site planning and design guidelines for the development of the employee housing and fire station at the Chamonix Master Plan Area. Information from other sources was balanced with the input gained from the Focus Groups.



C. Advisory Committee

On 16 January 2008 a “Kick-Off” meeting was held for the purpose of introducing the Chamonix Site Master Plan project to the Advisory Committee. The Advisory Committee, which was selected by Town of Vail staff as well as citizens, consisted of representative from the Town Council, the Planning and Environmental Commission, the Housing Authority, the Vail Fire Department, Community Development, and two Citizens at Large. Duties of the Advisory Committee consisted of reviewing previous master planning efforts produced for the Chamonix site, engaging in discussions on new opportunities and changed conditions to be considered during the new master planning effort, and issuing recommendations to the consultant team on the parameters that would guide the process and the creation of alternative development scenarios.

D. Town Council Hearing

The Town Council received an update on the work to date on 20 May 2008. The consultant team presented three schemes which ranged in total unit counts from 50 to 70 units. Optimizing the density of the site, the Council’s charge at the outset of the master planning effort, was not construed to mean that the maximum number of units possible for the site should be sought. Rather, the consultant team sought a balance between number of units and resident population, with special consideration given to the quality of the experience of living in and around the

development. The Town Council instructed the design team to seek a middle path on density, considering internal views and character of the surrounding neighborhoods. There was also a discussion of unit sizes, with the Council inclining toward larger units of two, three and possibly four bedrooms.

E. Refinement of Schemes

Based on the Council's comments and the request to accommodate more family-oriented units, the schemes were refined to concentrate on the creation of two and three bedroom units. Units ranged in size from 768 sq. ft. for 1-bedroom units, 1,292 sq. ft. for 2-bedroom flats, 1,333 sq. ft. for 2 bedroom lofts, 1,460 sq. ft. for 3-bedroom units to 1,632 sq. ft. for 3 bedroom duplex units. Because family housing was the stated focus of the development, one bedroom units were incorporated sparingly and generally used as "infill." There was attention to the possibility of providing 4-bedroom units. While these were not included in the final unit mix, some units were designed with expansion potential, where a fourth bedroom could be finished later.



F. Sustainability

Various construction methods and site design techniques were discussed for the site which conformed to "green" practices. Both traditional on-site building methods as well as the use of offsite, factory built construction were considered for the ultimate construction of the housing structures. Based on discussions with the Advisory Committee, offsite, factory built construction became the preferred method due to the energy efficiencies as well as lower construction costs inherent with this construction method. Site design standards which focused on solar orientation, limits to site disturbance, brown-field development, open space preservation, access to transit, and on-site storm water retention were integrated into the three schemes as providing the basis for certifiably sustainable construction practices.

Certification of the project using a third-party certification program, such as the United States Green Building Council LEED certification process, was considered and was included in the cost estimates. The Advisory Committee determined that third-party certification would create potential advantages in the future marketing of the development, would leverage the green techniques used in the development to

encourage or require other private developments to seek the same standards, and foster community pride. As a part of the third party certification process, on-site storm water detention, which would minimize impacts from impermeable surfaces at the Chamonix site to the municipal storm water system, was incorporated in to the design.

3. FINAL RECOMMENDATIONS

A. Advisory Committee

On 17 July 2008, the final Advisory Committee meeting was held. The consultants presented the final versions of the three schemes and, after discussing the schemes, the Advisory Committee members in attendance voted on their preferred scheme for recommendation to the Town Council. The "Village Neighborhood" scheme, which was the most dense scheme that featured an underground parking garage, received six of the ten votes cast, the "Neighborhood Block" plan received four of the ten votes cast, and the "Neighborhood Cluster" received none of the votes cast. While the Village Neighborhood became the elected preference of the Advisory Committee, a subsequent discussion after the vote tended to suggest that there was significant concern regarding the additional cost and maintenance of the sub-grade parking garage. This concern was noted and included in the report to Town Council.

B. Final Council Approval

On 5 August 2008, a final presentation of the three schemes was made to the Town Council. Following an update on the Advisory Committee recommendations the council voted six to one for the Neighborhood Block scheme as the preferred option. Reasons given for the preference for the Neighborhood Block scheme ranged from the middle density character of the scheme, the inclusion of open space, the mix of units, and the flexibility of unit layout. Council members voiced support for the third party certification of the project as well as for factory, off-site construction.

4. PREFERRED OPTION

Neighborhood Block



A. Overview

The Neighborhood Block scheme contains 58 units. The following unit mix was proposed:

- No 1-bedroom units;
- twenty, 2-bedroom flats;
- sixteen, 2 bedroom lofts;
- eight, 3-bedroom units; and
- fourteen, 3 bedroom duplexes.

This unit mix provided for 81,696 sq. ft. of housing with a density of 16 dwelling units per acre. A main access street, which gained access to the site from Chamonix Road, bisected the site, with 3-bedroom duplexes on the north side and multi-family units on the south side. An alley offers secondary access to the multi-family units. The main

street passed through the development to the fire station site. While access to the fire station was intended to be limited, this configuration allowed for dual points of access to the site, thus alleviating internal traffic congestion.

The landscape plan located potential community gathering spots throughout the scheme. Semi-private, stepped courtyards were located between the duplex units. Turf areas were limited to large open spaces on the east and west ends of the development. The open space on the east end could be utilized for such uses as a dog park. Landscaping on the east end was kept away from the street to preserve sightlines at the Chamonix Road/Chamonix Lane intersection. The open space on the west end would provide a viewing area into the fire station operations. For safety reasons, the viewing area was segregated from the fire station by a series of low, landscaped walls.

The landscape palette utilized native trees and shrubs. Aspens were situated along the northern edge of the site and gradually “spilled” through the spaces created by the structures. In these stands of aspen, a native understory of grasses (Thurber’s fescue, wheatgrass and blue-wild rye) was punctuated by forbs such as columbine, common lupine, golden banner, and strawberry. Along the southern portion of the site, where retention ponds were intended to hold and treat storm water runoff, more water-oriented plants took over. Blue spruce was planted densely to act as a screen to the commercial uses to the south and I-70 beyond. Shrub thickets of willow and birch filled in among the spruce.

B. Fire Station

The fire station design shown in the Neighborhood Block scheme was the consensus



alternative of Fire District staff and the Advisory Committee. The building foundation itself provided retention of the steep slopes to the north of the site, and thereby offered the most cost-effective site design.

5. PROCEDURAL REQUIREMENTS

Following extensive analysis of both the Chamonix Parcel and the Wendy's Site, staff determined the *Official Land Use Map* for the Town of Vail should be amended to reflect the new designation of **Chamonix Master Plan Area**. The designation of Chamonix Master Plan Area is harmonious with the residential and commercial uses in the surrounding neighborhood and achieves the development goals listed above.

Both properties were rezoned to reflect the development goals of the Chamonix Master Plan Area. The 3.6-acre parcel commonly known as the Chamonix Parcel was rezoned from Two-Family Primary/Secondary (P/S) zone district to Housing (H) zone district (Ordinance No. 27, Series of 2008) and the 1.25-acre former Wendy's Site was rezoned from Commercial Core 3 (CC3) zone district to General Use (GU) zone district (Ordinance No. 26, Series of 2008) on November 18, 2008.

Ultimately, the fire station itself will require the approval of a Conditional Use Permit by the Planning and Environmental Commission (PEC) in the General Use (GU) zone district as it is a conditional use rather than a permitted use in all zone districts.

The master plan is intended to be used as the development guide for the Chamonix Master Plan Area. The plan identifies the location for the fire station and the employee housing. The plan locates the highest density employee housing to the south of the lower density employee housing. This layout ensures the greatest compatibility with the adjacent neighbors. Locating the fire station on the southern edge of the property also locates this more commercial type use farthest from residential development.

6. NON-PREFERRED OPTIONS

A. Neighborhood Cluster Overview

The Neighborhood Cluster scheme contained 50 units. Unit mix consisted of:

- four, 1-bedroom units;
- eight, 2-bedroom flats;
- sixteen, 2-bedroom lofts;
- fourteen, 3-bedroom units; and
- eight, 3-bedroom duplexes.



The unit mix provided for 68,232 sq. ft. of housing with a density of 14 dwelling units per acre. A main access street, which gained access to the site from Chamonix Road, passed through the site to the fire station, again offering dual points of access. Access to the fire station was limited for safety reasons. Multi-family units were situated off the north and south side of the access road. Drives extend to the north off the main street to duplex units.

The landscape plan, similar to the Neighborhood Block scheme, located community gathering spots throughout the design. These community spots utilized terraced courtyards which were located off of internal pedestrian circulation routes. As with the Neighborhood Block scheme, turf areas were provided on the east and west ends of the development, connected by a pedestrian trail. The turf area on the eastern portion could be utilized for an amenity such as a dog park, while the western turf area offered a segregated vantage point of the fire station operations.

B. Village Neighborhood Overview



The Village Neighborhood scheme contained 70 units. This scheme offered a combination of lower density duplex and multifamily units and a multi-story, multi-family structure. Unit mix consisted of:

- nine, 1 bedroom units;
- thirty-two, 2 bedroom flats;
- no 2 bedroom lofts;
- sixteen, 3 bedrooms; and
- ten, 3 bedroom duplexes.

The unit mix provided for 87,936 sq. ft. of housing with a density of 19 dwelling units per acre, the highest density of the three schemes. The main access to the site is via Chamonix Road. The entry road offered a traditional neighborhood lane, with duplex units to the north and multi-family units to the south. The lane terminated in the plaza located in the center courtyard of the multi-story, multi-family structure.

The plaza was of a more urban character, with paving that allowed for pedestrian

and occasional vehicular access as needed. A raised landscaped platform in the center offered a green gathering spot for residents. A parking structure was located below the plaza and provided parking for the residents of the multi-storied structure. The parking structure was accessed via a dedicated entrance off of the frontage road. As in the previous schemes, open space was provided on the eastern and western ends of the site, with similar possibilities for programming.

7. RECOMMENDED ACTIONS

A. Amend the Vail Land Use Plan.

- Planning and Environmental Commission recommendation on December 22, 2008
- Vail Town Council adoption, on first reading of Ordinance No. 1, Series of 2009, scheduled for January 6, 2009

B. Rezone the "Chamonix Parcel" to Housing (H) District.

- Occurred on November 18, 2008 (Ordinance No. 26, Series of 2008)

C. Rezone the "Wendy's Site" to General Use (GU) District.

- Occurred on November 18, 2008 (Ordinance No. 27, Series of 2007)

D. Complete the final Chamonix Affordable Housing Development Cost and Revenue Analysis by Economic & Planning Systems.

- Draft complete on December 9, 2008

E. Complete a site and unit mix specific market study to determine demand for the development, based on the pre-determined area median income target.

- Initiated Phase II of contract with Economic & Planning Systems on December 16, 2008. Anticipated completion by February 15, 2009.

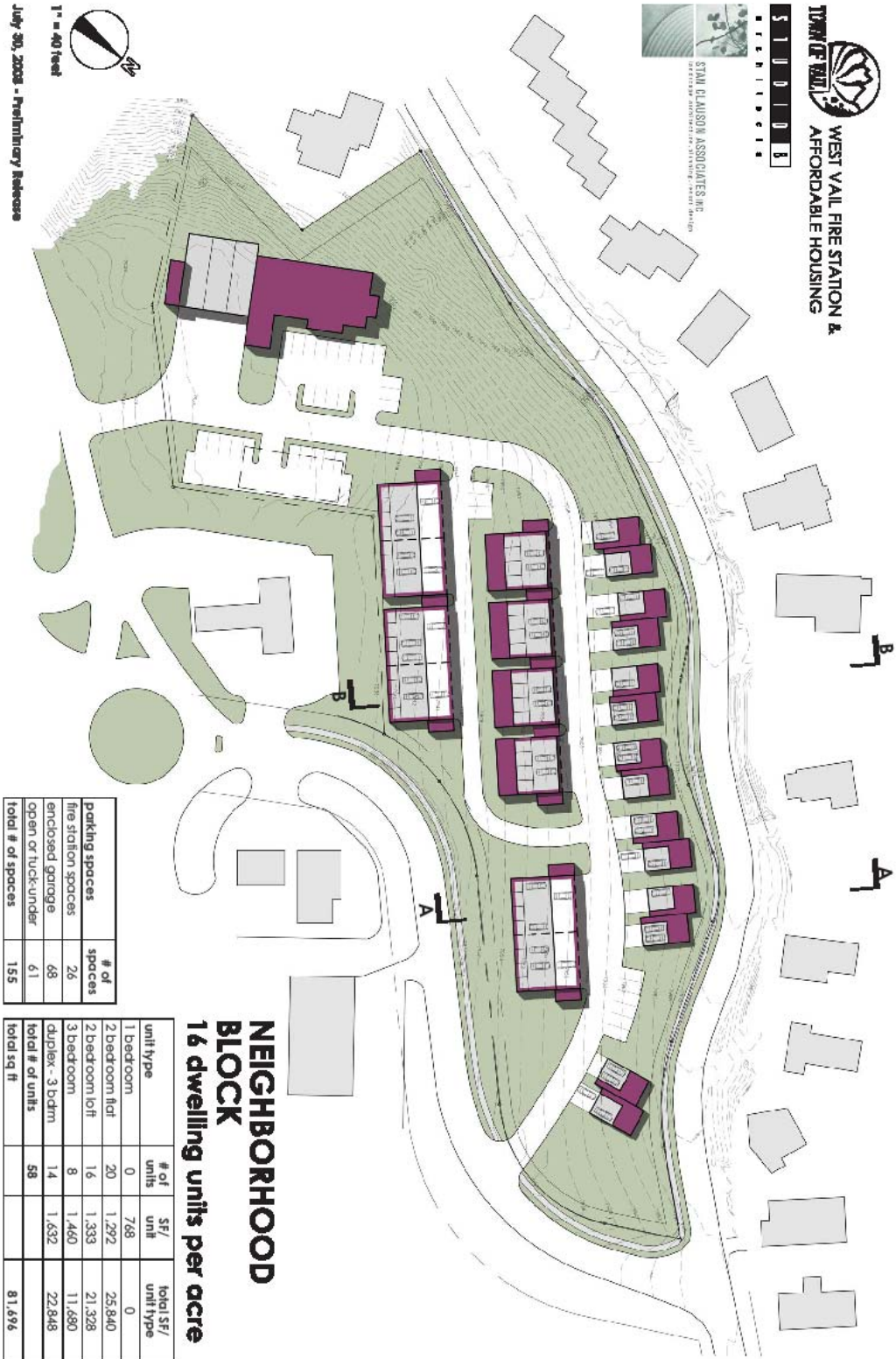
8. APPENDIX

A. Neighborhood Block Site Plan

B. Chamonix Affordable Housing Development Cost and Revenue Analysis

C. Vicinity Map

Appendix A



Appendix B

CHAMONIX AFFORDABLE HOUSING DEVELOPMENT
COST AND REVENUE ANALYSIS

Prepared for:

Town of Vail

Prepared by:

Economic & Planning Systems, Inc.

December 9, 2008

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I. INTRODUCTION

The proposed Chamonix affordable housing project site is located on Chamonix Lane in close proximity to the West Vail interchange. The Town purchased the site several years ago for the purpose of constructing housing. The former Wendy's site was purchased more recently for the purpose of constructing a fire station. Collectively, the two sites total 5.5 acres and are slated for housing and the fire station. Surrounding land uses in the area consist of highway oriented commercial development. Further north from the highway along Chamonix Lane, the land use pattern is composed of both single family and multi family residential uses.

PROJECT BACKGROUND

The Town of Vail recently retained Stan Clauson Associates, Inc. to complete a site plan and cost estimation for an affordable housing project on the Chamonix site. As part of the work, Clauson identified three possible development programs with varying levels of density and building types. Clauson's work also estimated costs associated with construction, engineering, and landscaping of the scenarios for both stick built and modular construction. In addition, the report considered additional costs and fees associated with achieving LEED certification. The analysis was completed in the fall of 2008.

From this work, the Town Council identified scheme 1, *Neighborhood Block*, as the favored development program. Included in this program are 58 total units with an overall density of 16 dwelling units per acre. The project cost estimated by Stan Clauson ranges from \$16.7 to \$23.3 million depending upon the building construction method. As part of the evaluation of the project, the Town seeks to develop a full understanding of any and all costs in addition to land costs that may occur throughout the course of the project's implementation.

SCOPE OF EPS ANALYSIS

Economic & Planning Systems (EPS) was retained by the Town of Vail to conduct a feasibility study of the project, building on the work done by Stan Clauson Associates. First, EPS researched comparable projects within Summit County, the Roaring Fork Valley, and Eagle County to identify prominent factors influencing the overall economics of a number of projects. Second, EPS modeled potential Chamonix project revenue based on targeted AMI levels. Project revenue was then compared to estimated costs, including additional cost factors identified by EPS, to determine the AMI requirements needed to provide sufficient revenue to make the project feasible.

II. COMPARATIVE ANALYSIS

EPS compiled comparative cost information for seven projects in the Roaring Fork Valley, Summit County, and Eagle County based on interviews with project representatives. This section discusses the individual projects and then summarizes the relevant findings.

COMPARATIVE PROJECTS

SUMMIT COUNTY

Vic's Landing

The Vic's Landing project is located in the Town of Breckenridge across from the Breckenridge Golf Course on Tiger Road. The project was spurred by an annexation request by the developer, Tom Silengo, and the corresponding request for water taps. As part of the annexation, the Town's inclusionary housing requirement was triggered. The Town required the developer to construct 24 affordable units in exchange for entitlements for 12 market rate units. Town contribution to the project viability was limited to fee waivers and the entitlement of the 12 market units.

The project is evenly split between one- and two-bedroom units with target AMI levels of 80 and 100 percent. The 24-unit project consists of six four-plexes. One-bedroom units are priced at \$185,000 and target income levels at 80 percent of AMI. Two-bedroom units target both 80 and 100 percent of AMI and are priced at \$229,500 and \$285,000 per unit. Among other standards, the deed restriction limits annual appreciation to three percent or the increase in local AMI, dependant upon whichever measure is higher. In addition, resales of the units are subject to income testing on the part of the buyer with a 10 percent income level tolerance.

Closings began in April of 2008. The one-bedroom units in the project are sold out. Approximately half of the two bedroom units are sold. It should be noted that the two bedroom units were completed later and thus have been impacted to a greater degree by current credit restrictions. Federal Housing Administration (FHA) approval of the project was not originally sought, although an effort on the part of the developer is currently being made to receive approval. The approval is expected to broaden market demand as buyer financing will become more available.

Valley Brook

Valley Brook is a project in the final planning stages also located in the Town of Breckenridge on northeast corner of Airport Road and Valley Brook Street. The proposed project is being developed on a fee basis by Mercy Housing Colorado as a result of a Town issued RFO in November 2007. As currently proposed, the project includes 42 units targeting income levels at 80 and 100 percent of AMI.

The project is composed of two- and three-bedroom units in two-story townhomes. Approximately 52 percent of the units are targeted for AMI of 80 percent or less and 48 percent of the units are targeted for AMI of 100 percent or less. Units at 80 percent range in price from \$133,000 to \$160,000 per unit. Prices at 100 percent range from \$200,000 to \$250,000. Similar to Vic's Landing, the deed restriction limits annual appreciation to three percent or the percent by which AMI increases.

Hard costs are currently estimated at \$184 per square foot with total a total square foot cost of \$230 per square foot for hard and soft costs as well as site work. The cost excludes land and off-site costs. Construction prices have increased approximately 10 percent from the time of that the project was initially bid. However, both the developer and representatives from the Town expect to benefit from a downward renegotiation of costs. The developer is charging a one-time fee equivalent to approximately four percent of total costs, although a 10 percent fee is typically used by the developer.

The project is being developed with a high level of subsidy with contributions from town, state, and federal sources. In total, it is estimated that grant funding will account for \$4.7 million of the project's budget, or approximately 38 percent of total costs, which does not include costs of land (which was contributed to the project by the Town). The subsidy figure does include fee waivers by the Town. In addition, the Town may also contribute an additional subsidy in grant funding. At this time, the subsidy per unit is estimated at \$117,000 per unit.

Roaring Fork Valley

Rodeo Place

The Town of Snowmass has recently completed the first homes in Rodeo Place, a 27-unit affordable housing development located near the Rodeo Grounds. The project is located within the Town of Snowmass, approximately half the distance between the base area and Highway 82, and is highly visible to traffic along Brush Creek Drive.

The project consists of 20 single family homes, two duplexes, and one triplex. Phase I accounts for 15 of the 27 total units. The Town finished and closed six units in the fall of

2008 and plans to have the balance of Phase I completed by the spring of 2009. The homes are modular. Town staff noted that there have been problems coordinating the site work and the manufacturer resulting in project delays and cost increases. Nevertheless, the Town staff is pleased with the overall process and the quality of the architectural design.

The Town did not established AMI targets for the prospective residents but relied on surveys of interested households to derive home prices. Approximately 50 to 60 households with at least one full-time employee based in Snowmass expressed interest in the project. Most of these households have maintained interest in the project since the surveys were first distributed in mid 2007. The deed restriction, which limits appreciation to three percent per year (among other terms), has caused some prospective purchasers to drop out of the process. However, because housing options are limited (particularly in Snowmass), most households have maintained their participation throughout the development process and the pool of buyers has remained sufficiently large to provide adequate demand.

Based on the response to surveys, homes were designed to fall into a price range spanning from \$300,000 to \$550,000 per unit (which translates to an AMI of approximately 140 to more than 250 percent). The small single family homes and duplexes are priced at \$300,000, for 1,400 square feet of finished living area plus 700 square feet of basement floor area (\$214 per square foot, finished). Medium sized single family homes are priced from \$425,000 to \$450,000 for 1,800 square feet, plus 900 square feet of basement area (\$229 per finished square foot). The largest are priced at \$550,000 for 2,150 square feet plus 950 of basement floor area (\$256 per square foot, finished). Basements were not an optional feature, as the Town mandated that they be included in each home. The requirement not only ensures adequate storage, but also creates additional bedroom area to be used for sublets and/or roommates, increasing the number of employees that can be housed locally.

The construction costs range from \$210 to \$225 per square foot and covers only vertical costs. The Town absorbed costs for all on-site infrastructure improvements as well as soft costs related to the site engineering and architectural design. While staff did not have specific costs for these services, they estimate a 25 percent increase for these costs resulting in a total cost of \$262 to \$281 per square foot. The Town had acquired the land previously and contributed the cost of the land as a form of subsidy. Subsidies range from \$33,000 to \$80,000 per unit based on an average construction cost of \$271 per square foot. The smaller units generate \$300,000 of revenue while construction costs total \$380,000 (1,400 * 271), resulting in a net subsidy of \$80,000. The medium sized units required a subsidy of \$50,000 and the largest units were subsidized by \$33,000. The average among all three unit types is \$54,000.

Burlingame Ranch

Burlingame Ranch is a 21.5 acre affordable housing development in the Town of Aspen located off Highway 82 to the north of the Bar/X Ranch. The project is entirely dedicated to affordable housing and planned to be developed over three phases and will include a total of 236 units. To date, 91 units have been constructed on the site. Income targets for the project range widely, although the majority of the units accommodate income levels that range from approximately 80 to 140 percent of AMI. (Note that the Aspen Housing Office sets its own median income and corresponding AMI levels. The targets shown here are approximate.)

The first phase of development includes 15 one bedroom units, 30 two bedroom units, 39 three bedroom units, and 7 single-family lots. Most of the units are townhomes. In addition to the identified income limits, residents are also required to earn a minimum of 75 percent of their yearly income within Pitkin County. The units are deed restricted to three percent annual appreciation or the percent by which the Consumer Price Index (CPI) increases. All 91 units included in the first phase have been sold.

An extensive audit of Phase I costs in Burlingame Ranch was completed as a result of a brochure that was published in 2005 misstating the total cost of the project to the public. The average sales price per unit (including lots) for the project was approximately \$230,000. Hard costs for the project averaged \$170 per square foot with an average total cost of \$202 per square foot of hard and soft costs (which exclude land, off-site, and mitigation costs). Including land and all other costs, such as off-site infrastructure, mitigation, and community benefits, the total project cost \$236 per square foot.

The project's audit indicates a per unit subsidy of \$331,567, or approximately 59 percent of the project's costs. This contrasts with an anticipated subsidy of \$184,455 per unit. The increase is largely attributable to programmatic changes made by Council as well as shifting AMI targets to lower levels. The project costs increased by \$11.7 million, resulting in relatively high per unit subsidies.

Iron Bridge

Iron Bridge is an affordable housing development located in Garfield County between Carbondale and Glenwood Springs. The affordable component of the project is part of the larger 300 home development by Iron Bridge Homes, LLC. The inclusion of affordable units in the development was a requirement of Garfield County's inclusionary housing ordinance triggered by the developer's request for a Planned Unit Development (PUD) density increase. A total of 30 deed restricted affordable single family units were required. County representatives expect 24 to be completed on site and another six to be addressed via fees-in-lieu.

The affordable units are all comprised of 3-bedroom 2-bath units with an average size of 1,430 square feet. The units are targeted to families earning 80 percent or less of AMI and working in Garfield County. The units are priced at \$230,000 as a result of calculation of AMI based on a 6-person family. Garfield County has since amended their ordinance to limit the amount of people able to be included in the AMI calculation and maintain lower price points. The units are deed restricted to three percent annual appreciation or the percent by which the Consumer Price Index (CPI) increases (among other requirements).

Sales within the affordable component have been slow, as the developer has closed on only four units. However, the balance of the project is under contract and the remaining 20 units are awaiting their certificate of occupancy which has been delayed as a result of the involvement of Lehman Brothers in the construction loan. As a result, the completion of the units and release has been delayed several months. No County or other public subsidy was used in the construction of the units. Developer representatives report that their approach was to sell the units at the cost of vertical construction and shift costs related to land, infrastructure, and soft costs to the market rate portion of the development. Vertical construction costs are estimated range from \$160 to \$175 per square foot. The project is not currently FHA approved, although the developer and County are investigating the measures necessary to become approved.

EAGLE COUNTY

Stratton Flats

Stratton Flats is a 47-acre housing development located in the Town of Gypsum south of Hwy 6 on the northwest side of the Eagle County Regional Airport. The developer for the project is Meritage Development Group. At build-out the 339 unit project will include 152 single family homes, 118 townhomes, and 69 condominiums of which 226 will include deed restrictions. At this time, a total of seven units have been permitted on the 47.3 acre site.

The affordable units target income levels at 140 percent of AMI and are evenly divided between Town of Gypsum and Eagle County deed restrictions. The Gypsum restriction limits income to 140 percent of AMI and requires that buyers earn 85 percent of their income in Eagle County. The Eagle County deed restriction limits income to 140 percent of AMI and includes a cap on annual appreciation based on the increase to the local AMI.

Units with the less restrictive Town of Gypsum deed restriction are priced at approximately \$320,000 to \$350,000 for townhomes and between \$180,000 and \$245,000 for condominiums. Units with the Eagle County restriction are priced at \$350,000 for single family units, \$300,000 to \$330,000 units for townhomes, and between \$180,000 and

\$245,000 for condominiums. Market rate units range from \$400,000 to \$430,000 for single-family homes and between \$340,000 and \$380,000 for townhomes. To date, the developer has written 8 contracts for units in the project. The developer reported that approximately 80 people had pursued loans without success. As a result, the developer has pursued and recently received FHA approval, which allows for 97 percent Loan-to-Value buyer financing.

The project was completed using modular construction at a total cost of \$200 per square foot. From the time of initially ordering the modular units through the current point in the construction process, the developer reported a cost increase of eight percent. Within the Gypsum deed restricted units, there is a per unit subsidy of approximately \$23,000 which was provided in the form of fee waivers by the Town. Eagle County units required higher subsidies of approximately \$23,000 of waived Town of Gypsum fees plus \$40,000 per unit which was provided through a \$4.5 million equity investment in the project by Eagle County in the form of a subordinated position.

Eagle Ranch Village

Eagle Ranch Village is a land development project by East-West Partners located in the Town of Eagle off Grand Avenue on Sylvan Lake Road. The project includes approximately 60 units which were constructed as part of the Town's inclusionary housing ordinance and were constructed approximately five to six years ago. The affordable units within the project are housed in four-plexes within the Sylvan Square development, which is part of a larger development that includes single-family houses, entitled lots, and additional multifamily housing.

The affordable units sold for approximately \$300,000 per unit as compared to market rate units within the project that sold for approximately \$350,000 per unit. Hard costs within the project were approximately \$180 per square foot for vertical construction only. Soft costs accounted for approximately 20 percent of hard costs resulting in a total cost to approximately \$216 per foot. The developer of the affordable units reported that no profit margin was received on the affordable units.

No income restrictions exist on the units. The deed restriction requires that residents must live and work in Eagle County and limits annual appreciation to three percent or CPI, although this provision is waived if the seller cannot find a buyer. The Eagle County Housing Authority has the first right of purchase from the owner. The affordable units were provided a development subsidy through a land donation by East-West Partners as well as a 0.2 percent transfer fee on the market rate units. The fee is allocated by a community housing committee to individual units. Including land and the transfer fee, the total subsidy in Sylvan Square was approximately \$50,000 per unit.

III. FEASIBILITY ANALYSIS

EPS conducted a financial analysis to provide a full indication of the costs the Town of Vail will incur in the development of the Chamonix site. EPS analyzed potential revenues from varying AMI levels and projected the per unit subsidies needed to finance the project.

Project Costs

Town Council has indicated a preference for Scheme 1 of the Stan Clausen proposals which includes 36 two-bedroom and 22 three-bedroom units for a total of 58 units. EPS compiled the cost information provided by the consultant with line items for a developer's fee and contingency consideration. With these factors added to the original estimate, the total construction cost for the "stick built" Option A is \$29,523,540. The cost for the modular built Option B is \$21,844,116, as shown on the following page in **Table 1**.

**Table 1
Total Project Costs
Chamonix Affordable Housing Costs and Revenue Analysis**

Sources & Uses	Neighborhood Block	
	Option A	Option B
Total Square Feet	81,696	81,696
Program		
1 Bedroom	0	0
2 Bedroom	36	36
3 Bedroom	<u>22</u>	<u>22</u>
Subtotal	58	58
Costs	<u>Cost Factor</u>	
Engineering		\$848,328 \$848,328
Engineering Services	7.0%	59,383 59,383
Construction		23,283,360 16,747,680
Landscaping		748,552 748,552
LEED Certification		<u>135,420</u> <u>135,420</u>
Subtotal		\$25,075,043 \$18,539,363
Cost per Square Foot		\$307 \$227
Contingency		
Engineering Contingency	15.0%	\$127,249 \$127,249
Construction Contingency ¹	10.0%	2,328,336 1,674,768
Landscaping Contingency	15.0%	<u>112,283</u> <u>112,283</u>
Subtotal		\$2,567,868 \$1,914,300
Fees		
LEED Certification Fee	0.5%	125,375 92,697
Developer Fee ¹	7.0%	<u>\$1,755,253</u> <u>\$1,297,755</u>
Subtotal		\$1,880,628 \$1,390,452
Total Costs		\$29,523,540 \$21,844,116

¹ EPS additions to Stan Clauson estimate

Source: Economic & Planning Systems, Stan Clauson Associates

H:\18887-Vail Chamonix Housing Site Feasibility Analysis\Data\18887 - AMI Eagle County.xls\Costs

Project Revenues

EPS estimated appropriate sales prices based upon an Average Median Income (AMI) of \$75,000 for a household of three in Eagle County, as shown in **Table 2**. Target home prices range from approximately \$228,000 at 80 percent of AMI to \$407,300 at 140 percent AMI.

Table 2
Affordability Calculation
Chamonix Affordable Housing Costs and Revenue Analysis

Description	Factor							
		80%	90%	100%	110%	120%	130%	140%
Maximum Income								
2 Bedroom		\$60,320	\$67,860	\$75,400	\$82,940	\$90,480	\$98,020	\$105,560
3 Bedroom		\$60,320	\$67,860	\$75,400	\$82,940	\$90,480	\$98,020	\$105,560
2 & 3 Bedroom								
Housing Payment Capacity								
Monthly Payment	30%	\$1,508	\$1,697	\$1,885	\$2,074	\$2,262	\$2,451	\$2,639
Less: Insurance	\$600 / Year	-\$50	-\$50	-\$50	-\$50	-\$50	-\$50	-\$50
Less: Property Taxes	0.50%	<u>-\$90</u>	<u>-\$100</u>	<u>-\$110</u>	<u>-\$120</u>	<u>-\$130</u>	<u>-\$140</u>	<u>-\$150</u>
Net Available for Debt Service		\$1,368	\$1,547	\$1,725	\$1,904	\$2,082	\$2,261	\$2,439
Affordability Target								
Loan Amount	7% interest	\$205,600	\$232,500	\$259,300	\$286,100	\$312,900	\$339,800	\$366,600
Loan Term		30 Years	30 Years	30 Years	30 Years	30 Years	30 Years	30 Years
Down Payment		10%	10%	10%	10%	10%	10%	10%
Loan : Value Ratio		<u>90%</u>	<u>90%</u>	<u>90%</u>	<u>90%</u>	<u>90%</u>	<u>90%</u>	<u>90%</u>
Target Affordable House Price		\$228,400	\$258,300	\$288,100	\$317,900	\$347,700	\$377,600	\$407,300

Source: HUD; Economic & Planning Systems

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COST SCENERIOS

The total amount of revenue available to the project was determined by the number of units within the project dedicated to each income level. Total income was then compared to the total project cost to determine the net difference. This amount provides the basis of the estimate of subsidy per unit for the proposed Chamonix project in three scenarios. For this analysis, the costs are based on the San Clauson report. Stick built construction is assumed to cost \$285 per square foot and modular is assumed to cost \$205 per square foot.

The field research indicates that these may be overly conservative at this time and that a lower cost figure may be reasonable. In the analysis that follows, the original cost figures have been maintained. It is recommended that the feasibility analysis be rerun with lower figures after the Town has had the opportunity to review them.

The first scenario examined an optimal level of affordability with half of the units targeting households at 80 percent of AMI and half at 100 percent AMI. The second scenario determines the price points necessary to reach a per unit subsidy consistent with the comparative projects in the region. The third scenario examines the per unit prices needed for the project to break even.

In the tables that follow, Scenario A refers to stick built construction costs and Scenario B is based on modular costs.

OPTIMAL AMI TARGET

An optimal AMI level of 80 and 100 percent of AMI was used in this analysis. At these levels a stick built project requires a per unit subsidy of approximately \$251,000 per unit, as shown in **Table 3**. Modular construction at these incomes requires a per unit subsidy of \$118,000.

Table 3
Subsidy at Optimal AMI Levels
Chamonix Affordable Housing Costs and Revenue Analysis

Revenue Sources		Neighborhood Block	
		Option A	Option B
2 Bedroom			
	<u>% of Total</u>		
80% AMI - 2 Bdrm.	50%	4,111,200	4,111,200
90% AMI - 2 Bdrm.	0%	0	0
100% AMI - 2 Bdrm.	50%	5,185,800	5,185,800
110% AMI - 2 Bdrm.	0%	0	0
120% AMI - 2 Bdrm.	0%	0	0
130% AMI - 2 Bdrm.	0%	0	0
140% AMI - 2 Bdrm.	<u>0%</u>	<u>0</u>	<u>0</u>
Subtotal	100%	9,297,000	9,297,000
3 Bedroom			
80% AMI - 3 Bdrm.	50%	2,512,400	2,512,400
90% AMI - 3 Bdrm.	0%	0	0
100% AMI - 3 Bdrm.	50%	3,169,100	3,169,100
110% AMI - 3 Bdrm.	0%	0	0
120% AMI - 3 Bdrm.	0%	0	0
130% AMI - 3 Bdrm.	0%	0	0
140% AMI - 3 Bdrm.	<u>0%</u>	<u>0</u>	<u>0</u>
Subtotal	100%	5,681,500	5,681,500
Total Revenue		\$14,978,500	\$14,978,500
Project Profit/Loss			
Square Feet		(\$178.04)	(\$84.04)
Unit		(\$250,777)	(\$118,373)
Total		(\$14,545,040)	(\$6,865,616)

Source: Economic & Planning Systems, Stan Clauson Associates

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TYPICAL SUBSIDY

Based on the research of regional projects, a representative per unit subsidy for stick built construction in a project with only affordable units is approximately \$120,000 per unit. A typical subsidy for modular construction is approximately \$30,000 per unit.

To reach a typical stick built subsidy, the program required units to be evenly split between 130 and 140 percent of AMI, as shown in **Table 4**. At these income levels, the project could be feasible with a per unit subsidy of approximately \$117,000.

Table 4
AMI Levels for Stick Build & Standard Subsidy
Chamonix Affordable Housing Costs and Revenue Analysis

Revenue Sources	<u>Neighborhood Block</u> Option A	
2 Bedroom		
	<u>% of Total</u>	
80% AMI - 2 Bdrm.	0%	0
90% AMI - 2 Bdrm.	0%	0
100% AMI - 2 Bdrm.	0%	0
110% AMI - 2 Bdrm.	0%	0
120% AMI - 2 Bdrm.	0%	0
130% AMI - 2 Bdrm.	50%	6,796,800
140% AMI - 2 Bdrm.	<u>50%</u>	<u>7,331,400</u>
Subtotal	50%	14,128,200
3 Bedroom		
80% AMI - 3 Bdrm.	0%	0
90% AMI - 3 Bdrm.	0%	0
100% AMI - 3 Bdrm.	0%	0
110% AMI - 3 Bdrm.	0%	0
120% AMI - 3 Bdrm.	0%	0
130% AMI - 3 Bdrm.	50%	4,153,600
140% AMI - 3 Bdrm.	<u>50%</u>	<u>4,480,300</u>
Subtotal	50%	8,633,900
Total Revenue		\$22,762,100
Project Profit/Loss		
Square Feet		(\$82.76)
Unit		(\$116,577)
Total		(\$6,761,440)

Source: Economic & Planning Systems, Stan Clauson Associates

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Modular construction affords a greater flexibility in the program required to reach typical subsidies. When 50 percent of units are priced for 120 percent AMI and the remaining units are divided between 110 and 130 percent AMI, a per unit subsidy of approximately \$33,000 is needed, as shown in **Table 5**.

Table 5
AMI Levels for Modular & Standard Subsidy
Chamonix Affordable Housing Costs and Revenue Analysis

Revenue Sources	<u>Neighborhood Block</u> <u>Option B</u>	
2 Bedroom		
	<u>% of Total</u>	
80% AMI - 2 Bdrm.	0%	0
90% AMI - 2 Bdrm.	0%	0
100% AMI - 2 Bdrm.	0%	0
110% AMI - 2 Bdrm.	30%	3,496,900
120% AMI - 2 Bdrm.	50%	6,258,600
130% AMI - 2 Bdrm.	20%	2,643,200
140% AMI - 2 Bdrm.	<u>0%</u>	<u>0</u>
Subtotal	100%	\$12,398,700
3 Bedroom		
80% AMI - 3 Bdrm.	0%	0
90% AMI - 3 Bdrm.	0%	0
100% AMI - 3 Bdrm.	0%	0
110% AMI - 3 Bdrm.	30%	2,225,300
120% AMI - 3 Bdrm.	50%	3,824,700
130% AMI - 3 Bdrm.	20%	1,510,400
140% AMI - 3 Bdrm.	<u>0%</u>	<u>0</u>
Subtotal	100%	\$7,560,400
Total Revenue		\$19,959,100
Project Profit/Loss		
Square Feet		(\$23.07)
Unit		(\$32,500)
Total		(\$1,885,016)

Source: Economic & Planning Systems, Stan Clauson Associates

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MINIMAL SUBSIDY

The following two tables test hypothetical scenarios in which the Town pays the least amount of subsidy. For stick built construction, the project requires a subsidy of \$102,000 per units even if 100 percent of the units are sold at 140 percent of AMI, as shown in **Table 6**.

Table 6
Incomes Required to Cover Costs of Stick Built Construction
Chamonix Affordable Housing Costs and Revenue Analysis

Revenue Sources	<u>Neighborhood Block</u> Option A	
2 Bedroom		
	<u>% of Total</u>	
80% AMI - 2 Bdrm.	0%	0
90% AMI - 2 Bdrm.	0%	0
100% AMI - 2 Bdrm.	0%	0
110% AMI - 2 Bdrm.	0%	0
120% AMI - 2 Bdrm.	0%	0
130% AMI - 2 Bdrm.	0%	0
140% AMI - 2 Bdrm.	<u>100%</u>	<u>14,662,800</u>
Subtotal	0%	14,662,800
3 Bedroom		
80% AMI - 3 Bdrm.	0%	0
90% AMI - 3 Bdrm.	0%	0
100% AMI - 3 Bdrm.	0%	0
110% AMI - 3 Bdrm.	0%	0
120% AMI - 3 Bdrm.	0%	0
130% AMI - 3 Bdrm.	0%	0
140% AMI - 3 Bdrm.	<u>100%</u>	<u>8,960,600</u>
Subtotal	0%	8,960,600
Total Revenue		\$23,623,400
Project Profit/Loss		
Square Feet		(\$72.22)
Unit		(\$101,727)
Total		(\$5,900,140)

Source: Economic & Planning Systems, Stan Clauson Associates

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The Town could hypothetically achieve feasibility with minimal subsidies using modular construction costs, as shown in **Table 7**. The sales modular constructed units are cost neutral when 40 percent and 50 percent of units are targeted for incomes of 130 and 140 percent of AMI, respectively. At these sales prices a small number of units can be devoted to 120 percent of AMI.

Table 7
Incomes Required to Cover Costs of Modular Construction
Chamonix Affordable Housing Costs and Revenue Analysis

Revenue Sources	<u>Neighborhood Block</u> <u>Option B</u>	
2 Bedroom		
	<u>% of Total</u>	
80% AMI - 2 Bdrm.	0%	0
90% AMI - 2 Bdrm.	0%	0
100% AMI - 2 Bdrm.	0%	0
110% AMI - 2 Bdrm.	0%	0
120% AMI - 2 Bdrm.	10%	1,390,800
130% AMI - 2 Bdrm.	50%	6,796,800
140% AMI - 2 Bdrm.	<u>40%</u>	<u>5,702,200</u>
Subtotal	60%	\$13,889,800
3 Bedroom		
80% AMI - 3 Bdrm.	0%	0
90% AMI - 3 Bdrm.	0%	0
100% AMI - 3 Bdrm.	0%	0
110% AMI - 3 Bdrm.	0%	0
120% AMI - 3 Bdrm.	10%	695,400
130% AMI - 3 Bdrm.	50%	4,153,600
140% AMI - 3 Bdrm.	<u>40%</u>	<u>3,665,700</u>
Subtotal	60%	\$8,514,700
Total Revenue		\$22,404,500
Project Profit/Loss		
Square Feet		\$6.86
Unit		\$9,662
Total		\$560,384

Source: Economic & Planning Systems, Stan Clauson Associates

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IV. FINDINGS

The following analysis summarizes the most prominent issues encountered in the development of the selected affordable housing projects. Issues are organized by cost considerations, subsidy levels, and buyer lending.

Cost Considerations

Construction costs for the projects under consideration in this report ranged from \$200 to \$281 per square foot, as shown on the following page in **Table 8**, which summarizes the costs, revenues, and subsidies for the projects evaluated. The construction cost data shown in the table is exclusive of land, off site mitigation, and other considerations. The figures generally include hard costs, soft costs, and on-site infrastructure. Results indicate frequent instances of construction costs around \$200 to \$230 per square foot.

Developers experienced cost escalations ranging from 8 to 20 percent from the time an initial bid was received to construction. However, project representatives repeatedly indicated that downward pressure in materials costs has fallen 20 percent from 2007 to 2008. Contractors in the planning stages are tending to renegotiate prices in light of weakening demand for construction materials worldwide.

Table 8
Summary of Findings
Chamonix Affordable Housing Costs and Revenue Analysis

Project	Planned	Built	Target AMI	Construction Cost (sq. ft.)	Subsidy ⁵ (per unit)	Cost Escalation	Price Range
<u>Summit County</u>							
Vic's Landing	24	24	80% to 100%	---	fee waivers	---	\$185,000 - \$285,000
Mercy Housing	42	---	80% & 100%	\$230	\$117,000	10%	\$133,000 - \$250,000
<u>Roaring Fork Valley</u>							
Rodeo Ground	27	9	140% - 250%	\$281			\$300,000 - \$550,000
Burlingame Ranch	91	91	80% to 140% ²	\$202	\$332,000	12%	avg. \$230,000
Iron Bridge	24	24	80% ³	\$202 ⁴	\$0	---	\$230,000
<u>Eagle County</u>							
Stratton Flats ¹	226	7	140%	\$200	\$23,000 - \$40,000	8%	\$180,000 - \$350,000
Eagle Ranch Village	60	60	live/work in Cty.	\$216 ⁴	\$50,000	20%	\$300,000

¹ Modular units

² Majority of units in this range, AMI level based on survey

³ Based on six person household

⁴ Total cost derived by allocating 20% of hard costs to soft costs

⁵ Burlingame Ranch and Mercy Housing figure do not include waived fees

Source: Economic & Planning Systems

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Unit Subsidy

Subsidies take many forms in affordable housing development. The research shows a clustering of per unit subsidies in the \$20,000 to \$50,000 range as well as a cluster on the upper end that spans from \$120,000 to \$330,000. In all cases, these subsidy levels are on top of land costs. In each of the case studies provided, land was provided at no cost to the affordable units, which is a minimum threshold for pursuing an affordable housing project at this time.

Generally, the projects requiring lower subsidies benefit from market rate units that defray the land, soft costs, developer fees, on-site infrastructure, and off-site mitigation. For example, Iron Bridge, Stratton Flats, Vic's Landing, and Eagle Ranch Village all received indirect subsidy through the ability of the developer to build market rate units on-site. In addition, the projects also received fee waivers to help offset the costs of affordable units. The \$23,000 to \$40,000 subsidy at Stratton Flats includes both fee waivers as well as the benefit of a \$4.5 million equity contribution from Eagle County. The \$50,000 per unit subsidy at Eagle Ranch Village includes both fee waivers proceeds from a RETA and the value of a land contribution from the master developer.

Another way to reduce subsidies is to increase sales prices and target higher AMI levels. The Snowmass project reflects relatively unique approach as virtually all of the units are priced at the upper end of the affordable spectrum, reaching approximate AMI levels near (or above) 140 percent. The Town was able to reduce the subsidy to \$54,000 per unit based on sales prices for some units that exceeded \$500,000. The project with the lowest required subsidy, Stratton Flats, reflects a combination of benefits, including on-site market rate units, modest deed restriction terms, as well as higher AMI targets.

In projects without supporting market rate units and conventional AMI targets that reach households earning as little as 80 percent of AMI, higher subsidies are required to cover project costs. The proposed Valley Brook project anticipates a per unit subsidy of approximately \$117,000. Burlingame Ranch requires \$332,000 per unit.

Moving forward, the Town of Vail should recognize that land subsidy alone will be insufficient for the project unless construction costs drop and/or AMI targets are set high. The Town should carefully consider higher AMI levels and should set them only after completing additional market analysis, as identified below. Generally, the Town should anticipate committing additional levels of subsidy to the project based on the research of comparative projects.

Buyer Lending Issues

Project developers repeatedly indicated that underwriting standards for residential borrowers represent the greatest current risk to affordable housing development. Preliminary research shows

that mortgage terms require down payments of 10 to 15 percent. Many developers cited the need to secure Federal Housing Administration approval, thus providing 97 percent loan-to-value financing. Project representatives indicated that FHA approval was contingent upon review of the deed covenants and in the case of the modular development (Stratton Flats) approval of building plans, including the unit foundation.

Construction loans appear to be less of an issue than individual homebuyer loans. Representatives from the Valley Brook project indicated a willing market for construction loans. In addition, downward pressure on construction costs has also eased restrictions to borrowing.

Additional Considerations

Based on discussions with developers with active affordable housing projects in the region, there are a number of critical issues that warrant consideration, in addition to the issues of costs, revenues, and feasibility. These include:

- **Competitive Market Position** – The Town should understand the market position of the site relative to other projects within the county. Prospective home purchasers have options and can be expected to evaluate several other opportunities before selecting a home at this location. Documenting the market context and determining the competitive advantages provided by this site will shed light on the profiles of buyers likely to purchase here. The analysis will enable the Town to price its units based on the market and improve receptivity among the segment(s) most likely to consider it.
- **Product Alignment** – Once the market position and price banding has been established, the Town should revisit the products designed for the site. Aligning the products with the buyer profiles is a critical step to creating a marketable project. It should be noted that most developers attempt to provide as broad a range of products as possible, thus generating interest from across the spectrum of prospective buyers. This approach is recommended for the Chamonix site as well; however, the Town should identify the most profitable and saleable product and ensure that the development program is concentrated around this unit type.
- **Market Depth by AMI Level** – In addition to evaluating the market supply, as noted in the first two bullets, the Town should consider an analysis of market demand. Using recent survey data, the Town could understand the depth of potential demand for units by income level. The data can be cross-tabulated by a range of factors to better understand depth of demand by type of resident.
- **Financing Risk Mitigation** – The current credit markets are substantially different from the recent past. Accordingly, developers must take action to ensure that financing is as available under the most flexible terms possible for future buyers. At this time, developers are seeking FHA approval to achieve this. The Town should understand the requirements of FHA and ensure that it is addressed from the start of the project.

Appendix C

