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A DESTINATION RESORT FOR BRIDGER BOWL

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A DESTINATION RESORT FOR BRIDGER BOWL

Bozeman, Montana

Thomas N. Milleson

Submitted in partial fulfillment of the requirements for the degree of

Bachelor of Architecture

at

Montana State University

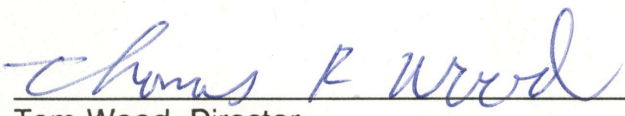
June 1991

Approved:



Ralph Johnson, Thesis Advisor

Linda Brock, Committee Person



Tom Wood, Director

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Thomas N. Milleson

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**A
DESTINATION
RESORT
FOR
BRIDGER
BOWL**

To Cindy

I would like to acknowledge the following people for their help:

Ralph Johnson, Linda Brock, Dick Prugh, Bob Utzinger, Patty Gunderson, Linda Goan, Janie Karnop, the Bozeman Daily Chronicle, the many, many people who took the time and effort to respond to my survey, and most of all, my wife Cindy.

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• A • DESTINATION • RESORT • FOR • BRIDGER • BOWL •

INTRODUCTION

INTRODUCTION

The Bridger Bowl Ski Area is one of southwestern Montana's best-kept secrets. It functions primarily as a day ski area for the residents of Bozeman, yet it has excellent intermediate and advanced skiing and some of the best extreme skiing in North America.

The area is operated by the non-profit Bridger Bowl Corporation. The area leases 1,153 acres from the U.S. Forest Service in Gallatin National Forest and 120 acres from the State of Montana.

National Trends

There are five major nationwide trends in the ski industry that must be recognized.

1. Increased resort competition has resulted in sophisticated marketing and expensive improvements in order to attract more people.
2. There is more concern with the total resort experience. Ski areas can no longer just sell lift tickets.
3. Resorts are increasingly being consolidated, with corporate resorts controlling more than one ski area. This has resulted in a decline in the total number of ski areas. Increased competition and rising costs have also resulted in a declining number of resorts, especially in the East and Midwest.
4. New lift technology has greatly enhanced the circulation of skiers and forced resorts to buy expensive technology or risk not being able to compete with other areas.
5. Increasing energy, labor, equipment, and insurance costs have rendered many resorts unprofitable.

These illustrate that the ski industry is becoming a very sophisticated high-risk business requiring substantial long-term investment.

Bridger Bowl

The February 1986 Bridger Bowl Master Plan identified several problems that Bridger Bowl is facing.

1. A decline in the skier growth rate while other Montana resorts are experiencing an increase.
2. Fluctuating skier utilization with high weekend and low mid-week use creates a more expensive, less efficient resort operation.
3. Few overnight accommodations result in many people choosing another area over Bridger Bowl.
4. Limited resort attractions aside from downhill skiing (with cross-country skiing available at Bohart Ranch) also result in people choosing another area over Bridger Bowl.
5. Inadequate lifts and deteriorating skier support services make Bridger Bowl less attractive than other ski areas.
6. A lack of adequate beginner terrain results in losing skiers when they are first getting started and forces families to choose other areas. x
7. Base area circulation problems result in less than pleasant experiences for many people.
8. Limited parking is also another problem. Bridger Bowl currently has only 900 parking spaces even though the zoning allows 1,500. However, the area does not own enough property to expand its parking. x
9. There is a limited profit center for the resort. Revenue generators are limited to season passes, lift tickets, some food service, the ski school, and interest.
10. Water and sewer problems are a major concern. Adequate facilities will require an expensive water collection and distribution system since the corporation does not own enough water rights to adequately fill this need.
11. The decision making process is very cumbersome and often self-defeating. The Board of Directors of the corporation is made up of nine elected members limited to two three-year terms. This has proven

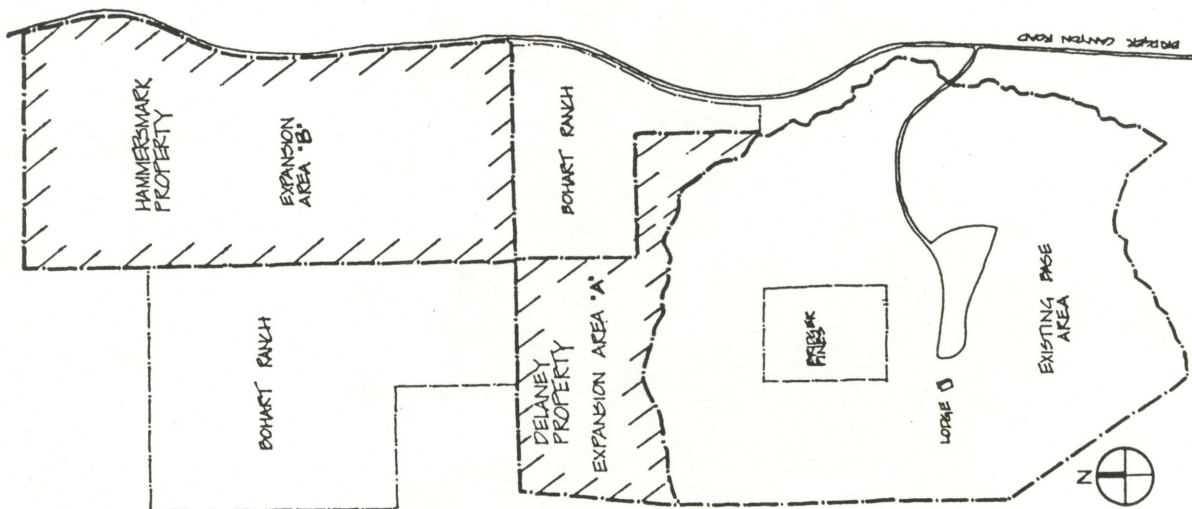
somewhat ineffective for long-range planning.

12. The non-profit attitude of the corporation makes it difficult to raise sufficient capital to make the necessary improvements. There is a general feeling that money should not be made from the sale of lift tickets, but people still want modern facilities. There is a strong sense of local ownership with a vocal minority who feel that out-of-state skiers should not be encouraged to ski Bridger Bowl. The non-profit concept is established in the by-laws but is impractical if the level of service and quality of experience is to be maintained.

Current Plans

A local developer has recently purchased several of the privately-owned parcels within the base area. For the first time, a majority of the land within the base area has been consolidated. This presents tremendous opportunities for Bridger Bowl. In fact, numbers 7, 8, and 10 on the above list may be partly taken care of by this consolidation.

This developer has proposed development of a year-round resort. He has requested that the base area be expanded to include additional land in two different parcels (see map). The Bridger Canyon Planning and Zoning Commission approved expansion of the base area to include area "A." They have tabled the request for area "B" pending further public hearings.



There is some very vocal opposition to area "B" for a couple of reasons.

1. The developer's plans show a golf course with 80 home sites--development many people feel is incompatible with the area.
2. The parcel is not connected to the base area and would require access over private land.

The developer's argument is that a golf course is necessary for attracting summer guests to the resort and the housing is needed to help pay for the rest of the development. This is a fairly common method of financing resorts.

It is interesting to note that present zoning allows a golf course on the property in question. However, without the additional density rights that being included in the base area would allow, the housing allowed on this parcel is of such low density that it makes the project much less feasible.

The developer has not asked for any additional density rights even though the land base would substantially be increased. The base area currently allows two density units per acre, or approximately 800 units. Even though the request would increase the area to 760 acres, no additional density rights are being requested so the original 800 units would be spread out on 760 acres for an average density of one unit per .95 acres.

The Project

It appears that something will have to change with the way Bridger Bowl currently operates if it is to survive into the next century. It must make itself more competitive with other ski areas in the region or risk losing its client base. We can see this base is already being lost when growth rates are compared.

In order to become more competitive, Bridger Bowl must increase the available activities and amenities. At a minimum, better and faster lifts, better and more beginner terrain, and overnight accommodations are essential.

While it can certainly be argued that bigger is not necessarily better, the economics of today's ski industry are dictating larger resorts. One of the big concerns with large-scale development at Bridger Bowl is the water and sewer requirements. In reality, the larger the development, the more economically feasible a real solution, to what is already a problem, becomes.

• A • DESTINATION • RESORT • FOR • BRIDGER • BOWL •

The economic nightmare of low mid-week usage must be addressed. This may be the most destructive element in Bridger Bowl's current operation. Mid-week usage must be increased. ^{main reason}

General problems such as parking and circulation also need to be dealt with to ensure the viability of the area. The limited profit center and lack of effective long-range planning must be addressed by introducing more stability to the operation in the base area, both in terms of a steady flow of customers and a private interest more capable of effectively achieving long-range goals. The non-profit nature of the ski area can be effective for the general operation but a profit base is necessary for the maintenance and upgrading needed for a modern ski facility. As noted earlier, substantial, long-term investment is needed. Investment such as this dictates that revenue be generated during more of the year than just the ski season. This in turn implies non-winter activities and attractions.

The consolidation of land in the base area presents a tremendous opportunity to address these problems. My project will take advantage of that opportunity by proposing a year-round destination resort for Bridger Bowl.

GOALS

GOALS

Background

Expansion of the Bridger Bowl Ski Area has been slow down through the years and almost any changes have always been met with a certain amount of opposition. The possibility of a major year-round destination resort being developed at Bridger Bowl has always been on the distant horizon. This kind of development is what the vocal minority fears the most.

Therefore, it came as no surprise that controversy erupted when a local developer announced his plans for just such a development. The intensity of emotions on both sides of the issue were rather startling. The threatened loss of what many people consider an essential element of Bozeman's identity is contrasted by the potential gain to the area's economy and recreational opportunities. The animosity towards the developer verbalized in private conversations overheard at some of the public hearings I attended was quite surprising. The political nature of architecture was made very real to me at those public hearings.

The "public" part of the process intrigued me. I began to wonder what the proper relationship between design and public opinion really is. This is a private development on private land for private profit. As long as the developer meets all the requirements in the zoning and building codes and follows any master plans that may be in effect for the area, does the public have a right to otherwise influence the development and its design? How does the architect balance his responsibility to the paying client with his responsibility to the public whose lives may be affected by the project?

While much has been written about the needs of the "users," I could find virtually nothing written about the residents of an area who may or may not be a "user" yet whose lives are affected in fundamental ways by a development. I can identify the "users" of the project as those people who will choose to come to Bridger Bowl for vacation, a conference, or just to ski for the day. However, how do I justify addressing the concerns of the person who lives a few miles down the canyon and is used to the convenience and atmosphere of a small, local ski area? That person's everyday existence will be affected in numerous ways, while the "user" I've identified will only be affected to the extent that they have a new place to spend their free time. The client/developer meanwhile is the one who's signing the checks.

I'm sure I don't have to justify my concern for the "locals'" point of view. This ski area is very important to a large number of people who live in this area. I would even venture to say that there are people who specifically choose Bozeman as their home because of Bridger Bowl and the unique experience it provides. By changing that experience, lives will be affected in fundamental ways. These concerns are valid and should be addressed at some level in the design process. This not only doesn't always happen, but in our profit-oriented society usually doesn't happen.

There are attempts to solicit public opinion in projects such as this. However, the public hearings held on this project up to this point have dealt mostly with expanding the defined base area of Bridger Bowl so that the higher density rights that exist for the base area can be utilized on a particular piece of property. Those who oppose any expansion do so mainly out of a fear of losing the special local flavor of Bridger Bowl. They fear more development will mean long lift lines and high lift prices. Those who favor expansion see an opportunity for better facilities and a boost to the area's economy. There is a considerable number who are somewhere in the middle and oppose only portions of the development. Most notable is the opposition to the golf course and housing development, which many feel is inappropriate for the site. While these concerns are being expressed at the public hearings, this forum is really only equipped to deal with the issue of expansion of the land area of the base.

The concerns surrounding the development have not been given a forum so that they might be addressed in the design process. I believe that within the proper framework, these concerns can be identified. Once identified, they can be used to influence the development in order to minimize the undesirable impacts while maximizing the positive ones. A process such as this would almost certainly make the development better and maybe even good in the eyes of those who now so stridently oppose the proposed changes.

This problem is not necessarily the fault of the developer. He is doing what he feels should be done in response to the opposition by addressing those issues he sees as the root of the problem. A very low-key approach is planned with the development to be as "lost in the landscape" as possible. He also has said that he will not seek to use all the development rights that he may be entitled to. While I can appreciate the attempt to address these concerns and the real effort being made to appease the opposition, I am not convinced that this is the issue.

The fault lies more within the general philosophy we have in this country regarding private development and architecture in general. There simply is no history or set of guidelines for us to follow when it comes to highly controversial projects. I'm not sure there is a "correct" way to deal with this problem.

One thing on the horizon is a relatively new concept of citizen design review committees. This is a committee of citizens of an area that is given the power to reject or approve of a design. Some have more power than others and some have no real power at all. They generally are limited in scope and may only be concerned with a particular neighborhood or an even smaller area. I believe that this is a step in the right direction. In fact, there is a design review process that must be completed for any development at Bridger Bowl. It is explained in the "Constraints" section. However, it is not a review by a committee and it is not public. Also, it is only concerned with individual structures and whether or not they will "fit in" with the general concept of what is appropriate.

However, this does not really address the issue of the controversy at Bridger Bowl. There needs to be a forum for expression of the concerns surrounding the type of development that should occur. Do we want another Big Sky? A Club Med? A dude ranch? Maybe no development at all is what's most appropriate. While the zoning and all the master plans certainly allow, and even encourage, resort development at Bridger Bowl, now that a specific proposal has been made, there needs to be some public input to help determine the most appropriate response.

Again, the actual "design" or "style" of the development is not the issue. It is much more fundamental than that. The threatened loss of what makes Bridger Bowl special, the appropriateness of a large development in such a relatively pristine area, and the "right" of the public, even if it is a relatively small minority who are opposed, to halt such a development, must be addressed.

General Goal

It is my intent to design a year-round destination resort facility appropriate for the Bridger Bowl Base Area.

Specific Goals

1. Identify the main concerns of those opposed and those in favor of the development and make the appropriate design decisions.
2. Design an environmentally sensitive facility that maximizes the unique natural features of the site.
3. Design a facility that functions well as a resort with Alpine skiing as its base.

4. Design a facility that is appropriate for the site, area, and region in terms of materials, scale, and character.
5. Design a facility that provides a true sense of retreat from everyday life for the guests.

HISTORY

HISTORY OF BRIDGER BOWL

Skiing began in the Bridger Bowl area in the late 1940s when the local ski area in Bear Canyon was abandoned due to insufficient snow. It was frequented by a few local skiers and was used by the ski team at Montana State University. In 1946, the State of Montana acquired 120 acres and constructed the first access road.

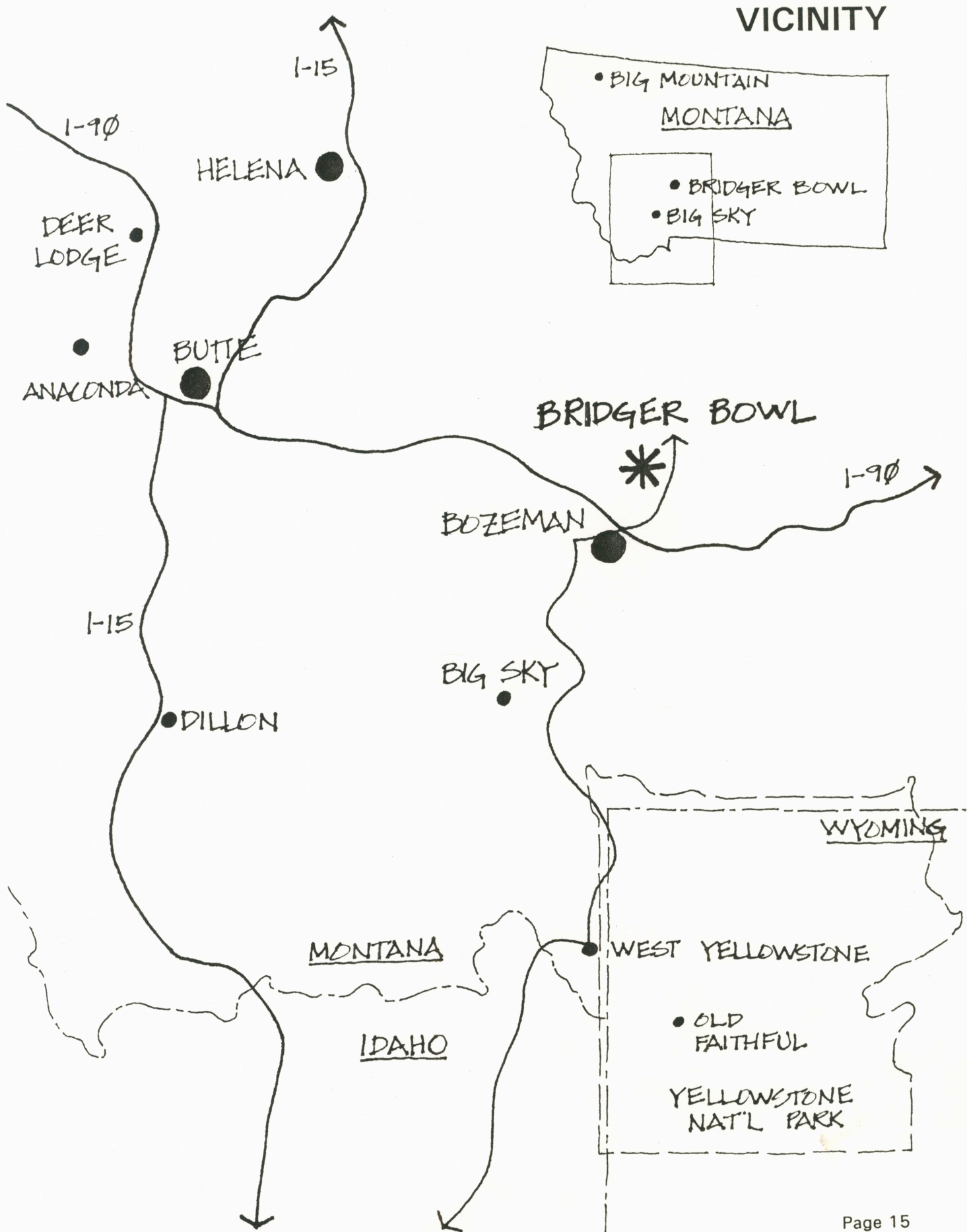
In 1952 local residents organized and built the first rope tow and base lodge. The tow was 2,600 feet long with 800 feet of vertical climb. An old Chevy on blocks provided the power to get skiers to the top of the hill. Bridger Bowl has grown to five chair lifts and one T-bar with approximately 600 acres of developed ski trails. The non-profit corporation was formed in 1954 to maintain and operate the ski area. In 1957, ticket prices were \$2 for adults and 50 cents for children.

The corporation built the Deer Park Chalet in 1959. Overcrowding occurred almost immediately. With the addition of the Bridger chair lift in 1965, the need for a new base lodge became critical. A new base lodge was built on the present site and was added on to in a rather haphazard manner as the need arose.

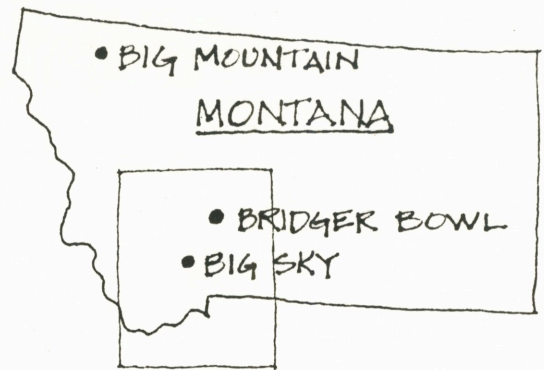
A desperately needed larger lodge was constructed in 1987. The rather juvenile atmosphere of the old lodge has been replaced with a more appropriate adult ambience. This, along with the additional space in the lodge, has resulted in a more satisfying skier experience in terms of comfort and available services. This in turn has resulted in a larger profit base for the operation. All vendors in the base area have experienced positive economic impacts from the expansion of the base lodge. This has proven a very successful addition to Bridger Bowl and shows that better facilities can make a difference in the area's viability.

Resort planning was informal until the late 1960s when tremendous growth in the number of skiers was seen. There have been at least 12 studies done since that time addressing the issue of expanding Bridger Bowl. The most recent study was done in 1986 and contains several different options for development of the ski area. The "Optimum Development Plan" calls for extensive resort development around the current base lodge with a potential remote base area to the north. Alternatives 1 - 3 involve lower levels of development around the current base area. Alternative 4 is the "Remote Base Option" and is very similar to plans announced in 1990 by a local developer (see maps, page 73), "Restrains" section). He is proposing a full-scale, year-round resort to be located in the north part of the base area, leaving the existing base area much as it is to serve day skiers. It is on this proposal that I am basing my project.

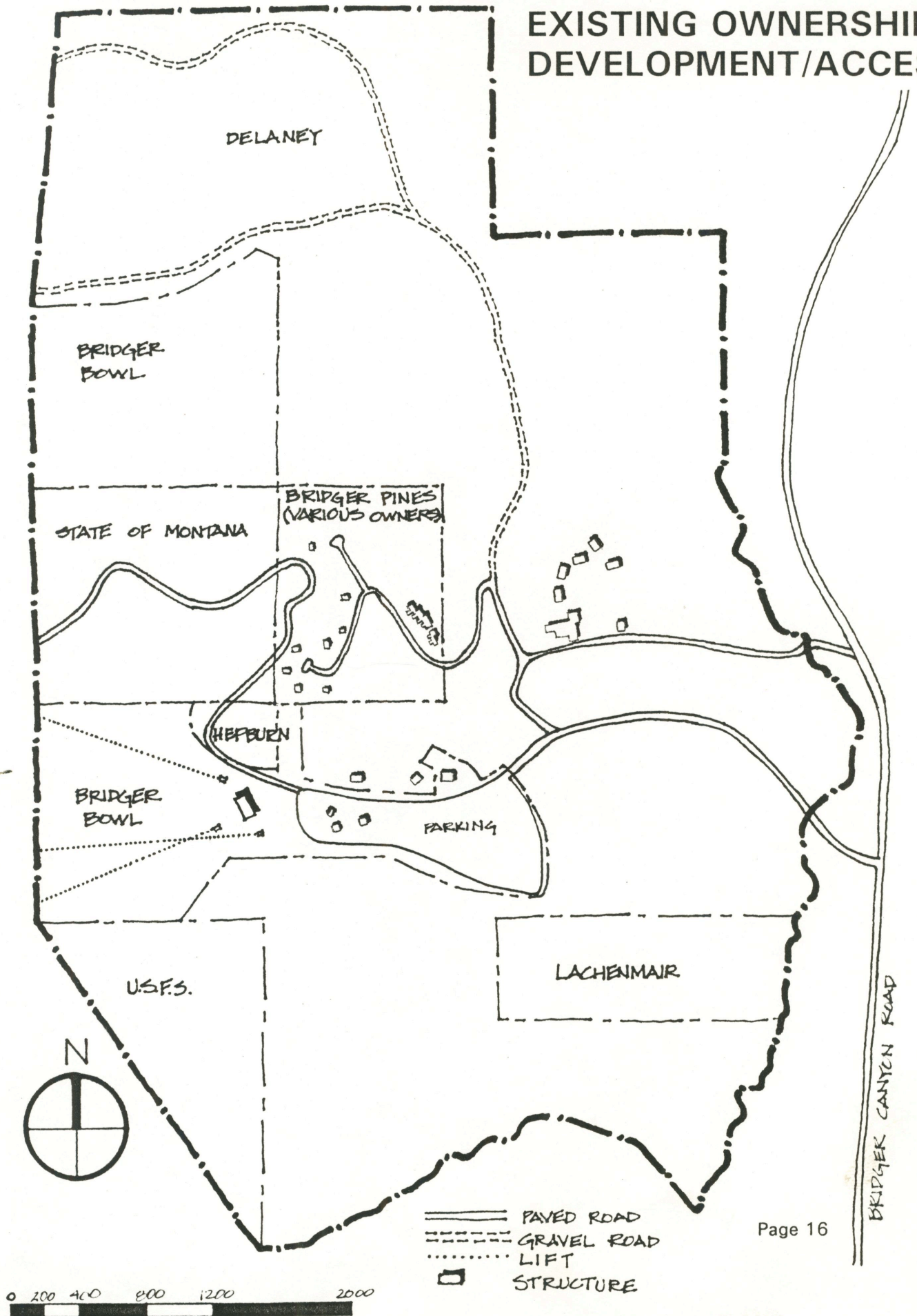
SITE & CLIMATE



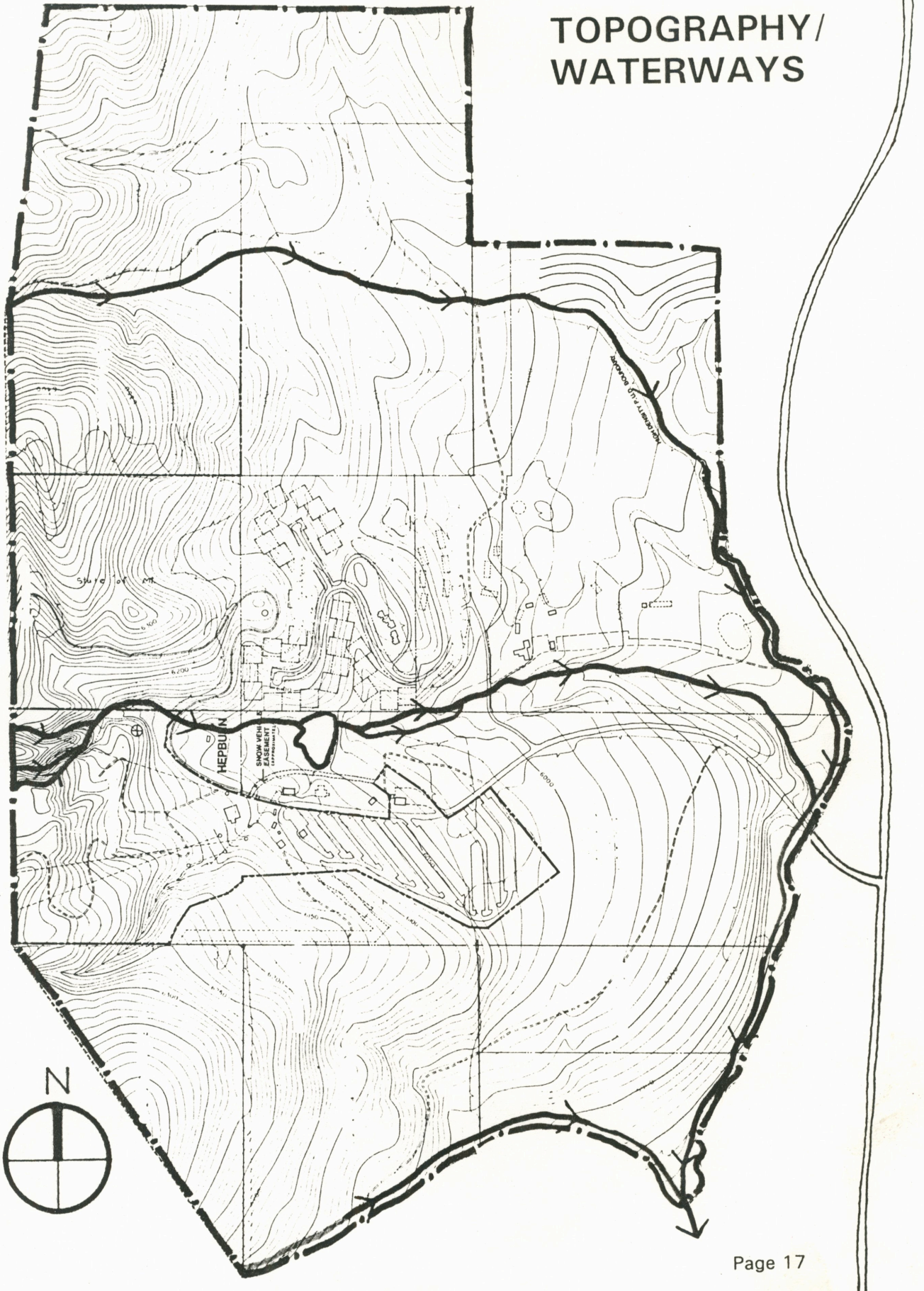
VICINITY



EXISTING OWNERSHIP/ DEVELOPMENT/ACCESS



TOPOGRAPHY/ WATERWAYS



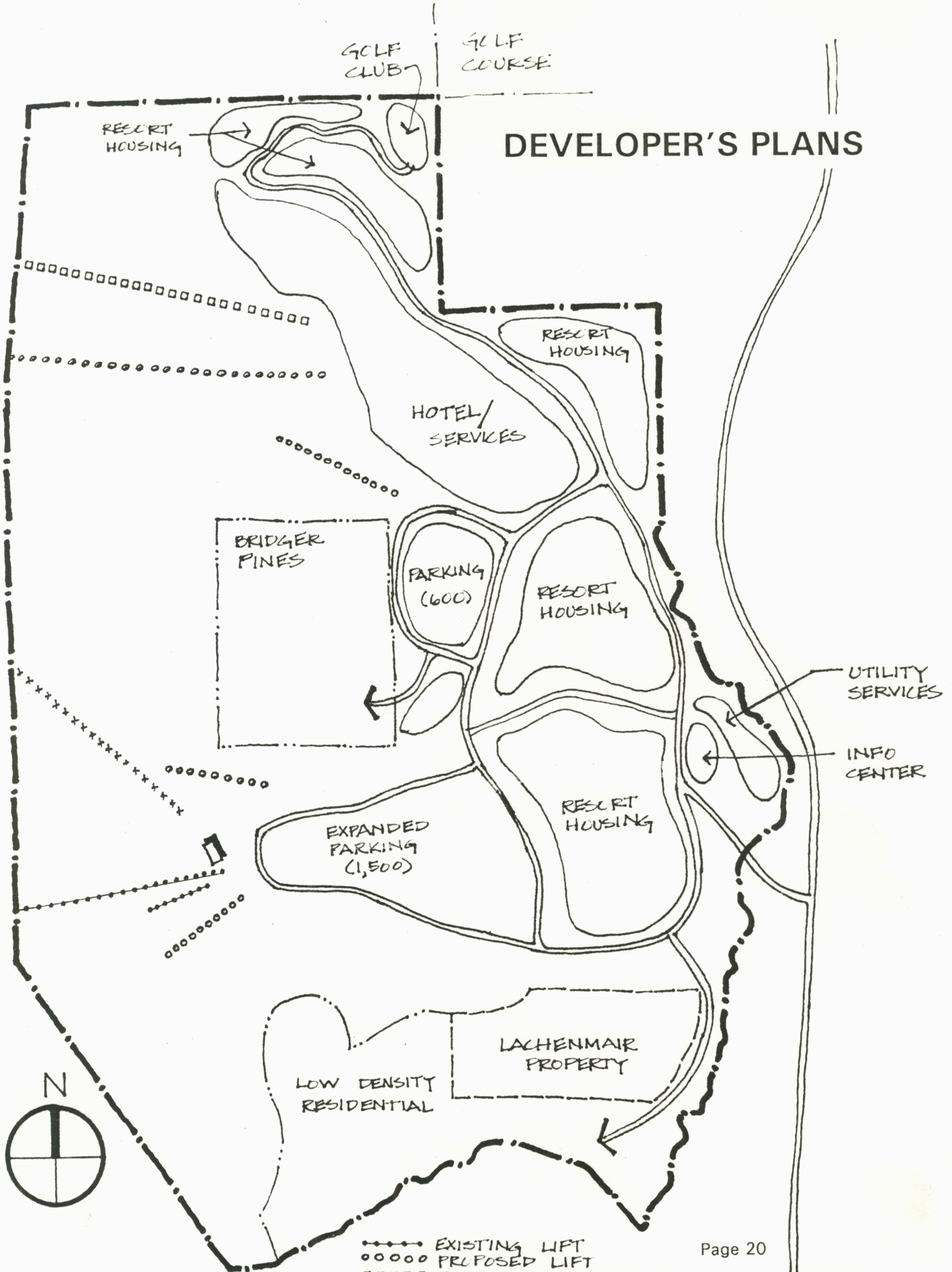
SOILS SUITABILITY FOR BUILDING



TREE COVER



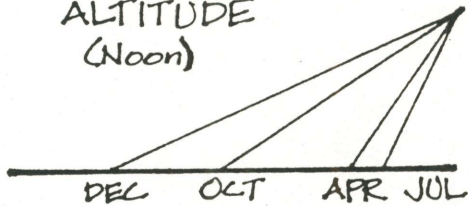
DEVELOPER'S PLANS



SOLAR ALTITUDE ANGLES

	<u>10 a.m.</u>	<u>Noon</u>	<u>3 p.m.</u>
APR.	47	55	40
JULY	54	64	45
OCT.	26	33	18
JAN.	19	24	12

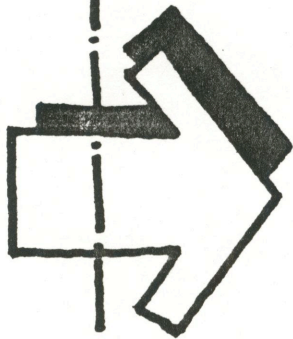
ALTITUDE
(Noon)



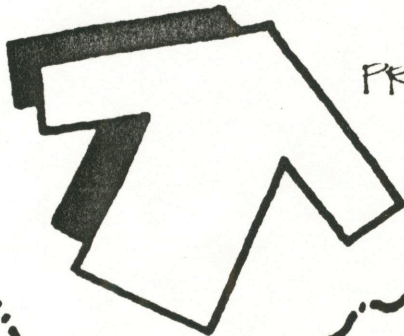
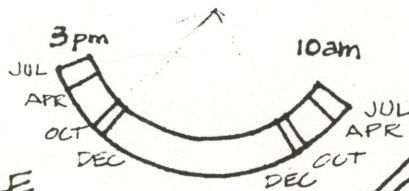
SOLAR/WIND

SOLAR AZIMUTH ANGLES

	<u>10 a.m.</u> <u>E of S</u>	<u>3 p.m.</u> <u>W of S</u>
APR.	46	62
JULY	53	70
OCT.	33	47
JAN.	29	43



UNPREDICTABLE
WIND
GUSTS



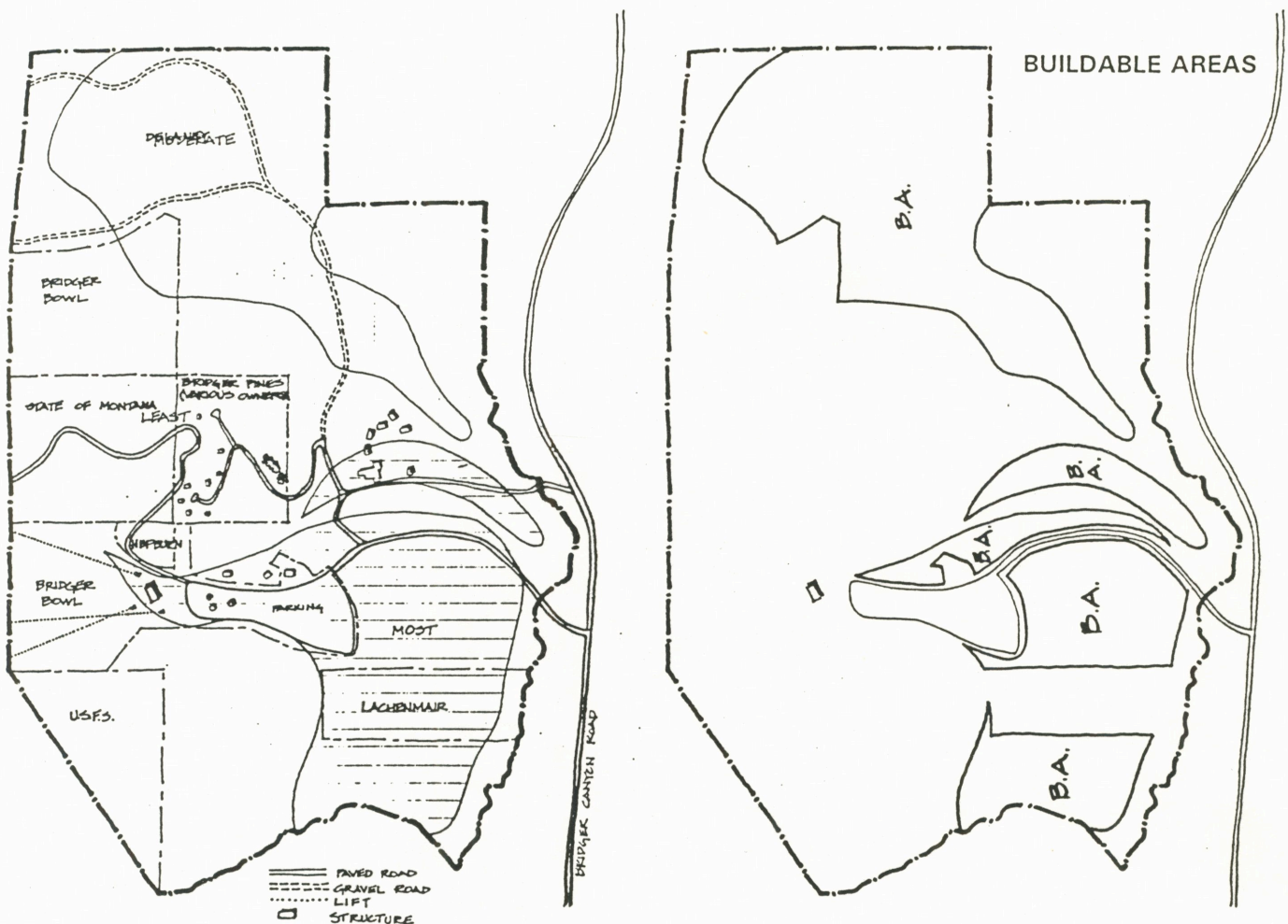
PREVAILING BASE
AREA WIND

BRIDGE CANYON ROAD

ANALYSIS OF SITE CONDITIONS

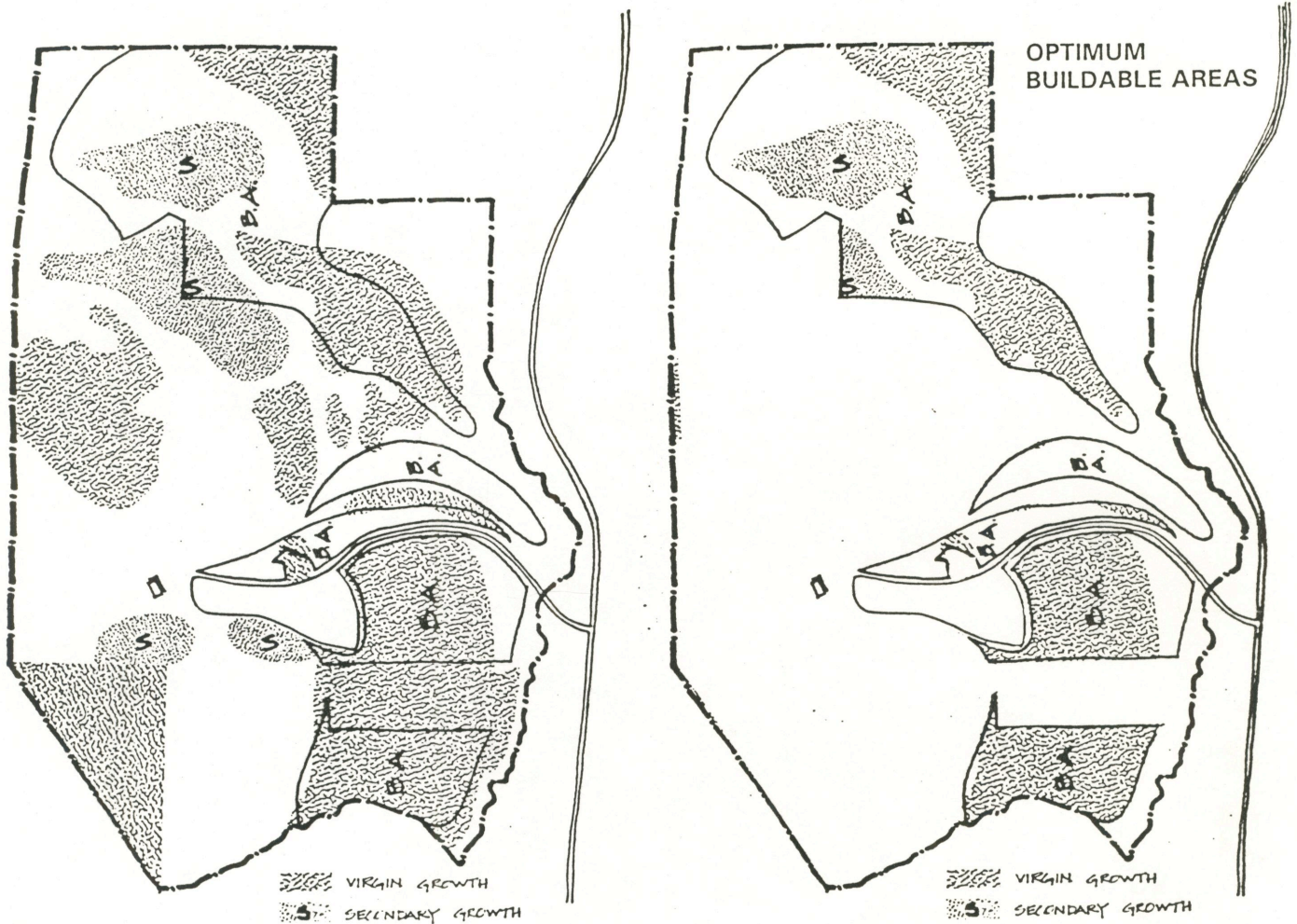
These pages contain overlays of the previous site analyses. These overlays will help determine a specific site for the facility that I am planning.

Soil (Building Suitability) and Property Ownership



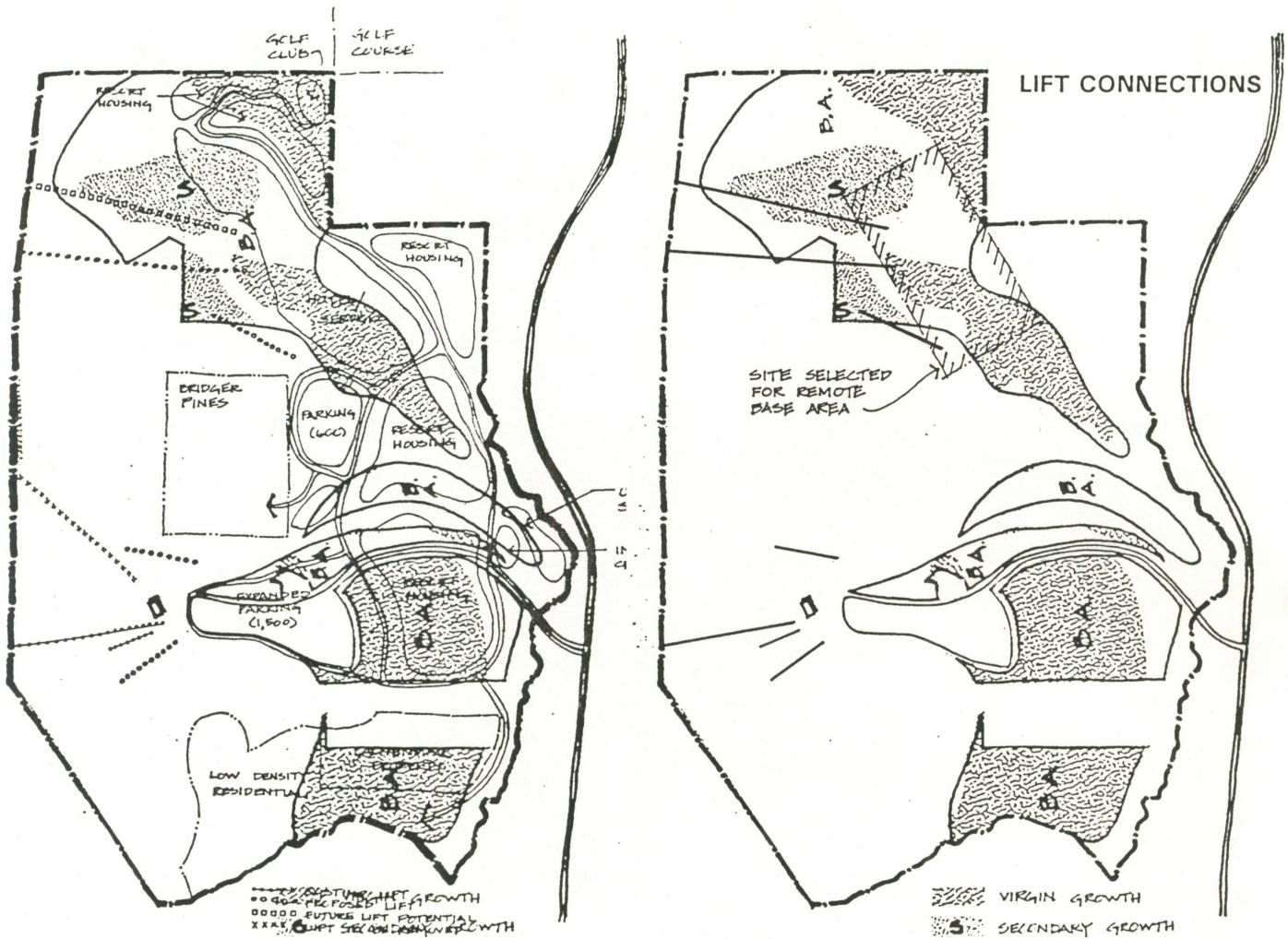
The resulting map on the right side of the page illustrates the results of this overlay in defining those areas that are suitable for building, taking into account soils and the land available due to ownership. This map is titled **Buildable Areas**.

Buildable Areas and Vegetation



This overlay results in the map entitled **Optimum Buildable Areas**. The darkly shaded area is buildable, but should be avoided if possible due to the presence of virgin timber. The area noted as containing secondary growth is more desirable as a building area than that containing virgin growth, but less desirable than that containing no tree cover. The goal should be to cut down as few trees as possible.

Optimum Buildable Areas and Master Plan



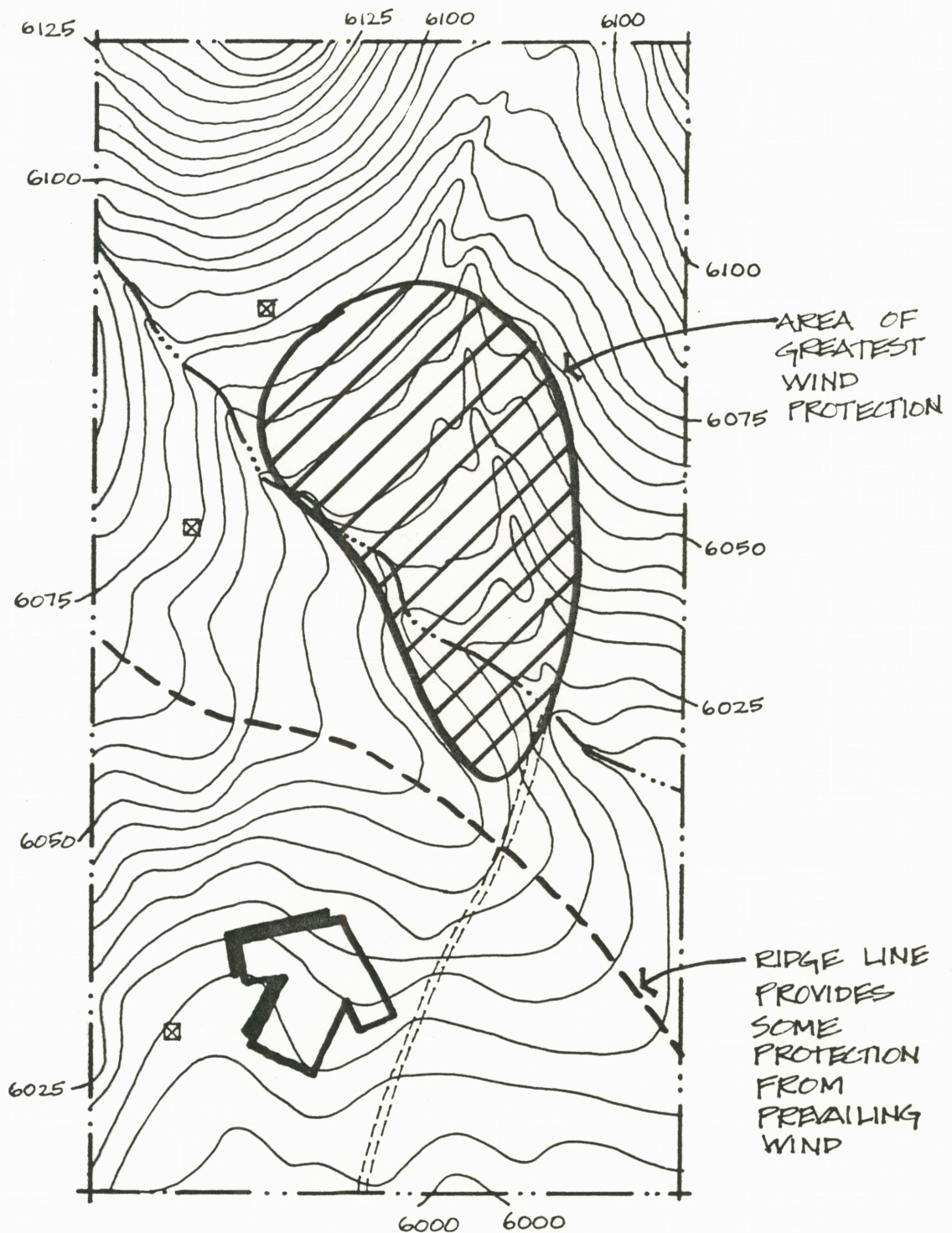
This overlay results in a map entitled **Lift Connections**. By identifying the proposed lift sites, I can further refine the final site selection. This map notes the final site selection. On the following pages I have further analyzed this final site in terms of topography, waterways, and wind and solar considerations.



—...— STREAM
 - - - - - EXISTING ROAD
 ☒ PROPOSED LIFT

SCALE: 1" = 250'

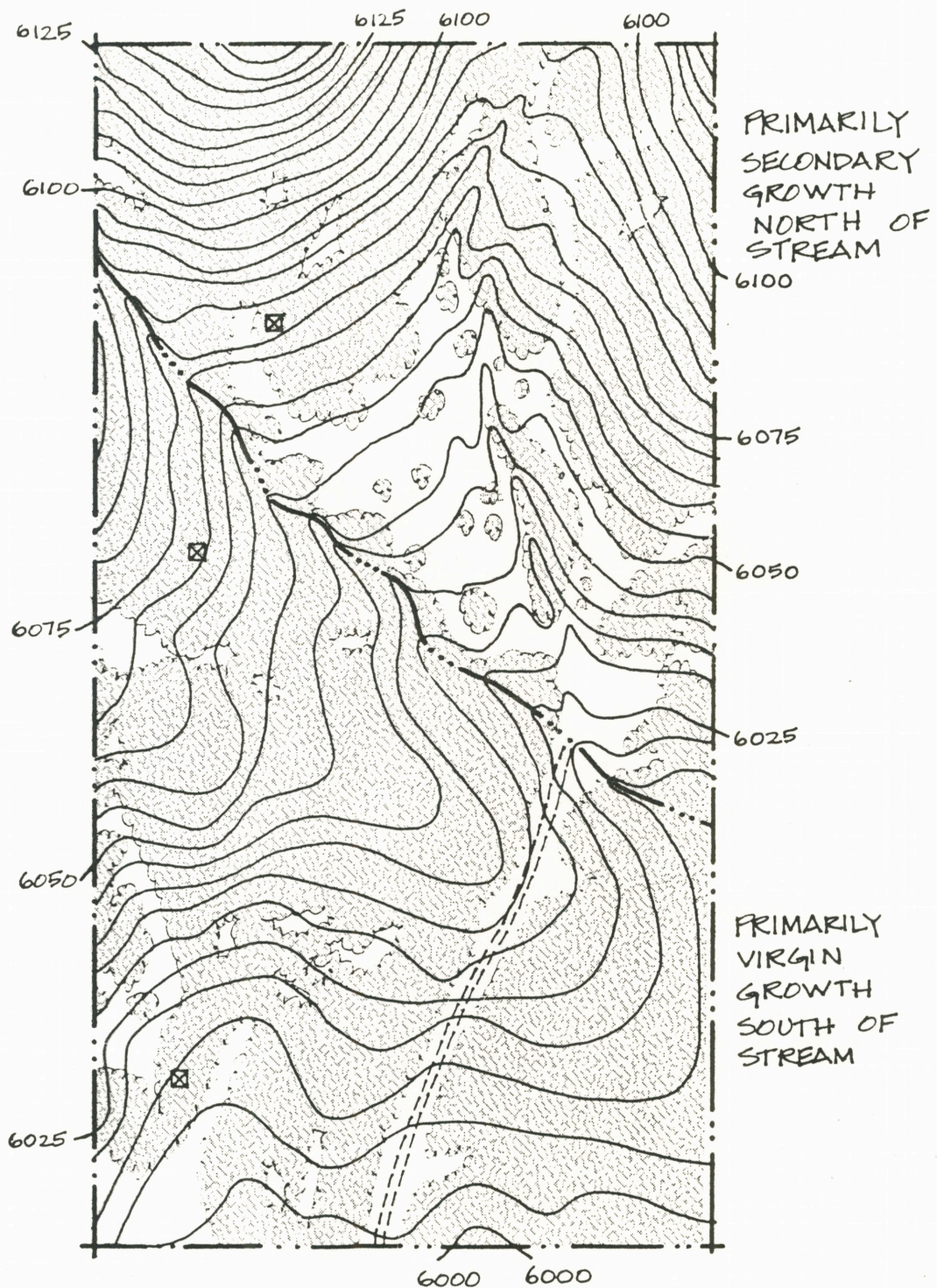
WIND



- - - - - STREAM
 - - - - - EXISTING ROAD
 ☒ PROPOSED LIFT

SCALE: 1" = 250'

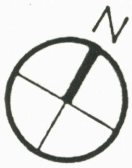
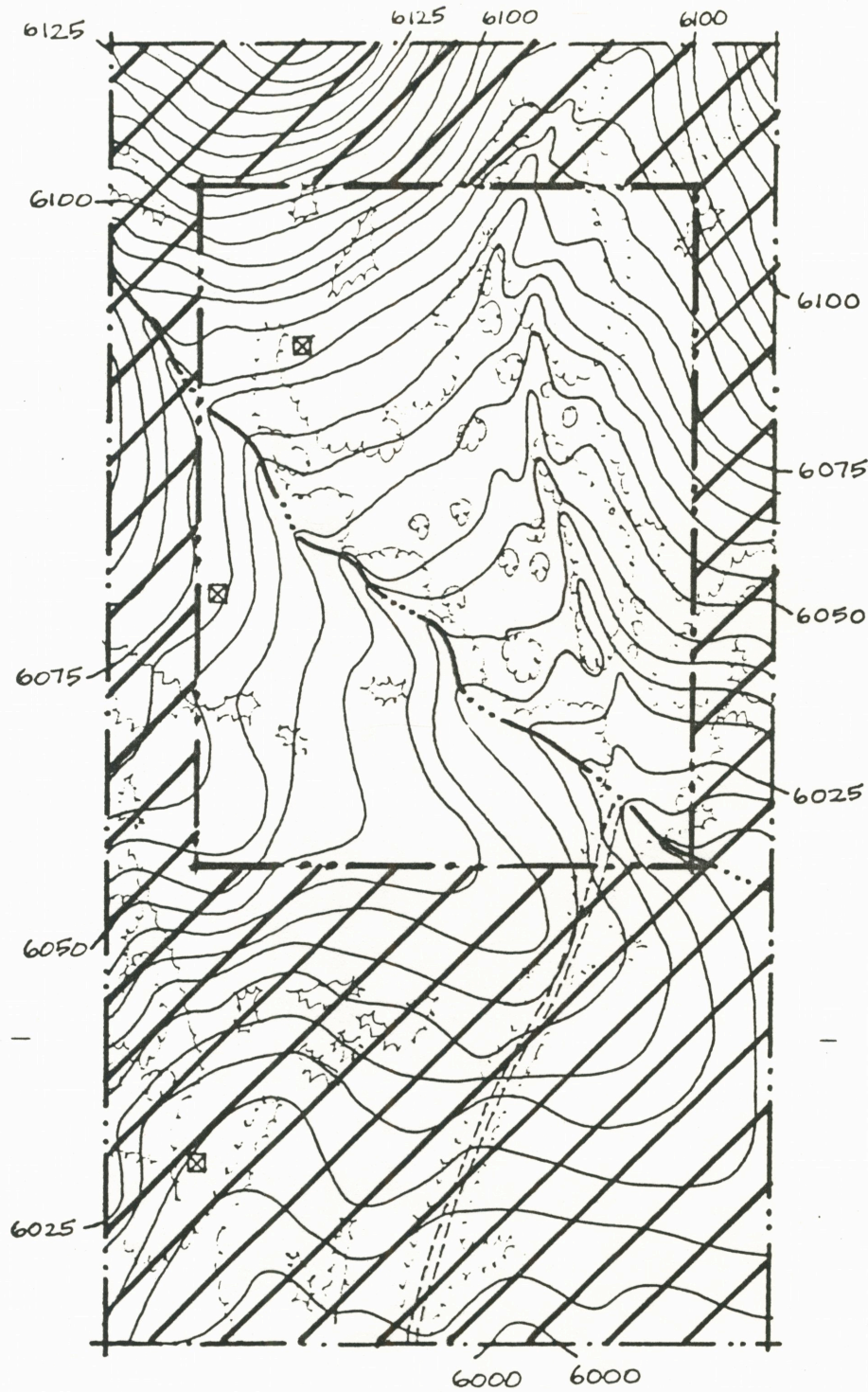
TREE COVER



- · · · — STREAM
- - - - - EXISTING ROAD
- ☒ PROPOSED LIFT

SCALE: 1" = 250'

BUILDING SITE SELECTION



— · · · — STREAM
— — — — — EXISTING ROAD
X PROPOSED LIFT

SCALE: 1" = 250'

VIEWS



Looking north

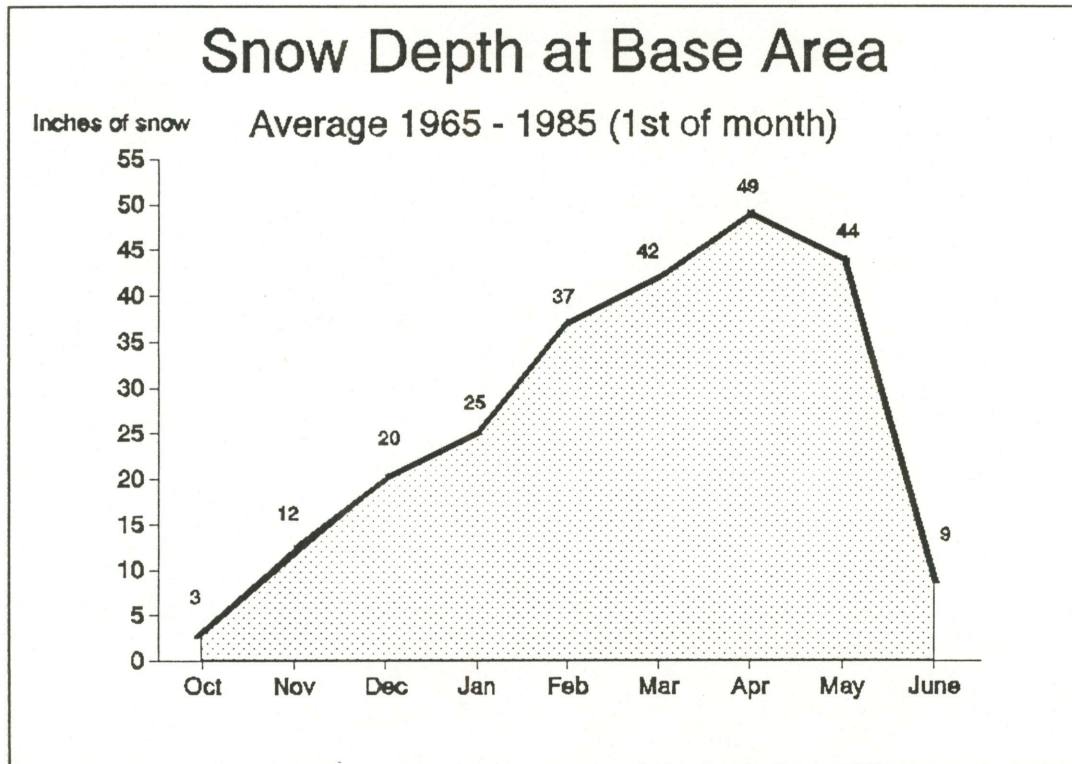


Looking east



Looking west

These are pictures taken from the west end of the building site.



Maynard Creek Station

Source: Soil Conservation Service

79" (29" moisture) - greatest depth recorded at base area 1965 - 1985 (May 1970)

Temperatures

Winter - Temperatures in the base area are obviously going to be very low during the winter. The worst problems experienced in relation to temperature will be when the wind blows. Therefore, if there is adequate protection from the wind, problems with cold temperatures will be minimized. Bright, sunny, relatively warm days are not uncommon at Bridger Bowl, providing for wonderful weather for winter recreation. Nighttime temperatures will be much lower than daytime.

Summer - Summer temperatures are very pleasant with a multitude of warm, not hot, sunny days, and cool, sometimes cold, evenings. Montana summer days are very long.

Design Implications

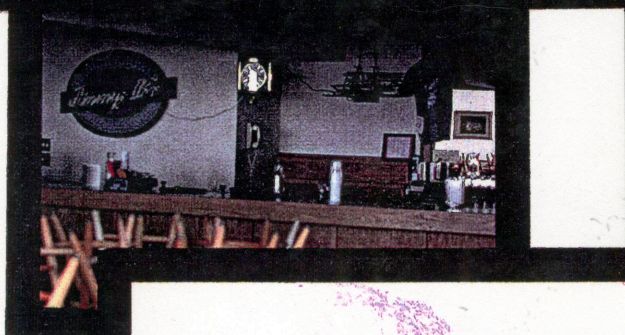
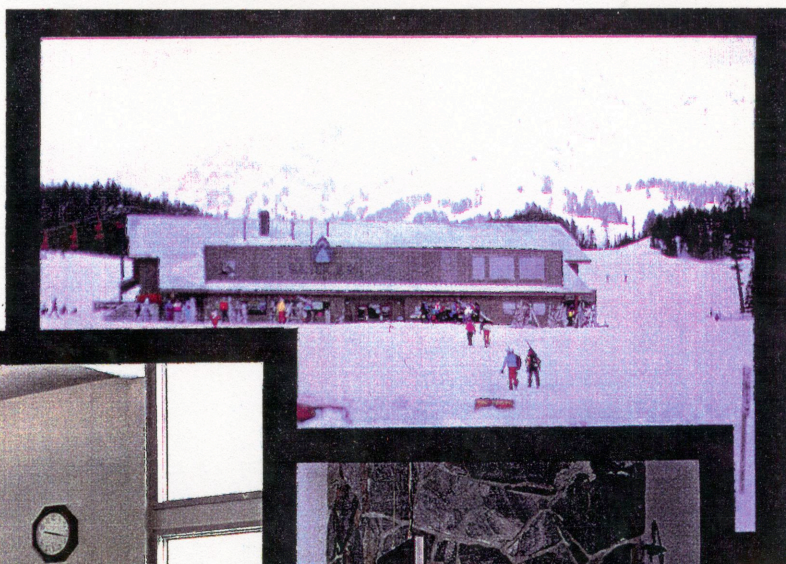
Some of the solar and wind functions of the site have been incorporated into the site analyses done previously. Additional analysis has resulted in the following design considerations.

1. Design for maximum snow depth average of 49".
2. Protect against south winds and unpredictable west wind gusts.
3. Provide abundance of opportunity to circulate outside while maintaining minimum level of entirely enclosed circulation to protect from infrequent yet very hostile weather.
4. Provide view of ski hill from lodge for those inside to watch skiers (both day and night).
5. Be cognizant of view of resort from ski hill.
6. Design should take full advantage of sun to provide for maximum penetration during the winter and some degree of protection during the summer.

ARCHITECTURAL CONTEXT

BRIDGER BOWL

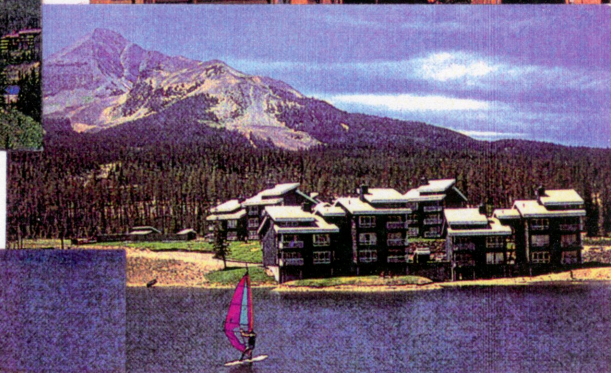
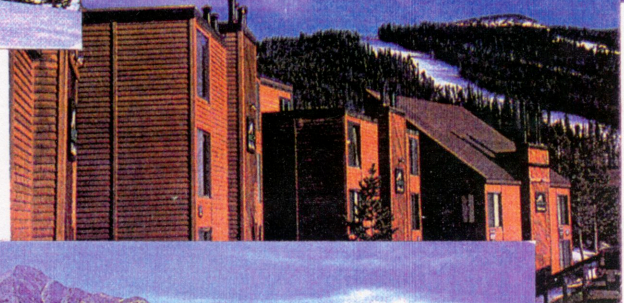
THE LODGE



ON SITE

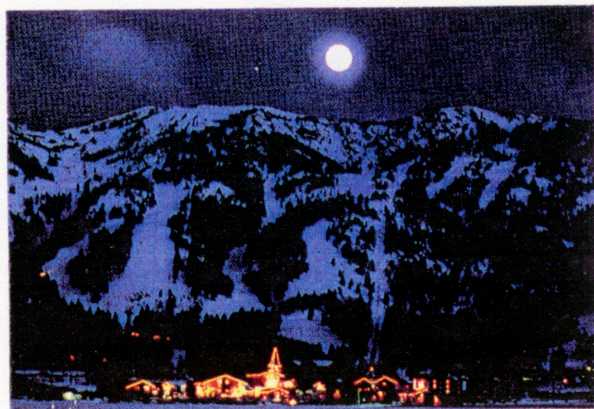
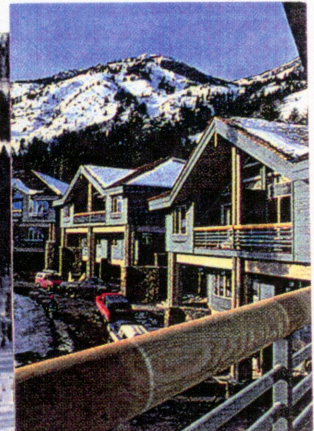
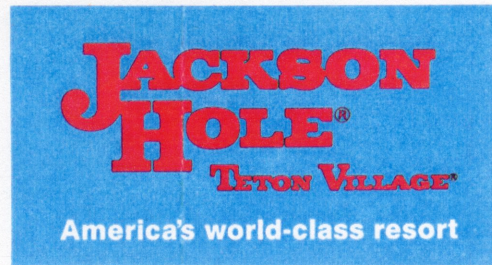


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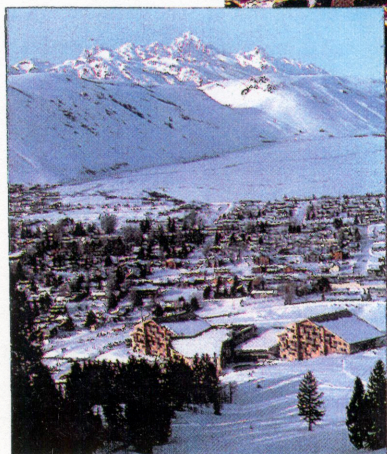
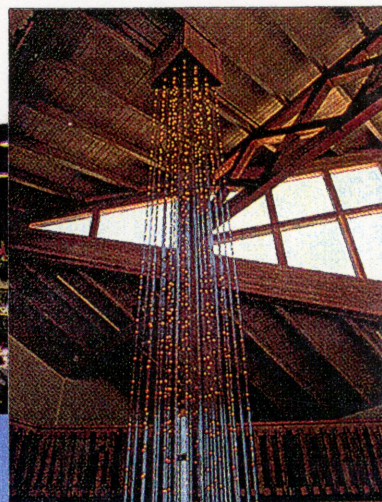


OTHER AREA RESORTS

• A • DESTINATION • RESORT • FOR • BRIDGER • BOWL •



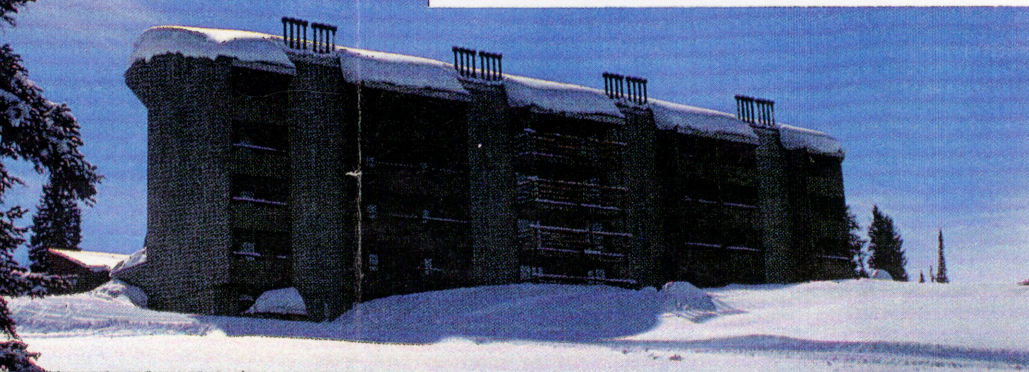
SNOW KING *resort*



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Grand Targhee

SKI & SUMMER RESORT



RESORTS THROUGHOUT THE WORLD



Wachusett Mountain Base Lodge
Princeton, Massachusetts



Sunriver Lodge
Bend, Oregon

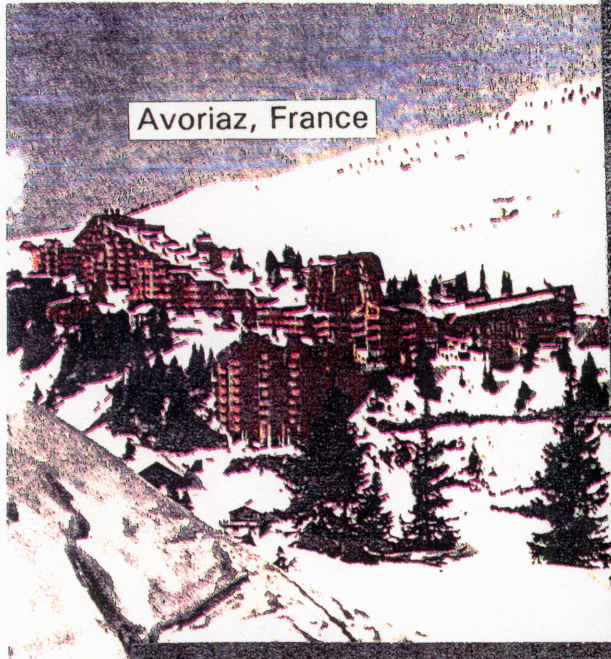


Cervinia, Italy



Flaine, France

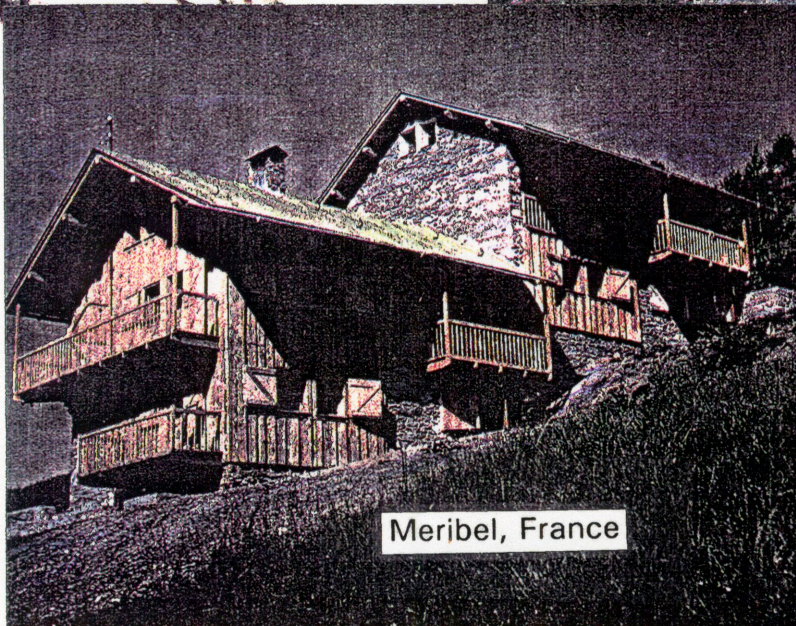
RESORTS THAT OPTIMIZE THEIR SITE



Avoriaz, France



Hotel Tahara'a Intercontinental
Tahiti



Meribel, France



El Conquistador Hotel
Punta Gorda, Puerto Rico

Design Implications

Materials - A wide range of materials can be found in this look at resort architecture. While wood and stone are the most common, concrete and even what appears to be adobe can be found in ski resort architecture. While this variety might be construed as a lack of helpful information, I prefer to look at it in terms of providing possibilities.

I have stated previously my desire to be sensitive to the site in terms of destroying as few trees as possible. In that light, I question the appropriateness of wood as exterior siding and as hidden structural material. However, I also recognize the warmth and familiarity that wood can provide an interior. Therefore, I propose to use wood mainly as an exposed interior finish material. I want to use stone, probably rough cut, on both the exterior and the interior, as a way of uniting them and tying the facility to the earth. In addition, I want to experiment with some as yet undetermined, newer, high-tech materials. I especially want to experiment with metals--maybe as roofing, structure, or finishes.

Form - Again, a range of possibilities exist. I am especially intrigued with the facilities that seem to have become one with the site. Allowing the contours to dictate layout and form appear especially successful and very applicable to the building site I have chosen. The nestling of a building into the hillside is also appropriate in dealing with the weather experienced at Bridger Bowl. The somewhat medieval character of the Italian resort is very interesting. I believe this type of clustering of forms in a linear fashion not only might work well with my site, but it also provides opportunities for the "mountain alpine skiing setting" requirement I address in the "Constraints" section.

The sloped roof is the most common, and I feel, most satisfying, roof form that I could use here. Virtually everything currently on the site has a sloped roof and it is undoubtedly what would be expected. However, a sloped roof can take many forms. Another very pleasing image is that of the lodge buried in snow, a roof almost reaching the ground, and walkways through "tunnels" of snow. The sense of shelter and warmth in this image is very appropriate for a facility such as this. Therefore, I am going to explore a "cold" roof--one that would retain snow cover and provide insulation.

While most of my form analysis deals with the winter season, I believe these guidelines will also serve the summer resort very well. The best mountain resorts remind one that this is a very different place in the winter and that the extreme weather found then is the one most appropriate to respond to.

USERS

POTENTIAL USERS

Winter

There will be two distinct groups of "users" of this facility--locals and non-locals. According to the 1986 Master Plan, 80% of the current skiers are from Montana with the majority from Bozeman. Half of those hold season passes. The other 20% are mostly from the upper Midwest (Illinois, North Dakota, and Minnesota) and central Canada (Alberta, Manitoba, and Saskatchewan). The number of out-of-state skiers is increasing.

The winter season will probably see about a 40/60 split between local skiers and destination skiers. This is based on doubling the capacity and assuming that virtually all of the increase will be in non-locals.

The primary winter activity will be skiing. All other winter activities should be seen as supplemental to skiing. Therefore, the skier must be accommodated first and foremost. This implies a rather young, healthy, active clientele. The facility must be accommodating to singles, couples, and families. This demonstrates a need for plenty of "meeting places," vigorous nightlife, various levels of dining, various levels of accommodations, and provisions for children (nurseries and various activities).

Circulation from the parking area to the hotel lodge and the base lodge is critical. The distance must be as short as possible or mechanized. This is necessary because of the equipment and clothing associated with the skier, coupled with snow on the ground, making walking a long distance difficult and resulting in a decline in the quality of the experience. The grade should also be as small as possible for the same reasons. It is important that the different facilities be easily recognizable and accessible from the parking area. The connection between the existing base lodge and the new remote base will be only by way of ski runs, the access road, or a pedestrian path that will be groomed for easy walking.

The destination skier's first stop will probably be the hotel while the day skier will be looking for lift ticket sales or the base lodge. Connections between parking and any of the facilities must recognize the pedestrian nature of the clientele. Parking that is clearly separated from the facilities yet has a clear, strong, safe pedestrian connection is a must. A small close-in parking area for guests checking into the hotel will also be necessary. After checking in and unloading luggage, a reserved parking spot in the main lot would be assigned. A pick-up point for mass transit to and from Bozeman and within the base area must also be accommodated.

Circulation for the skier is also very important. Connections between the base lodge, ticket sales, ski rentals, lockers, and lifts must all be carefully considered. Circulation within the base lodge needs to take into account the logical progression of both day and destination skiers. Ski rentals and sales must be immediately apparent and accessible from the main parking lot entrance as well as any other entrance that may connect to the hotel. The ski school should also be very accessible as this will be the first stop for first-time skiers. The next stop for any skier will be the locker area, then ticket sales, and finally the lift. Ticket sales may or may not be included within the base lodge. A location closer to the lift may be more appropriate.

It is important that all facilities within this part of the base area be easily accessible from each other as all traffic will be pedestrian. Main entrances must be clearly marked and all activities should be easily recognizable and accessible.

Summer

The vast majority of summer guests will be non-locals. There will be some use of the restaurants by locals and the nightlife may bring some people up from Bozeman. However, it is important to remember that the summer guest is there primarily to relax. There will be a much slower pace during the summer. The summer clientele of this resort is likely to be somewhat older than the winter user and may include significant numbers of retired and elderly people. Therefore, pedestrian connections must be as accessible as possible without sacrificing the resort experience.

There will not be one single activity dominating the resort as skiing does during the winter. In addition to the activities available within the base area (listed under the "Facilities Program" section), the facility may also serve as a base for activities in the surrounding region. These might include fishing southwest Montana's blue ribbon trout streams, golfing the various courses in the area, day trips to Yellowstone National Park, hiking, picnicking, and taking advantage of the shopping, galleries, and museums in Bozeman.

There will undoubtedly be a much slower pace during the summer. The overall resort experience will be the goal. This "resort experience" implies the availability of every conceivable creature comfort in a natural setting with a multitude of recreational opportunities. In addition to the facilities already necessary for the skier clientele, I see a need for such things as a sun deck, spa/sauna/health club, and room service.

Requirements for summer visitors are very similar to those for winter visitors in terms of parking connections and facility recognition. Therefore, it is necessary that

all the summer activities be very accessible, yet separate enough that each results in a different experience for the guest.

Conference

The guests attending a conference will likely be much more homogenous in terms of age than either the winter or summer crowd. Typical conference facilities, somewhat separated from the rest of the resort, must be provided. The "meeting places" mentioned earlier will also be important as will good dining and a vigorous nightlife.

Guest Room Considerations¹

The following information should be kept in mind when designing room sizes. A longer stay implies that more space may be desirable.

Couples - 1-7 nights - mid-price to upscale - King-size bed

Families - 1-5 nights - budget to mid-price - two double beds, adjoining rooms, room for roll-away

Conference - 2-4 nights - mid-price - King-size or two double beds, work area

General Considerations

There is one thing that all the "users" of this facility have in common--they are coming to Bridger Bowl to experience its unique environment. That environment consist of excelling skiing and other winter recreation in a beautiful mountain/canyon setting. During the summer, it will be a beautiful mountain resort with all the amenities. In all cases, the natural environment must be respected as the driving force behind the facility. Therefore, the design must integrate with, and enhance to the degree possible, that environment.

It is also necessary that the expectations of the guest be met. This is being called a "resort" and it is imperative that all the amenities and luxuries implied by that term are available. These are detailed in the facilities program. A good share of the guests will be relatively well travelled, and while they may enjoy "playing" hard outside during the day, they will expect a comfortable place to relax at night.

¹Rutes, Walter A. and Richard H. Penner. Hotel Planning & Design, Watson-Guptill Publications, New York, 1985, p. 169.

COMMUNITY

THE COMMUNITY'S ROLE

"Our analysis of communities is rarely done in a way that connects the parts of the whole. This approach limits the value of every part, and ultimately the success of the community."¹

There is a passage in the bylaws of Bridger Bowl, Inc., that reads ". . . first, to the residents of Gallatin County, second to the citizens of Montana, and third, to areas outside of Montana." This is in reference to the people that Bridger Bowl is intended to serve. This is also one of the arguments that is being used to oppose the development of a destination resort.

In the "Goals" section I expressed my desire to include a public opinion component in my project. I wanted to find out exactly what the root of the opposition was and what the community would support in terms of development.

I decided to do this through the use of a survey. I carefully prepared a list of proposed "enhancements" and asked the respondents to rate their opposition or support for each one. The survey itself is on the following pages.

The only specific group I made a real attempt to sample were people who live in Bridger Canyon. I obtained a list of 200 residents of the canyon and sent a survey to approximately every fourth person on the list, for a total of 50. I distributed another 125 to various other people I came in contact with.

Out of 175 surveys distributed, I received 69 responses representing the views of 94 people. The 55% response indicates a high level of interest. I only received a 40% response from Bridger Canyon residents.

Forty-seven respondents (50%) identified themselves as skiers. I believe the actual percentage was somewhat higher. This belief is due to comments some people made that implied they were skiers, yet they didn't identify themselves as such.

". . . the planner should be very cautious in using public opinion that has been typically gathered in a very fragmented way and not correlated or validated with other data."² I realize that this does not represent a true scientific sample. However, it does give me a basis for incorporating public opinion into the project. I will react to the results as though this is an accurate picture of community sentiment.

¹Jubenville, Alan. *Outdoor Recreation Planning*, W. B. Saunders Company, Philadelphia, 1976, p. 198.

²Ibid, p. 46.

Tom Milleson
911 Alpine Way
Bozeman, MT 59715
406-586-7852

On December 17, 1990, the Bridger Canyon Planning and Zoning Commission voted to expand the base area of the Bridger Bowl Ski Area to include property owned by Michael Delaney. It turned down his request to include the Hammersmark property in the base area expansion. These areas are noted on the map on the back. This expansion may result in as many as three additional lifts (with another two in the future) and several runs. The lifts anticipated capacity of the expanded ski area is 7,000 - 8,000 skiers per day.

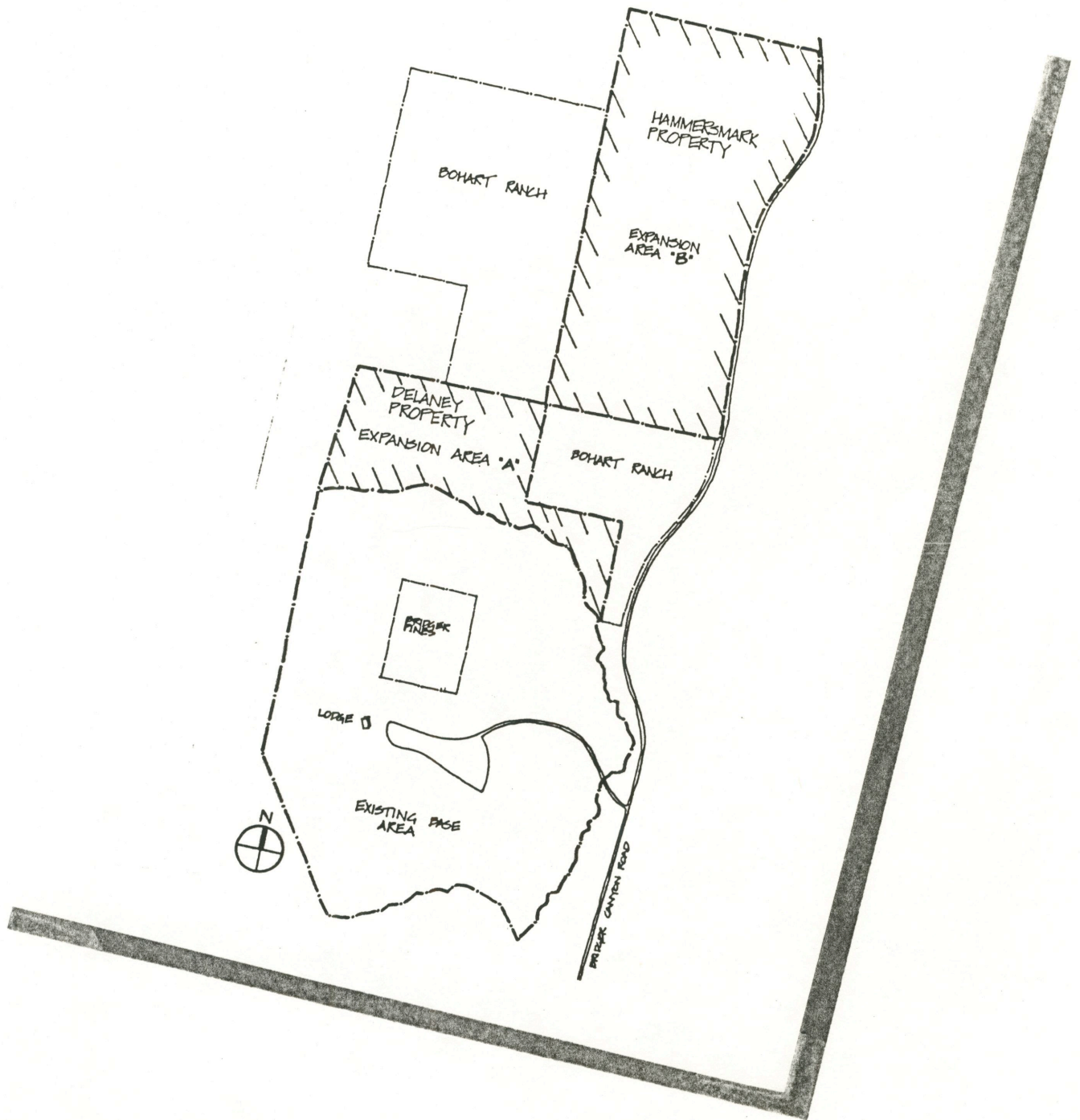
I am a fifth-year Architecture student at Montana State University. I have chosen this proposed expansion and development for my thesis project. I am studying public opinion and its proper relationship to design. I am hoping to be able to address those issues that seem to be of greatest concern to the greatest number of people.

Therefore, I am asking for your help in determining those concerns. While the results will have no impact on the actual development that will occur at Bridger Bowl, the results will be available to anyone who requests them.

Please fill out the survey and return in the postage-paid envelope by February 25, 1991. You may affix a stamp and save me the cost of postage or return the survey to the Architecture office in Cheever Hall on the MSU campus if that is convenient.

Please feel free to distribute copies of this survey to anyone who may be interested in responding. Thank you for your time.

Sincerely,
Tom Milleson
Tom Milleson



BRIDGER BOWL BASE EXPANSION

All responses are optional. Attach additional sheets if necessary.

If you desire a copy of the survey results, include a _____

Number of people _____

_____ Number of people whose views this survey represents _____

Number of people whose views this survey represents. Please explain if more than two.

Check those that apply to you:

☐ Live in Bridger Canyon (anyone who lives beyond the Story Hills Road). Distance from Bridger Bowl

☐ Member of Bridger Bowl Board of Directors

☐ Skier--lives in Bozeman area

☐ Ski Patrol

☐ Eagle Mount Ski Program Volunteer

☐ Lives in Bozeman

Check those that apply to you:

☐ Live in Bridgeport

- Those that apply to you:
- ☐ Live in Bridger Canyon (anyone who lives beyond the Bowl)
- ☐ Member of Bridger Bowl Board of Directors
- ☐ Skier--lives in Bozeman area
- ☐ Ski Patrol
- ☐ Eagle Mount Ski Program Volunteer
- ☐ Live in Bozeman area but not Bridger Canyon
- ☐ User of Bridger Bowl but live outside Bozeman area
- ☐ Live in Montana or out of state?
- ☐ Other, please explain _____
- Please rate your preference by circling:

Please rate your preference concerning the following elements specific to the areas of _____, please explain _____

by circling the appropriate number.

Base area expansion in terms of land area	Expansion Area
Subdivision/single lot	gpr
Golf course	

Base area expansion in terms of land area

Expansion Area A

<u>oppose</u>	1	2	3	4	<u>favor</u>

Expansion Area B

<u>oppose</u>					<u>favor</u>
1	2	3	4	5	

- area
- Expansion in terms of la
- Subdivision/single-family homes
- Golf course
- Small lodge/hotel (100 units or less)
- Large lodge/hotel (100 - 400 units)
- Hostel
- Condominiums
- Retail mall
- Gas station/general store
- Chapel
- Fire station
- Public restaurants/clubs
- Private restaurants/clubs
- New runs/lifts

[illegible]

• A • DESTINATION • RESORT • FOR • BRIDGER • BOWL •

The following are general questions about the expansion. Please rate your feelings by circling the appropriate number.

oppose favor
1 2 3 4 5 1 2 3 4 5

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- Idea of transforming Bridger Bowl into a destination resort (rather than a local day ski area)
- Development of a "destination resort" adjacent to but separate from Bridger Bowl
- Activities designed to expand Bridger Bowl's season to *all year* and make it more desirable as a destination resort. Specifically,
 - Nature trails, picnicking, hiking, rock climbing, nature classes
 - Golf (Hammersmark property)
 - Swimming pool, tennis courts, horseback riding
 - Tram/lift rides
 - Alpine slide
 - Eagle Mount summer program
 - Outfitting/hunting base
 - Other

- Expanded *winter* activities designed to increase use of Bridger Bowl and make it more desirable as a destination resort. Specifically,
 - Ice skating, snowshoeing, sledding, sleigh rides
 - Additional runs and associated lifts/trams
 - Pro ski races
 - Night skiing
 - Winter carnivals
 - Snowmobiling
 - Expanded Eagle Mount program
 - Other

- (Cross-country skiing has purposely been omitted from the list above because adequate facilities exist at the Bohart Ranch.)
- Restaurant at top of mountain (access from lift or tram)
- High density development (results in more open space as opposed to low density development which results in more disturbance to the total land area)
- Mid-rise development (4 - 10 stories)
- High-rise development (greater than 10 stories)
- Small conference/convention center (200 people or less)
- Mass transit (minivans, buses) within base area
- Mass transit (minivans, buses) between Bridger Bowl and Bozeman
- Use of the maximum development rights as allowed by the Master Plan (approximately 800 units for 3,000 overnight visitors with sufficient support services)?

The Bridger Bowl Base Area Plan (as amended 8/18/89) provides for overnight accommodations as detailed above in order to reduce the traffic volume on the Bridger Canyon Road and eliminate the need for a new highway. With this in mind, please rate your confidence in the current highway's ability to handle the increased traffic associated with a resort complex expanded as detailed above.

What effect would the proposed expansion have on Bozeman's economy?

How important is it that no development be visible from the highway?

hurt help
1 2 3 4 5 1 2 3 4 5

not very
1 2 3 4 5 1 2 3 4 5

• A • DESTINATION • RESORT • FOR • BRIDGER • BOWL •

Please describe what you would like to see happen at Bridger Bowl.

Please list concerns you have that this survey has not addressed.

Thank you for your time.

The Results

I have broken the results down into three components: Bozeman area residents, Bridger Canyon residents, and Overall. I did this because I felt it was important to recognize the difference in the potential for effects on the lifestyles of those who live in the canyon. They will undoubtedly experience more of the negative impacts of an expanded resort than will the average Bozeman resident. A good share of the most vocal opposition seems to be from canyon residents.

By the same token, I realize the results of my survey will be heavily weighted in favor of canyon residents. Therefore, the "Overall" results have been adjusted according to the following criteria.

Approximately 375 households in Bridger Canyon = app. 1,000 residents
Approximately 30,000 Bozeman area residents

$$\frac{1,000}{30,000} = 3\% \text{ of total area are Bridger Canyon residents}$$

Recognizing the disparate impact this will have on canyon residents, I am giving additional weight to their responses by counting them as 10% of overall (opposed to only 3% that their actual numbers would indicate).

A result above the line indicates an *average* level of support, indicated by the number of lines. Similarly, the degree of opposition is indicated below the line. Keep in mind that these are averages. A result above the line does not mean that there was no opposition. It only means that there was a greater level of support than opposition.

I have personally interpreted the results as follows:

3.5 and above - substantial support--should be pursued

3.4 - 3.1 - some support--pursue if it can be shown to be of benefit

3.0 - OK to pursue but must show substantial benefit

2.6 - 2.9 - some opposition--pursue only if essential to project

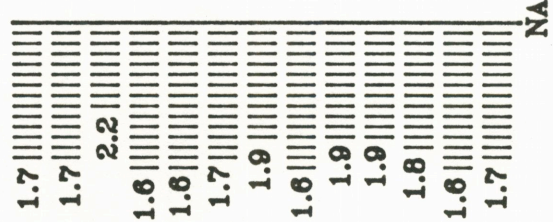
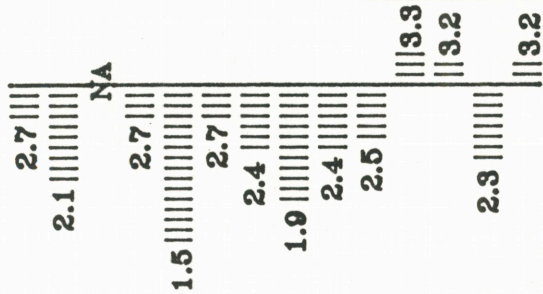
2.5 and below - substantial opposition--should not be pursued

I am basing my conclusions on the "Overall" result. The other results are shown as a point of interest. The difference between the two groups is rather startling. However, this may partially be explained by what I feel is the increased likelihood of those canyon residents opposed to development responding versus a lack of response from those who do not feel as strongly, yet whose opinions are just as valid and valuable.

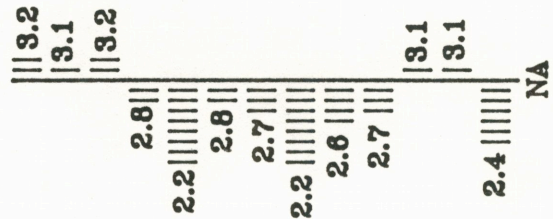
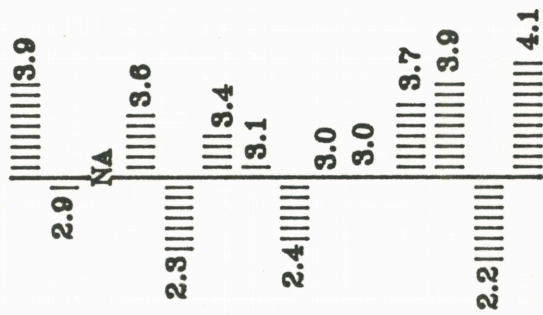
Expansion Area "A"

Expansion Area "B"

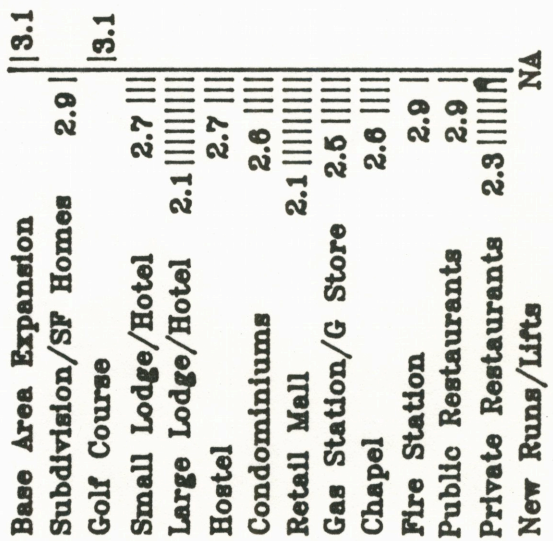
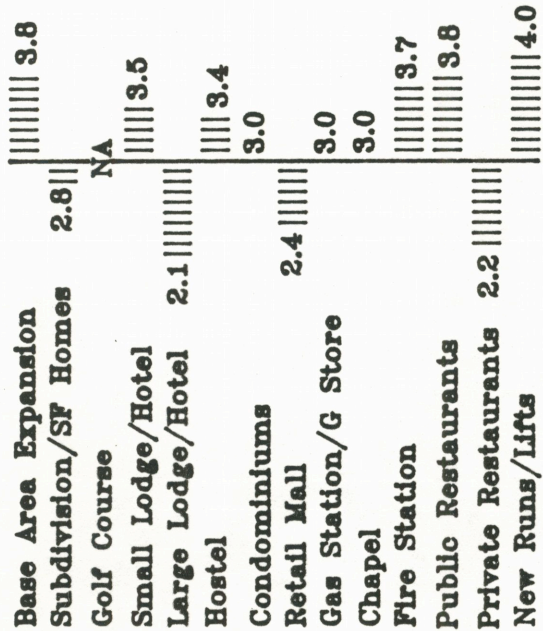
Bridger Canyon Residents



Bozeman Area Residents



Overall



I am not proposing any development on expansion area "B" simply because it is outside the scope of the project I am proposing. I included it in the survey because it has generated the majority of the vocal opposition. By allowing people to express that opposition to expansion onto that particular piece of land, I hoped to get a more reasoned response to the rest of the proposal. Therefore, my conclusions will deal only with results dealing with expansion area "A."

The results from this first page of the survey indicate a substantial level of support for the overall project.

Subdivision/Single-Family Homes - While this is already outside the limited scope of my project, I don't feel that it is essential. However, the economics of the overall development may prove me wrong.

Small Lodge/Hotel (100 units or less) - The substantial level of support for this indicates that it should be included in my project.

Large Lodge/Hotel (100 - 400 units) - I am very disappointed in the level of opposition to this item. I do feel a hotel of this size may be essential in the long run. I have decided to propose a phased development that will include a 150-room hotel in the first phase. (Justification for the extra 50 rooms can be found later in the comments on the conference center.) Public and support areas will be sized for a 250-room hotel. Further expansion phases up to 400 rooms may be explored.

Hostel - I believe this could prove very beneficial to the project by attracting skiers who might otherwise choose another area. This could also help to substantially reduce traffic on Bridger Canyon Road. During the summer it could prove valuable to the resort in attracting groups.

Condominiums - I believe that condominiums are essential to the economic viability of the area. They provide hard cash for the development and are an essential part of the overnight accommodations. Most of the condominiums would probably become part of the rental pool. Many people choose a "resort" vacation because of the unique experience renting a condominium provides. While this is an important part of the overall development, and there is insufficient opposition to exclude it, it is outside the scope of my project. I will note appropriate areas for this type of development on the master plan.

Retail Mall - I think there may have been some misunderstanding of what I meant by a retail mall. The opposition voiced certainly excludes a full-blown separate shopping center. However, some retail within the hotel is absolutely essential. It needs to be kept very low key and strictly limited to the uses outline in the zoning.

Gas Station/General Store - I believe this is a necessary support service for a resort of this size. Without it, the nearest gas and food would be 15 miles away in Bozeman. With insufficient opposition shown, I believe this should be included. Again, this is outside the scope of my project, but a location will be noted on the master plan.

Chapel - This might increase business for the restaurants and hotel because of weddings that would take place there. While I think it would be a very nice addition to the area, I'm not sure there is sufficient support to justify it. I will note an appropriate area on the master plan, realizing that actual construction should wait until more support or need is shown.

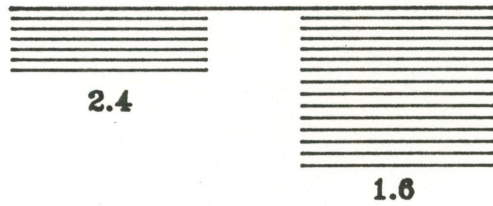
Fire Station - The widespread support expressed for this indicates that it should definitely be included. It will be noted on the master plan.

Public Restaurants/Clubs - Substantial support for this amenity indicates that it should be included. In addition to a cafeteria-style facility in the base lodge, I am proposing an upscale gourmet restaurant, an intimate bar/cafe, and a nightclub.

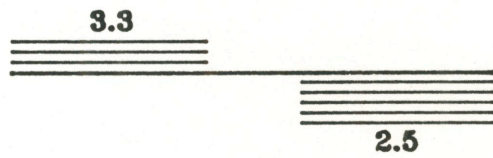
Private Restaurants/Clubs - As I suspected, a high level of opposition will exclude private facilities such as this.

New Runs/Lifts - The high level of support shown for new runs and lifts indirectly illustrates support for expansion in general.

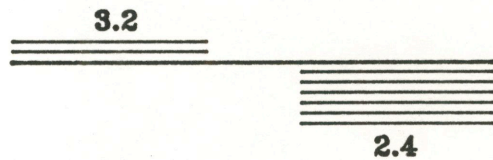
Bridger Canyon Residents



Bozeman Area Residents



Overall



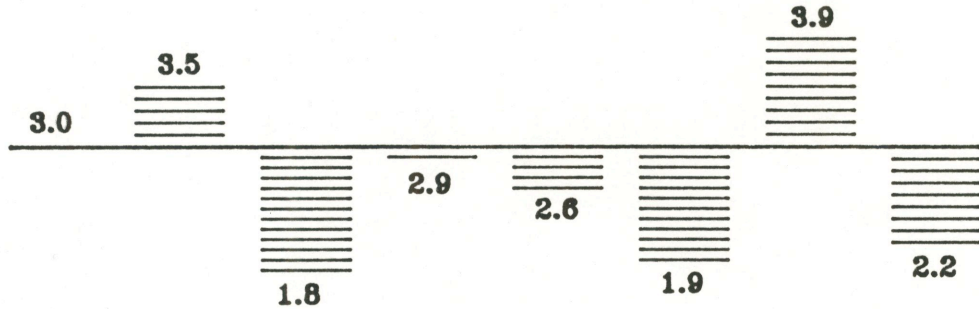
Idea of transforming Bridger
Bowl into a destination resort

Development of a "destination
resort" adjacent to but
separate from Bridger Bowl

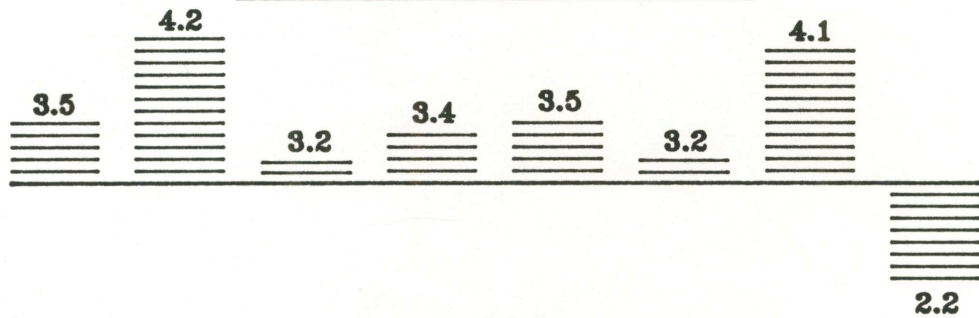
The response to these questions indicate support for a destination resort as long as it is a part of Bridger Bowl. I thought that given the option of a separate facility, some of the opposition might be lessened. However, it is obvious that this is not at all what people want.

I am surprised that support for a destination resort isn't greater. However, as detailed earlier, this is essential for an economically viable Bridger Bowl if it is to expand skier services, which people do seem to support.

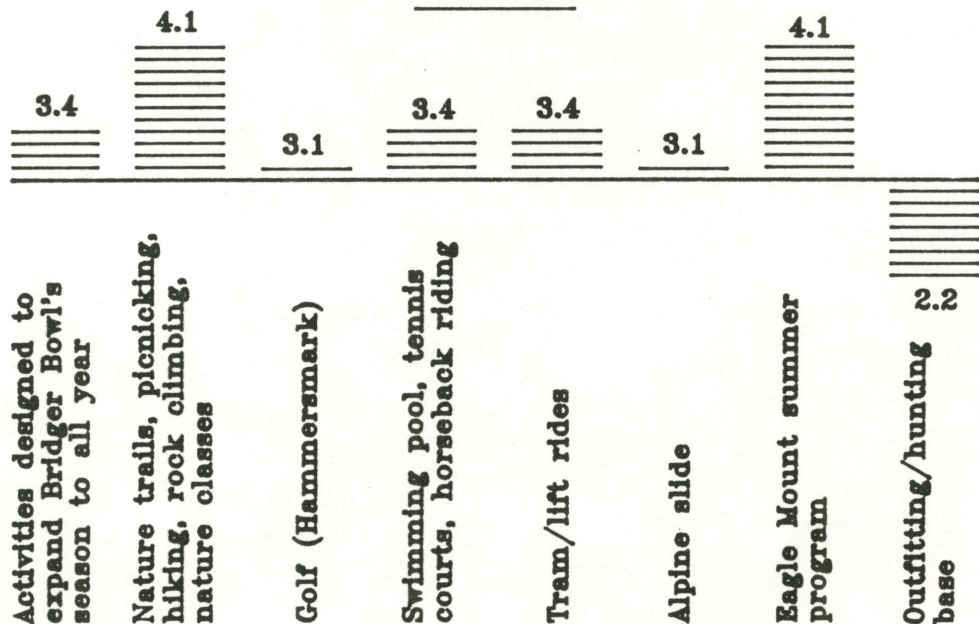
Bridger Canyon Residents



Bozeman Area Residents



Overall



From these results, I have concluded that the following activities should be part of the resort

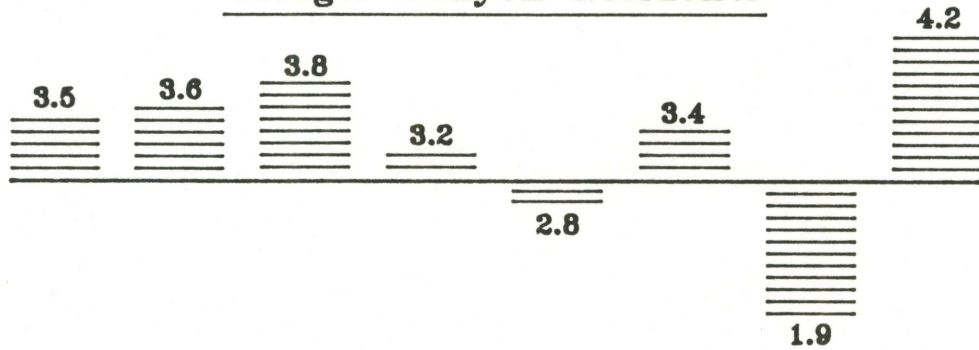
- nature trails, picnicking, hiking, rock climbing, nature classes
- swimming pool, tennis courts, horseback riding
- tram/lift rides
- alpine slide
- Eagle Mount summer program

Even though the alpine slide did not show a great deal of support, I feel it would be a real benefit to the summer operation. It might prove to be the biggest summer draw for local residents. I think there may have been some confusion with people thinking it referred to a water slide. This may be why it didn't show more support.

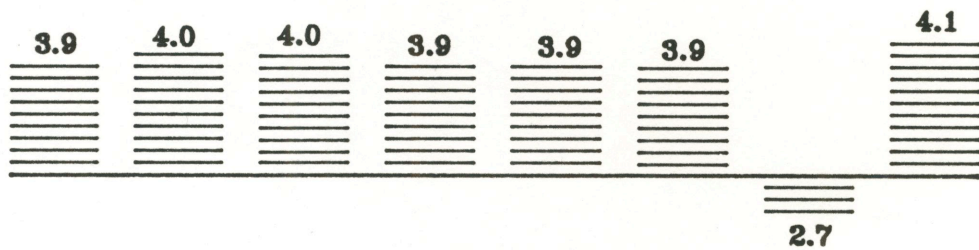
It is obvious there is not enough support to provide facilities for hunting and outfitting. However, hunters may still find the lodgings available at the resort attractive because of their location. This might provide some badly needed business during what would otherwise be between peak seasons.

The Eagle Mount program generated more support than anything else on the survey. I think that illustrates a responsibility of the developer to the program in ensuring that adequate facilities exist. However, I also believe that the best location for Eagle Mount is in the existing base area with an appropriate expansion of their current facilities. This provides a summer use for the existing base area, which will not be part of the summer facilities. The hostel might be put to good use during the summer by this program.

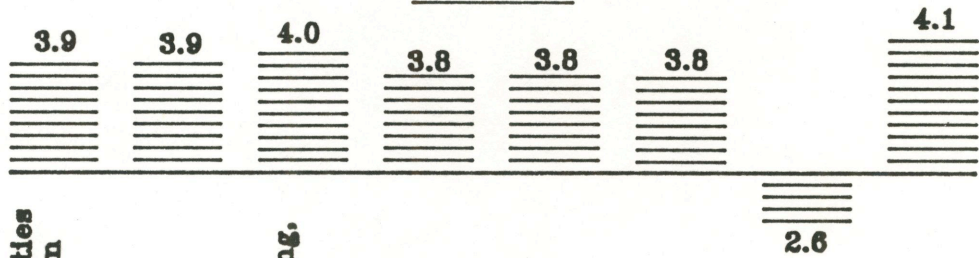
Bridger Canyon Residents



Bozeman Area Residents



Overall



Expanded winter activities
designed for destination
resort

Additional lifts and
associated lifts/trams

Ice skating, snowshoeing,
sledding, sleigh rides

Pro ski races

Night skiing

Winter carnivals

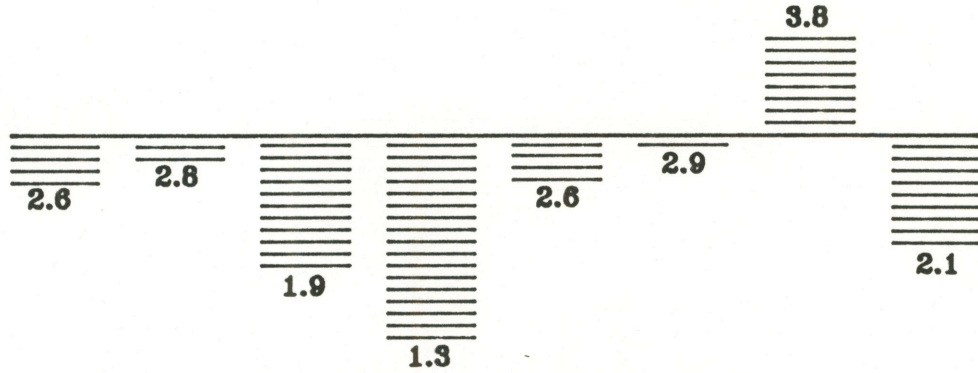
Snowmobiling

Expanded Eagle Mount
program

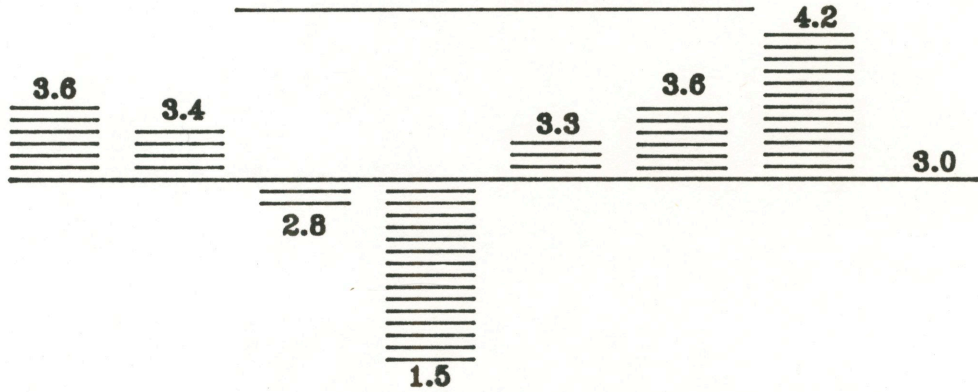
With the exception of snowmobiling, all expanded winter activities show substantial support. This would indicate a need for the following facilities:

- skating rink
- snowshoe trails
- sledding hill
- sleigh ride trails
- additional lifts/runs
- large public areas (for pro ski races and winter carnivals)

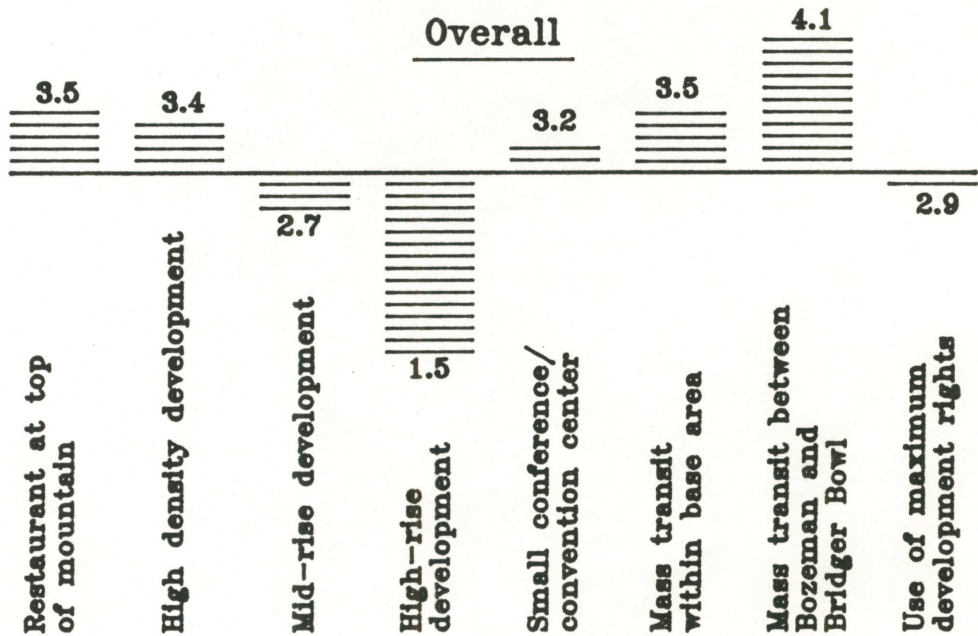
Bridger Canyon Residents



Bozeman Area Residents



Overall



Mountain Restaurant - The support for the restaurant on the mountain was higher than I expected. I feel it would be a valuable addition to both summer and winter activities and will be noted on the master plan.

High-Density Development - I was pleased to see the amount of support for high-density development. I have a feeling that if I hadn't defined it as I did, it would not have shown such support. I do feel that the more concentrated the development, the more area becomes available for recreation.

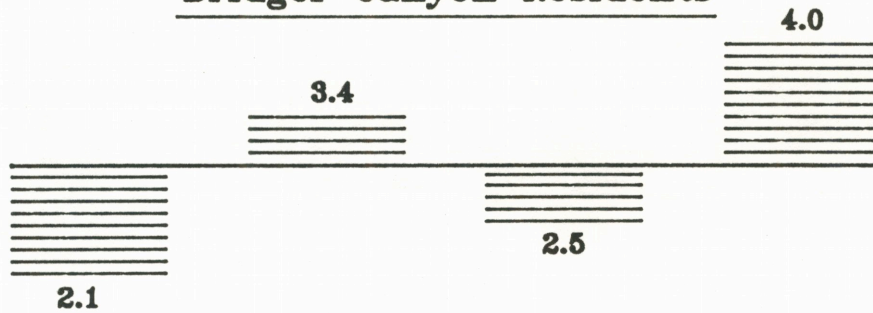
Height - The height limitation of 35 feet imposed by the zoning, coupled with the opposition to both mid- and high-rise development, dictates that this will be a low-rise facility. However, I do believe that some elements might be justified in exceeding the 35-foot limit.

Conference Center - I am including a small conference center because I feel it is essential to the economic viability of the facility. I am increasing the size of the hotel to 150 rooms to make the conference facilities viable. I don't believe the additional rooms will violate the lack of support shown for a large hotel.

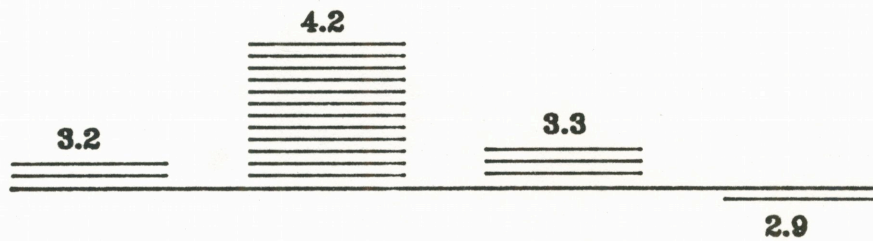
Mass Transit - Mass transit, both within the base area and to and from Bozeman, should be included due to the high level of support shown. Facilities for this must be included.

Development Rights - I don't believe there is sufficient support for use of the maximum development rights right now. However, I think ultimately there will be a need for all of them. This illustrates the need for a phased development.

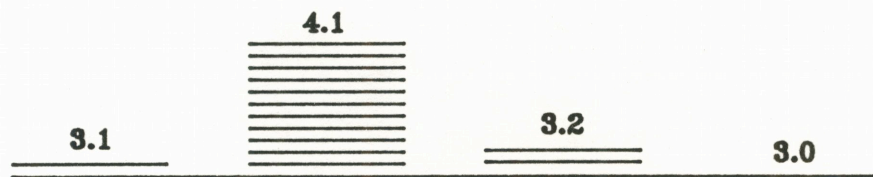
Bridger Canyon Residents



Bozeman Area Residents



Overall



Ability of highway to
handle additional
traffic

Effect on Bozeman's
economy

Effect on Bozeman's
lifestyle

How important is it that
no development be
visible from highway?

Bridger Canyon Road - The question of whether the road is capable of handling the additional traffic is one there seems to be little agreement on. This might be a good question to look at the Bridger Canyon responses more closely on. These people are probably in a much better position to judge the capabilities of the road. However, this just points out the increased need for more overnight accommodations.

Economy and Lifestyle - The generally optimistic view that people have towards this development is illustrated by the responses to these two questions. This attitude bodes well for the ultimate success of the area.

Visibility from Highway - I was hoping for a definitive response here and obviously didn't get it. The site is already hidden for the most part from the road by a ridge. The 35-foot height limit, coupled with substantial tree cover, will make it difficult to design anything that would be very intrusive on the viewshed from the road. I do feel it is important that something be visible, just to locate the resort and encourage exploration.

Miscellaneous Comments

There were four main areas of concern that seemed to be on people's minds.

1. Traffic on Bridger Canyon Road
2. Water and sewer problems
3. This particular developer's ability to carry through
4. The loss of the local flavor and fear of another Big Sky

RESTRAINTS

RESTRAINTS

Zoning

The Bridger Bowl Ski Area is under the jurisdiction of the Bridger Canyon Planning and Zoning Commission. The Bridger Canyon Zoning Ordinance is designed to achieve objectives outlined in the General Plan and Development Guide for Bridger Canyon.

The zoning document recognizes the unique aspects of the base area and allows many uses that are not allowed in other parts of the canyon. I have listed below the parts of the zoning ordinance that directly affect my proposal.

1. Total of 800 "density units" or bedrooms allowed in base area (hotel rooms, condominiums, homes, etc.) with a 50% bonus density for hotel/motel rooms.
2. A number of permitted and conditional uses. I have listed those that may be pertinent to my project.
 - bakeries
 - barber and beauty shops
 - dry cleaning and laundromats
 - fire and police stations; post office
 - health and exercise establishments
 - museums, libraries, and galleries
 - parking lots
 - photo studio
 - rental of non-motorized sports equipment
 - restaurants and cafes
 - retail sales
 - bars, cocktail lounges
 - gasoline service stations
 - gift and novelty shops
 - overnight accommodations
 - guest ranches
 - rental of sports equipment
 - picnic areas
 - ski lodges
 - ski lifts
 - ski activities centers

- stables and corrals
 - riding and hiking trails
 - instruction in recreational and sports skills
 - conference and meeting facilities
 - campgrounds
 - golf courses
 - driving ranges
 - ski tow facilities
 - pack stations
 - swimming pools
 - tennis courts
 - churches
3. Overnight accommodations are not permitted on the ground floor.
 4. Setbacks--25 feet from property lines and 50 feet from any stream. Per the county planning office, the streams in the area are so small, it is not specified if that is 50 feet from the centerline of the stream or the bank. This appears to be a rather arbitrary restriction designed to minimize effects of developments on the stream. I am going to ignore this restriction and show that the stream on my site can be integrated in a sensitive and appropriate manner.
 5. Buildings not to exceed 35 feet in height. Due to the terribly restrictive nature of this requirement, I intend to follow only the spirit, and not the letter, of this rule.
 6. All utilities are to be installed underground.
 7. All structures are subject to design review and must be harmonious with a "mountain alpine skiing setting." Per the county planning office, the design review process consists of submitting renderings of the exteriors of structures to the Zoning Enforcement Agent, who is designated as the county planner. This agent then makes their own determination as to whether or not the structure is "harmonious with a mountain alpine skiing setting." That decision can be appealed to the Zoning Commission, who would then hold a public hearing on the matter.
 8. Specific parking requirements for different uses are spelled out but I am going to assume the 600 spaces planned for in the developer's master plan are sufficient.

Base Area Plan

The Bridger Bowl Base Area Plan (amended 8/18/89) is also a document of the Bridger Canyon Zoning and Planning Commission. The plan sets forth three main goals which I have summarized.

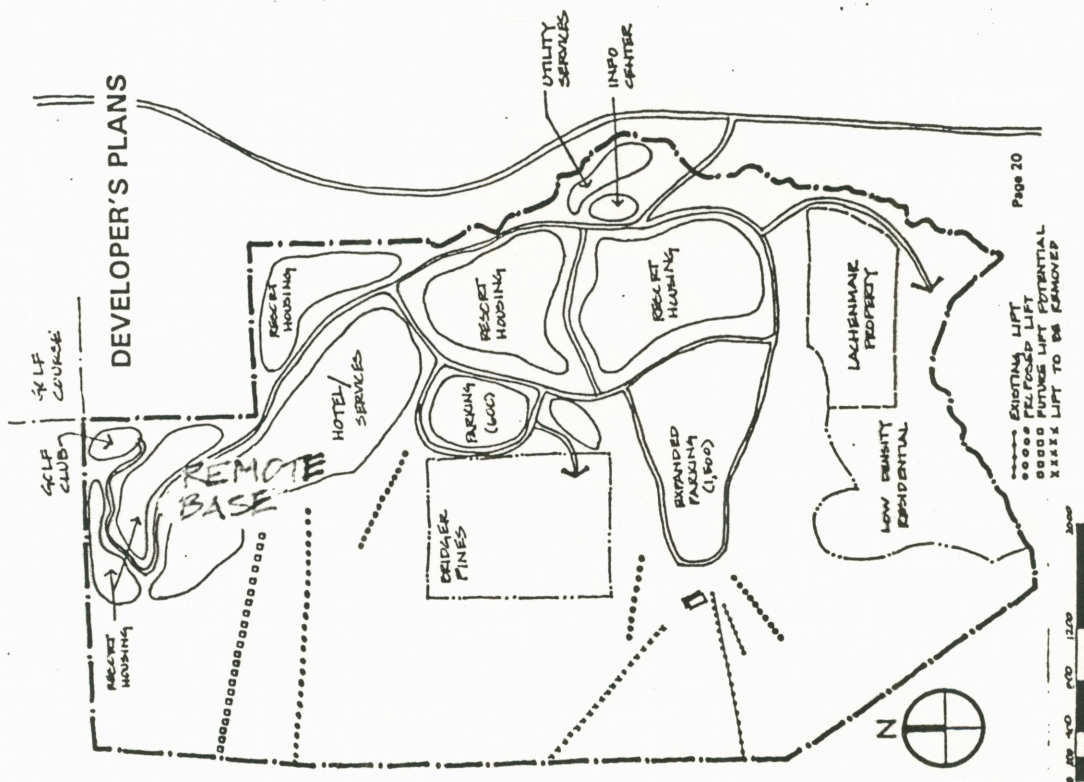
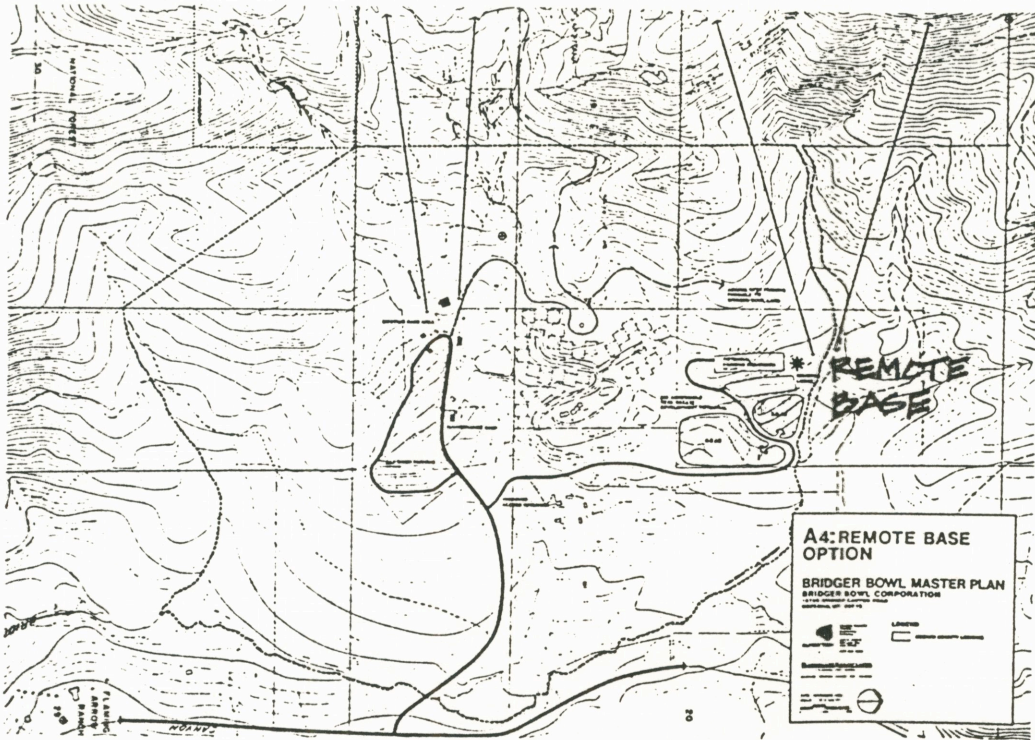
1. Encourage quality year-round recreational activities within the base area.
 - overnight accommodations
 - diversify recreation of area
 - balance recreational and residential travel
 - maintain natural setting
 - set limits on high-intensity recreational uses
2. Help control traffic within the limits of two-lane Bridger Canyon Road.
 - develop 1,500 parking spaces for Alpine day skiers
 - develop up to 800 units for accommodations
 - expand recreational facilities to ultimate capacity without exceeding capacity of Bridger Canyon Road
 - develop base area for overnight accommodations
 - provide employee housing
 - encourage development of services
 - provide bus parking
 - provide up to 200 spaces for Nordic skiers
3. Conserve the natural resources of the base area and Bridger Canyon in general.
 - preserve stream areas and wetlands
 - encourage central water and sewer system
 - minimize soil erosion
 - encourage cluster development
 - signage must be designed in accordance with General Plan
 - direct development to suitable areas
 - develop a transit system
 - encourage non-motorized recreation

Bridger Bowl Master Plan

This is a master plan for the ski area that was adopted in 1986 by the Bridger Bowl Board of Directors. It spells out a number of different options for development in the base area.

"Option A4: Remote Base Option" fits very well with the developer's plans. (See maps on the following page.) The Board of Directors has officially come out in favor of the proposal.

Therefore, it is safe to say that the basic concept of this development meets any conditions set forth in this Master Plan.

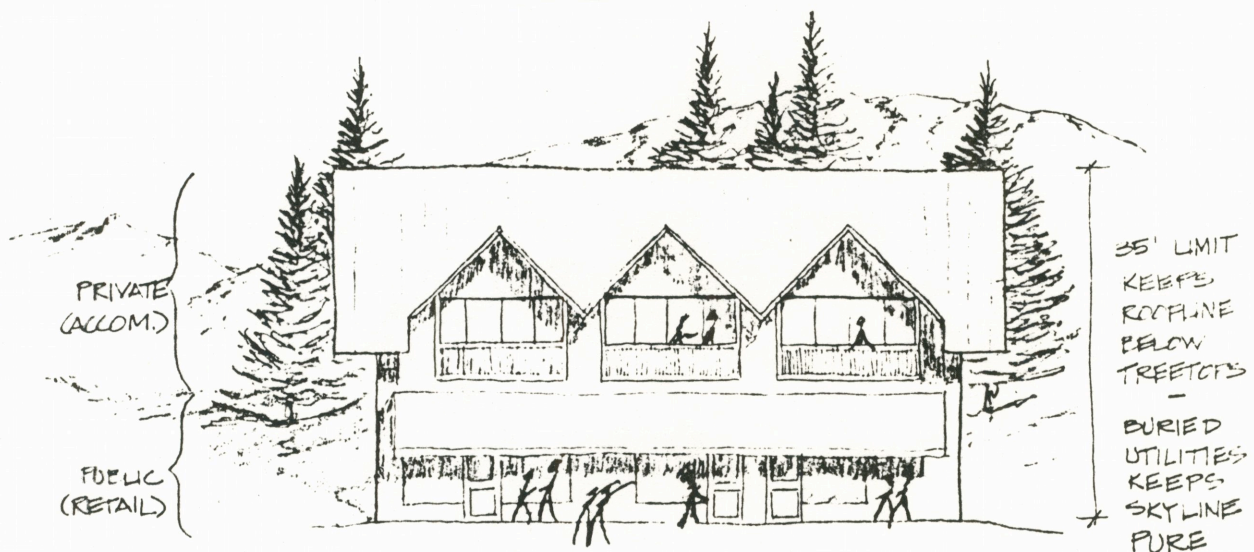


Design Implications

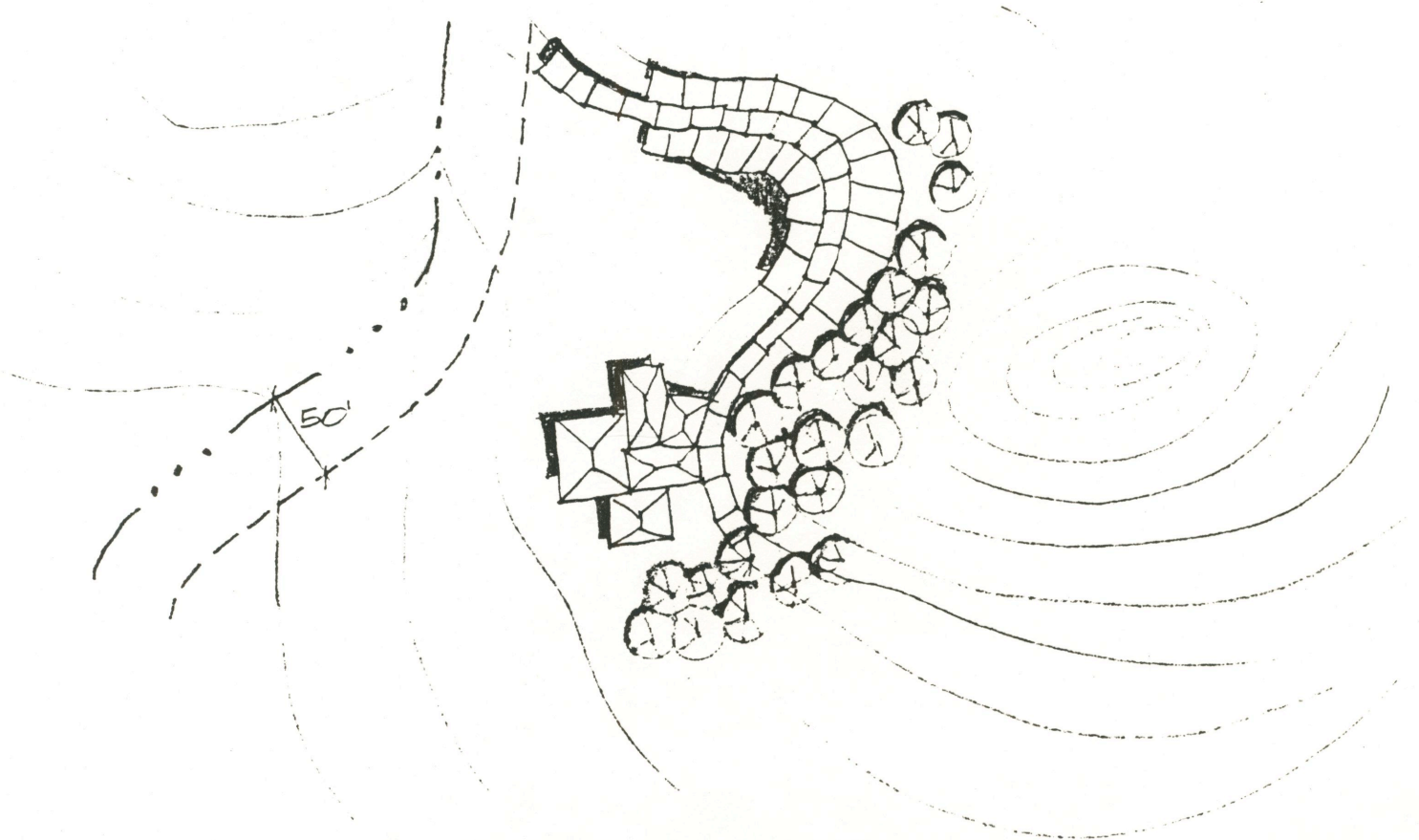
It is obvious that overnight accommodations is a primary goal of both plans and is encouraged by the zoning. One of the objectives behind overnight accommodations is the reduction of traffic on Bridger Canyon Road. Another way to decrease this traffic is to encourage mass transit between the base area and Bozeman.

In order to encourage people to stay overnight and to expand the season of Bridger Bowl, a rather generous list of uses is allowed by the zoning. This implies considerable expansion of recreational opportunities as well as many traditional resort amenities. An appropriate mix of retail services is also encouraged. These amenities and services should be located for the most part on the ground floor with overnight accommodations above. This increases access to the services and helps separate the accommodations from the more public areas of the facility.

In order to maintain the natural setting, a number of requirements are listed, such as height limits and installation of underground utilities.



There is also concern with soil erosion, implying minimal grading and integration of the structure(s) with the contours. Cutting down as few trees as possible is also important as is cluster development and building on suitable areas. The suitable areas concern has been addressed in the site analysis section.



EROSION MINIMIZED
- INTEGRATION W/ TOPOGRAPHY
- RETENTION OF AS MANY
TREES AS POSSIBLE

The requirement for a "mountain alpine skiing setting" is rather vague and without any guidelines. What will be considered appropriate by the design review process is anybody's guess. I have listed below a number of elements that I feel would be conducive to creating such a setting.

- materials predominately stone and wood
- details geared toward the pedestrian
- narrow curving streets that spill onto squares
- narrow slits between buildings allowing penetration by shafts of light
- feeling of containment derived from tall buildings and restricted vistas
- snow-covered sloped roofs
- areas allowing for accumulation of snow cleared from pedestrian walkways
- varying building heights

CONCLUSION

CONCLUSION

There are a great number of concerns that must be dealt with in any project. It is an architect's job to bring together the expertise to evaluate these concerns, develop priorities, and strike a balance. All are important and must be resolved. At the same time, the full potential must be met. This is an incredible responsibility but is what makes good architecture.

The "real project" nature of this as a thesis subject appealed to me. A lot of the ground work had already been done and so I planned on using the developer's proposal and adjusting it to fit my desires in terms of a thesis project. That would have been the easier and, in retrospect, maybe smarter thing to do.

However, the resort proposed for Bridger Bowl presents some rather unique problems. First of all, this is an existing viable ski area. While the *future* viability of the area may be in question, Bridger Bowl is functioning primarily as it was intended to. However, I feel that the development of a destination resort is inevitable or Bridger Bowl will cease to exist. I also feel that the community has too big of a stake in this to be ignored. Without its support, the ski area won't survive and everybody loses. The very strong sense of local ownership results in a complex connection with Bozeman's identity, and some very strong feelings when there is talk of change.

The controversy surrounding the project seemed to insist on being part of my thesis. It also presented an opportunity to explore the political nature of architecture. We tend to be insulated from this side of the profession while in school. I knew that there was sufficient interest to get some real feedback and I assumed I could ask for that feedback without becoming part of the fray. I found that even an innocent student can have trouble keeping his nose clean.

What I discovered is that first of all, the project must be *justified* in terms of economics, need, and, in a case like this, community support. Without the means for success, the architect would be irresponsible to go ahead with a project. This responsibility doesn't lie entirely, nor even primarily, with the architect. Yet, like so much of the building industry, the architect has the role of watchdog. Once justified, factors affecting the actual design can be addressed. However, in a project such as this, the community must remain a part of the process.

The architect must never lose sight of the ultimate *purpose* of the architecture he is producing. In this case the unique environment of Bridger Bowl is the reason a proposal even exists. This project will attempt to take advantage of the opportunities

that exist besides skiing. This is dependent on maintaining that environment, and implies a need for sensitivity and at the same time, realization of the full potential presented by that environment.

Function is the backbone of any good design. In this project, a number of different functions must be accommodated. Those functions change with the seasons. This presents a whole series of challenges. The summer sunbather must be able to use the same space as the winter alpine skier. The conference attendee has different needs than the child on a family ski vacation, yet they both must be accommodated.

An important source of information that must not be overlooked is **precedence**. The materials, scale, and character are the elements that define particular types of facilities. If something is too out of scale or character for a particular site or region, it risks failure due to rejection by both the community and users.

And finally, we must be concerned with the **experience** we want to create. In this case, it is a retreat from daily life. That implies a separation from the "real world." A "place" that is different, with different experiences and different ways of doing things. A place where one is pampered, if that is what one desires, or a place where one is tested, a place to play hard. A place where all your needs are taken care of.

The temptation to allow one concern to override others must be avoided. If not, we run the risk--if not the probability--of incomplete and unsatisfying architecture. The real trick is to be successful in all these things at the same time. It is unwise to say one is more important than the other. However, an order can be established that may facilitate solving the problem. There are no easy solutions. That is the challenge, and delight, of architecture.

DESIGN PHILOSOPHY

DESIGN PHILOSOPHY

"The role of the architect is not in the practice of Styles, but poetically and truly to satisfy human needs, to do this with honesty in form and technique."¹

While this statement may seem rather simplistic, it provides a solid foundation for design and very succinctly describes the challenge of this project. "Human needs" include the needs of many conflicting groups--the community (with widely divergent views), the users (a very diverse group), and the developer/client. Form and technique are the mechanics of design while "poetically" is the key to success.

There exists somewhere within this project a successful marriage of site, user, form, and function. This marriage is the goal of any design. The term "marriage" implies a joining together resulting in something better. That is, one is not sacrificed for the union, but the union results in a realization of the potential.

We must not lose sight of the fact that this project will change the experience of Bridger Bowl, and by changing that experience, lives will be affected in fundamental ways. This is the nature of architecture and one of the things that make architects, in my opinion, one of the most truly powerful professions in society. When we look at ancient civilizations, what do we see? It is the architecture that tells us the most about a people and defines what we feel about and how we look at those people.

As you look around yourself today, are there any men of 100 years ago who are still influencing your lives in fundamental ways? Look at our main streets, look at our cities, look at how we function in our place and time. Our lives are guided in physical terms by, for the most part, nameless architects of 100 years ago.

Architecture must be seen as not just "city building but of society building, an evolution of cultural heritage, and an expression of collective values that future historians may label 'a civilization.'"² This facility will help define the "culture" of Bozeman. It is important that it is *of* the community.

¹Erskine, Ralph. "Democratic Architecture: The Universal and Useful Art," *Architecture in an Age of Scepticism*, Oxford University Press, New York, 1984, p. 73.

²Lewis, David. Review of The Prince, the Architects and New Wave Monarchy by Charles Jencks. *Architecture*, December 1988, p. 55.

I have done a lot of philosophizing in terms of the role of the community in this project. I feel that relationship has been explored, at least to the degree possible for me. The concerns of the community will affect my project in many ways. I also realize that it is important to remember that while different concerns must be balanced, one must be careful not to design to the "lowest common denominator." Good design will almost always offend or disappoint some and may or may not greatly please anybody.

There are a number of elements that must be addressed in order to successfully create the facility I propose. First of all, we need to explore the basic conflict we face with this project--that is the place of nature in man's world versus the place of man in nature. There are many instances where this might not be a clear choice. Bridger Bowl however very clearly is a case of defining man's place in nature.

We have a responsibility here to the land and environment--both to be sensitive and to make the most of the opportunities presented. For most of western man's existence, he has attempted the conquest of nature. This attitude is changing and is especially important in a project like this.

Nature offers both opportunities and limitations to human use. The site analyses I went through showed how some areas are more appropriate for certain uses than others. This kind of analysis is especially critical in a project like this. Erskine again sums up very nicely with, "We must cultivate a mature judgment of where to be modest and subservient to an existing landscape . . . and when to enrich them with new accents."³ The contours of the land, the canyon, the forest, the ski hill, the sky, the snow, and on and on--the site offers many opportunities . . . and limitations.

In exploring the precedents for this type of facility, we find many responses to the site, from the concrete high rise to the earth-bermed chalet. All respond to the site in different ways. In this project, a high-density, low-rise development has been mandated by the community. This calls for a "capsule" of civilization that is easily concealed within the forest.

The perspective of the user must pervade the design process. How will the user react, or not react, to the view from the highway. Imagine the sense of anticipation as the development appears through the trees. There should be just enough "teasing" to excite. How will the user react to the experience of the resort? The architect must do everything in his power to make sure the user has a pleasant experience.

³Erskine, p. 73.

The forms must speak of the site. They should appear natural, as if they have grown there. The organic nature of the topography must be echoed by the structure. The snow will give the winter resort a very different look and feel. The topography will change, the color will change, the look and attitude of the user will change. This must all be accommodated by the form and function of the design.

Our times present an incredible opportunity, absolutely unparalleled in history. New materials and techniques, coupled with the rapid changes that our culture is experiencing, cry out for an architecture that speaks of today. These opportunities must be taken advantage of.

An image keeps coming back to me in terms of the "resort" experience I have talked about. That is of entering the gates of the Emerald City. I want to create a place that is isolated and protected from the "real world." A sense of shelter and entry into a different place, a sense of arrival, is called for. There needs to be an "inside" versus the "outside world."

Precedent analysis can provide clues on how to accomplish this union of site, user, form, and function. Ultimately, however, we must keep in mind that this is a unique place. The solution here will be different than any other one that might be appropriate for another place.

PROPOSAL

PROPOSAL

My basic proposal is for a year-round destination resort in the Bridger Bowl Base Area. The bulk of the development will be in the north end of the base area and will include the following:

- 150-room hotel
- conference center
- nightlife
- restaurants
- appropriate retail
- remote base lodge
- 30-bed hostel
- new runs and lifts
- mass transit

Also necessary, but not included in the scope of my specific design:

- condominiums
- gas station/general store
- chapel site
- fire station

These elements will respond to the site in the following manner:

- take advantage of sun
- protection from south wind
- take advantage of views
- take advantage of snow cover--cold roof
- cut down as few trees as possible
- take advantage of topography

They will respond to the user:

- encourage outside circulation but provide inside circulation
- accommodate skier first
- provide clear connections between different functions

- lively winter atmosphere, relaxing summer atmosphere
- luxuries, pampering available
- diverse recreation, both winter and summer

The architecture:

- stone and new materials--wood as interior finish
- sloped roof
- medieval alpine layout, clustered development
- high-density development
- mostly low-rise development
- not visible, for the most part, from the highway

The experience:

- retreat
- shelter
- focus

SCOPE OF THESIS II

SCOPE OF THESIS II

I will limit Thesis II to a very compact, high-density development consisting of the following:

- 150-room hotel
 - conference center
 - gourmet restaurant
 - bar/cafe/nightclub
 - snack/coffee shop
- Remote base lodge
 - cafeteria
 - bar/lounge
 - rest rooms
 - ticketing
 - ski rentals/sales
 - ski school
 - public lockers
 - nursery
 - first aid/ski patrol
- 30-bed hostel
- Mass transit connections
- Health club, swimming pool
- Some retail
- Skating rink, sledding hill
- Public plaza

FACILITIES PROGRAM

FACILITIES PROGRAM

All figures are in square feet.

Base Lodge¹ (3,000 skier capacity)

12,000	- Food service (750 seats)
3,000	- Bar/lounge
1,650	- Rest rooms
450	- Ticketing
2,850	- Ski rental/retail
900	- Ski school
2,400	- Public lockers
1,050	- Nursery
420	- Employee space
1,950	- First aid/Ski Patrol
1,500	- Administration
750	- Storage/mechanical
3,181	- Circulation
32,101	- Total

Hotel/Lodge

Guest Rooms (includes corridors)

23,400	- 60 high-comfort rooms (390 ft ²)
28,800	- 90 average-comfort rooms (320 ft ²)

Public Areas

3,000	- Lobby (designed for 250 rooms)
1,000	- Rest rooms

Dining

2,400	- Gourmet restaurant (150 seats)
2,000	- Snack/coffee shop (100 seats)
6,000	- bar/cafe/nightclub (300 seats--separate entertainment area)

¹From Bridger Bowl Master Plan, February 1986.

Conference Facilities

- 1,200 - Meeting rooms
- 900 - Prefunction areas
- 3,500 - Ballroom
- 5,600 - Total

Administration

- 200 - Front desk
- 150 - Manager
- 200 - Accounting
- 100 - Reception
- 120 - Reservations/operator
- 100 - Bellman
- 50 - Safe deposit boxes
- 200 - Copying and storage
- 200 - Marketing office
- 150 - Personnel office
- 150 - Security office
- 100 - File storage
- 1,720 - Total

Food Preparation

- 2,400 - Main kitchen
- 100 - Room service
- 100 - Chef's office
- 1,500 - Storage
- 100 - Rest rooms
- 4,200 - Total

Receiving and Storage

- 200 - Loading dock
- 250 - Receiving area
- 100 - Office
- 200 - Locked storage
- 200 - Garbage
- 200 - Grounds equipment
- 850 - General storage
- 2,000 - Total

Laundry/Housekeeping

- 100 - Soiled linen
- 1,000 - Laundry
- 50 - Storage
- 100 - Housekeeping office
- 500 - Linen storage
- 250 - Uniform storage
- 100 - Lost and found
- 2,100 - Total

Employee Facilities

- 400 - Men's lockers/toilets
- 400 - Women's lockers/toilets

Mechanical/Maintenance

- 2,000 - Mechanical areas
- 2,000 - Maintenance/storage

Hostel

- 10,000 - 30 beds (2 single beds/room, community bath)

Recreation

- 4,000 - Swimming pool and deck

Health Club

- 100 - Whirlpool/jacuzzi
- 300 - Lockers/toilets/sauna
- 500 - Exercise room
- 400 - Game room/lounge/juice bar
- 100 - Storage
- 75 - Attendant
- 100 - Massage
- 1,575 - Total

Retail

- 10,000 - Miscellaneous

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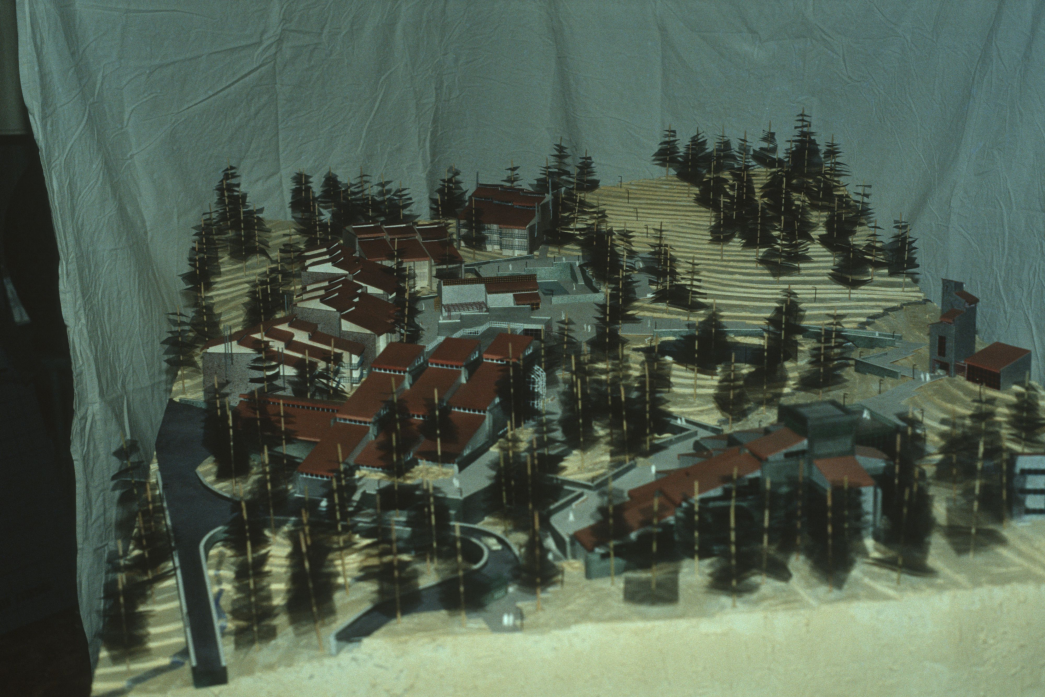
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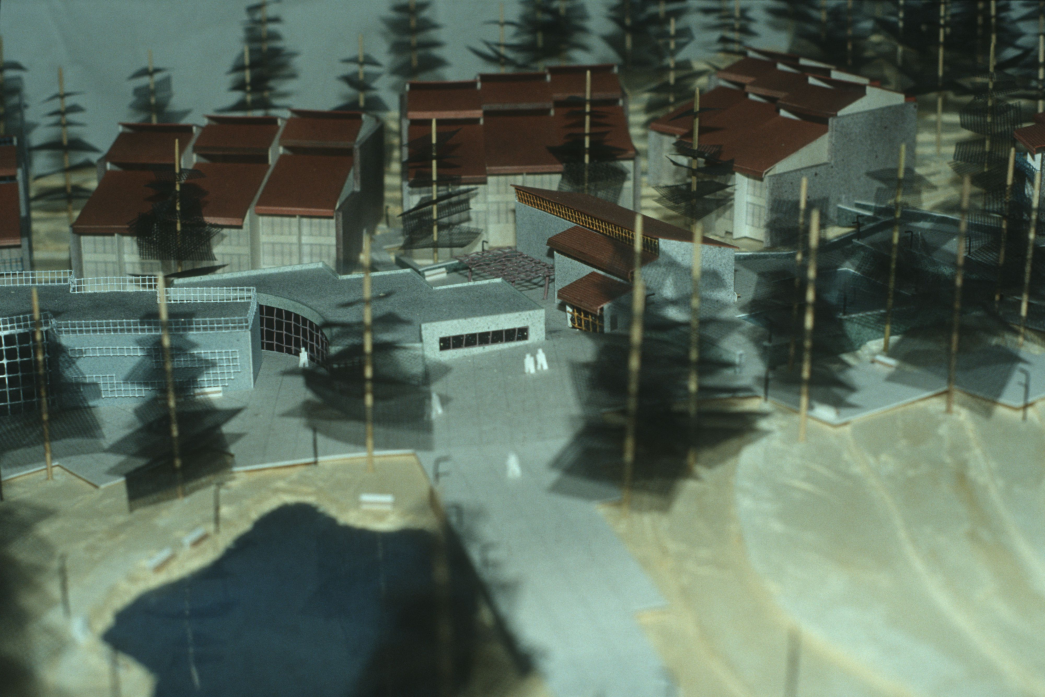
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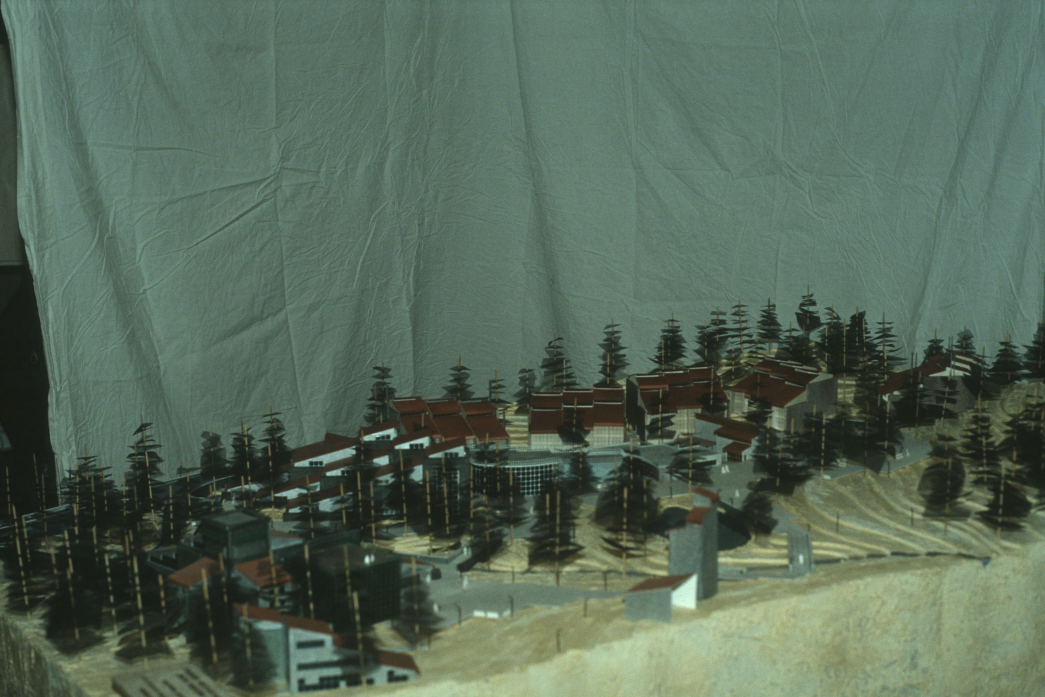
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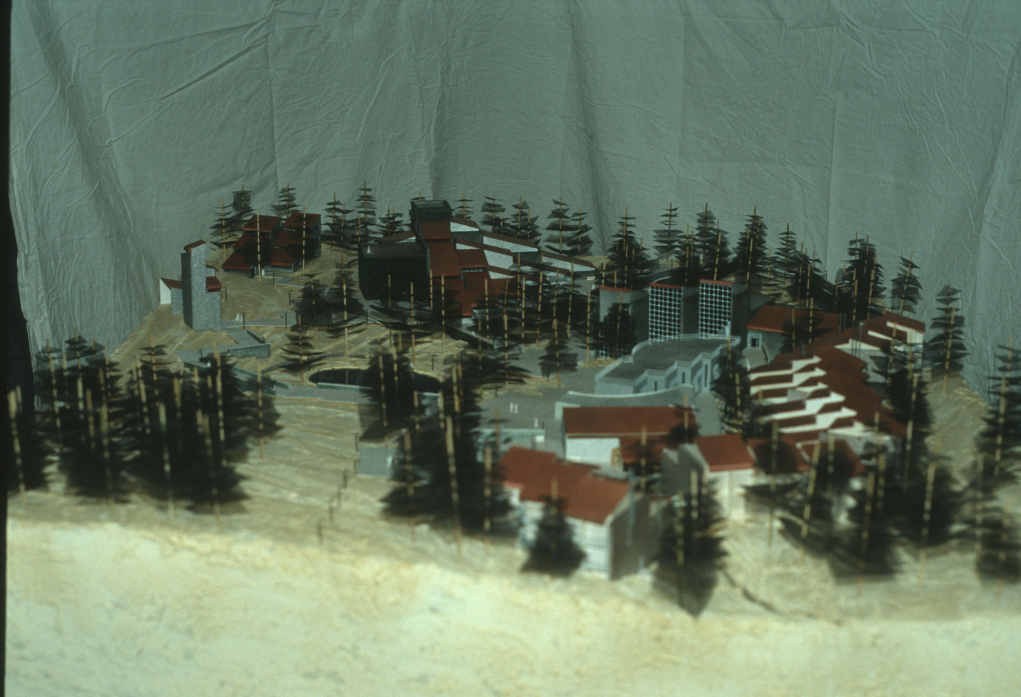
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