

Ski Yellowstone

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Ski Yellowstone

Base Lodge

by

Mark T Howard

A professional paper submitted on partial fulfillment

of the requirements for the degree

of

BACHELOR OF ARCHITECTURE

Approved:

Advisor

Thesis Coordinator

Director, School of Architecture

Montana State University

Bozeman, Montana

June 9, 1987

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Signature

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Date

DEDICATION

I would like to dedicate this thesis to my father, William J. Howard and my mother, Elsa Marie Howard. They have nurtured and supported my love of architecture without reservation.

God bless both of you.

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INTRODUCTION

INTRODUCTION

Ski Yellowstone is a proposed year-round resort that is located on the northern edge of Hebgan Lake in south western Montana. John Hall of Mechanicsburg, Pennsylvania is the leading stock holder in the corporation and is a man of much local controversy. Recently he was convicted of stealing stocks from his father, John Hall , and selling them in Puerto Rico for a larger commission. In 1974 he bought the land that Ski Yellowstone had acquired and managed to get the forest service to consider the allowance of ski runs on Mount Hebgan which trails into Hebgan lake.

Ski Yellowstone, a 2,900 acre project is located twelve miles north and west of West Yellowstone, Montana and is four and one half miles due west of the Yellowstone National Park boundary.

Ski Yellowstone Has plans to incorporate a marina at Hebgan Lake as well as a club house and hundreds of condominiums.The current design proposals for the facility suggest that it will be anything but a bedroom community with overly adequate commercial facilities.

According to the developer's plans, the resort would be expected to draw from 3,000 to 6,000 people a day and would be located on 1,800 acres of national forest service land and 1,100 acres of private land.

The Greater Yellowstone Coalition is, to date, the greatest opponent to the development. They claim that the resort would, in

one way or the other, affect the fragile existence of an estimated 200 grizzlies that remain in the greater Yellowstone ecosystem. In 1977 the Grayling Arm of Hebgan lake was ruled a "no jeopardy" area by the Forest Service by means of an extensive grizzly bear study. In January of 1984, Wayne Brewster, an endangered species field officer, review the study and again issued a recommendation of "no jeopardy". Recent information, however, indicates the existence of four male and three female radio-collard grizzlies in the area which necessitates further study under the endangered species act. According to National Parks Magazine, environmental groups are certain that the Ski Yellowstone project will never get of the ground for two reasons.

First, a complex of Ski Yellowstone's size points to a four-seasons resort, rather than an area merely for winter use. Second, even of it were only a winter-season resort, conflicts could still arise in the late winter between recreationists, such as snowmobilers and cross-country skiers, and bears that are just emerging from their den.

It is my belief, having grown up in the immediate area that bear related conflicts will arise. However, it is my position in this thesis to assume that the project will continue as planned.

Taking this position will allow me to deal with sensitive issues such as this and to keep the tranquility that I enjoyed constantly in mind as I design with the environment.

THESIS DIRECTIVES

FOCUS

To develop a climatically responsive architectural form for the yellowstone region.

APPROACH

To analyze climate, vegetation of the site, wildlife and region as a means of expression related to sensitivity. Clientele and typological studies will be used to determine the flavor of the architecture. A merging of these two characteristics will be used to define the scope of the problem while considering the function based on user needs assessment.

VEHICLE

To use the set goals of the Ski Yellowstone Corporation Planning Commission for the development of Ski Yellowstone and to allow my assessment of user characteristics to add definition to the design of Ski Yellowstone. Thus, regionalism plays a lesser role than that of cultural aspects.

THESIS DIRECTIVES

PURPOSE

To utilize the skills and interests that I have incurred during my stay at Montana State University's School of Architecture. With the ending of my education there is also expressed the beginnings of new interests. These ideals will be incorporated into the design of Ski Yellowstone in what promises to be a non-traditional expression of architectural form and function. If any question could be answered with this thesis I would wish it to be this; A middle class population is expressed by middle class architecture. Can an upper class economy exist at a year round resort in one of the most remote parts of the world simply by architectural expression and offerings? At this point I think not. But the architectural expression of Ski Yellowstone should be enough to attract the type of clientele to make it so.

THESIS GOALS

To create an architecture of memory and sequence. This memory will be expressed through material, pattern and organizational elements.

To create a sense of "place" that adheres to those principles founded in humanities' continual search for a sense of "place".

To find an architectural expression that is appropriate to wealthy clientele that expresses "recreation" to the user in a remote environment.

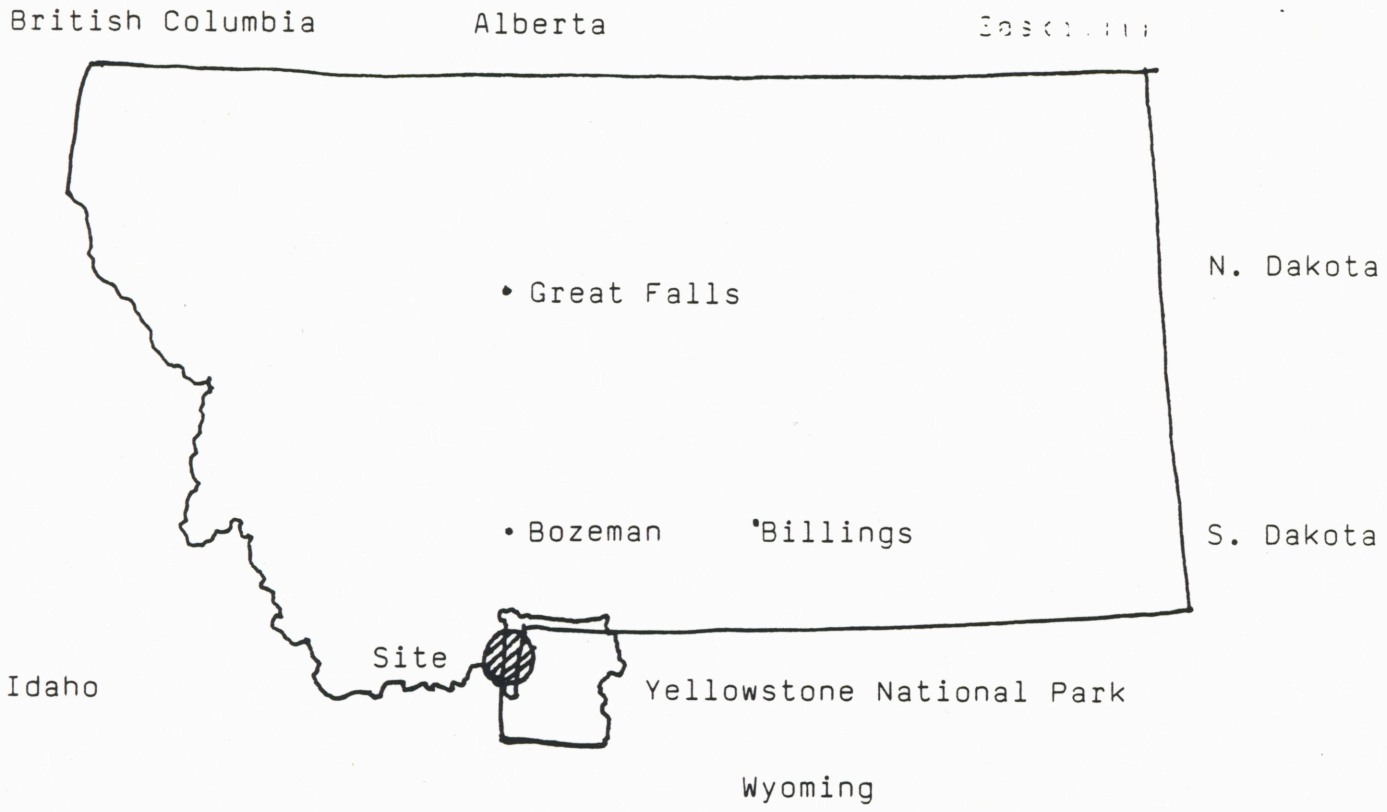
To make the ski resort not simply a "mall", but a diverse assortment of shapes, forms, colors, materials and expressions that are somehow read as a whole to the user.

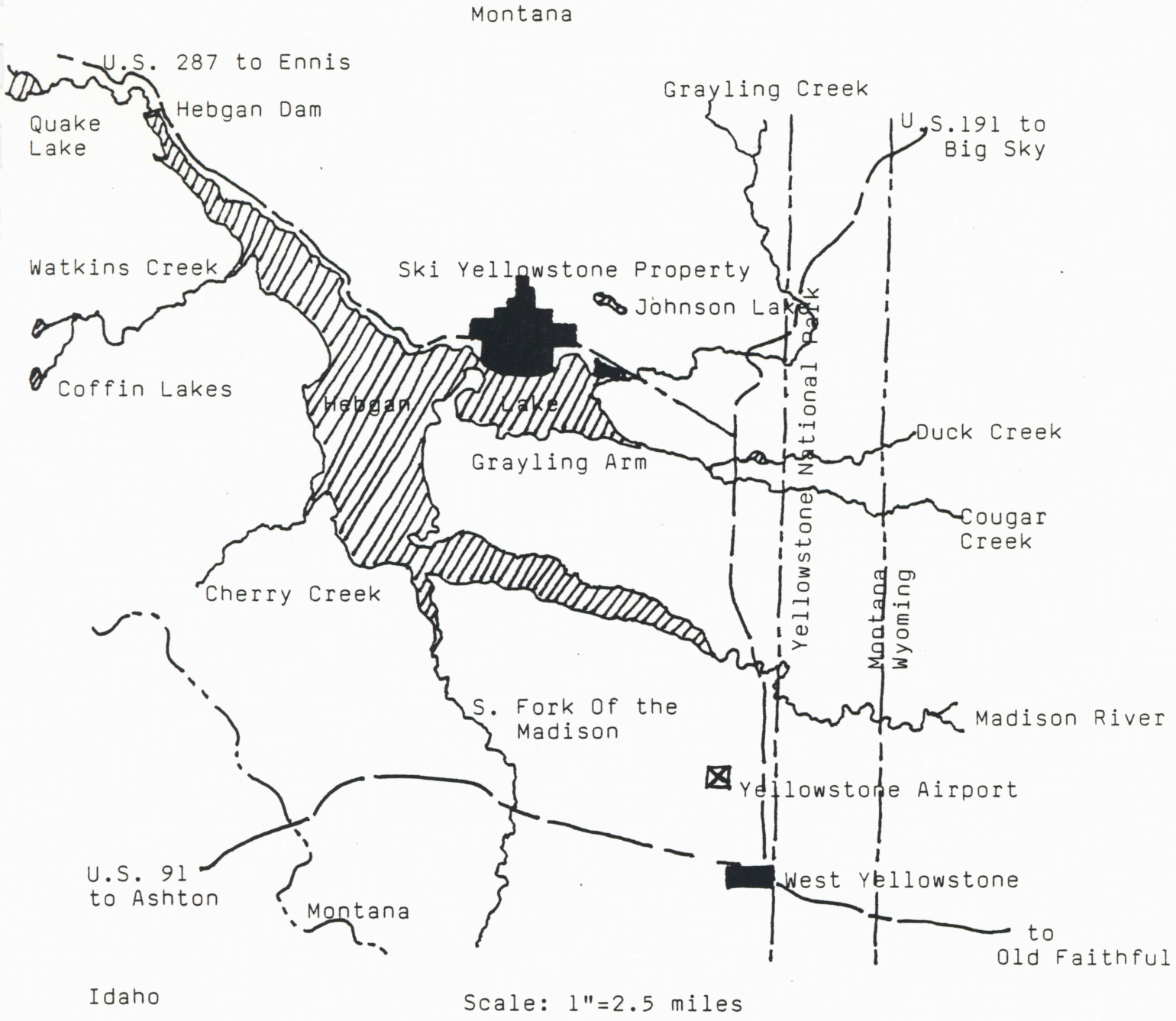
To make the base lodge equally appealing to the user throughout the calender year.

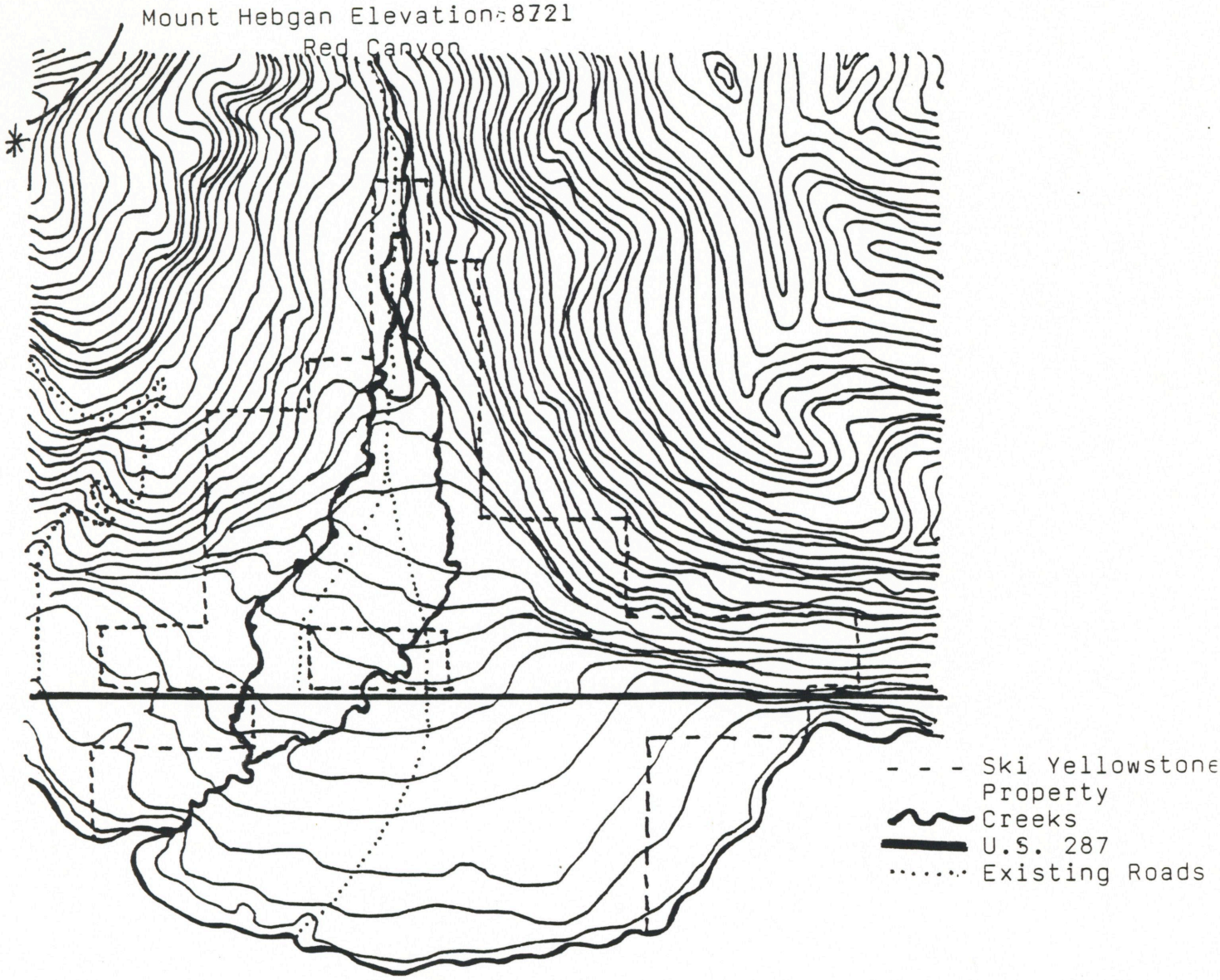
To set the expression for the later stages of the Ski Yellowstone development.

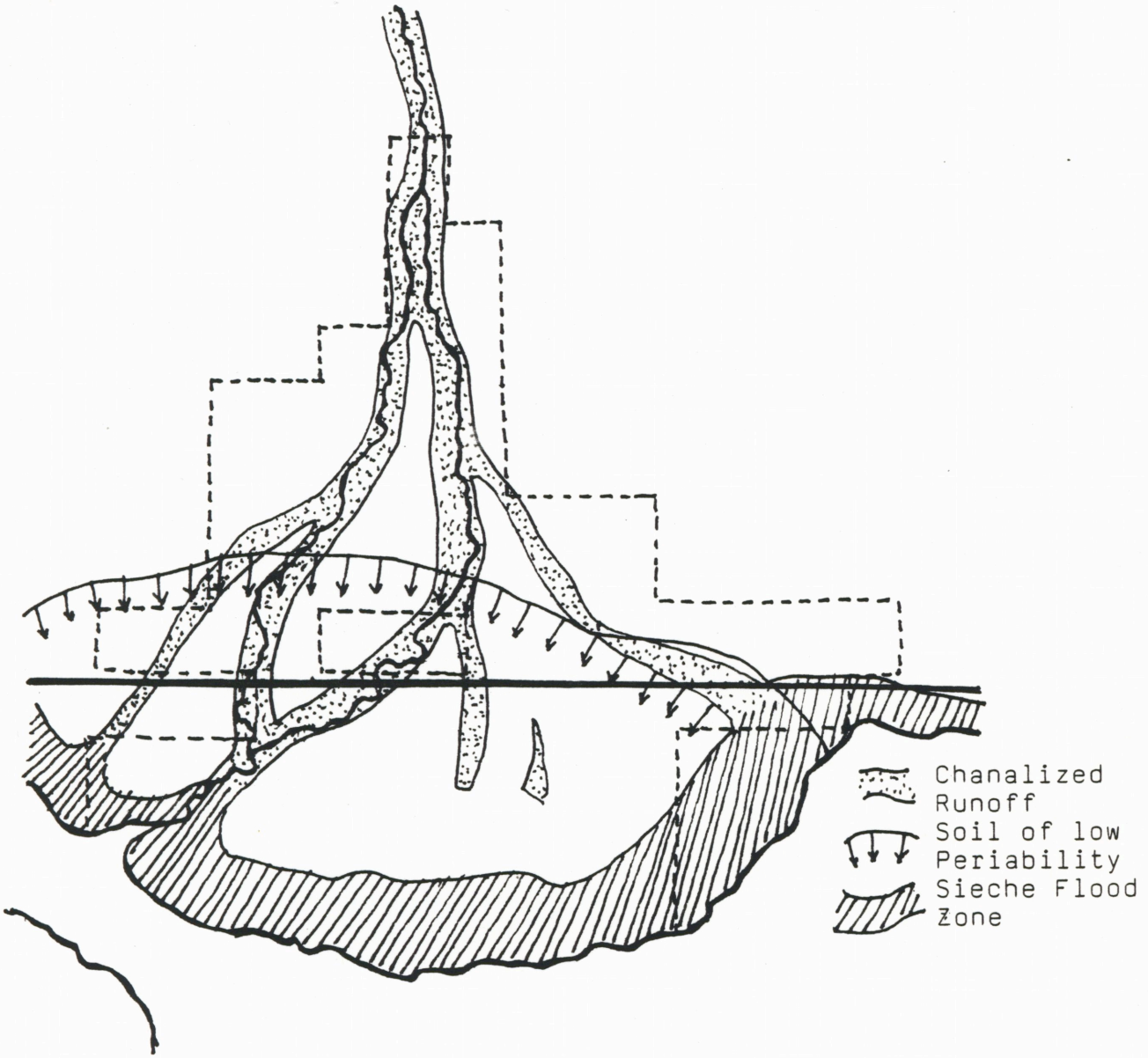
To create responsively to a sensitive environment that should serve man and wildlife equally.

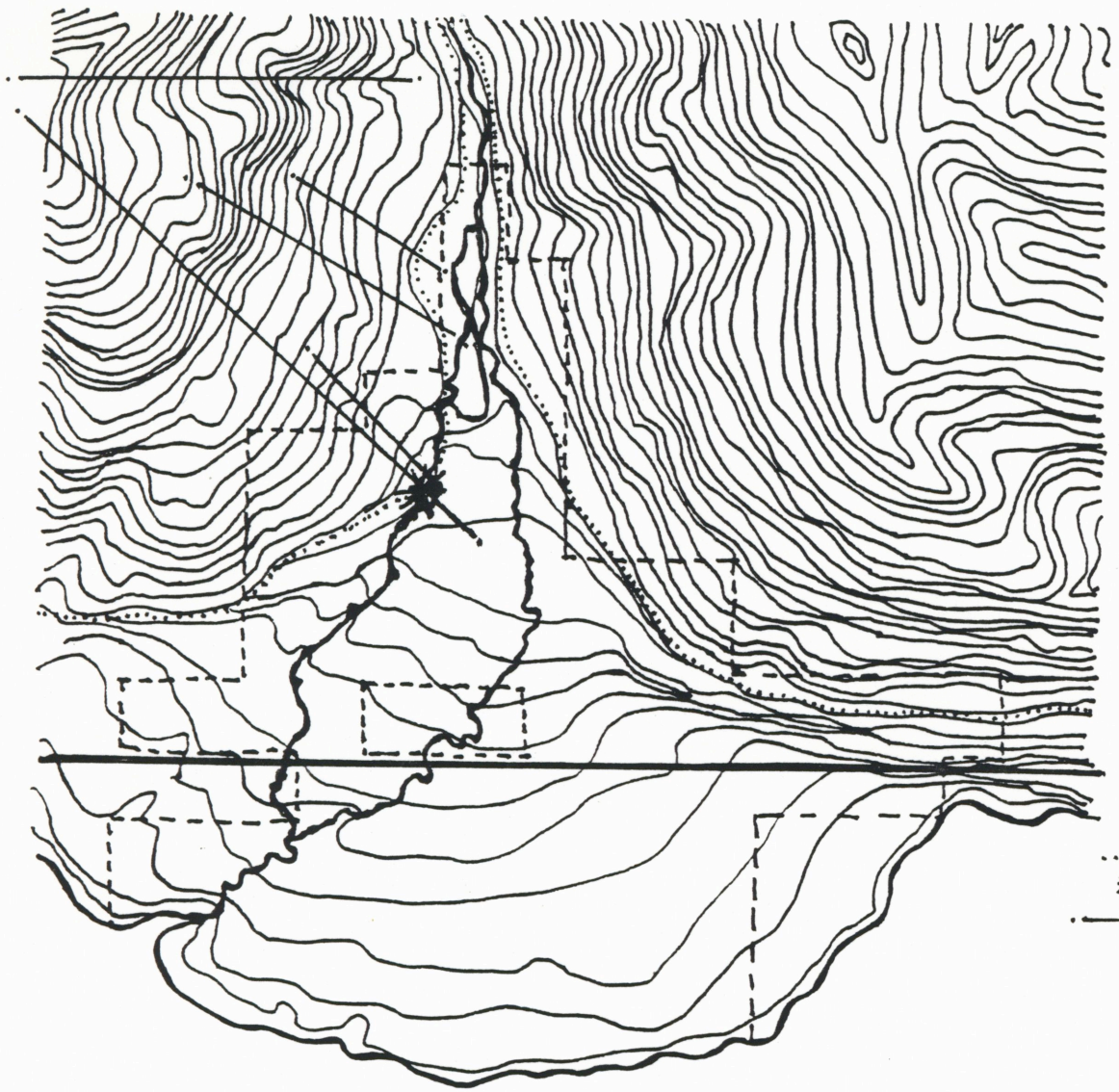

Ski
MAPS
Yellowstone


British Columbia
Alberta
N. Dakota
• Great Falls
• Bozeman
Billings
S. Dakota
Site
Idaho
Yellowstone National Park
Wyoming

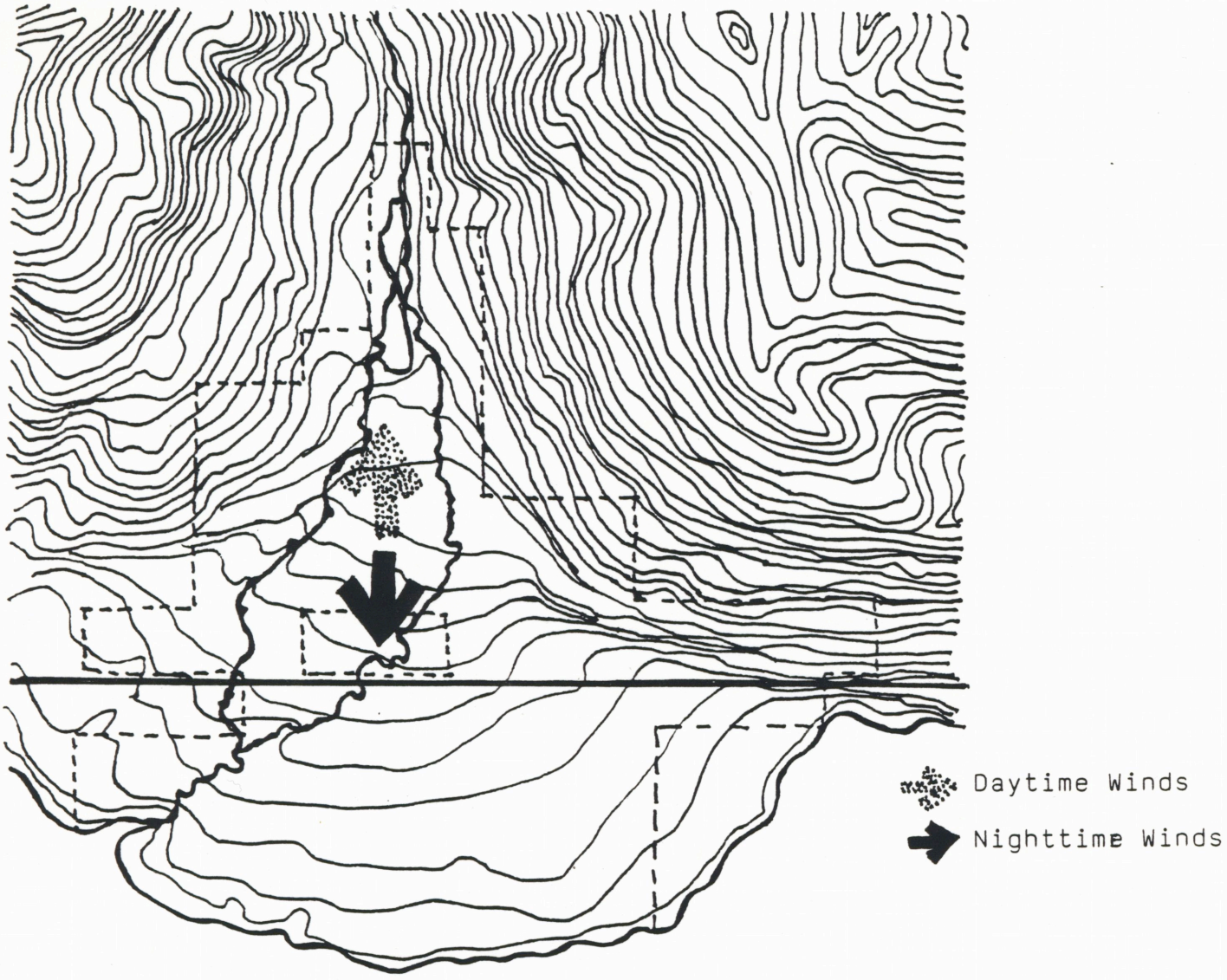

Montana
U.S. 287 to Ennis
Hebgan Dam
Quake Lake
Grayling Creek
U.S.191 to Big Sky
Watkins Creek
Ski Yellowstone Property
Johnson Lake
Coffin Lakes
Hebgan Lake
Grayling Arm
Yellowstone National Park
Duck Creek
Cougar Creek
Cherry Creek
Montana
Wyoming
S. Fork Of the Madison
Madison River
Yellowstone Airport
U.S. 91 to Ashton
Montana
West Yellowstone
to Old Faithful
Idaho
Scale: 1"=2.5 miles

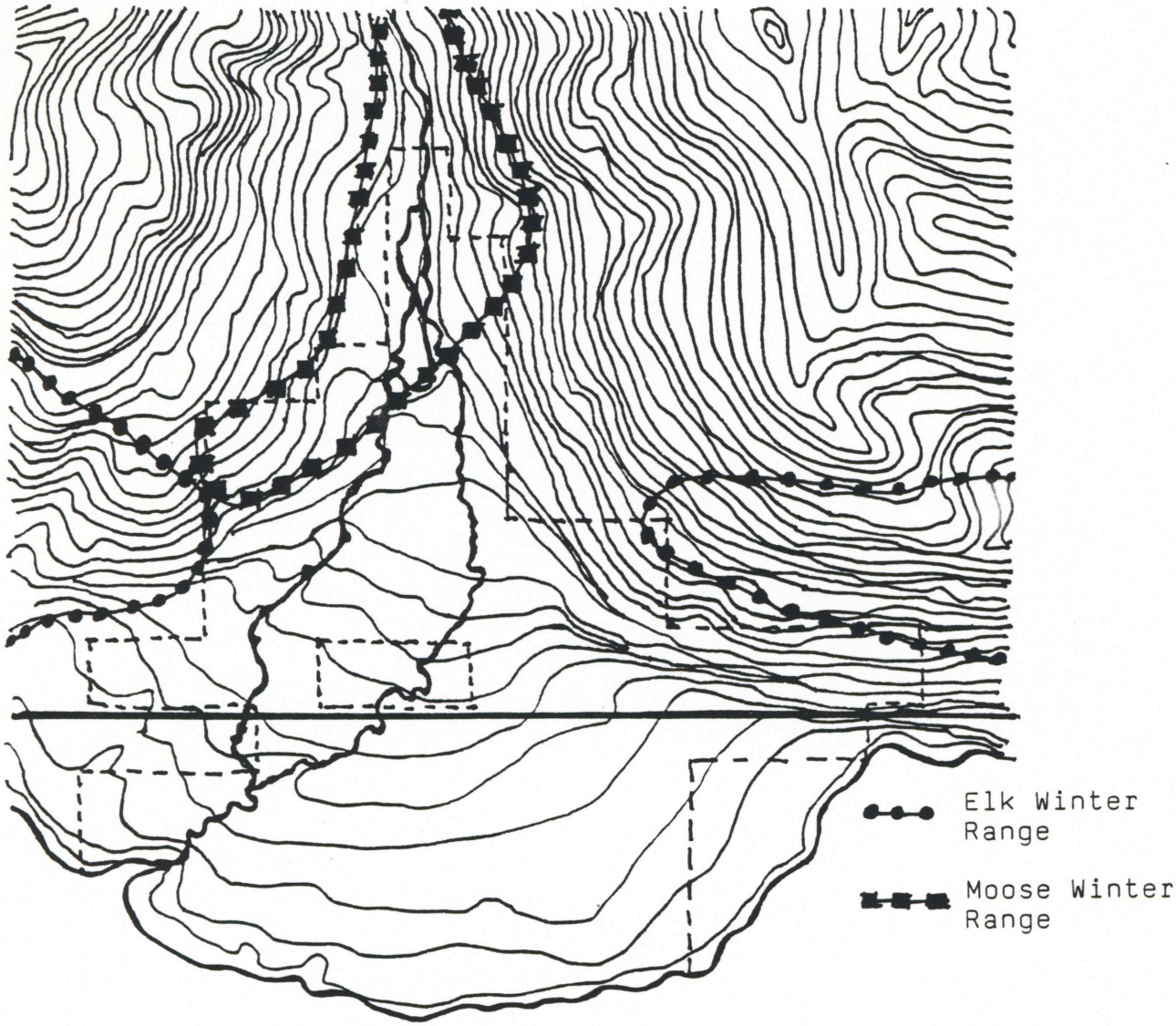

Mount Hebgan Elevation 8721
Red Canyon
Ski Yellowstone Property
Creeks
U.S. 287
Existing Roads
Hebgan Lake
Scale: 1"=2000'

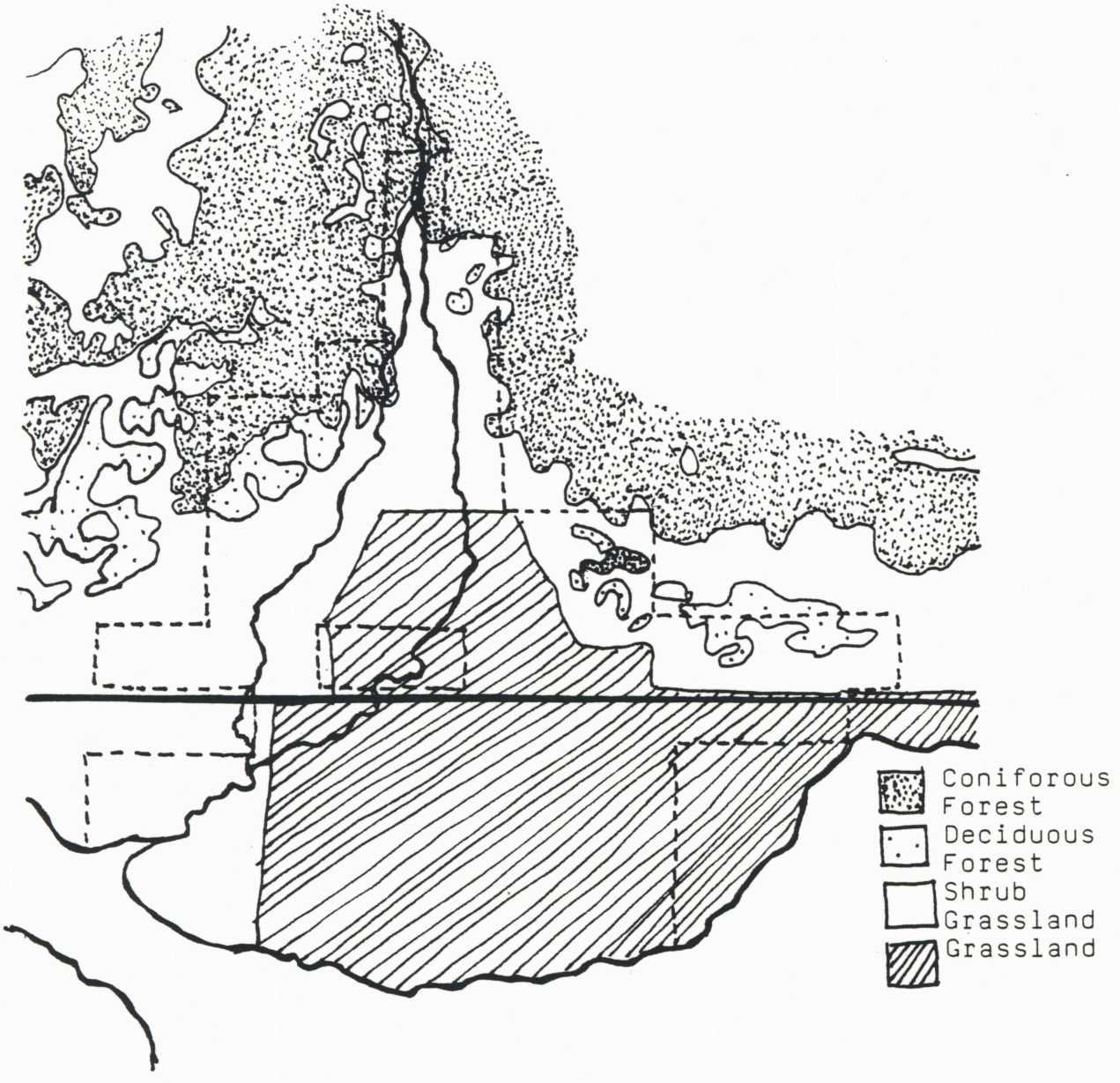

Chanalized
Runoff
Soil of low
Periability
Sieche Flood
Zone



Scale: 1"=2000'


Daytime Winds
Nighttime Winds


Elk Winter Range
Moose Winter Range


Coniforous Forest
Deciduous Forest
Shrub Grassland
Grassland


Ski
THE DESIGN PROCESS
Yellowstone

Design Process

The design process that I utilize is one that I feel is uncommon and yet, still developing. I do not expect this thesis to be the antitheses of all my knowledge, for I haven't learned everything yet. What new shapes remain untouched by the architect? How many forms lay yet undiscovered? What are the means to achieving these forms?

As a personal directive I would offer to you that the most satisfying forms I have achieved so far lay in nature.In Frank Lloyd Wright's book, Writings and Buildings, He states:

> I wish to be a part of my beloved southern Wisconsin and not put my small part of it out of countenance. Architecture, after all, I have learned, of before all, I should say, is no less a waiving and a fabric than the trees. And anyone might see, a beech tree is a beech tree. It isn't trying to be an oak. Nor is a pine trying to be a birch although each makes the other more beautiful when seen together.

One may or may not identify with this statement according to taste but let me clarify my view. The Prairie School has long since past. Why then, am I discussing an irrelevant architecture? It is not my place to design in the Prairie style of architecture or to even try to achieve any of its decorum or abilities. I, however offer, that modern architecture, in the literal sense, should deal with the age it represents. This has already been seen in the past as the world switched from an agriculturally based society to an industrial society. Architects of that age were struggling with the cause of finding an architecture which reflected the views of the industrial revolution.

In the 1880's when Lois Sullivan began the undertaking of the Auditorium Building, he wrote of the difficulty in understanding new materials and structural techniques.

> The building business was again under full swing, (after the Chicago fire)and a series of important mercantile structures came into the office, each one of which I treated experimentally, feeling my way toward a basic process, a grammar of his own. The immediate problem was daylight. This led me to use slender piers, tending toward a masonry and iron combination, the beginnings of a vertical system...Into the work was slowly infiltrated a corresponding system of artistic expression, which appeared in these structures as novel,and, to some, repellent in its total disregard of accepted notions.

It is in this sense that I design. It is the manner in which society is now changing from an Industrial society to a technological society that has to be my cause.

So, a combination of naturalistic and technological design applications will be incorporated in this design. How can one use these methods and apply them to a ski lodge in a manner that will appeal to the elite? The base lodge is only a small portion of the whole which will be developed initially and set the theme for all further construction. From Kevin Lyche's book, <u>The Image of the City</u> I can utilize some basic assumptions that he favors. He suggests that the environment can be analyzed in three ways; through identity, structure and meaning. Identity; what is the identifying elements of the place? This causes me to believe that the base lodge could have the most pronounced identity in the design of ski yellowstone. The design of other elements in the area can have their own identity so long as they identify with

the base lodge. Structure; the base lodge must be structured with the whole of Ski Yellowstone to read as a whole. This structure can not be debilitating to the wildlife in the area and thus I feel it to be the most important aspect of Ski Yellowstone. Meaning; is manifested in design beliefs that I have laid out earlier to you. This aspect can not be fully assimilated until the actual design process begins. A meaning for me generally lies in the use of a metaphor. For example, I may use an Italian hill town as a metaphor for a project and, after several tries at it, may end up with something that doesn't even vaguely resemble an Italian hill town. But, what I will have is a meaning which can not be appropriate to any other site in the world, for, as discussed earlier, I take into account nature, the qualities of the site and technological aspects which all form to give meaning to the site.


Ski
ENVIRONMENT
Yellowstone

The Built Environment

As far as context is concerned, there is relatively little in the way of existing buildings on the site except for the old cabins and houses which made up the extinct town of Grayling. Much of Grayling lies within an island of property which currently is leased to a rancher. The site I am choosing is out of context with the prescriptions of Ski Yellowstone for two reasons. First, upon inspection of the site it is obvious that the base lodge would be located to far from the slope to allow skiers to simply glide to the services offered at the base lodge. Secondly the site chosen for the base lodge would be in the open with very little site context offered to me to work with. As mentioned before, it would be much to my advantage to work around site constraints rather than to develop them as an after thought. Included in this thesis is a map that describes the layout as the corporation has planned out. It is important to show this because of the program outside of the base lodge that should be taken into consideration.

NATIVE PLANT LIFE

The following plants have either been identified as native to the immediate Ski Yellowstone area or have been considered to be suitable to Ski Yellowstone's terrain and climate.

Evergreens

Douglas fir
Engelmann Spruce
Limber Pine
Colorado Spruce
Subalpine Fir
Western Red Cedar
Rocky Mountain Juniper
Scotch Pine
Pacific Yew
Creeping Juniper
Common Juniper
Utah Juniper

Shrubs

Buffaloberry
Antelope Bitterbush
Caragana
Common Chokecherry
Shrubby Unquietoil
Sticky Currant
Red Dogwood
Big Sagebrush
Silver Sagebrush
Black Elderberry
Black Greasewood
Honeysuckle
Horsebrush
Mountain Mahogany
Russian Olive
Rabbitbrush
Yucca

Grasses

Kentucky Blue Grass
Idaho Fescue
Timothy
Smooth Bromo
Orchard Grass

Deciduous Trees

Peachleaf Willow
Black Cottonwood
Narrowleaf Cottonwood
Quaking Aspen
Green's Mountain Ash
Thinleaf Alder
Common Chokecherry
Curlleaf Mountain Mahogany
Rocky Mountain Maple
Mountain Alder


Ski
TYPOLOGICAL STUDIES
Yellowstone

ASPEN COLORADO

Aspen, Colorado is probably one of the most popular ski resorts in the United States because of its limitless slopes and more than adequate snow fall. But what makes it successful as a destination resort?

Aspen is a small mining town turned ski town. It was first established in the 1880's. More than $100,000,000 worth of silver, gold , lead, copper and zinc were mined in the mineral boom from 1880 to 1920. Aspen, the county seat, was the first of the great Colorado ski resorts and has grown along with the nearby town of Glenwood Springs. Today Glenwood springs offers natural geothermal pools for bathing and a myriad of outdoor sports such as golf and polo.

After the demand for metals declined in the 1920's the town's quality of life diminished. This led the people of Pitkin county to recognize and understand the threat of uncontrolled exploitation of their natural and historical resources. Today they are articulate in their concern about impacts on those resources and have set a goal of preserving, conserving, and protecting the County's natural and historical quality. When the ski boom came along in 1945 the people were ready and thus Aspen has evolved into the resort destination that it is today. Part of the success of today includes a host of activities, year round.

Every year nationally know talents are present in Aspen. Aspen also offers a host of cultural and philosophical events at a selection of their many convention facilities.

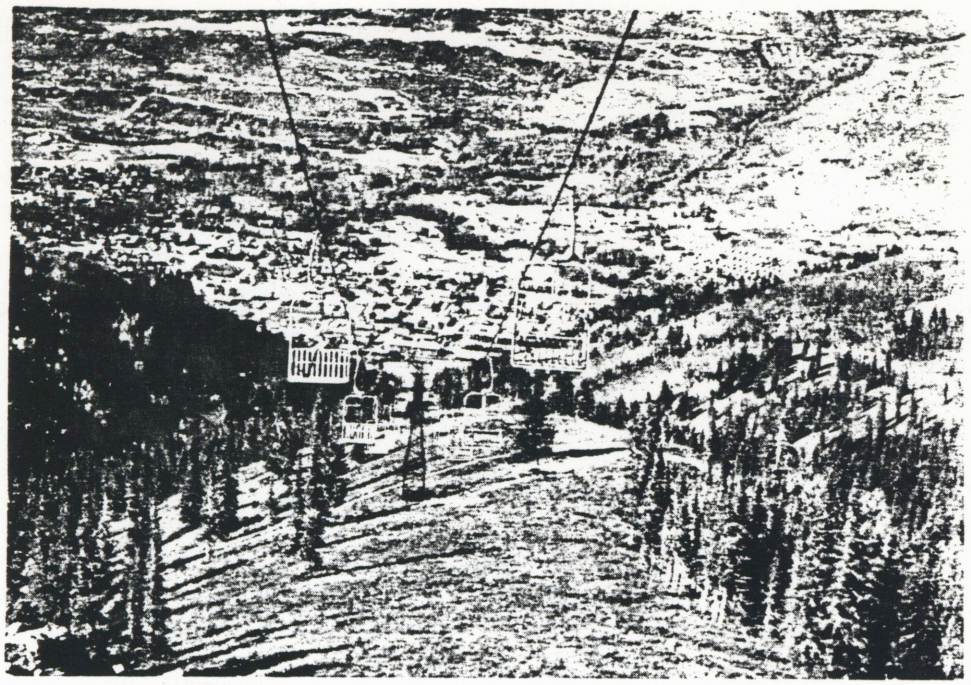
Walter Paepcke, the original developer of Aspens is quoted as saying of Aspen:

> On the whole it has turned out very well. Aspen is known world-wide. But we hope to keep on developing the educational and philosophical character that has been established.

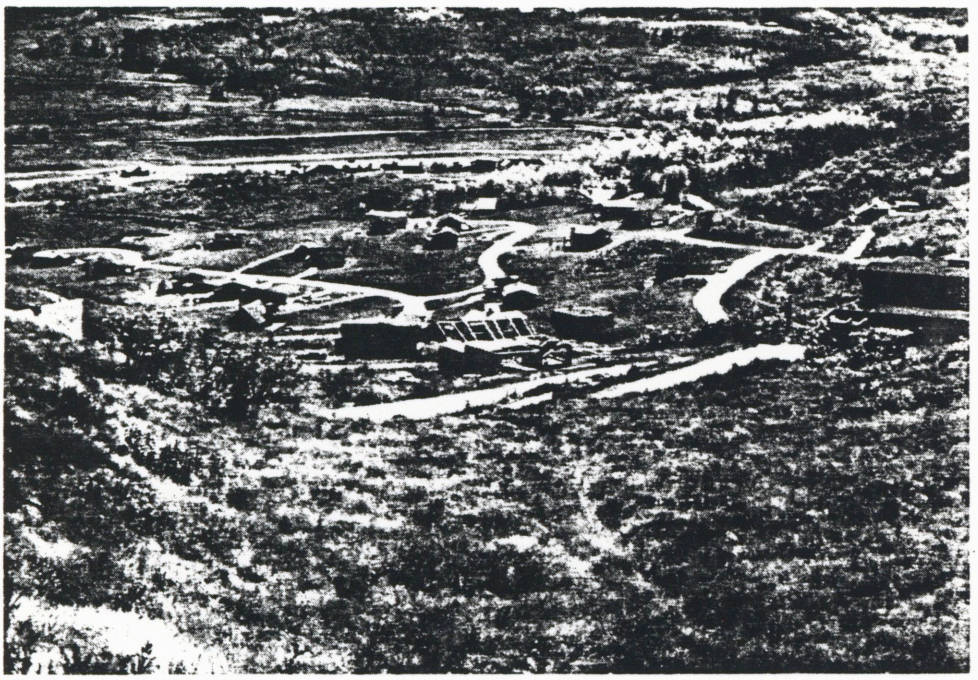
We learn from aspen that the streets are given over to the pedestrian. The historical context of the town is not covered over but is often revitalized and utilized as a very pleasant study of urban design techniques.

The typical ski lodge at Aspen offers the visitor a small lobby, long corridor plan. This is changing however, as the economy grows and the need for more lodgings develops.

In all Aspen is a successful undertaking that will set the pace for future success minded developers.

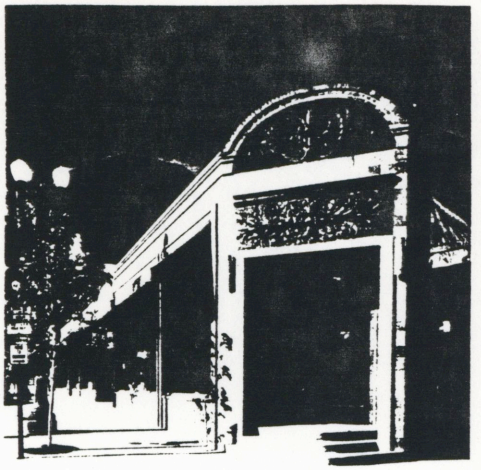


View of Aspen from the Ski Slopes on
Ajax Mountain



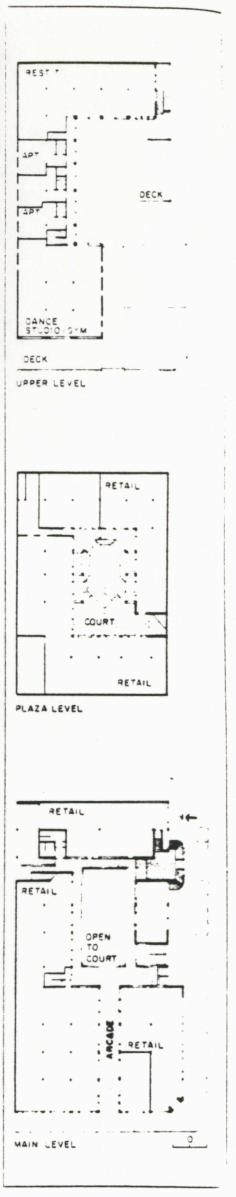
Mountain Subdivision near Snowmass-at-Aspen

Mill Street Plaza
Aspen, Colorado
Owners:
Frank Woods and Tony Mazza
Architects:
Hayman Yaw Architects, Ltd. – Tim Hayman, principal-in-charge; Michael Thompson and John Cottle, design team
Engineers:
Anderson & Hastings (structural); McFall-Konkel & Kimball

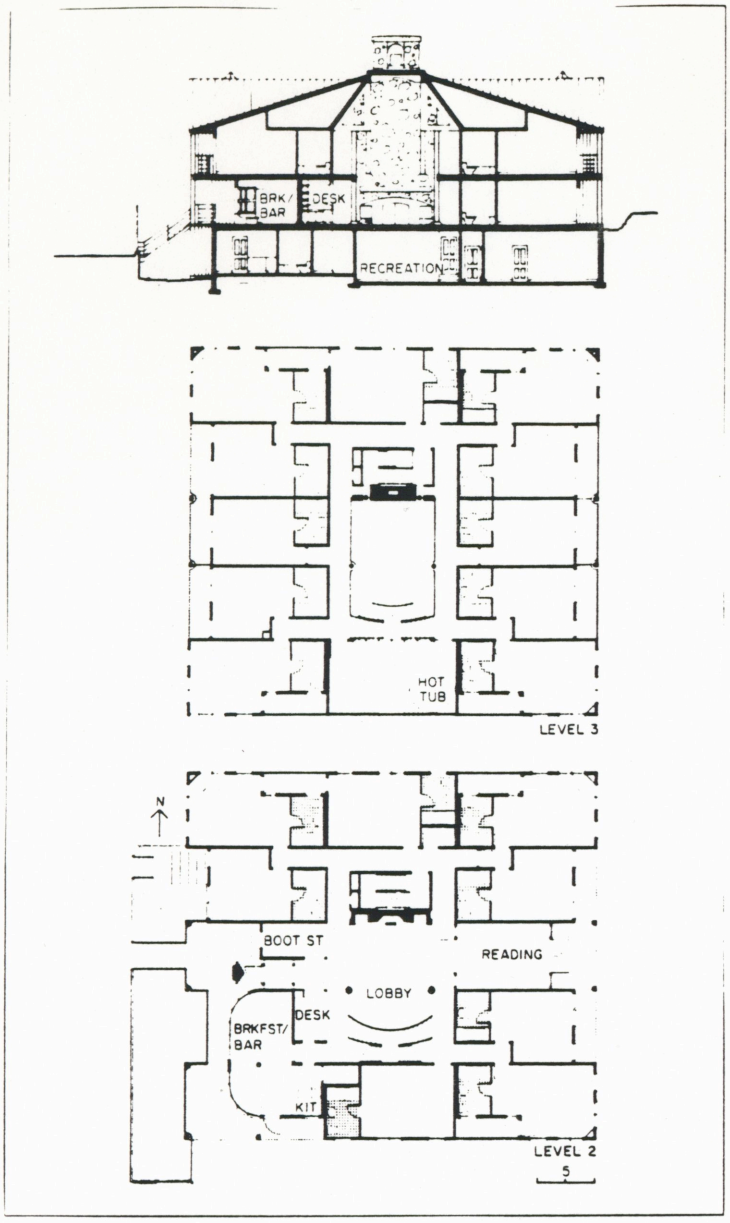


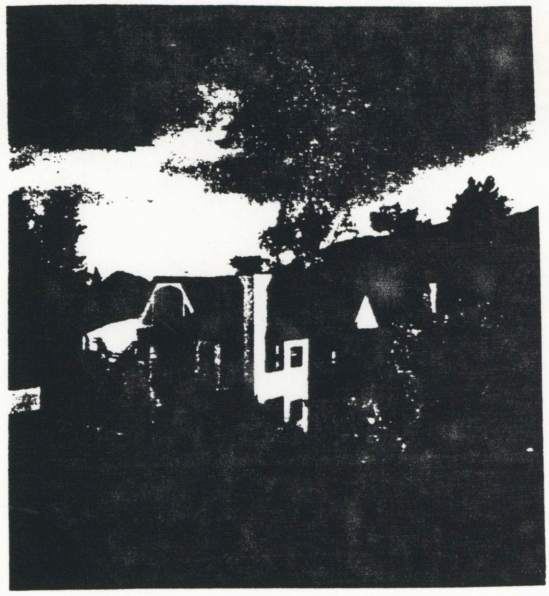


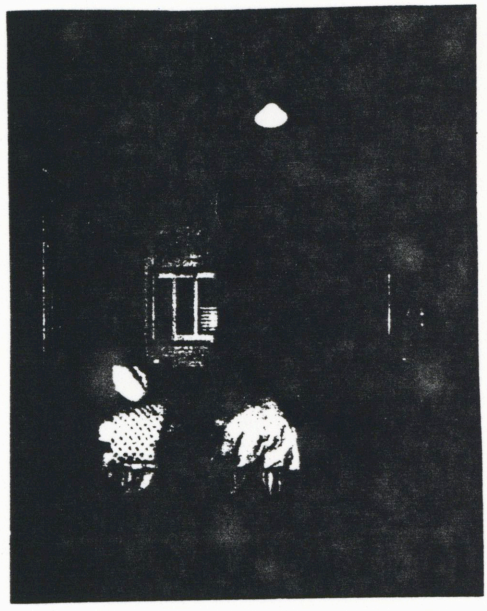


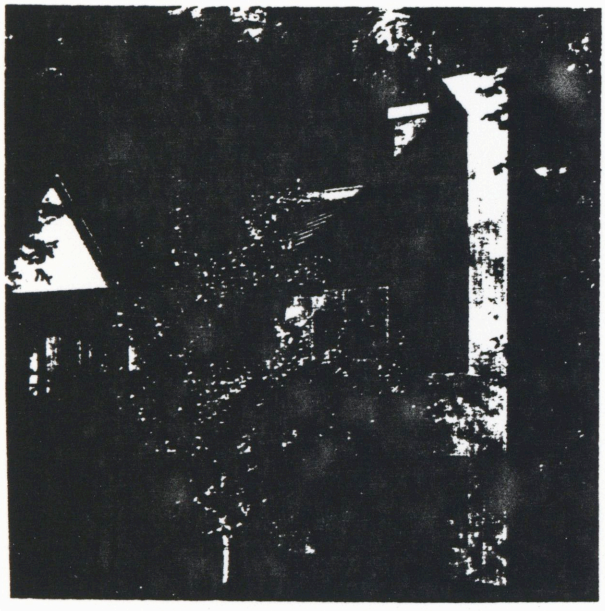


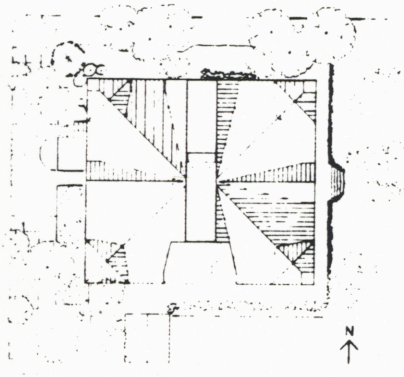












Hotel Lenado
Aspen, Colorado
Owners:
Long Run Partnership—Elizabeth Jones, Daniel Delano, Frank Peters
Architect:
Harry Teague Architects—Ron Robertson, project assistant; Denis Cyrus, Marcia Weese, project team
Engineers:
Collins Engineers, Inc.—Clayton Hayes, engineer-in-charge
Interiors:
Karen Day Hudson
General contractor:
Rocky Mountain Structure

VAIL, COLORADO

Vail, Colorado lies just west of the continental divide in North central Colorado. It is a relatively new resort as it was built a little over forty years ago. The town is a flourishing village of pseudo-Tyrolean (of Austrian descent) chalets. The village boasts of a fine collection of restaurants and shops that cater to an affluent clientele. Wide streets allow for pedestrian and vehicular traffic alike.

Vail is a city of harmony and contradiction. The older, more mature part of town is a humble harmony of intimate spaces that is organized by the creek that runs through the town. this organization is not debilitating as roads from the cross-over bridges are allowed also to help organize the town's pattern language. There are intimate nodes flowing in and out of the town.

Nature is a precursor to the ultimate scheme of the town. The banks of the creek are maintained in their natural state and the town turns its back to the creek. Intimate spaces are allowed to break this rule on rare occasions and bleed into the creek area.

Contradiction does abound, however and the newer developments in the area are out of character to the town. There are extravagant new facilities that are really quite nice except for the fact that the romanticism of the older parts of the town are ignored. Linchian theory would argue that the nodes are disrupted and that

continuity is not always the best answer to the growth of the town. No longer do we see the pleasant glimpses of the creek , but instead, we are constantly reminded of it.

The nodes of the former town become extinct and intimate spaces become large pedestrian malls that compete for importance.

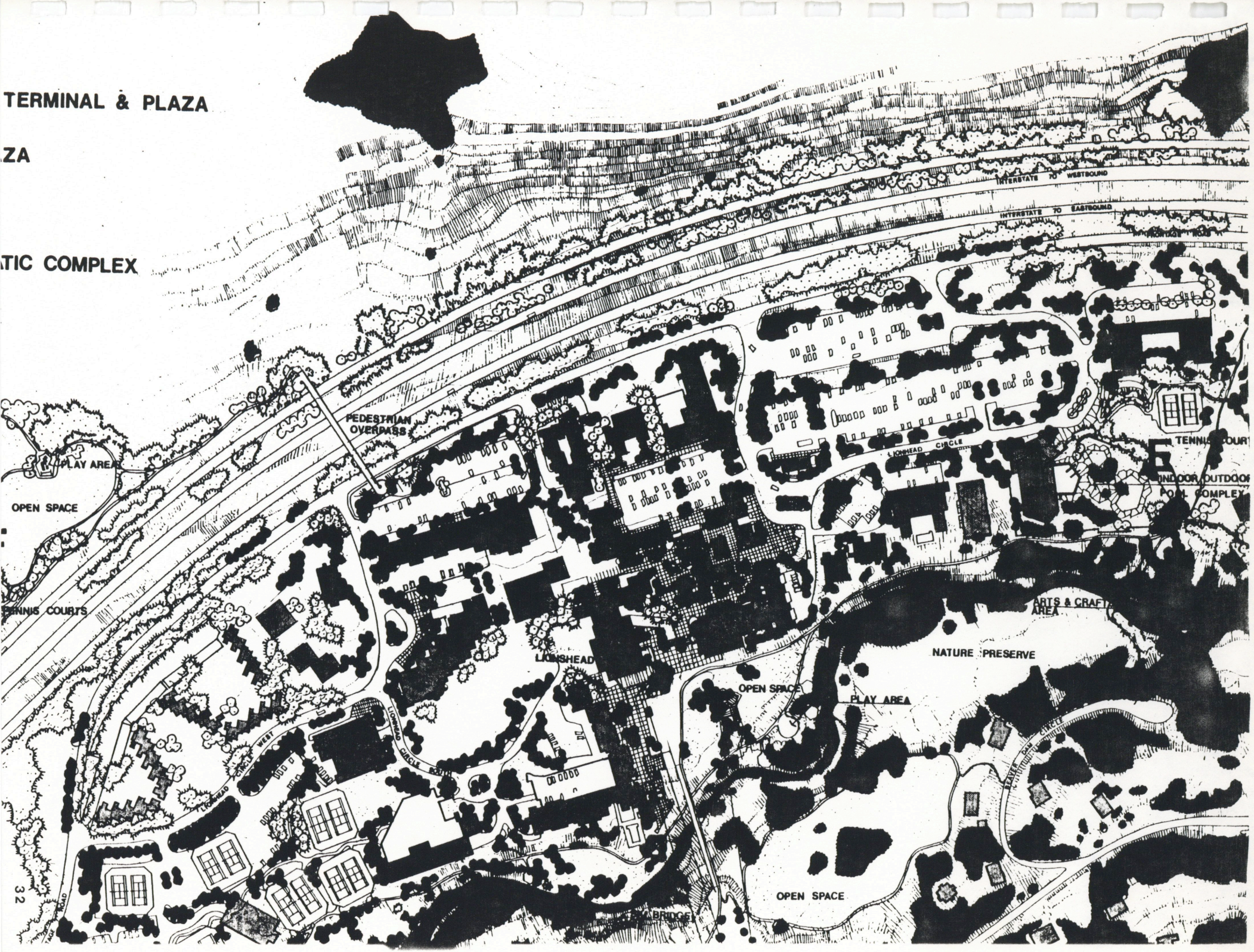
VAIL CREEK PLAZA PLAN

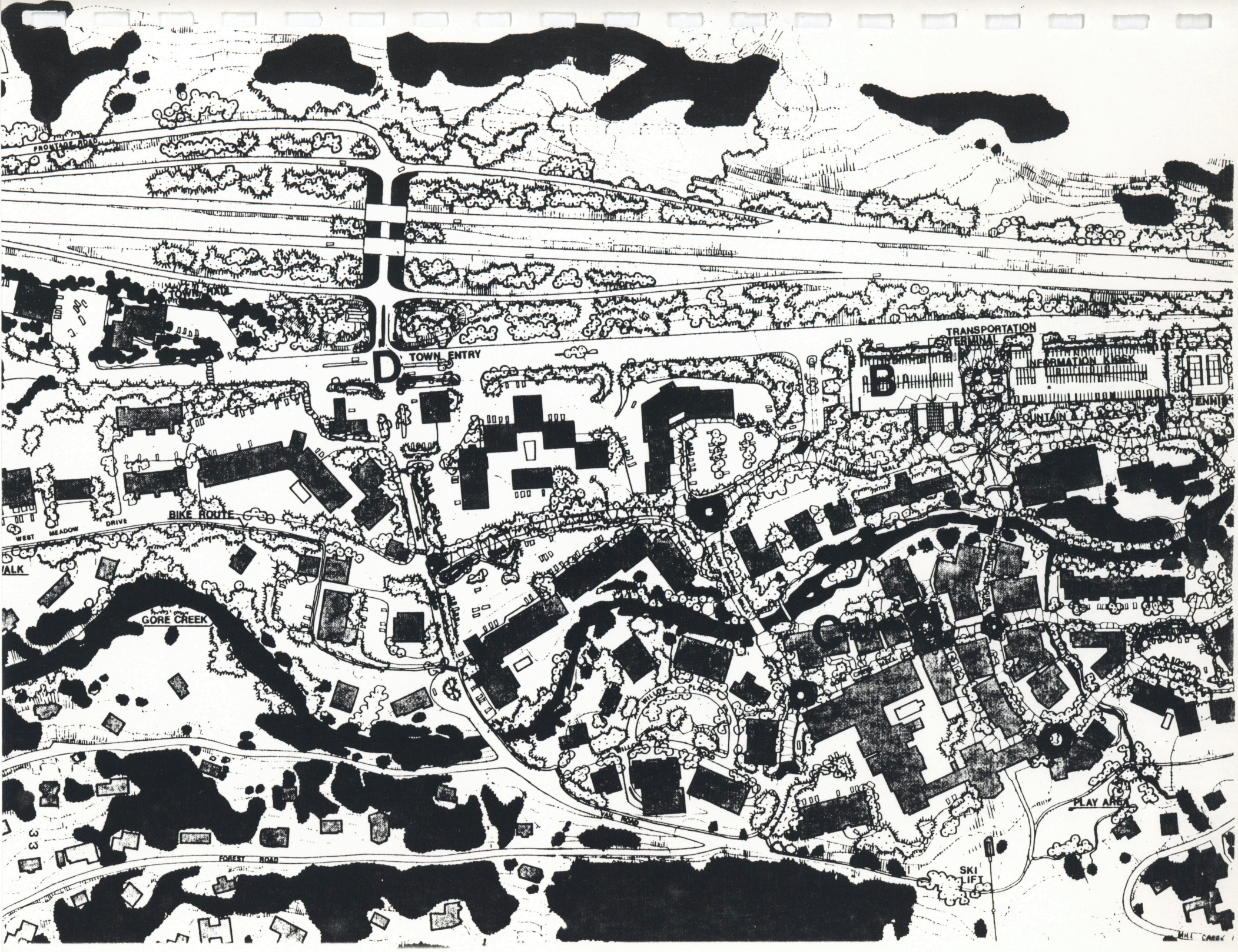
Roys
Hana
Beck
Abey

TERMINAL & PLAZA

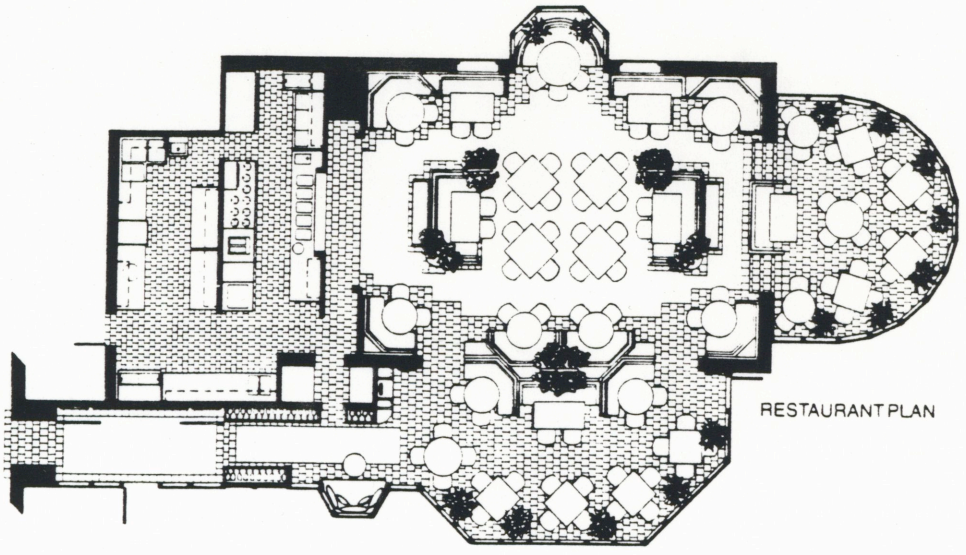
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TIC COMPLEX



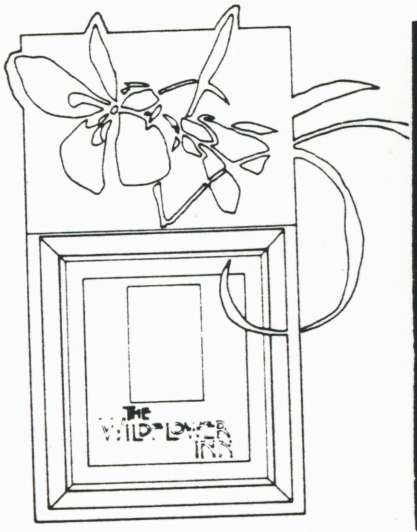

FRONTAGE ROAD
TOWN HALL
TOWN ENTRY
TRANSPORTATION TERMINAL
INFORMATION KIOSK
FOUNTAIN
BIKE ROUTE
WEST MEADOW DRIVE
GORE CREEK
PLAY AREA
SKI LIFT
FOREST ROAD

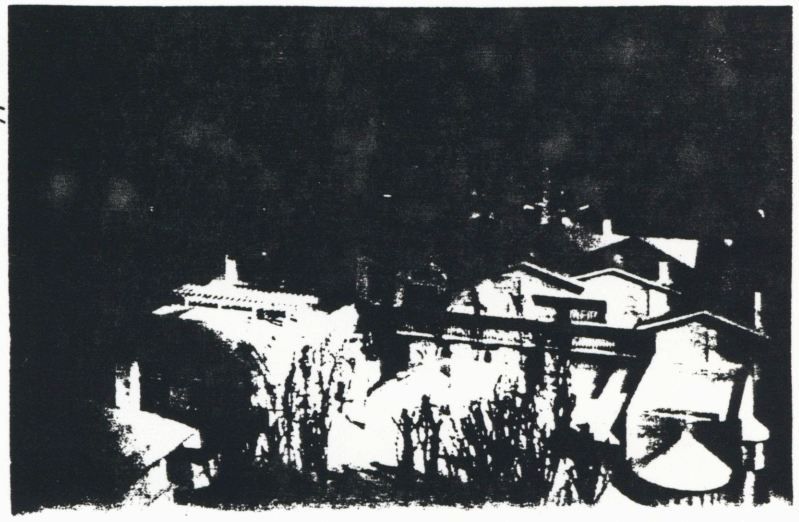
Platner in Vail

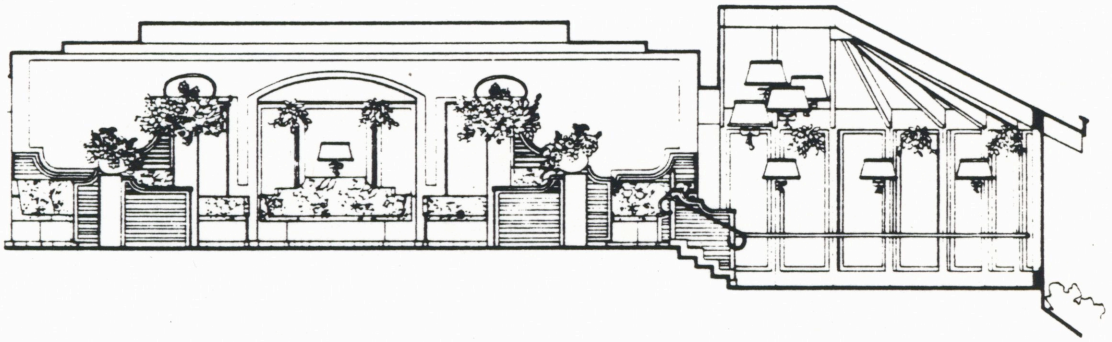


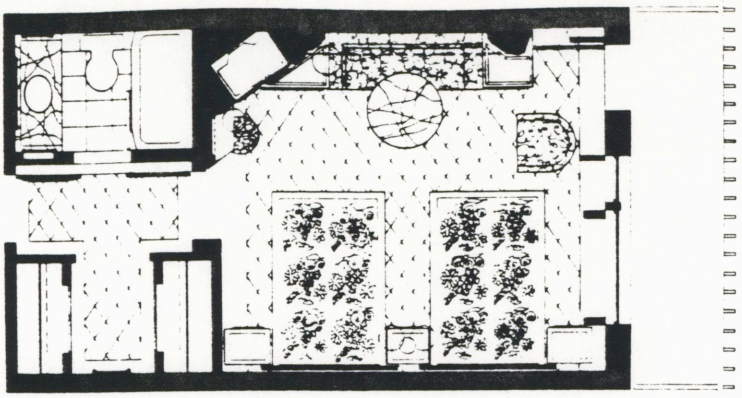
RESTAURANT PLAN

Below: Photograph of model shows existing Lodge tower in background, restaurant addition at right, and new guest room wings at left and center. These new low elements shelter a courtyard used for outdoor dining.

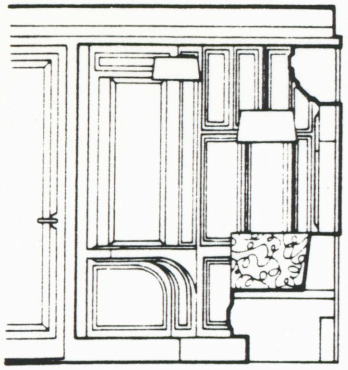




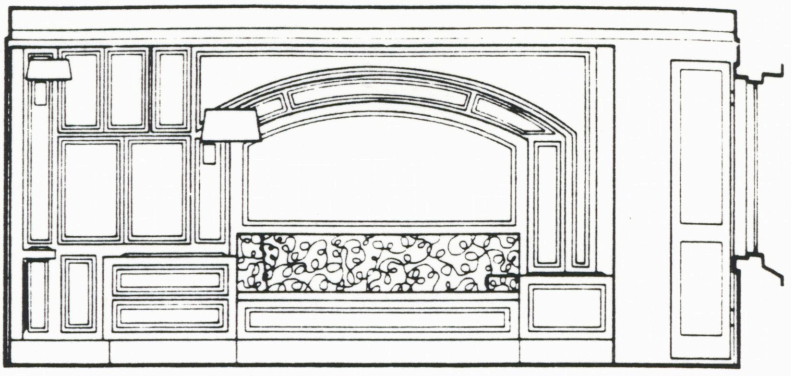




GUEST ROOM PLAN



SECTION AT DAYBED ALCOVE



ELEVATION OF CABINETWORK WALL



DEER VALLEY, UTAH

In 1981 the destination resort of Deer Valley, Utah opened to the public. The 6,750 acre resort is adjacent to Park City, Utah and the Olympian skier, Stein Ericson is currently the director of skiing.

The resort is not built on the valley floor but on a flat, protected ridge at the 8,100 foot level. The main commercial area called Silver Lake is accessible by bus to day skiers only. Those who stay at one of the several lodges are required to park their cars for the duration of their stay.

The $34 dollar a day adult lift ticket is the most expensive in the country. At the resort there is one employee for every seven people that stay at the resort. The employees are all easily recognizable as they all wear coordinated uniforms.

The main lodge offers easy access to the restrooms by means of an elevator from second story functions. All lodges respect a ban on advertisements of any kind. Their are , instead, monitors strategically place around the resort that list waiting line times at the lifts as well as at the restaurants.

The chair lifts are all weatherized with padded seats and an always stocked box of Kleenex. The lift lines are virtually non-existent as their is a first come first served limit of 3500 visitors on any given day. On the slopes themselves, there are pay phones placed along the length of any given run.

Roads and driveways (to the garages) are cleared as fast as the snow falls.

Restaurants offer fresh-squeezed juices and crystal pitchers of milk at each table for breakfast at well-distanced tables. At lunch a person can find asparagus-cum-carrots in dill vinaigrette on the menu daily and at dinner truite-en-croute is a regular.

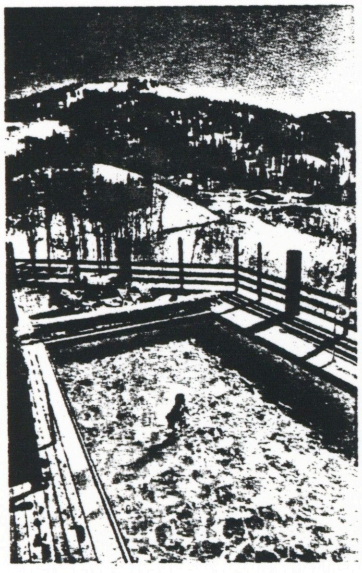
The person in charge of these restaurant operations is Bill Nassikas who studied at the hotel schools of Cornell and Lausanne, and apprenticed in a succession of small restaurants in Switzerland.

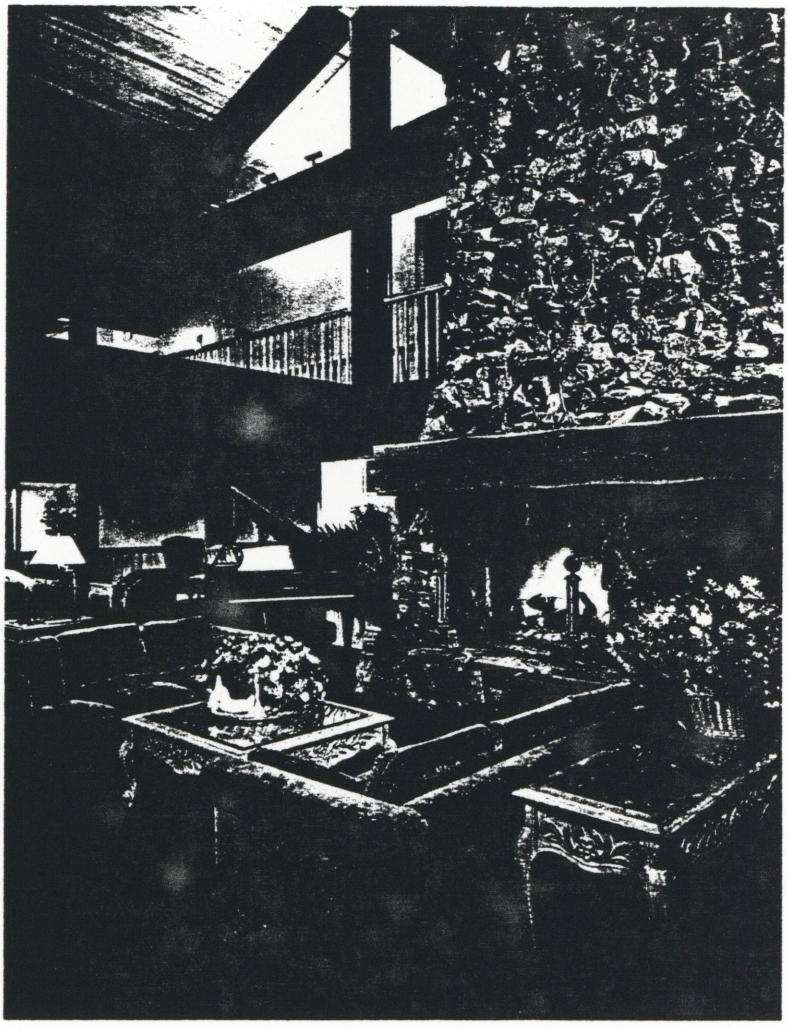
One to four bedroom condominiums at Deer Valley can cost between $200-600 per night. Stein Ericson Lodge suites can cost $195-335 a night. A survey of the guests at the resort reported a mean annual household income of $101,000. One third of the guests fall into the $150,000 and up category.

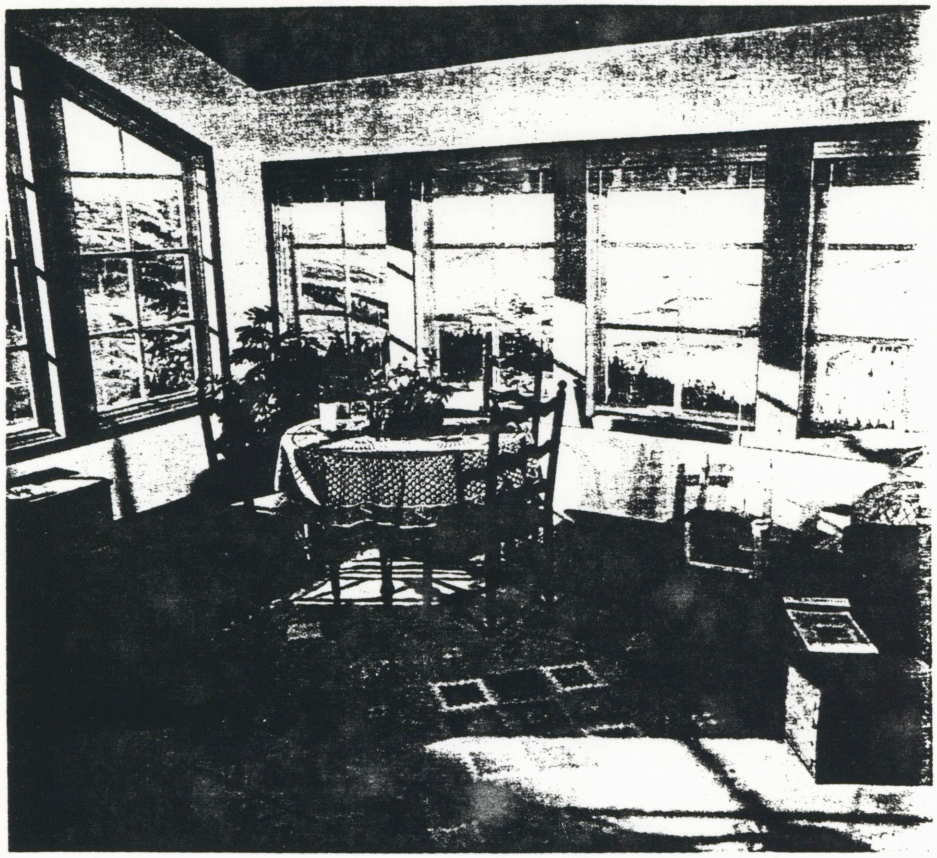
It is this attention to details and the lucratively elite clientele that makes Deer Valley a destination resort.

La Dolce Utah

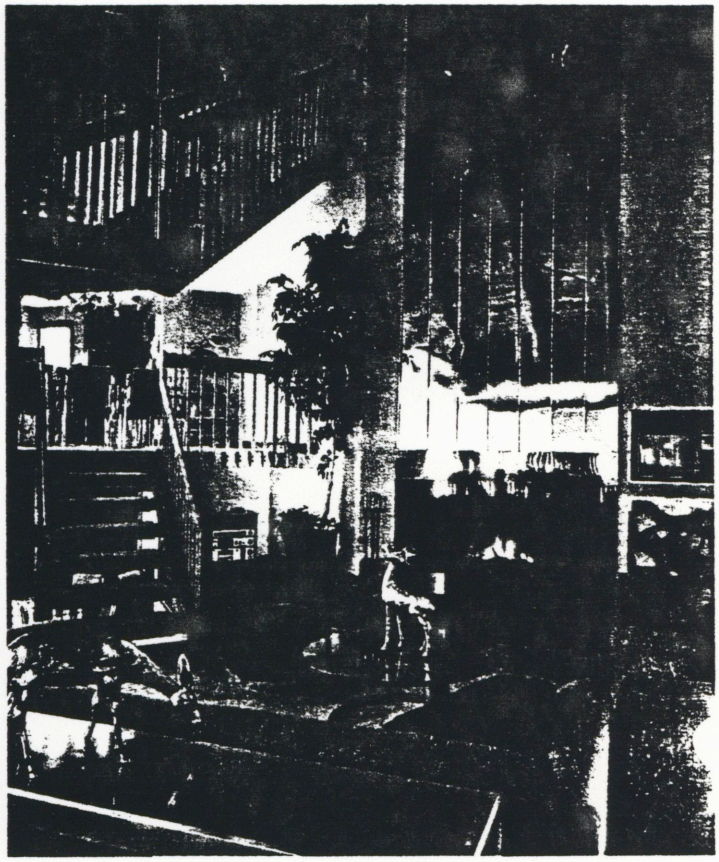
It's called Deer Valley, folks, and its sculpted powder slopes, posh digs, and mean cuisine are drawing the well-heeled to the Wasatch.

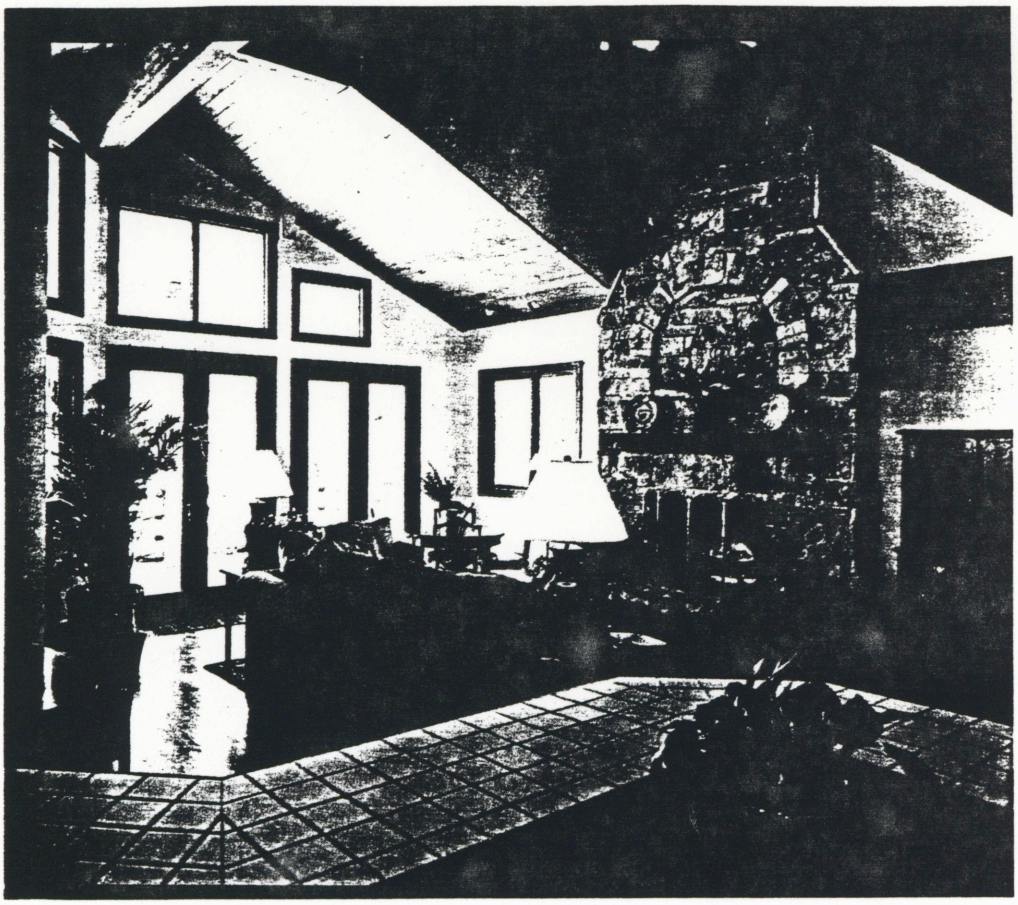


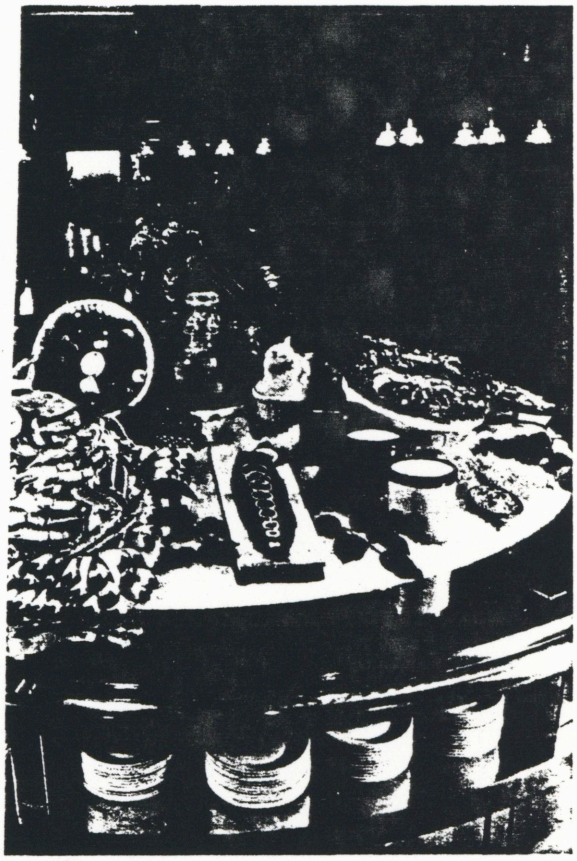












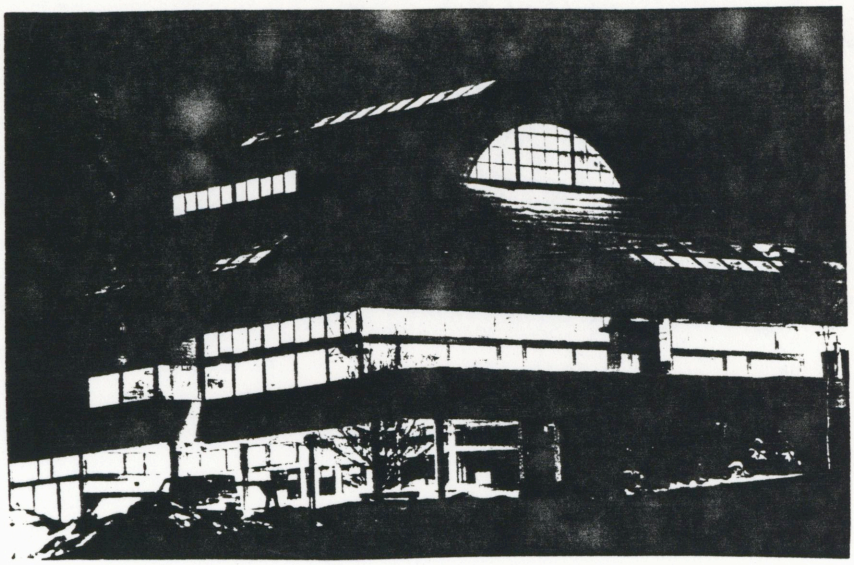
SUGARLOAF, MAINE

Sugarloaf USA is located in the interior of Maine near the Allagash river in a remote area. The resort is small and out of the way. Small lodgings are offered with small retail shops. There is a cafeteria in the main lodge but restaurants are scattered along the roadside a few miles from the resort that have acheived rave reviews. The resort appeals to locals but is currently working on out of state clientele as they are currently fighting to avoid bankruptcy.

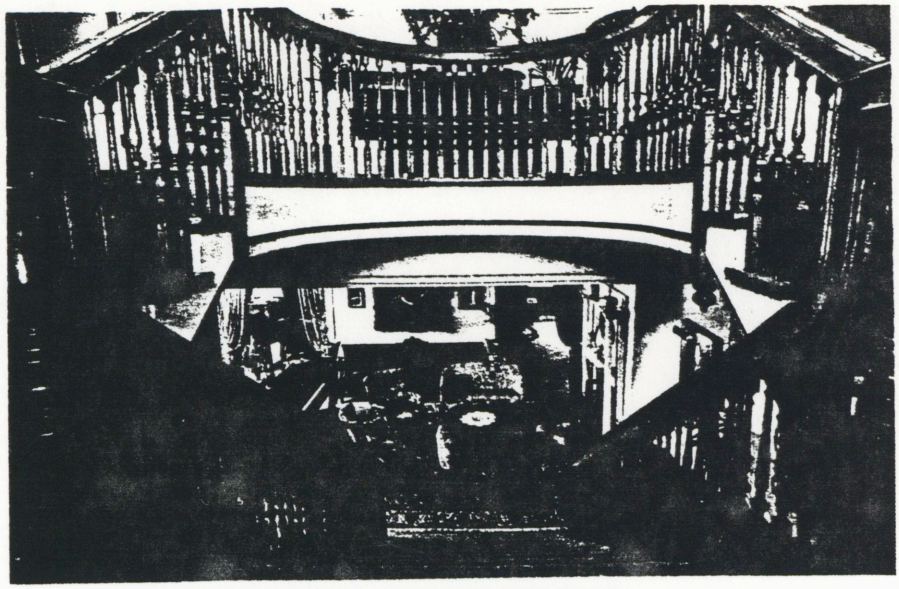
Small, renovated, New England farm houses serve as the preferred lodgings to wealthier patrons of the resort but, again, they are located several miles from the main lodge.

Sugarloaf offers winter sleigh rides and scenic gondola rides in the summer but does little else in the name of appeal to the year-round tourister.

As a result the resort has its appeal but falls short as far as destination resorts are concerned.









SUGARLOAF/USA, MAINE

HOW TO GET THERE: By car: From Boston (200 miles), New York City (500 miles), and points south, take I-95 north to Augusta, Me.; follow Me. 27 to U.S. 2 to Me. 4 north through Farmington; then take Me. 27 north through Kingfield to area. From Montreal (190 miles) and points west, go east on Can. 10 through Sherbrooke to Lenoxville; take Can. 212 south/east to Woburne and the border; then follow Me. 27 south to area. **By air:** Mountain Air Service provides an air shuttle from Boston's Logan Airport and Portland's Jetport. Ground shuttle service is also available from both points.

WHAT'S THERE: One gondola, one triple chair, eight double chairs, and four T-bars serve 56 trails and slopes, 2,637 vertical feet, and above-timberline snowfield spring skiing. Ski school, ski shop, rentals, snowmaking, extensive children's programs; other facilities include two base lodges, summit lodge, on-mountain picnic cabin, five restaurants, two bars, cafeteria, sports center, video arcade, nursery, grocery store, chapel. Carrabassett Valley Touring Center one mile away provides more than 105 km of groomed X-C trails with lessons, ski shop, rentals, guided day trips and moonlight tours, ice skating. Accommodations for 3,900 at mountainside condominums; lodging for another 5,400 nearby.

WHAT IT COSTS: Lifts: Adult all-day, weekends, $25; child (12 and under), $16; 6 and under ski and rent free; multi-day and package tickets available. **Lessons:** Group (90 minutes), $12; private (one hour), $25. **Rentals:** Skis/boots/poles, one-day adult, $15; child, $12.

INFORMATION: Sugarloaf/USA, Carrabassett Valley, Kingfield, Me. 04947; (207) 237-2000; reservations, (800) 451-0002 (out-of-state), (800) THE LOAF (in-state).

BIG SKY, MONTANA

Big sky was originally conceived of as a dream of Chet Huntley, the famous NBC News broadcaster. He planned it to be Montana's only destination resort. It would contain a golf course, tennis courts, pools, horseback riding, ski hills, cross-country skiing and a host of other activities.

Shuttle busses carry people from the valley development known as The Meadows to the Mountain Village. as an option, many people choose to drive to the mountain lodge and park in one of its over 1000 parking spaces. As a result, many of the visitors find themselves hurtling between the mountain and the meadow to partake of the services that they require.

In addition to the problems of transportation is in the market's appeal itself. 43% of the property owners at Big Sky are Montanans. This virtually eats up the total market for second home owners in Montana as 56% of all Montana owners are from towns of a population of less than 10,000. 37% of Montana owners reported an annual income of less than $20,000. Only 3.6% reported an income exceeding $80,000.

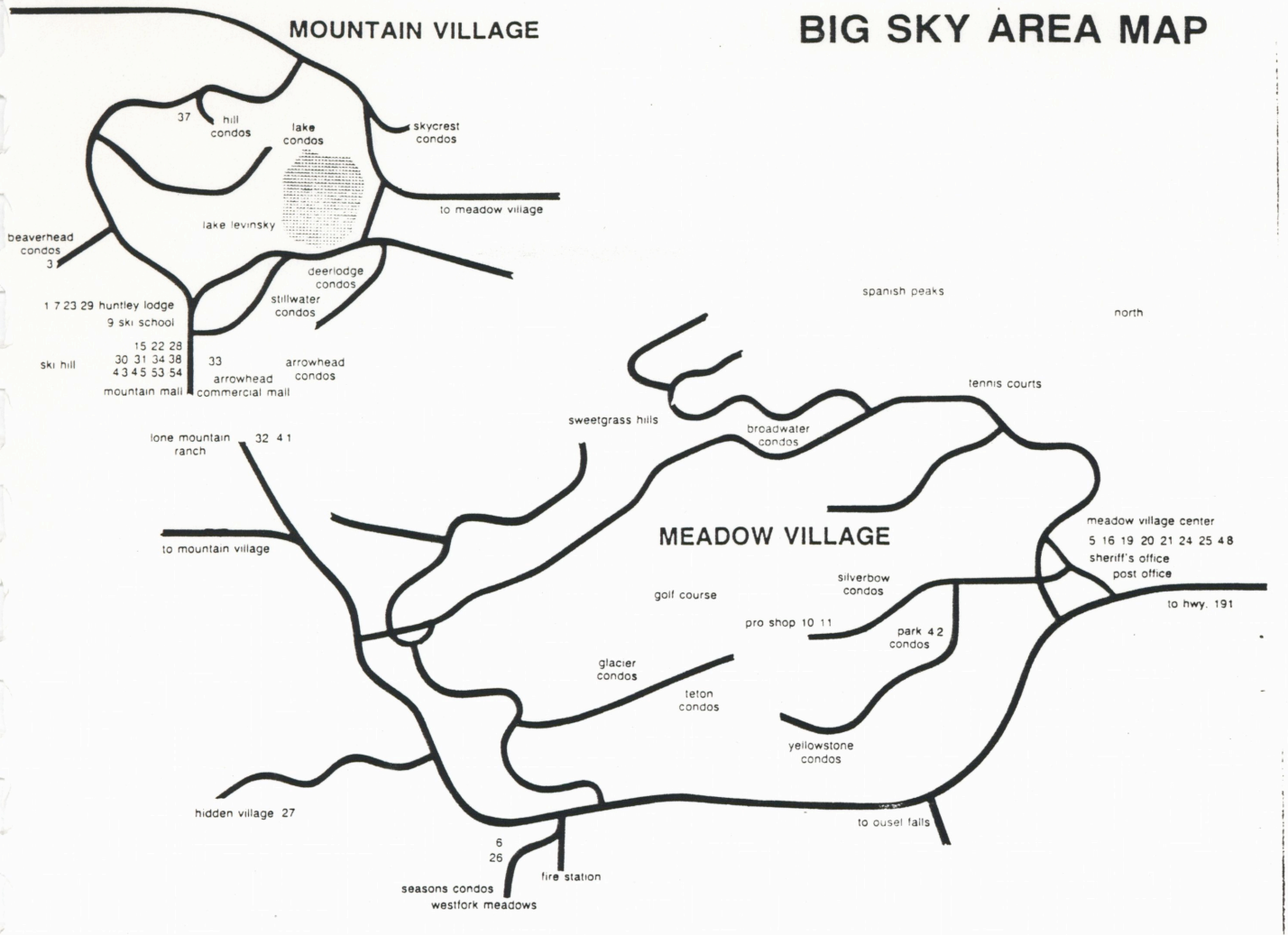
In planning the base lodge their were several considerations that directly affected the success of the resort. The northern latitude and the shadowy site conditions discouraged exterior retail development such as at Aspen. Thus, the base lodge was conceived as one entire building. The first phase (the present

lodge) contains 37,000 square feet of leasable space.

Perhaps the most successful aspect of Big Sky lies not in any functions associated with downhill skiing but in a cross-country ski development known as Lone Mountain Ranch. The ranch contains 17 cabins and 65 kilometers of groomed trails .

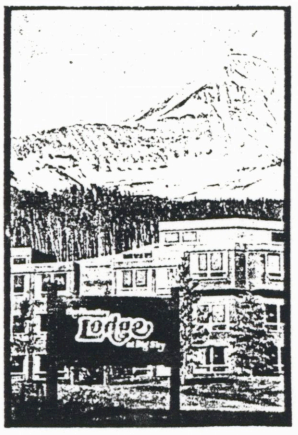
In all though, Big Sky is unsuccessful and very poorly marketed.

BIG SKY AREA MAP



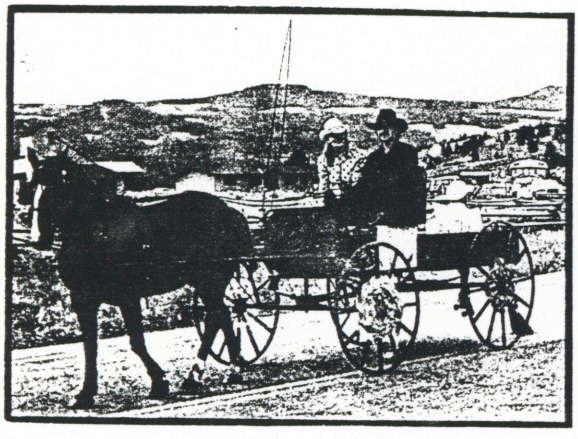


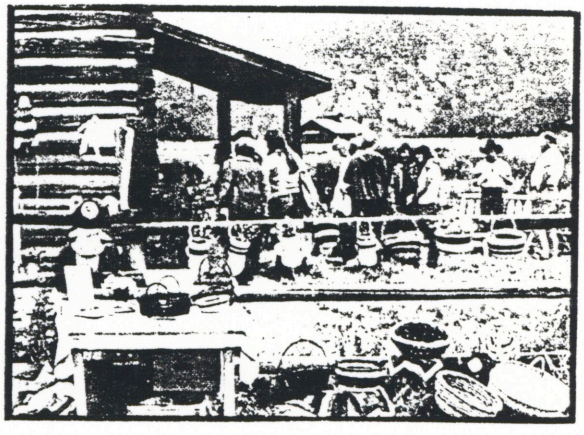








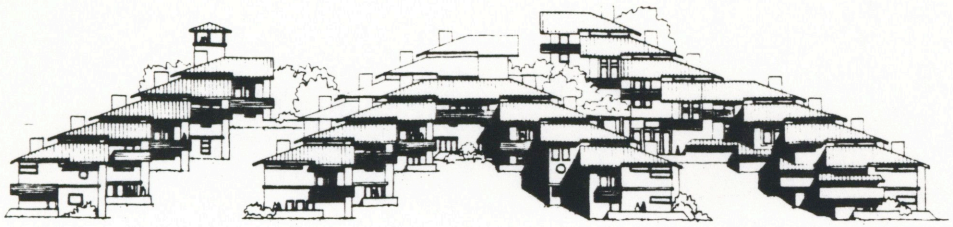




EAGLERIDGE COMPETITION

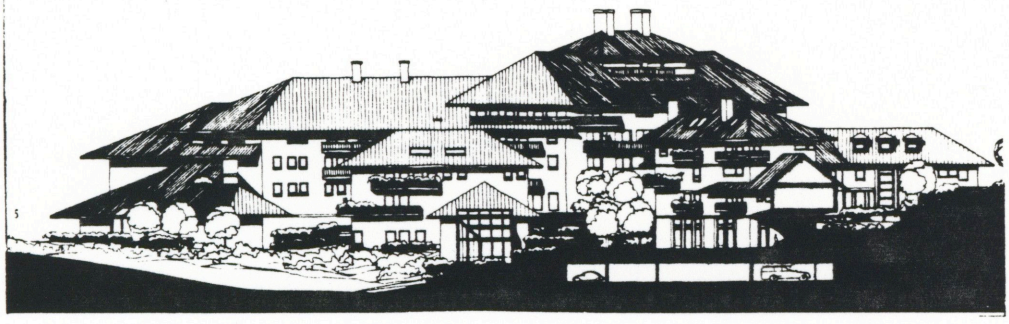
Eagleridge, Colorado is an up and coming ski resort. Today the foundations for new proposed developments have not been laid but in keeping with curent ski industry trends the management has sponsored a design competition for the redevelopment of the area. I am showing these award winning schemes from the competition not as realistic studies but as relivent case studies as applied to urban design. There are valuable lessons to be learned from the schemes.

Many of the schemes relate to the topography but in all instances special consideration is given to the mall area adjacent to the main lift. Some are more modern proposals than others but, in my opinion, all are successful.

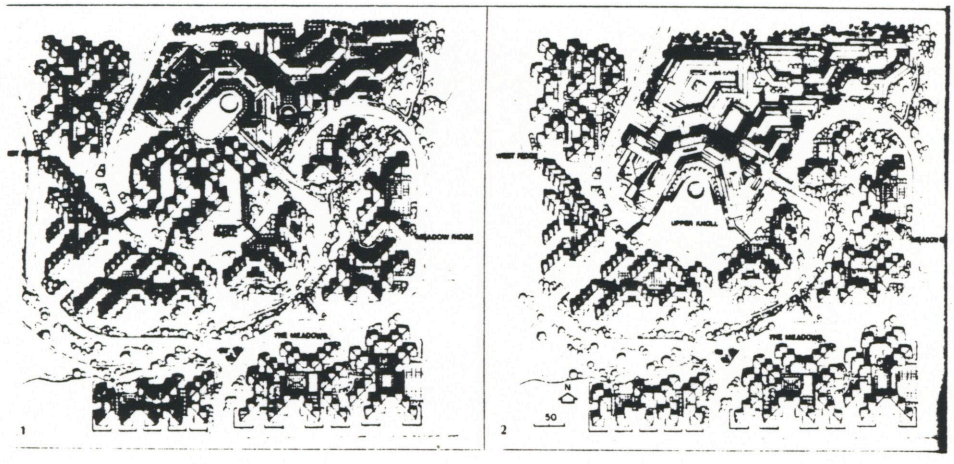


WEST ELEVATION
4

PREMIATED DESIGN GOODY, CLANCY & ASSOCIATES



5



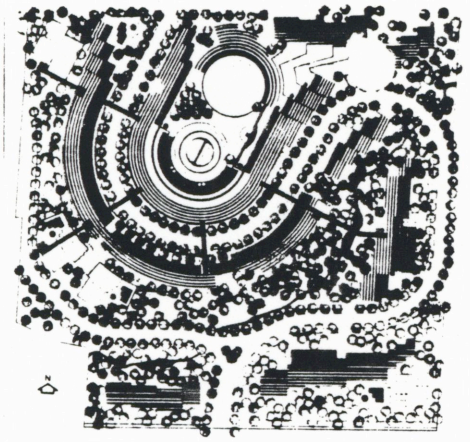
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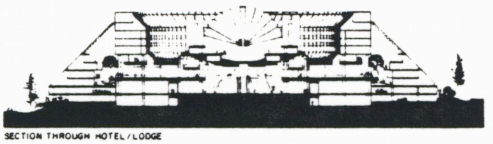
LUN CHAN ASSOCIATES





WOU INTERNATIONAL

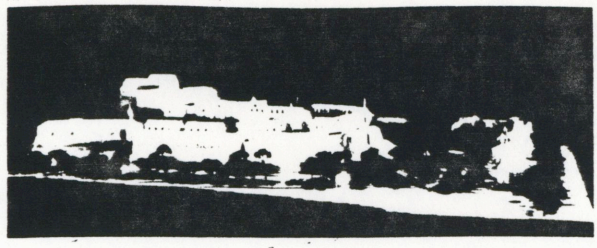




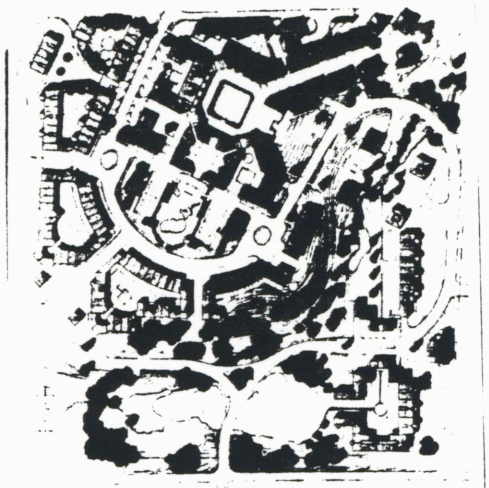
SECTION THROUGH HOTEL / LODGE

FRASER THOMSON AND ASSOCIATES

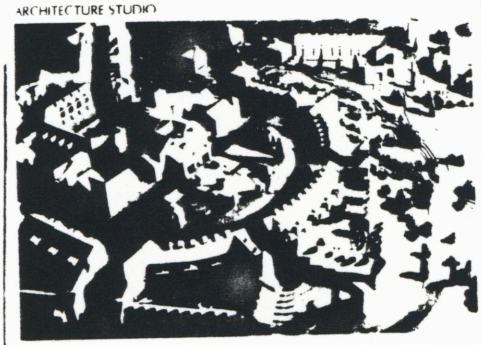








ARCHITECTURE STUDIO





Kirkwood Meadows

Kirkwood Meadows has some very practical applications in reguard to the design of Ski Yellowstone. Kirkwood Meadows, California is a new resort that is in its initial stages of design. It currently has 60 units of housing developed, but it is predicted that that number should climb to 2500 with an expected population of 13,000. The lodge is designed in a manner that will allow for future expansion and does it in a straight forward, over simplified manner.

The theory that the developers utilized was one that could easily be reversed. They determined that the lodge should be designed and built first so that the later stages of development such as condos could be added later. I believe that Ski Yellowstone wants to take this action one step further by not only being the initial phase of the development, but also being the dictator of architectural for and expression around the resort community.

In all, Kirkwood Meadows has been successful, but the fact that the lodge was designed and built in six months speaks a lot of the fact that it looks and feels like a quick developers scheme to make money. Had more attention been given to form and detail it may have been a much more successful project. In plan though it is a study of efficiency as circulation, exterior relations and servicability are all quite well thought out.

ski resort base lodge

KIRKWOOD MEADOWS

v Sherwood Stockwell
ull Field Volkmann Stockwell, architects

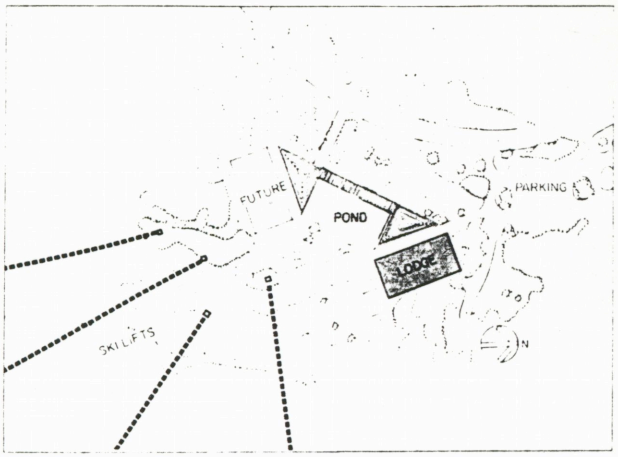
irkwood Meadows Lodge at Lake irkwood, California, initial building in an entirely new ski area, is good example of what it takes to et a mountain destination resort into operation. At the moment, Kirkwood has only 60 units of ousing, not enough to attract the olume of skiers it would like 2500 to optimize the potential of the uphill ski facilities. There is always a chicken-and-egg dilemma in a resort of this kind: building housing first and hope it will sell and thus support the ski rea, or build the ski area in the ope that this will encourage others to build the housing. Kirkood's developers favored the latter, and the two-story day lodge became Phase I of the new resort.

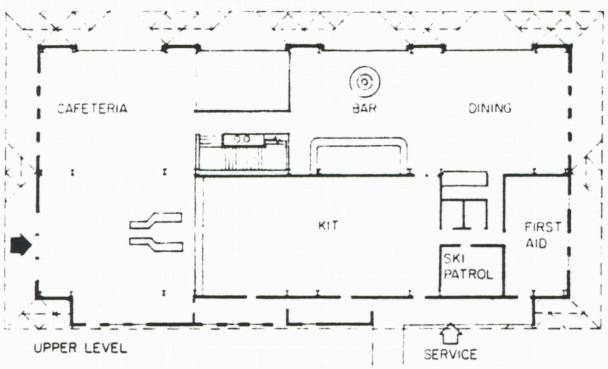
The lodge was designed and built in less than six months, and in operation, while construction of other new resorts was closed down for the winter.

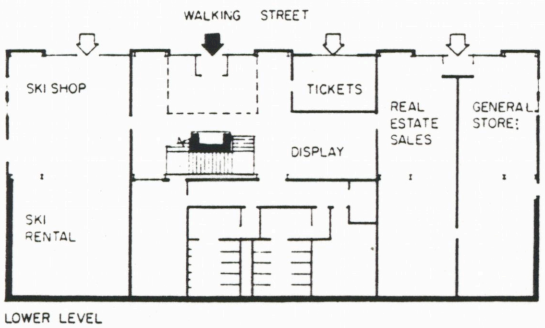
It is a steel frame, single-roof tructure supported by three-dimensional trusses tied to steel olumns. The truss angles out om the building walls to the dge of the roof, and this sloping plane is glazed to provide a lareless, splendid view of the nountains. The roof is flat, designed for a snow load of 250 pounds per square foot. Melting now drains off through pipes in arm interior walls so snow cannot slide onto people.

Restroom facilities (with vice as many fixtures for women s for men) are on the lower level.

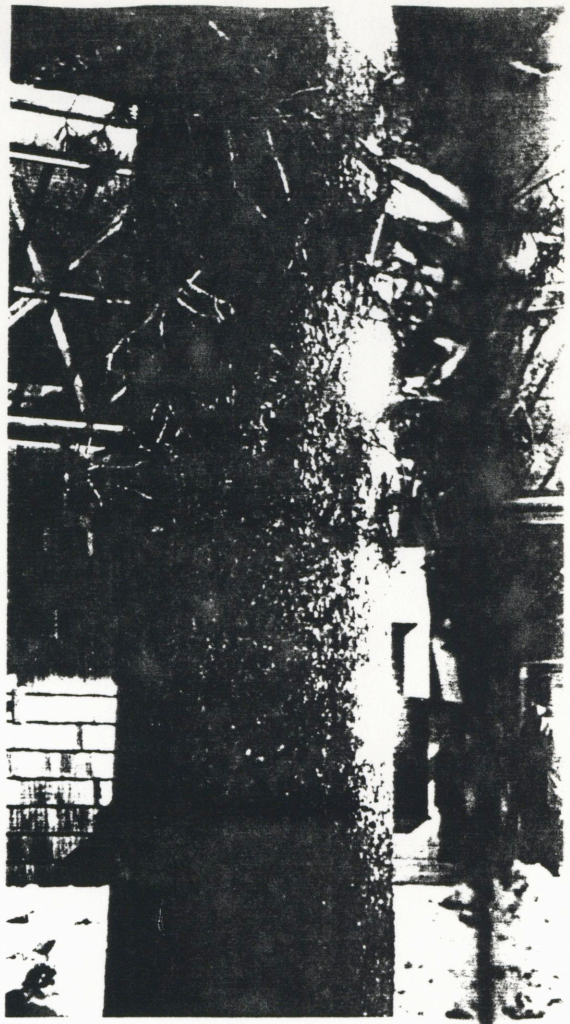
Because the kitchen must erve a large number of people in very brief period, we designed it or high efficiency and ample storage space, and located it on e upper level where it could erve both cafeteria and restaurant-bar. We used readily available materials and equipment, because in an out-of-the-way place, eplacement can be a big problem. Equally important is the capability to change as the resort exands its operation.

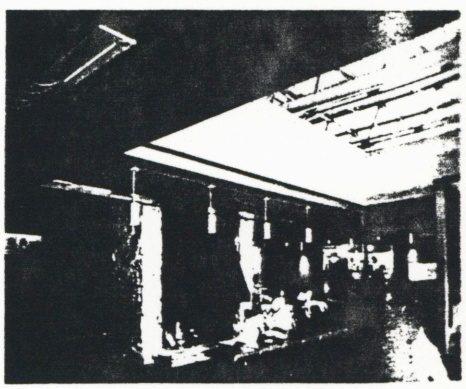






KIRKWOOD MEADOWS LODGE, Lake Kirkwood, California. Architects: *ull Field Volkmann Stockwell—Sherood Stockwell, partner-in-charge; H.C. Bruce Jr., project architect.* Engineers: *Hirsch and Gray* (structural), *arion-Cerbatos & Tomasi* (mechani-l/electrical). Contractor: *Brunzell Construction Company.*









James K.M. Cheng photos



Northstar at Tahoe

Northstar at Tahoe is unique in that it was initially conceived by developers that worked closely with the architects. It is also unique in that the site was sensitively addressed for several reasons.

First and foremost is the fact that the 2200 plus acre site was originally a clear cut timber site. This meant that the landscape had to breath to allow for repair of eroding soil. The developers responded by allowing the density of the building site coverage to be very niminal. It worked quite well actually in that one has a very secluded feeling while on the site.

The second factor that contributed to the overall scheme was actually another response to the delicate site. The parking had to be located far from the main lodge and that meant that pedestrians either had to hoof it to the lodge or that a shuttle bus system had to be provided. What actually happened is that both transitions were provided. A pedestrian mall was built around several cleverly spaced buildings and a shuttle bus shares a service road. The parking, I feel, actually enhanced the design as it is not visible from the ski area thus allowing for a more natural setting.

Land use planning and design for

SKI RESORTS

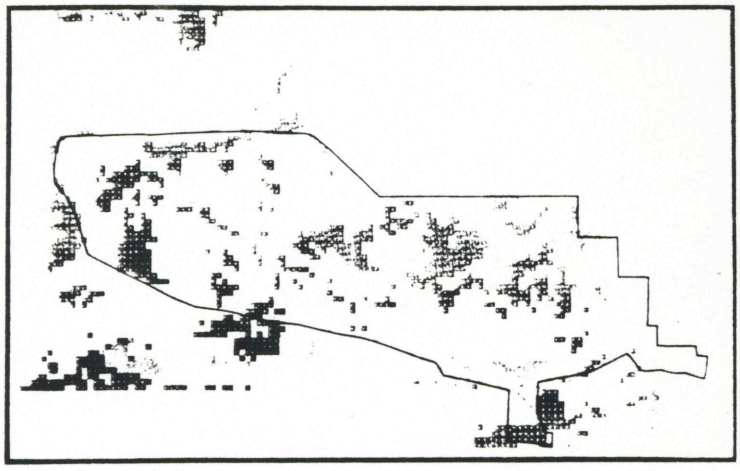
Ski resorts serve skiers and skiers need lifts and trails and places to stay in, and all these structures require spaces cleared of vegetation. Ski resorts are in the mountains, and mountain scenery has a tendency to be beautiful and fragile. What happens when skiers discover good snow and good places to ski? All too often, skiers' needs are served without interest in or concern for either the beauty or the ecology of the countryside. But the conjunction of ski resorts and mountain landscape need not be disastrous to either. Northstar-at-Tahoe, Kirkwood Meadows Base Lodge and Elkhorn at Sun Valley—shown on the following pages—handsomely show how masterplanning for maintenance of environmental and ecological and economic values, and creative architectural design, can bring the man-made and the natural into a harmony of beauty and use.—E.K.T.

Henrik Bull



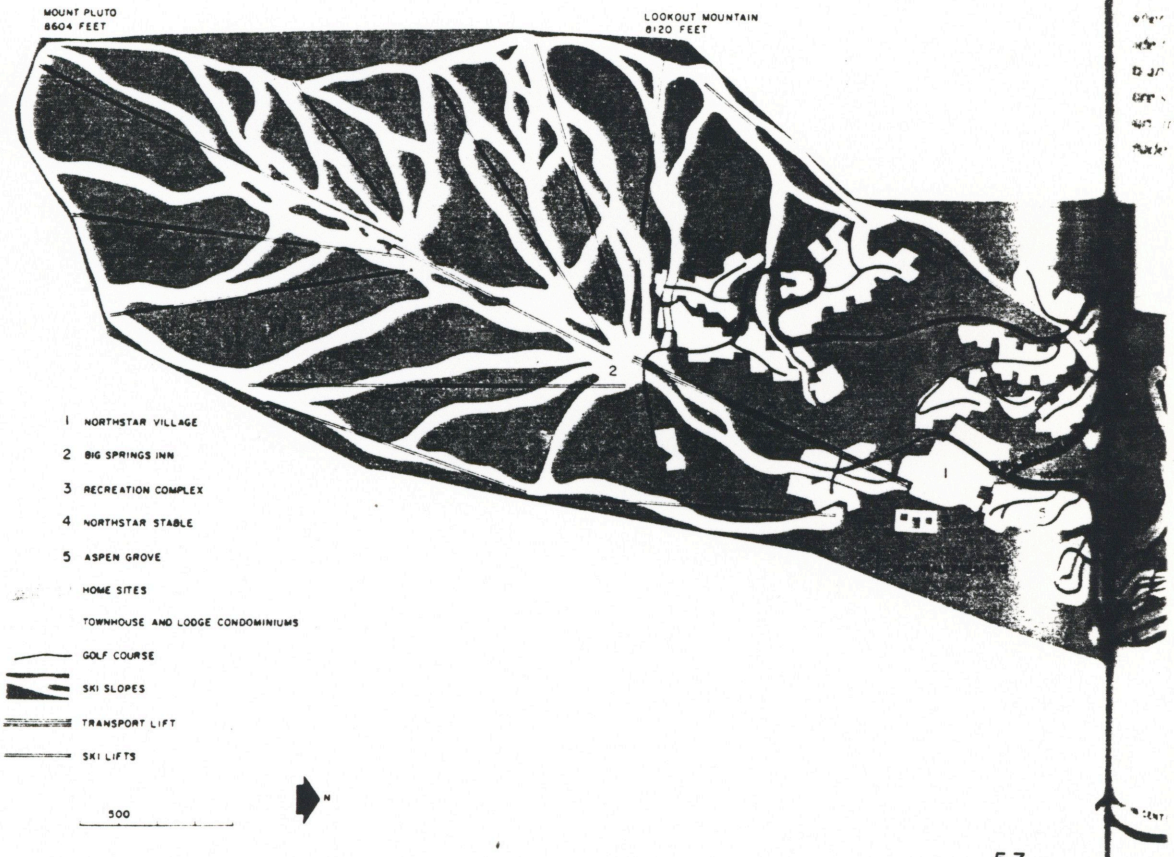
NORTHSTAR

Sierra Nevada, six miles north of Lake Tahoe, on the heavily forested slopes of 8600-foot Mount Pluto and 8100-foot Lookout Mountain. This is ski country —at least 20 other ski areas are within the immediate vicinity— but it is also summer vacation country, and it was inevitable that some kind of development would eventually take place on this land. Fortunately, the developing company—Trimont Land Company, a subsidiary of Fibreboard Corporation—recognized the property's natural beauty as its major asset. It set out, with a zeal and a thoroughness rare for land development projects, to devise a land use plan which would maintain the environmental and ecological—and the economic—values of their land. The forests that cover the mountainsides are not virgin preserves; they had, in fact, been logged for many years, but without devastation. Since 1946, when Fibreboard bought the property, logging had been carefully planned to maintain the landscape, minimize erosion and foster forest regeneration. Detailed studies made during this period of the ecology of sample forest plots—including tallies of trees by size and specie; extent of regeneration of vegetation; hazards like wind, lightning and fire; insect attacks, diseases and parasites; water and drainage—provided rich background data when development of 2500 of the company's acres was decided upon in 1966. From the beginning, Trimont set high goals and geared both thinking and processes to implementing them, with continuing scrutiny of plans to assure that the project would not veer from the original intentions. From site feasibility studies and land use proposals, it was clear that the best development potential was in outdoor recreation, and the best economic potential was in maintenance of a favorable environment for recreation. The company—and its outside consultants (Paul Zinke, forest environment; Eckbo, Dean, Austin & Williams, land planners; Bull Field Volkmann Stockwell, architects and town planners; Wilsey & Ham, engineers)—studied the effect on the environment of each kind of land use in the determination that Northstar should have a minimum ecological impact on the area. Site analysis by computer—of slope angles, exposure to sun and

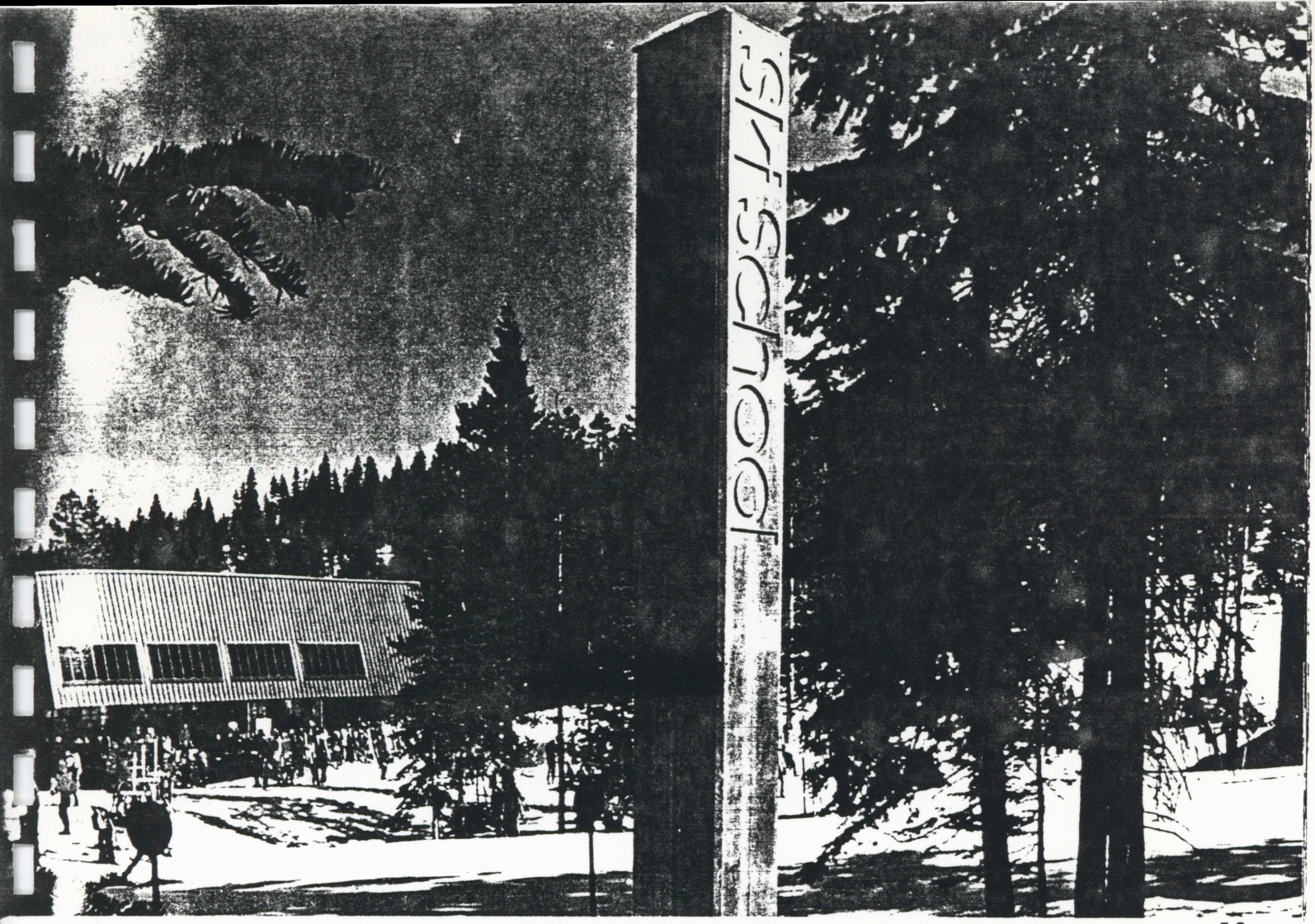


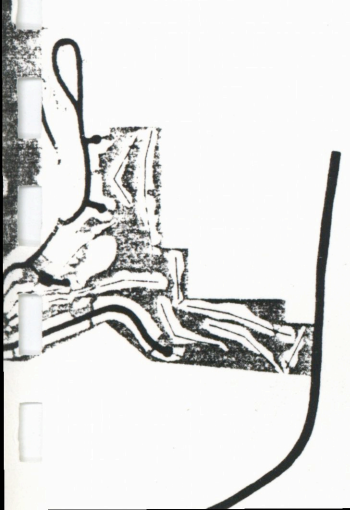


James K.M. Cheng



most striking feature of the Big ...gs Day Lodge, part way up ...t Pluto, is its blue-enameled alu...m roof, designed to take care of ... problems through its forms. On ...de it is so steep that snow can ...uild up on it; this is the "front," ...re people gather. On the other ...e pitch allows snow to slide off ...a never used by people. Be... ...ils were selected, studies of ... ...ity for every month were ... ...mputer printout, left).



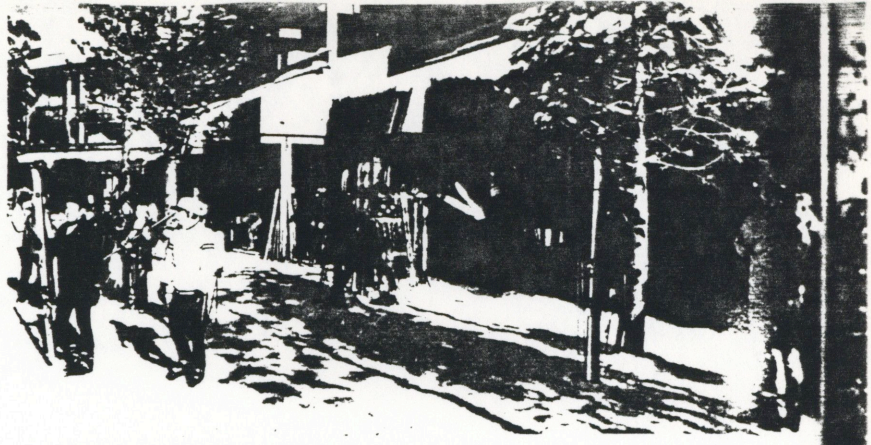


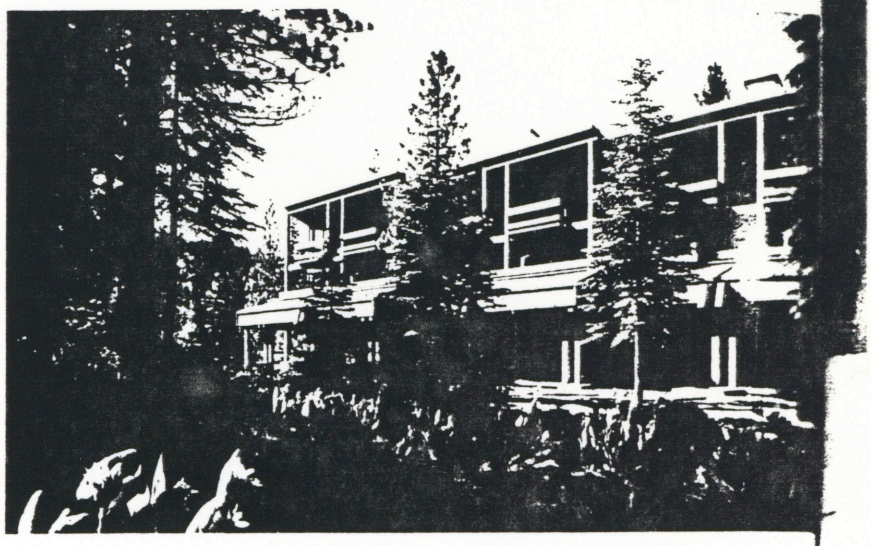


tree species, plant variety, indigenous animals; in sum, of all possible aspects of the ecology—were developed into criteria for physical planning. Visual impact studies proved that buildings could be fitted into the environment without altering it and, indeed, so that they would be invisible from anywhere outside the property. Ski trails and runs can be seen only from the air. Even within the property, no more than three buildings can be seen at a time, and nowhere is an over-all view obtainable. The sense of seclusion belies the density of development (11 units per acre in the condominium area, 48.4 units per acre in the Village). "It is not quite true that no trees were cut down," points out architect Henrik Bull, "but it looks that way." Even eight-inch trees growing beside a doorway's location were saved.

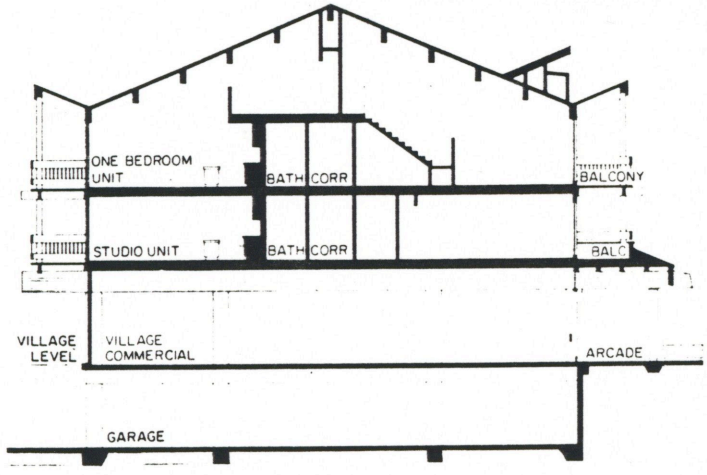
One of the primary design goals was to create a completely pedestrian place and, with remarkable success, the architects have done this. Cars are parked away from the village and condominiums, and everyone walks (or takes one of the two minibuses which run through the area and also meet planes and Amtrak at Truckee, six miles away). Six hundred cars can be parked in a large lot just outside the village, laid out to follow the contours of the site, and well planted with trees that will eventually hide it.

Some 400 condominium units have been built, but the master plan provides for an eventual 3100 units and 585 houses by 1980, and a population of 13,000. Even then—if the original standards of design and planning are maintained—with only 359 of Northstar's 2,560 acres in development and well over 86 per cent of its land in open space, the character of the place is expected to be much as it is today. Since skiing is (and will be) limited to the capacity of lifts, slopes will never be crowded. Condominium owners (or their tenants) have priority over the public in use of the ski slopes, so the present 600-car parking lot outside the village will not be expanded, and parking for the future condominiums will be at their sites. Summer recreation facilities—for swimming and tennis—are under the trees outside the village center. An 18-hole golf course, part of the resort's open space, is in the individual house section.





James A. M. Cheng photos



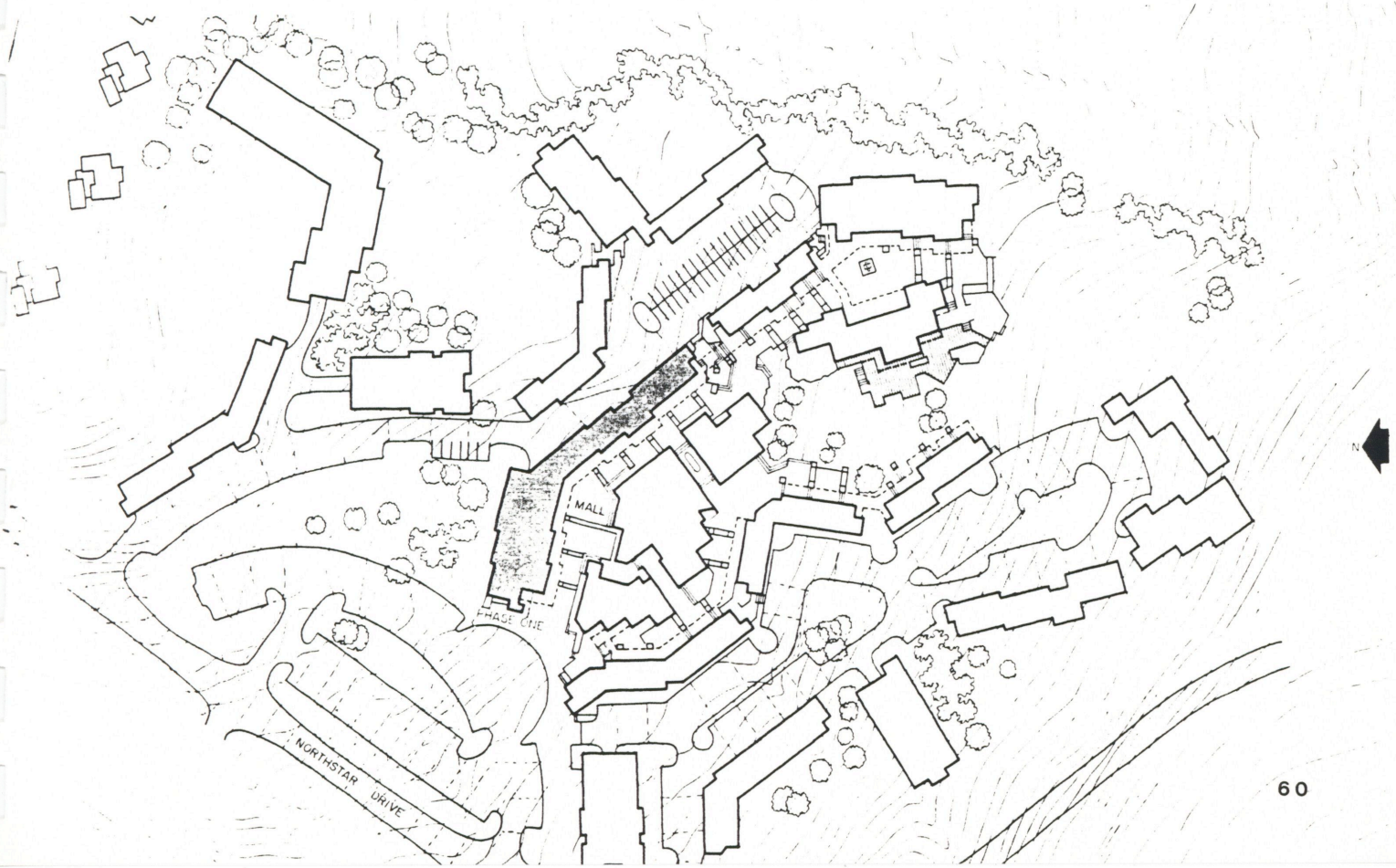
SECTION 5

Summer or winter, the Village is the center of activity for Northstar's community's "downtown" ... restaurants are on the ground ... the village buildings (one of the completed and in use), with an ... to shelter access to them. ... European-style, are two floors of ... dominium units which double as ... accommodations—studios on the ... ond floor, studios with lofts ... third. The grove of trees in the ... of the village set the height ... buildings in this area. Only ... can enter the village; all ... parked outside. A ski lift ... trails start at the village. It is des... as a lively, intense place, de... the buildings and semi-enclosed



Tom Eppert

Tom Lippert



Snow Country

by Henrik Bull, FAIA
Bull Field Volkmann Stockwell, Architects

It takes more than extra insulation and a larger furnace to design a good, tight building for snow country. The average architect, however, does just that, and even the sophisticated architect makes as grievous errors—using architectural cliches whose relevance to mountain climates is zero, and evidently expecting the weather to adapt to his design, instead of the other way around.

It is surprising how little common sense goes into design for snow country. Everyone knows that melting snow will slide on an inclined surface. But few people give any thought to where that snow will end up, and often it ends up over a doorway, a deck, or a path.

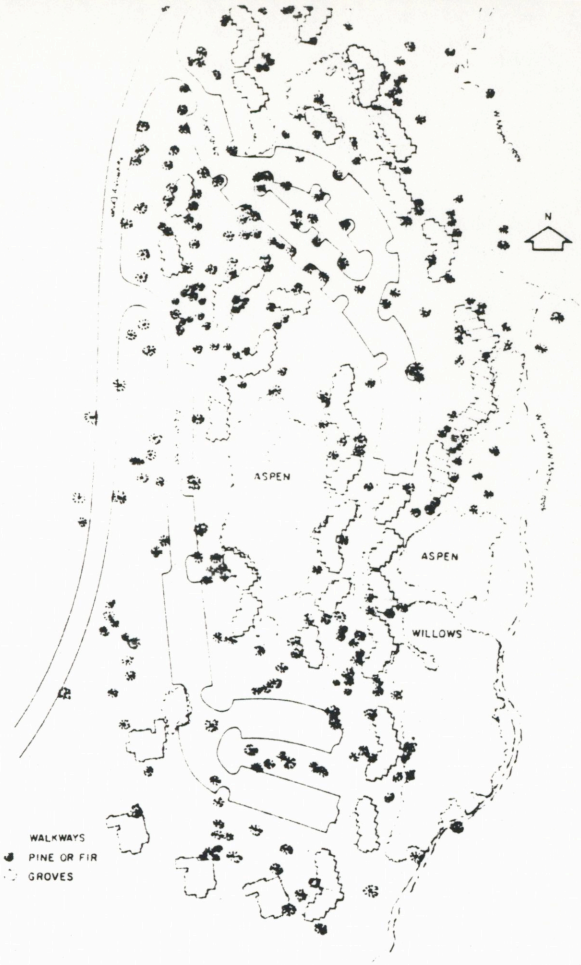
A good first rule for mountain areas is to pitch roofs away from where people are expected to be.

Ice dams, formed at eaves when heat from inside melts snow and sends it coursing down to the cold eave, where it freezes, eventually cause leaks inside or damage to the roof outside.

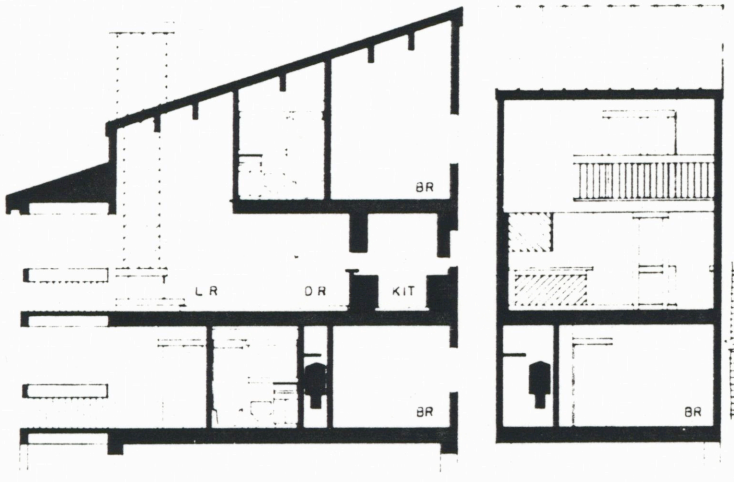
A good second rule in the mountains, therefore, is to design so ice dams can't form. This is accomplished either by using the European "cold roof"—two separate layers between which outside air flows, preventing heat transfer—or by introducing warm air into the eaves.

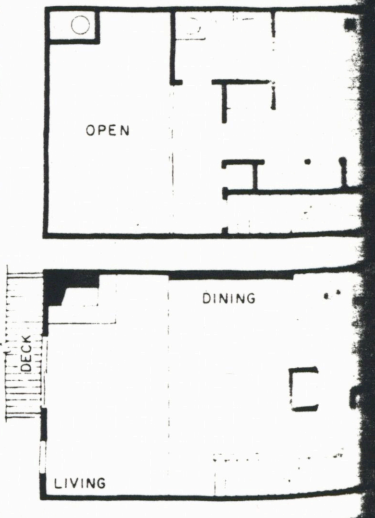
A good third rule in snow country is to design for a respectable snow load: at Northstar we used 240 pounds per square foot—far more than previous standards required. Flat roofs—as at Kirkwood (page 148)—can be effective, and sometimes may even be preferable from an engineering standpoint.

NORTHSTAR-AT-TAHOE, California. Site feasibility, land planning: *Eckbo, Dean, Austin & Williams*. Architects: *Bull Field Volkmann Stockwell—Henrik Bull, partner-in-charge; Steven Y. Kodama, project architect; Robert D. Kendort, construction administration*. Engineers: *Gilbert Forsberg Diekmann & Schmidt* (structural), *Dames & Moore* (soils), *Marion-Cerbatos & Tomasi* (mechanical/electrical). Consultants: *Mountain Marketing Services* (graphics), *The Len Koch Company* (cost), *Fred Schmidt & Associates* (kitchen). Contractor: *Murchison Construction Co.*

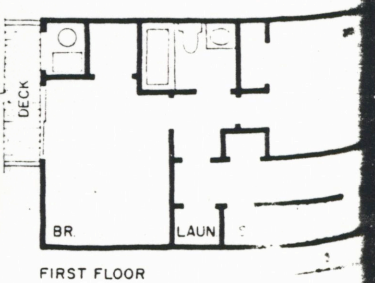










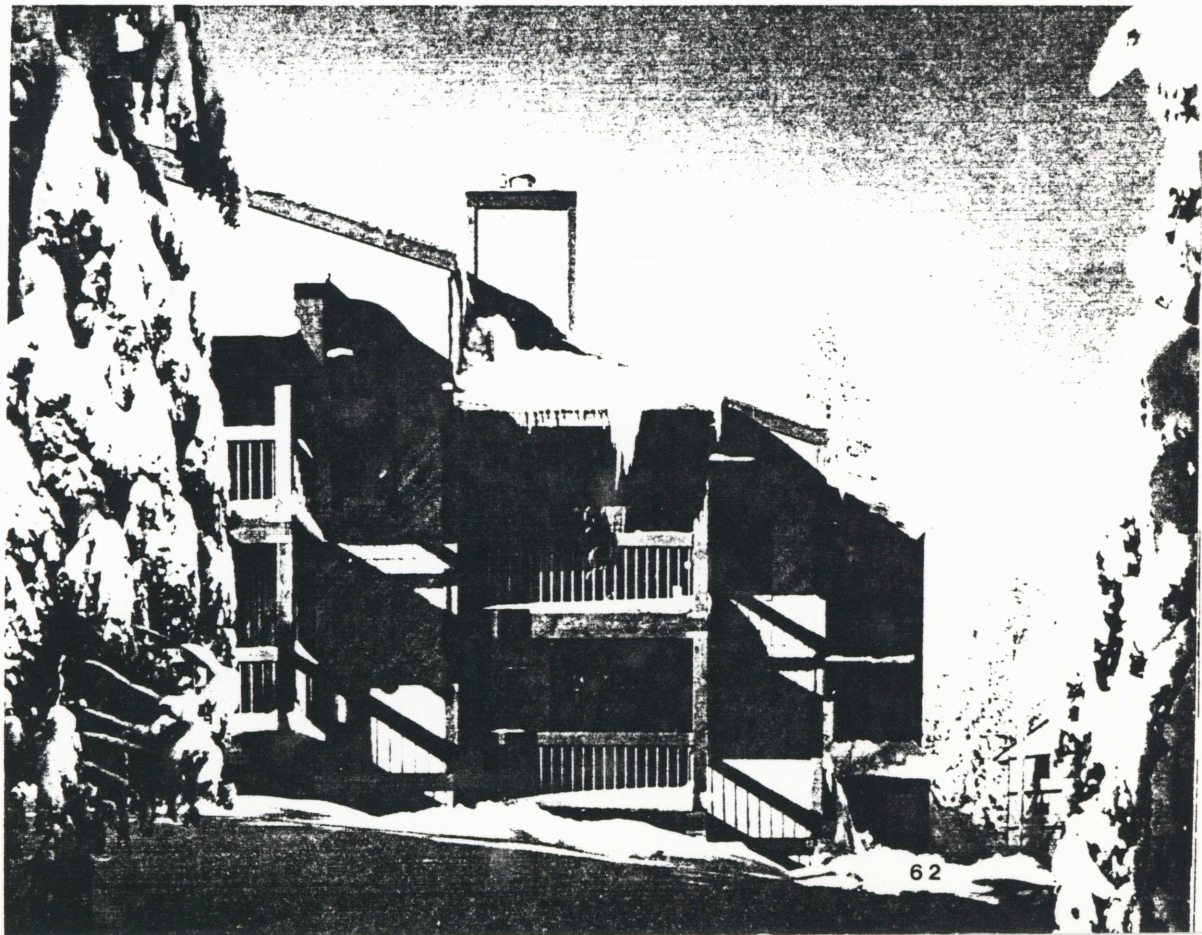


FIRST FLOOR



James K. M. Cheng photos

...most completely wooded ...architects with a ...to relate buildings ...ment. Condominium ...among tall pines and firs, ...sters, and no building is ...ntects. Many are only ...stands of aspen and ...signated for pres- ...For minimum dis- ...buildings con- ...mber and type of ...on site conditions, ...in clusters. Modular ...makes adaptation to the ...ample. "We used four ...20 different buildings," ...Ball. "Units can be ...ly or linked horizon- ...roofs don't belong ...we put three-story ...ght next to each ...oof slope serves ...n design but ... Roofs are de- ...pound snow load, ...ength than formerly ...ssary, but required to take ...snows of the Sierra. En- ...located at right angles to ...s to preclude sliding snow ...cicles from hitting peo- ...ish, diagonally-cut ce- ...are used on exterior walls; ...is stained brown. ...room.



Snowbird

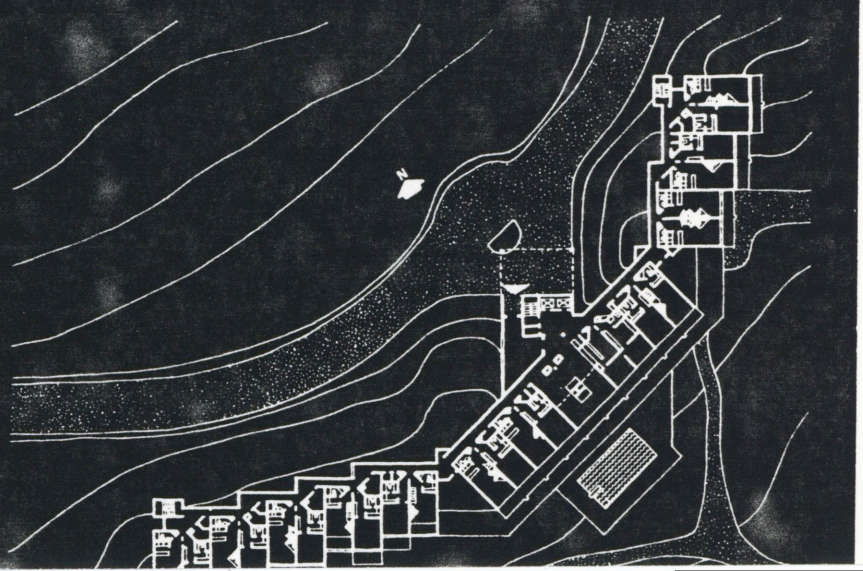
The lodges and rapidly expanding facilities gave me a wonderful opportunity to study and analyze layouts for hotels. The condominiums and hotel review here are typical for mass layouts with minimal site coverage. The hotels also show how to provide balconies while providing protection for the elements at the same time.

Issues concerning solar orientation and view orientation are also reviewed in this section.

The restaurant that is positioned at the top of the mountain is a convenience to the skier that doesn't want to be forced to the base lodge to have lunch, to warm up or relieve himself. The restaurant is capable of handling 200 skiers at a time and is typical of ski resorts that must take earthquake lateral loads into consideration. This will make a direct impact on my design as Ski Yellowstone is located in a number 3 zoned earthquake area and has a fault line running south to north directly across the valley.

These studies are also valuable in that they give me some rough square footages upon which I can base my own program to make its credability more pronounced.

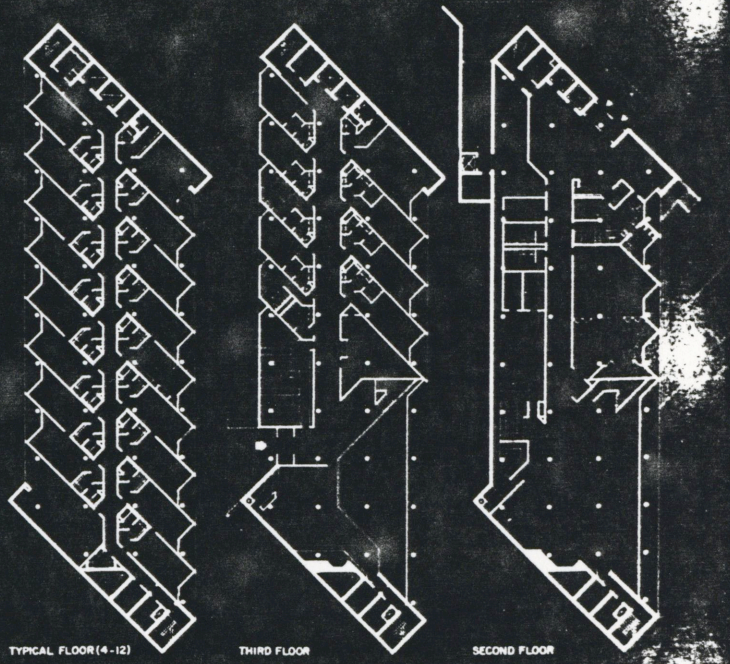
The Lodge at Snowbird (above and on the left in the opposite drawing) takes its form from the linear principles of the overall land planning. It is a 160-unit condominium hotel, and the units vary from singles to studio apartments to three-bedroom apartments with kitchens. These are arranged along single-loaded corridors (plan right) so that they all have the advantage of facing the sun and the ski runs. This was the first full-scale illustration at Snowbird of the principles of high-density residential units large enough to be a presence in the landscape, but with sufficiently low site coverage to avoid destroying it. The 140,000 square feet cover only about a half acre, and, according to Snowbird officials, only four evergreen trees had to be removed to put it there. Though it successfully manages to signal its presence by force of its size, the Lodge, with its cantilevered balconies, seems somewhat less continent and less bold than some of the other buildings that have been built more recently at the resort.



THE LODGE AT SNOWBIRD. Architects: *Brixen & Christopher.* Engi-

The Cliff Lodge at Snowbird, unlike the first lodge near the Base Village Plaza, is a conventional rather than a condominium hotel. It is a 12-story reinforced concrete building with 162 rooms, restaurant, saunas, swimming pool, library, lounge and bar. The plan of the lodge is skewed from rectangle to parallelogram in order to attain longer views up and down the canyon—though the structural grid manages without apparent strain to remain orthogonal (plans right). The first three floors contain on the whole public spaces, including the double-volume lounge and dining area. The remaining nine floors consist entirely of guest rooms. The folding together of structural and programmatic concerns, as well as those of siting and massing, seem comfortably appropriate. There is little here that screams for attention, but much that seems altogether fitting for the occasion.

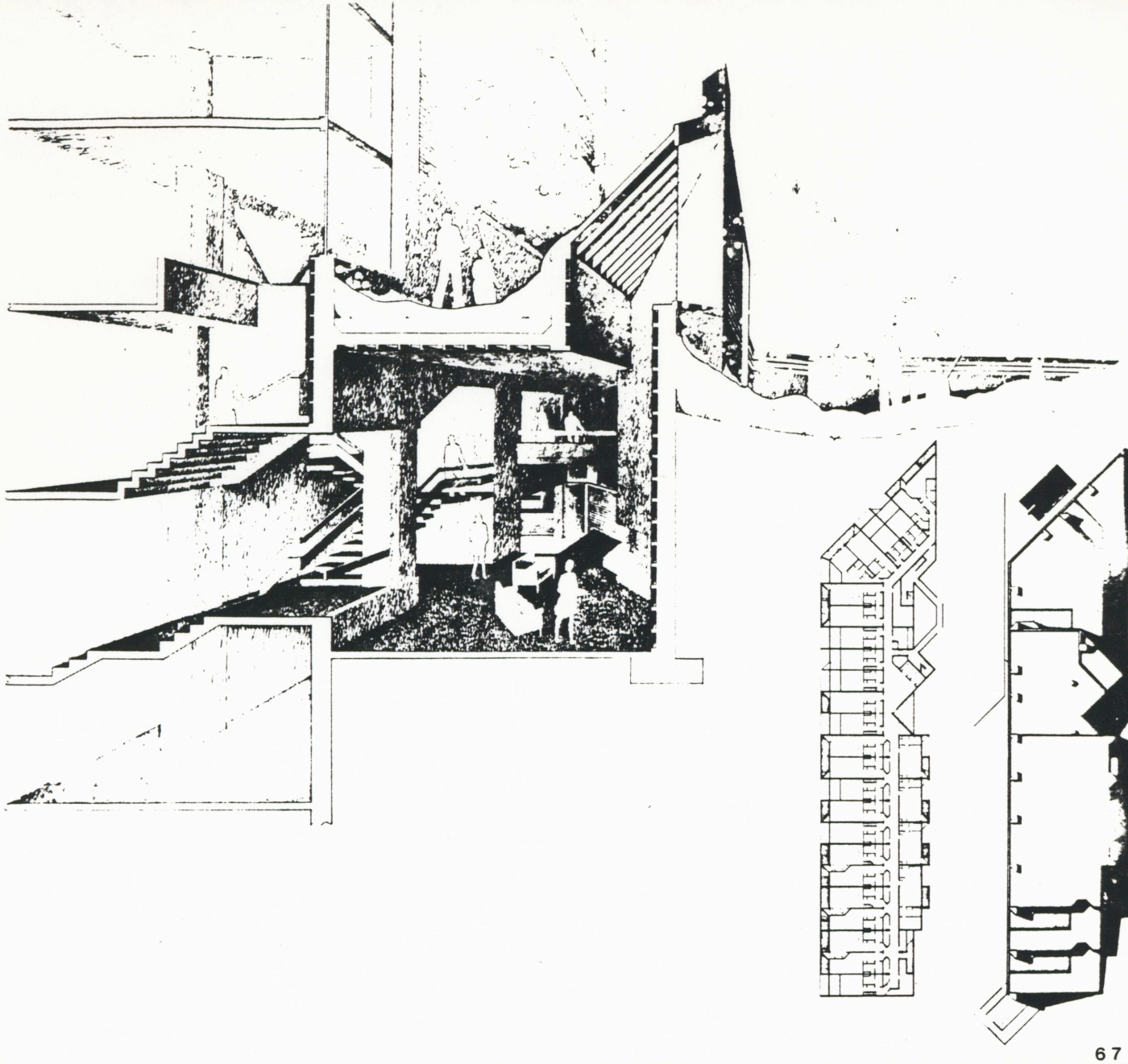
THE CLIFF LODGE AT SNOWBIRD. Architects: *Enteleki Architecture, Planning, Research.* Engineers: *Edmund W. Allen & Associates* (structural); *Rollins, Brown & Gunnell, Inc.* (foundation); *Bridgers & Paxton Consulting Engineers, Inc.* (mechanical); *Nielson Engineering* (electrical). Consultants: *D. R. Mansfield & Associates* (interiors). General contractor: *Cannon-Galesburgh Construction Company* (joint venture).



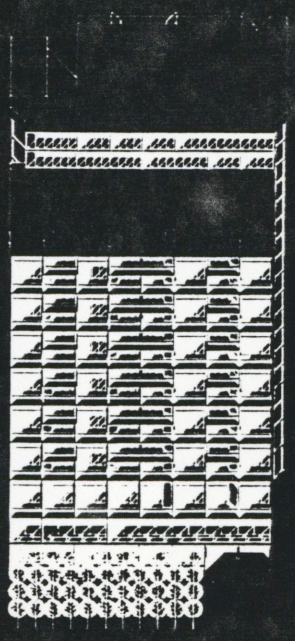
Cad Valley Restaurant is located approximately half way be- the bottom and the top of the ski runs. It can warm and out 200 skiers at a time (and also resist 125 mile an hour and earthquakes, if necessary). The building is a 10,000 oot structure of laminated wood beams and glass. Point olumns at the corners support the entire structure fifteen ve the ound. The structural system consists of a series ock minated wood trusses with steel gusset plates. nsparent framework of the building affords panoramic the mountains and the village below. At the center of the g. where the truss members come together to form an in- pyramid, there is an open fireplace which is the visual the interior. A part of the square plan is eroded (site plan, provide an outdoor terrace as well, where skiers can, on days, relax in the sun. Overall, the building is remarkable clarity which it manages to maintain while meeting the nal requirements of an unusual site.



D VA RESTAURANT. Architects: *Fataleki Architecture, Plan-*



Lodges IV and V are the most recent designs for Snowbird by Enteleki Architecture, Planning, Research, and they show that firm's continuing interest in accommodating the varieties and nuances of a building's program within a clear and rational building system. Lodge IV (above) is, like the first lodge at Snowbird, a linear structure, and it is built parallel to the main access road (see site plan, pages 120-121); it is a 74-unit condominium hotel. Lodge V (right) is a condominium hotel with 69 units, and it is just next to the Base Village plaza (see drawing on page 122) and will be linked to it on two levels by a plaza extension. There are five basic types of apartments ranging from a one-module studio unit through two-, three- and four-module apartments with interior balconies. The configuration of various module units is shown in the axonometric drawing, far right.



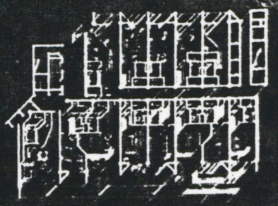


Illustration credits: Enteleki Architecture, Planning, Research —pages 119, 122, and 126; Kent Fairbanks—page 121; Patrick King—pages 122 and 123; Gordon Peery—pages 124 and 125.

SNOWBIRD LODGES IV AND V. Architects: *Enteleki Architecture, Planning, Research.* Engineers: *Joseph Joseph Patrick* (structural); *Rollins, Brown & Gunnell, Inc.* (foundation for Lodge IV); *Bridgers & Paxton Consulting Engineers, Inc.* (mechanical); *Nielson Engineering* (electrical). Consultants: *Reed, Jones Christoffersen, Ltd.* (consulting structural engineer for Lodge V); *Richins Organization* (interiors for Lodge IV). General contractor: *Henry C. Beck Company.*

Pavillion Soizante-Dix, St. Sauveur, Quebec

The pavillion, design as a stop-over to a dead end lift at a popular ski hill was iniatially conceived of as a warming house. The program blossomed to a Moore type stage setting with destination facilities such as a lunchroom as well as a swimming pool in the summer.

The dining room shows the typical layout for a scramble area that is designed for 300 people. The bar will accommadate 150 people.

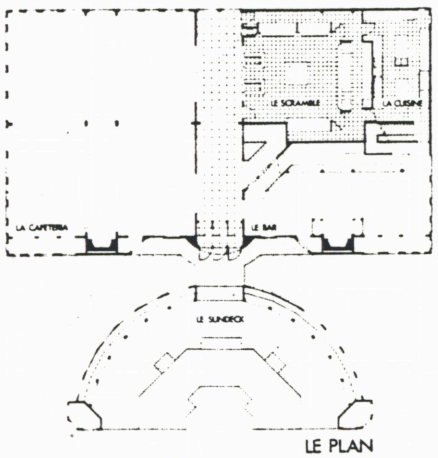
Award: Architectural design

Peter D. Rose with Peter Lanken and James V. Righter

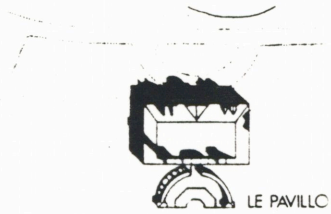


A 'Moore-ish' ski lodge uses old motifs to recall the *joie de vivre* and style of old Québec in a design that is both traditional and distinctly contemporary.

Program: Design a main pavilion for the oldest ski area in North America. Provide a cafeteria for 300 persons, bar for 150, scramble system food pick-up, kitchen, ski shop, and sundeck. The architects were reminded of the rich tradition of St-Sauveur and that the pavilion would be, along with the church and the bakery, one of the most important buildings in town.
Site: At the automobile entrance to the area and at the base of the ski slopes.
Solution: The building was conceived as having two main façades. A "real front" with dormers and hipped roof faces the village and approaching cars; a "false back" confronts the mountain, sun, and onrushing skiers. A semicircular deck is combined with the south façade to suggest places and activities of grander proportions. Interiors are organized about an axial entrance hall and will use trusses, high ceilings, and wainscoting.
Materials and construction: Conventional wood frame; cedar siding and decking; laminated trusses in cafeteria; metal and built-up roofing.

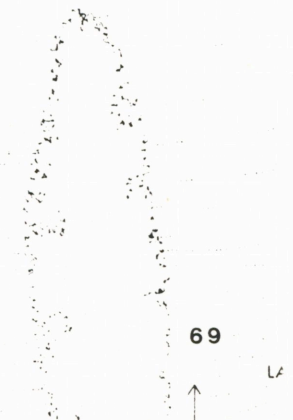


LE PLAN

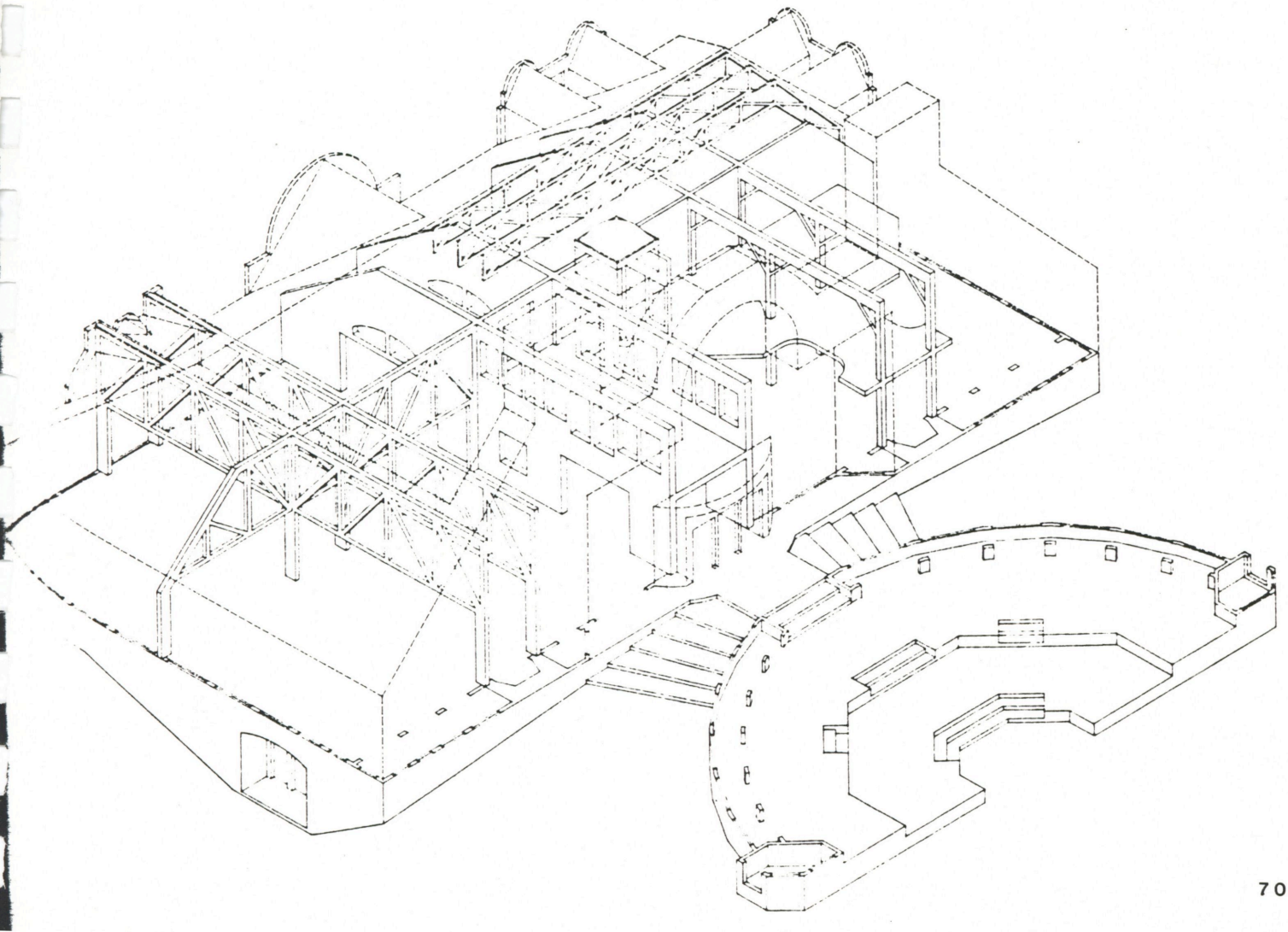

LE PAVILLO

Jury comments
Moore: A particular favorite of mine. . . . It's at once very good humored and festive and ingratiating and very highly disciplined, I think. Not only because it's symmetrical, but because the pieces are marshalled to give a lot of the grandeur of the 19th-Century great house of the eastern United States or that part of Canada. So it has all at once a dignity, a lot of discipline, and all this crazy ebullience which seems altogether appropriate.
de Blois: A little bit kooky, but the elevation looks like it was carefully studied. Perhaps it has a certain gaiety about it that makes it suitable for recreational facilities.
Bain: It's got a romance, a kind of grand hotel appeal to it that's very compelling. I would find myself wanting to get down to it after the ski slopes and maybe expecting to live life a little better because of being in that building.

Project: Pavillon Soixante-Dix, St-Sauveur, Québec.
Architects: Peter D. Rose, Quebec, Canada; Peter Lanken, James V. Righter, associated architects; Alan Maples, Erich Marosi, architectural assistants.
Consultant: S. Singh, structural engineer.
Client: Mont St-Sauveur.







Elkhorn, Idaho

Elkhorn, Idaho is located directly adjacent to Sun Valley and is meant to actually be a branch of that development. In studying the layout for the town the architects studied various mountain villages in Europe to dirive characteristics that would give the resort a village character. They were not interested in borrowing forms, but details as well as urban spaces were carefully studied.

It was the architects' intent to design in a contemporary fashion but to try to bring the whole together in a unique fashion. This was accouplished through materials as well as pedestrial and vehicular pathways. The materials were limited to the district they communicated. For example, the condos were uniform in that they all had shingle roofs with lapp siding. The commercial district was highlighted with areas of stucco, etc.

The site along which Elkhorn is located is mostly barren of trees and vegitation but can and was defined by the valley in which it rests.

The exterior spaces conver a feeling of containment which was derived from tall buildings and restricted vistas. These buildings were not allowed to simply be tall but were carefully scaled down to the pedestrian level.

Another element which acted to tie the variety of building types together were the steeply pitched roofs. These are probably the most dominant elements in the town.

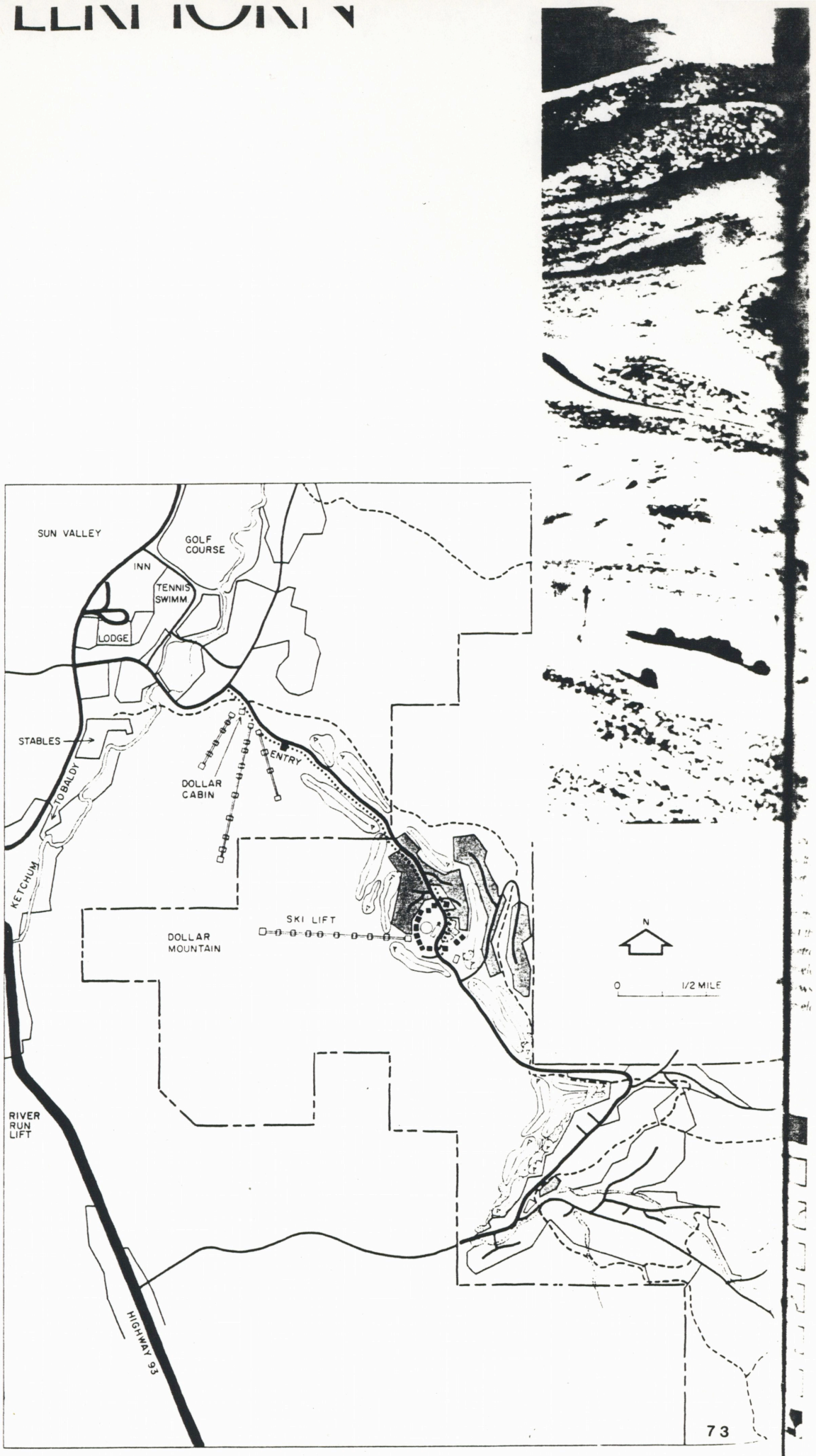
Elkhorn has some very useful applications toward the making of Ski Yellowstone in that it is my hope that the exterior urban spaces and the future additions to the year round resort should be unified in a similar fashion. This study is also reflective of the aformentioned Aspen with it's system of nodes and paths.

the saddle of Dollar Mountain, is a sunny, almost windless, completely treeless and —until 1972—untouched place in Idaho, known mostly to skiers and hikers. In 1972, Bill Janss, owner of the Sun Valley Corporation, joined with Johns-Manville Corporation in a plan to develop 2,950 acres of Elkhorn Valley as a new ski resort area to complement the resort at Sun Valley.

Fortunately, Janss and his co-developers were aware of the need to handle such an area with great care. Development at Sun Valley had extended that resort town to its furthest limits as a walking village, and further development would encroach on the character of the place, which, along with its splendid powder snow, had made it an internationally attractive area since 1936 when the Union Pacific Railroad began its development.

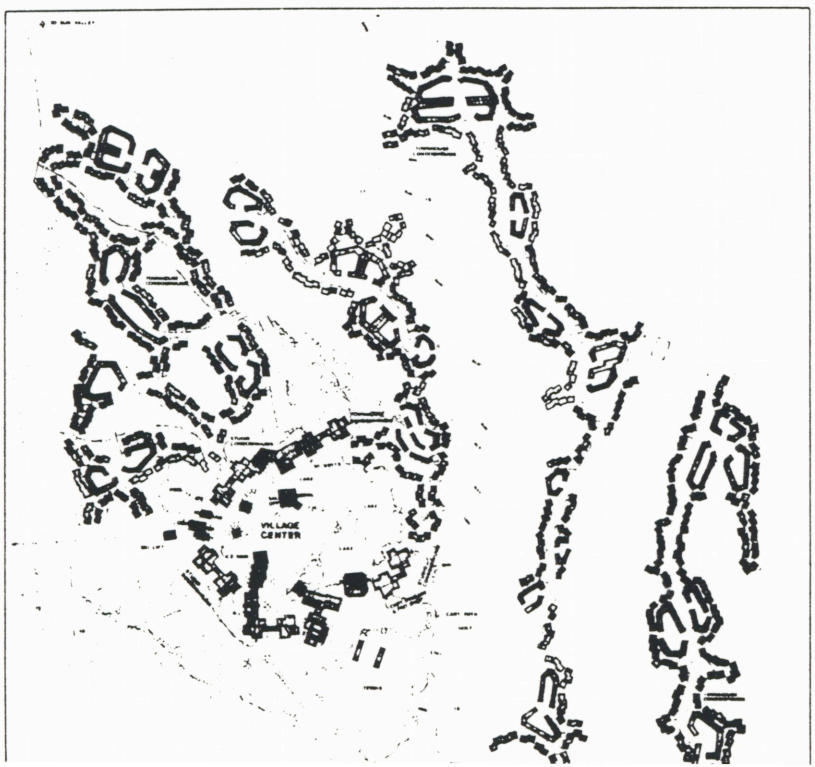
Site planners Sasaki, Walker & Associates were called in to master plan the new resort for phased development over a 10-year period. They studied every aspect of the valley's environment—climate, soil structure, geology and soil relationships, topography, vegetation—in order to know how to develop the land and at the same time maintain its natural relationships. A slope inventory was also made and—since the visual quality of the place was of great importance to its success—a visual analysis was made of the views and vistas of the site, from the site, and within the site. From this data, a physical and visual summary was made as the first step toward a conceptual plan for the valley.

To intrude upon the untouched grandeur of this open valley may have seemed a sacrilege, but its openness made it vulnerable and a sure target for development at some time. The decision to make of Elkhorn a human-scaled village within the vast scale of the valley and mountains at once brought it into the context of similar situations in the Alps. Indeed, there is a feeling of a Swiss mountain village in the location of Elkhorn in a valley below a lofty mountain. The man-made village seems tiny, drawn into itself, alone—especially in the snow. What makes it uniquely American and particularly Western American is its containment within, its circumscription by, a space vastly larger than itself and destined to remain so.



Steve Marks

...s master plan was developed ...ed planners as part of the ...ng-range plan for the city of ... (left) of which it is a part. ... the same standards—though ... same architectural style—will ... development in each. The total ...ment plan for Elkhorn (right) ... density of future condominium ...ment around village center.



...NDOMINIUMS

...MES TES

PONDS & CREEKS

...F COURSE

...VESTRIAN & HIKING

...KE PA...

At Elkhorn, the view is up to the mountains, rather than, as more frequently happens in this country, from the mountain to a panorama of the valley.

Of the 2,950 acres of Elkhorn's site, only 300 will be covered by buildings. Approximately 400 will be paved and landscaped, and the remainder—75 per cent of the site—will be preserved as natural open space.

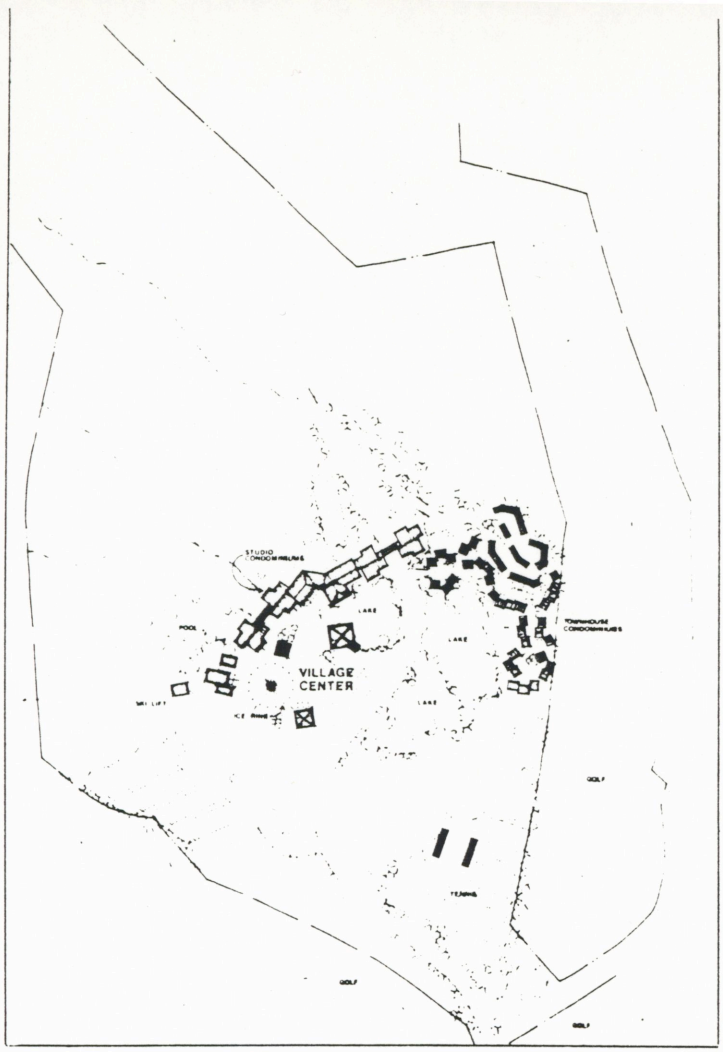
In the village center are community and commercial facilities, less extensive than a self sufficient village might require since Sun Valley's older and more extensive commercial development and its two large hotels are easily accessible by car or free bus service.

In developing an architectural expression for this new resort, Killingsworth, Brady & Associates, architects for both condominiums and commercial areas, studied mountain villages in various parts of Europe—not to borrow their forms but to analyze the characteristics which were common to all, and, using these basics, to devise a contemporary and individual style which would be distinct to Elkhorn. The pitched roofs, deep set windows and balconies, and stenciled patterns (in blue) catch the whimsical and the practical aspects of alpine buildings but look little like them.

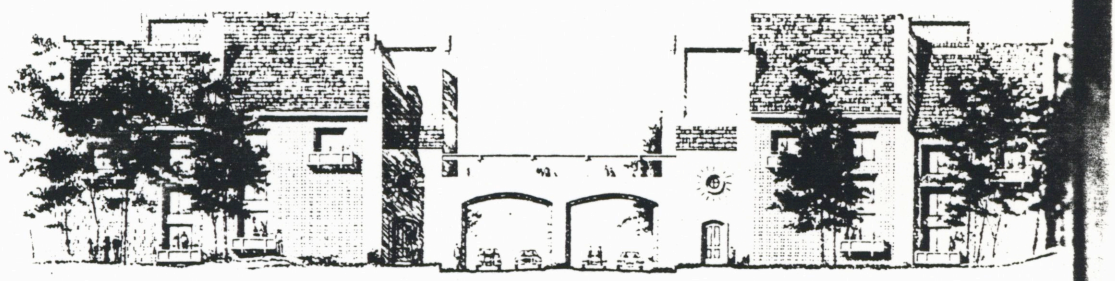
"Old villages," says Edward Killingsworth, "aren't precise and well-ordered; they just sort of happen." The analysis by Killingsworth and his associates netted good results: Elkhorn is no self-conscious putting-together of forms for a studied variation, but has a feeling of natural difference which comes from the siting of the groups of condominiums and from disciplined use of materials.

The valley's landmark is the village bell tower, a distinctive form which is the focal point of the village center, marking the location of the community hall. Nearby, and complementing the tower with its strong circular form, is the ice rink, used year-round. Ranged in a semi-circle about the rink is a terrace on which are located shops with condominiums above, and a hip-roofed restaurant building (bottom, right).

When it is completed in 1982, Elkhorn will look only slightly larger than it does now. More condominiums will be built around the village, but private residences and ranches (lots up to two and a half acres) will be located in the "finger valleys" off the big valley, preserving the unity of the village.



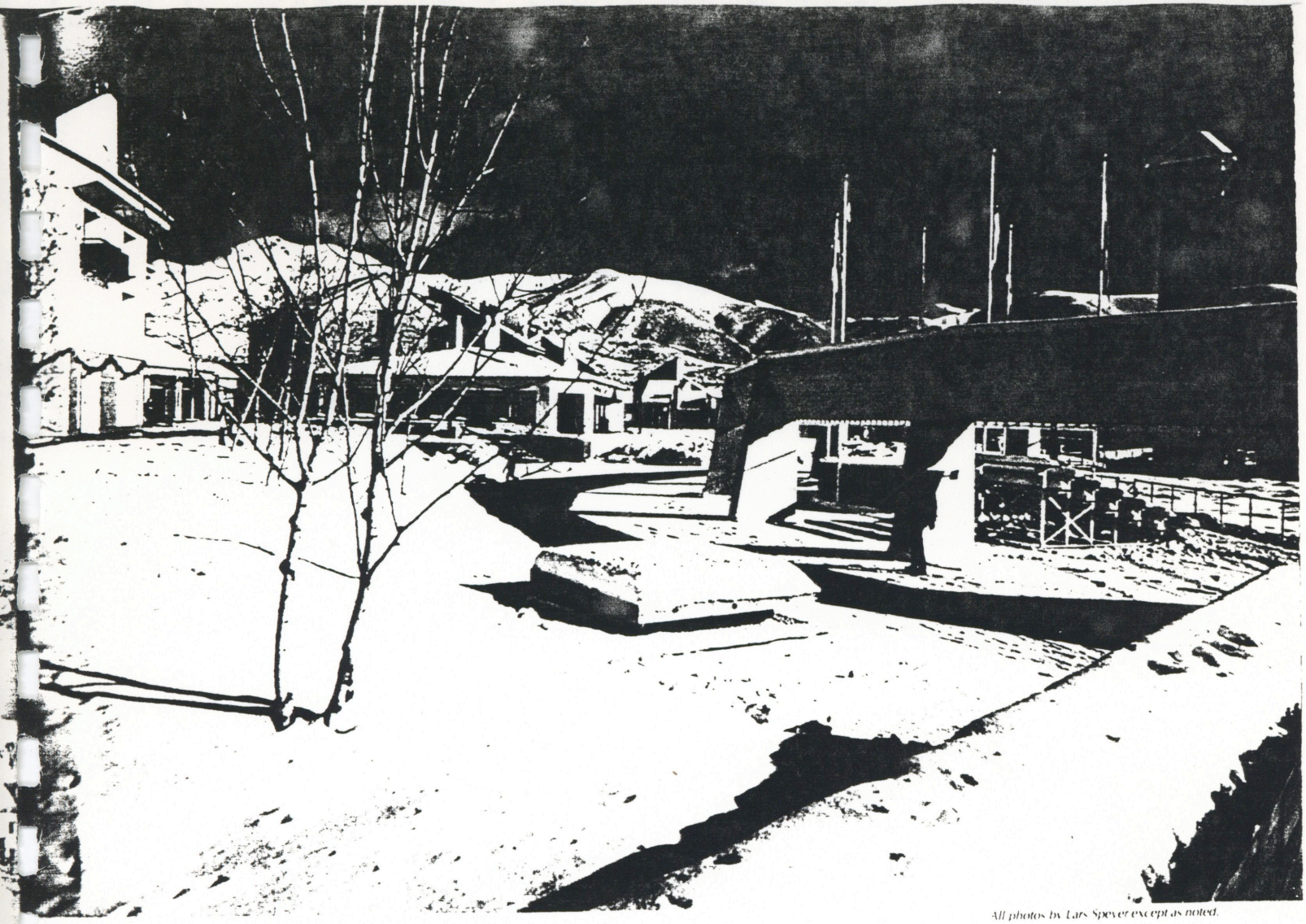






Lars Speyer

The village center concentr[ates] ... munity activity in a sma[ll] ... area ... shops, restaurants and recre[ational] ... cilities, like the ice rink (to[p] ... page). Although cars are not pe[r]mitted in the center, ample parking ... vided for visitors and skiers (the ... Mountain ski lift is just outside ... center) on the periphery. The ... phase development (plan, above ... included the commercial area and ... lage condominiums, Bonne Vie ... dominiums, the ice rink and ... tennis courts. Actual buildings ... village show some changes ... early studies of architectural ... particularly in more formal ... for Village entrance (above ... sketch), and in use of stencilling ... village buildings. The Bell Tow[er]'s strong form dominates the ... center and is visible from all p[arts] ... the valley.



All photos by Lars Speyer except as noted.



with Alpine charm

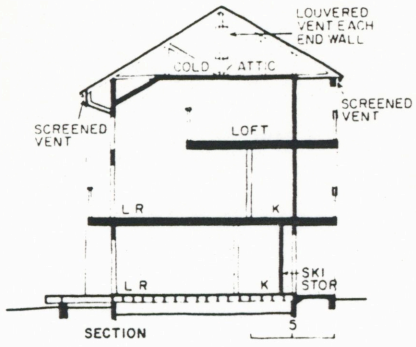
By Edward A. Killingsworth, FAIA
Killingsworth, Brady & Associates

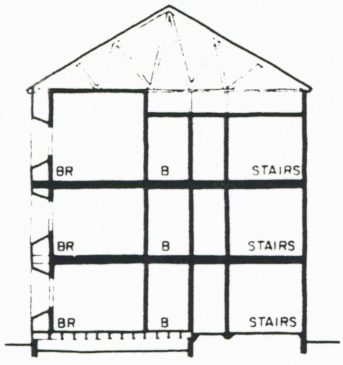
A new resort town, however small, deserves its own architectural character as much—perhaps more, because it is small and more easily seen—as any larger development. Sun Valley, in the next valley, had chosen years ago to use an eclectic, unspecific European approach for its buildings, but we determined that Elkhorn should be completely modern. We knew, however, that we wanted it to have as much charm as an Alpine Village, so we studied European mountain villages and towns, establishing those basic elements that are so universally appealing to people.

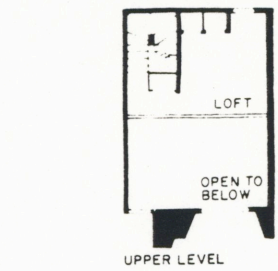
Reduced to their basics, many villages—Swiss, Bavarian, Austrian, Italian: it makes little difference—are essentially identical. The towns have many common denominators, all of which contribute to an impression of inviting variety, carefully balanced by great discipline in the use of materials and details: A play of spaces; narrow curving streets, enticing the pedestrian, that spill out into squares; narrow slits between buildings through which shafts of light penetrate; a feeling of containment derived from tall buildings and restricted vistas. All contribute to a comfortable pedestrian scale and to the delight which spells success in any destination resort.

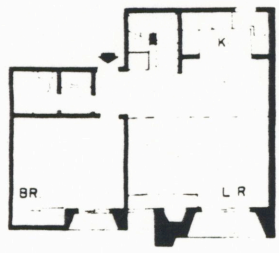
We determined to base our design for Elkhorn on these principles, but to develop only the subtlest resemblance to buildings of earlier periods so that a unique identity could develop for Elkhorn. We adopted and adapted the Tyrol's exterior surface stenciling using our own designs in a bolder contemporary way. (Stenciling proved economical and is easily maintained.) Deep wall recesses and double doors suggest but do not imitate old world details. Steep-pitched roofs became the strongest element in the village, marking it against the stark valley landscape as a place of unique and individual character.

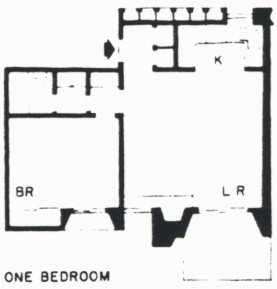
In its initial development, Elkhorn is small, perhaps too small to have the scale needed to make an impact in the beautiful openness that surrounds it and is there forever. As it develops to its full size—1400 condominium units, 700 single-family houses and ranches—that scale will change.

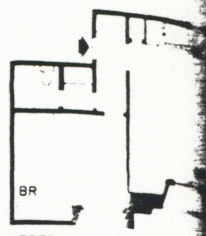


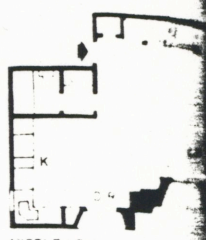


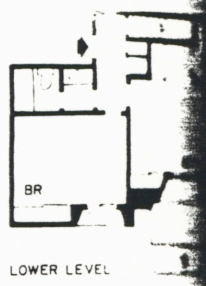








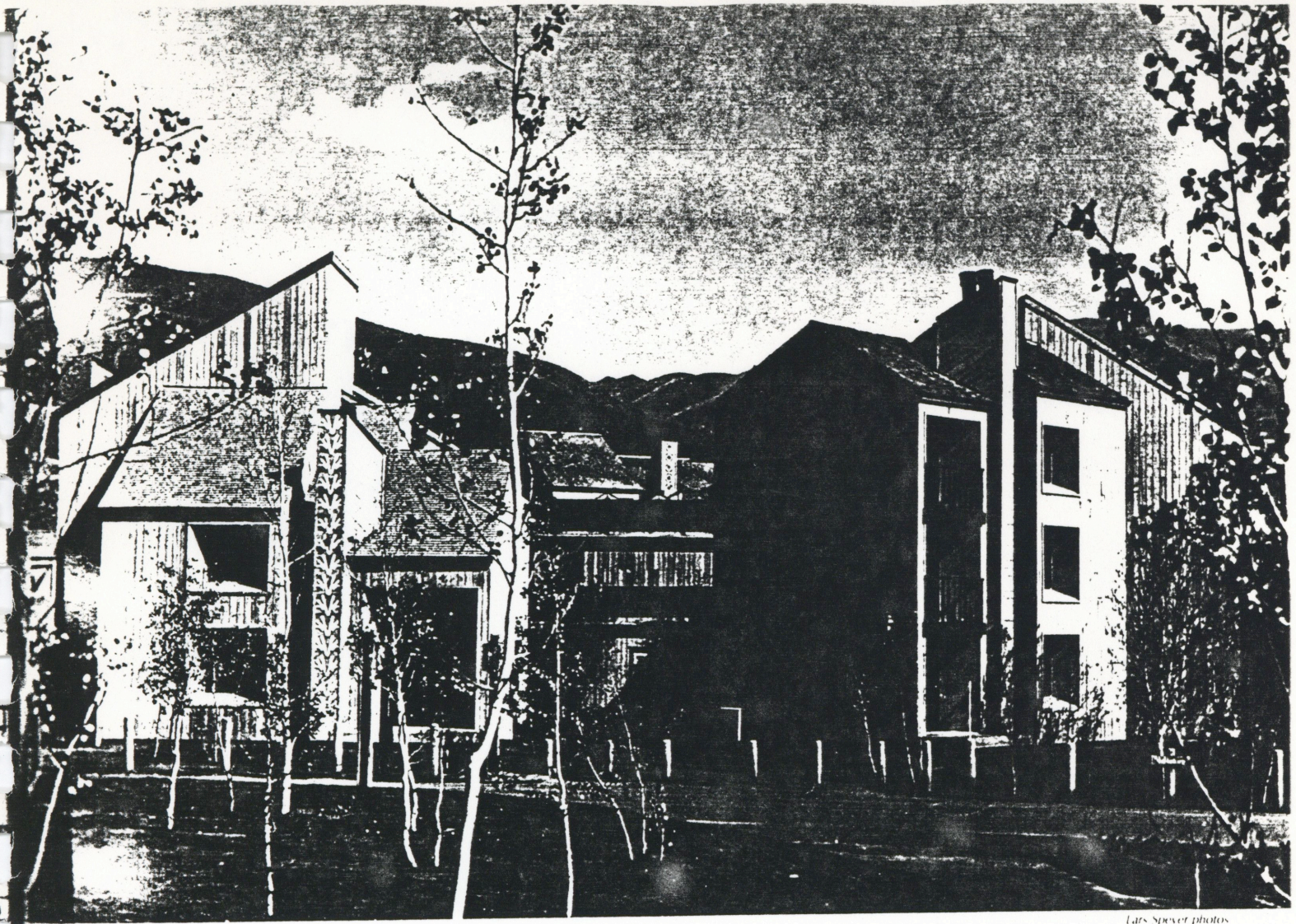




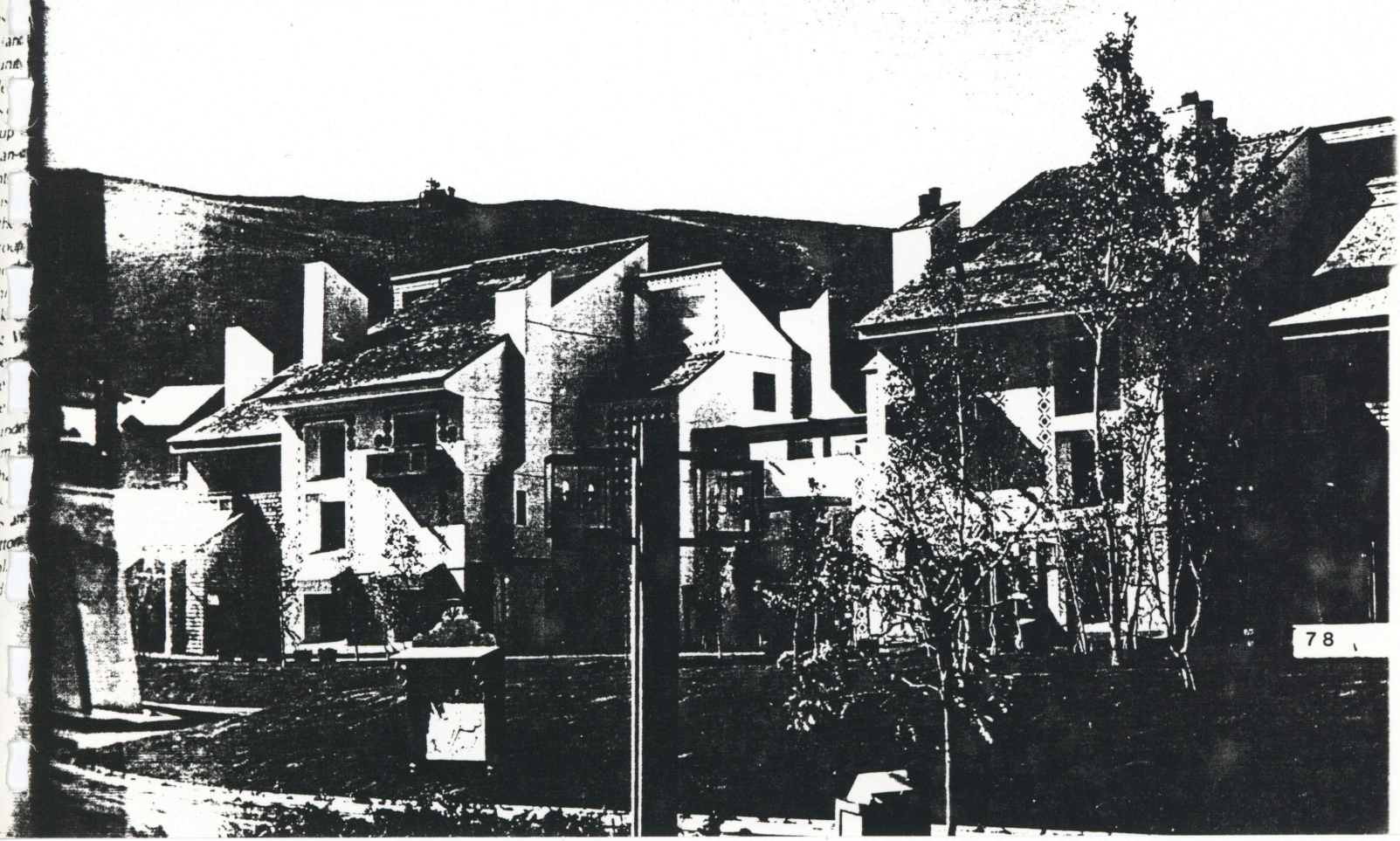


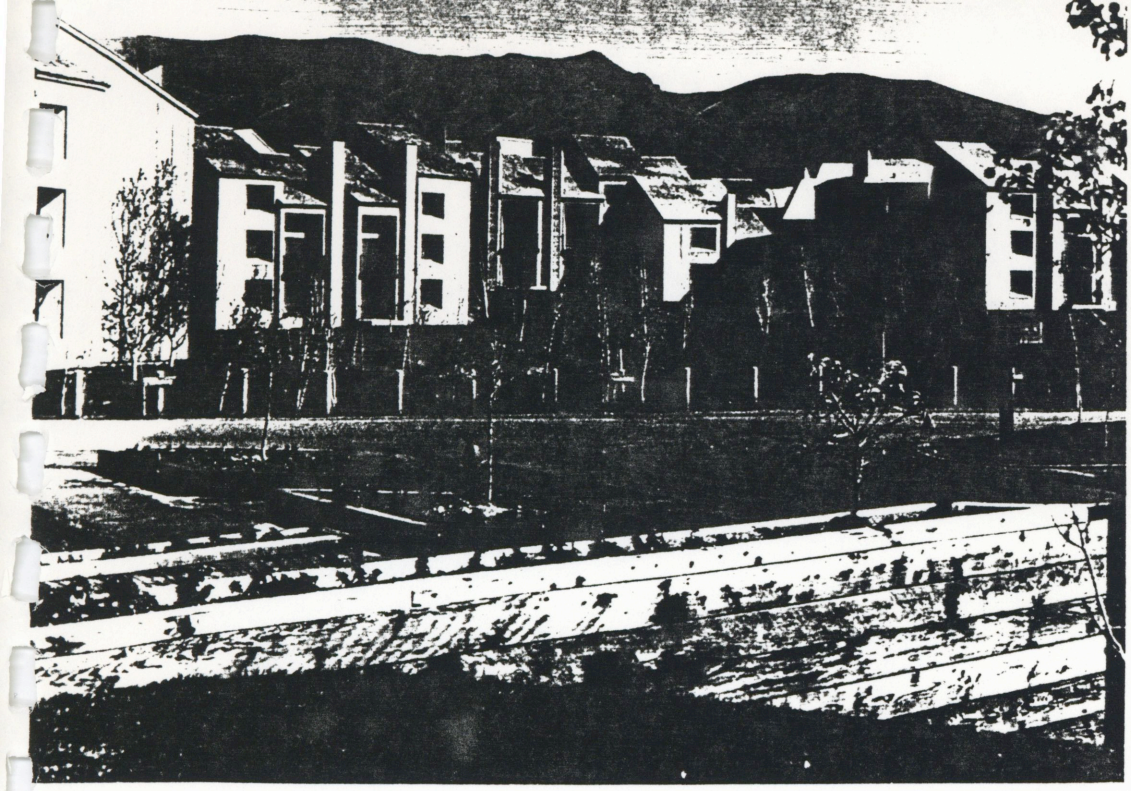


Elkhorn's master plan comprises a total of 1400 condominium units with an over-all total of 2100 [illegible] including ranches and single houses). There are three groups of condominiums: the Village Group (bottom, across page) is European style above shops and restaurants; Bonne Vie (top, across page) is to the east of the Village, across the road from Sun Valley. Another group, Sidian Springs (not shown), is north of the village. Bonne Vie and Village have garages as well as outside parking; Sidian Springs has open parking. All units have parking on the property, near enough but well outside the actual village where no cars are permitted. Warm air is circulated under the pitched roof of condominium buildings and to the eaves so that snow rarely builds up on them. Snow does form, however, at roof edges and is removed with long poles from below. Wood shingles, boards and battens are used on condominium exteriors.



Lars Speyer photos





Master planning land use in an unspoiled mountain valley

By Peter Walker
Sasaki, Walker Associates, Inc.
Planners and Landscape architects

The master plan for Elkhorn's development is based on the principle of open space and recreation as primary considerations. The same principle underlies the master plan, also prepared by us, for the city of Sun Valley, of which Elkhorn is a part. The two resorts, just a mile apart although in separate valleys, cannot be considered alone. The impact of one on its environment will inevitably affect the valley location of the other. Sun Valley, the older resort, is much more developed than Elkhorn, which, being newer, is the more fragile of the two. Over 75 per cent of Elkhorn Valley will be permanent open space; the other 25 per cent is in residential and resort use. The golf course which surrounds Elkhorn defines it and links it with the open valley and with the mountains that ring it.

In making the master plan for the city, we made a comprehensive study of future land uses, considering the economic and community goals of Elkhorn and Sun Valley as well as the environment itself. Now we have recommended continuing planning procedures for implementation by the city. As growth continues, transportation—whether by public bus or by car—will be increasingly evident and needs study as to appropriate controls so as to preserve the character of the area. Zoning, subdivision and architectural review and environmental controls are needed for each category of land use. Community facilities—for city hall, library, police, fire and public works services, schools, hospital, cultural activities—will be demanded in time. However much a resort may be a place apart at its beginning, and however limited its growth, it eventually takes on all the requirements of any other type of community. They will have to be provided, but they can be assets, in location and in architecture, if they are expected and planned for in advance of their need.

In planning for the future of these valleys, a sensitive stewardship of the land as a basic resource was, as it must be elsewhere too, our most important premise.

ELKHORN AT SUN VALLEY, Sun Valley, Idaho. Master planners: *Sasaki, Walker & Associates*. Architects: *Killingsworth, Brady & Associates*. Engineers: *Cornell, Howland, Hayes & Merryfield* (structural, Phase I and Village; soils, foundation, mechanical, electrical); *John Jacoby* (structural, Phase II). Consultants: *Barbara Elliot Interiors* (interiors), *William F. Mullen* (cost). Contractors: *Sato Construction Company; Wick Construction Co.*



Steve Marks


Ski
ski Yellowstone as intended
Yellowstone

^C

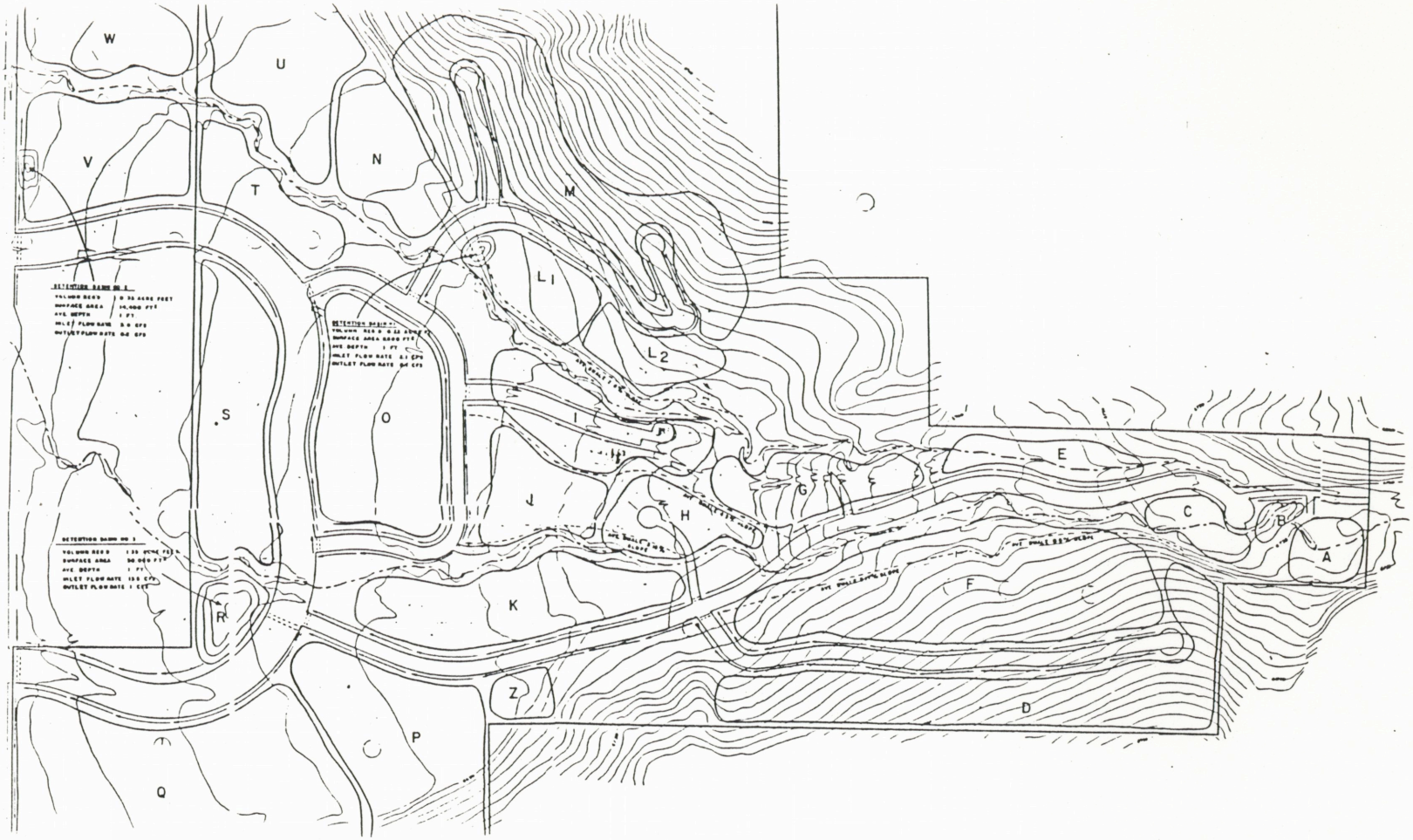
Ski Yellowstone as Intended

The purpose of this section is to introduce the current schemes and plans for Ski Yellowstone. this is useful for two reasons. First it allows one (along with the photographs and slides) to see the errors that may result if the lodge is built in its currently designated site. I feel as though it would be an awful lot of work for skiers to pole their way across a bridge and across the flat areas in front of the lodge. Therefore, my scheme takes this into account and pulls the lodge and the gondola up the hill with a better relationship to the slopes. Second, building a lodge in this opem area would allow for more solar access but at the same time it would expose the skiers to more wind which is quite high at times in the direct path of the canyon. By pulling the lodge up the hill I have created a wind block in the outdoor areas by means of the two natural ridges that will flank the design.

One final reason for showing you the as designed drawings is to show you the relationships of the lifts ot the lodge as well as the other future development zones. I will not attempt to rezone the area, but intend to let the zones stem from the final design solution. These drawings do not indicate the development that is intended to occur along the marina at Hebgan Lake.

Legend

Lot #	Use
1-3	Public Accommodations and Commercial
4	Condominiums
5	Public Accommodations and Commercial
6	Parking
7	Public Accomodations and Commercial
8	Condominiums and Commercial
9	Public Accomodations and Commercial
10	Condominiums
11	Public Accomodations and Commercial
12	Day Center
13-14	Condominiums and commercial
15	Parking
16	Hostel
17	Day Skier Parking
18	Community Center
19	Yellowstone Village Parking
Tracts A-J	Open Spaces / Common Property


W
U
V
N
T
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L1
L2
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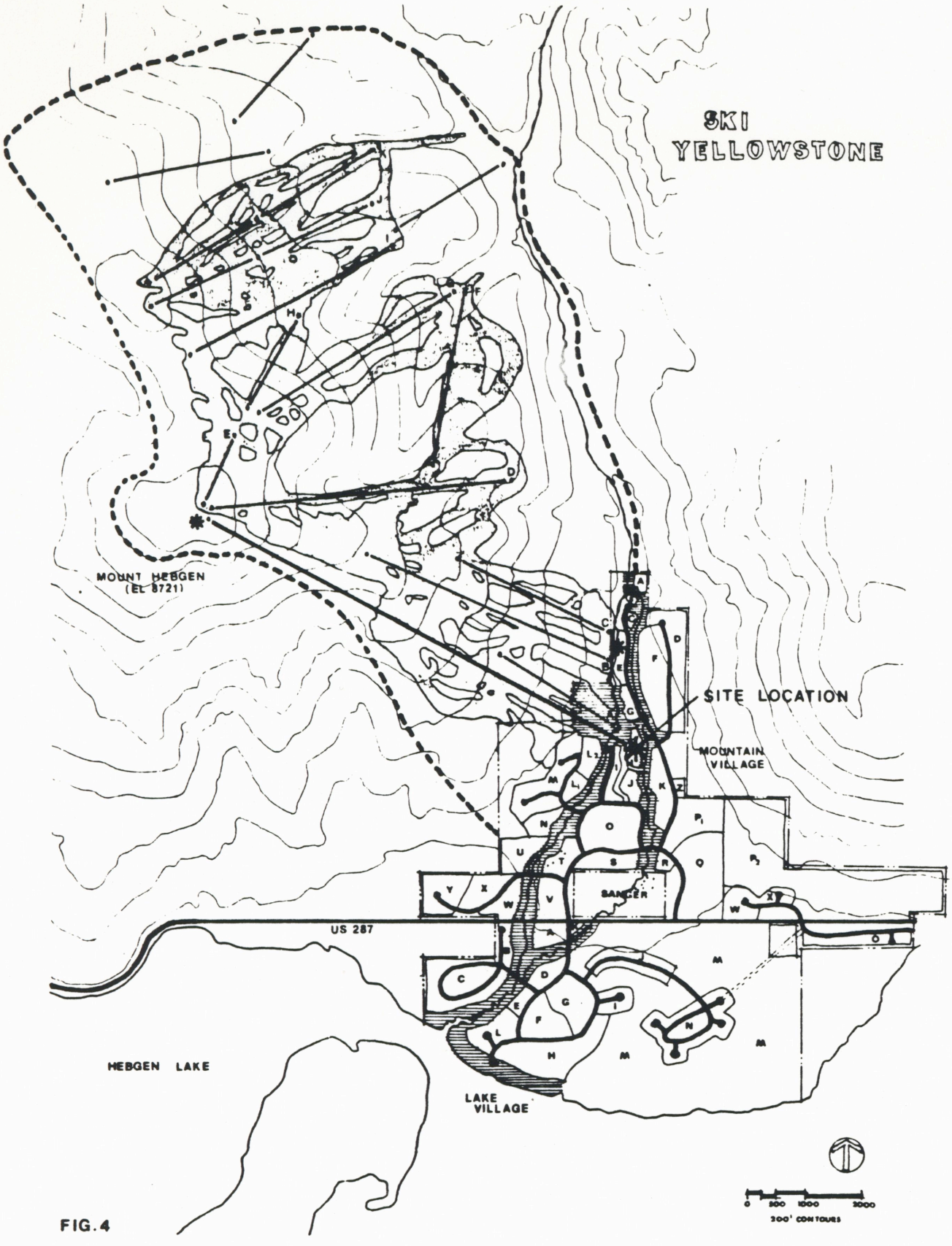

SKI
YELLOWSTONE
MOUNT HEBGEN
(EL 8721)
SITE LOCATION
MOUNTAIN
VILLAGE
SANGER
US 287
HEBGEN LAKE
LAKE
VILLAGE
0 500 1000 3000
200' CONTOURS

FIG. 4


Ski
SPACIAL PROGRAM
Yellowstone

Estimated Occupancy

Winter

	Proposed Units	Season Occupancy	Ave. Person/ Unit	Persons/ Day Ave.	Day Max
Lodging	600	50%	2	600	1200
Condos	493	60%	3	887	1479
Private Lots	60	35%	5	105	300
Sub Total	1153			1592	2979
Day Users	750	50%	3.5/car	1312	2625
Total				2904	5604

Summer

Lodging	600	20%	2		240
Condos	493	43%	2.5	1239	2882
Private Lots	60				
Day Users	750	25%	2.5%	469	1875
Totals				1708	4997

Parking 2625 Day visitors/3.5 persons per car= 750 cars.
750 cars x 400 sq.ft. per car= 300,000 sq. ft. of parking.

Restaurants. 1200 Lodging plus 2625 day users= 3825 people/day. By ski industry standards 4 sq. ft. x 3825=15300 sq. ft. of restaurant. Total provided (including kitchens) = 16016.

Program

Day Use	Sq. Ft.
Change Rooms	2,278
Gondola Bldg	1,430
Control Bldgs (2 Lifts)	600
Tickets	540
First Aid Facility	1,840
Restaurants (3)	5,551
Kitchens (3)	1,980
Scramble	8,485
Bars / Lounges (3)	4,410
Atrium / Sitting	1,600
Ski Rental / Pro Shop	2,304
Fireplace Nook / Sitting	440
Ski Patrol	396
Ski School	396
Administrative / Break Room	1,368
Info / Lost and Found Counter	60
Entry Vestibules / Waiting	800
Restrooms	1,472
Retail Shop Undesignated (6)	4,270
Mechanical	2,688
Receiving / Storage	2,464
Daycare / Nursery	944
Trail Maintenance (uphill from resort)	600
Circulation	4,692
Total	51,608

Hotel	Sq. Ft.
Lower Lobby	768
Gift Shop	200
Main Desk	304
Manager's Apartment	1,224
Custodians (5)	640
Laundry	304
Atrium	1,200
Guest Rooms (18 @ 864)	15,552
Guest Rooms (29 @ 576)	16,704
Circulation	3,690
Total	40,586
Total Day Use and Hotel	92,194

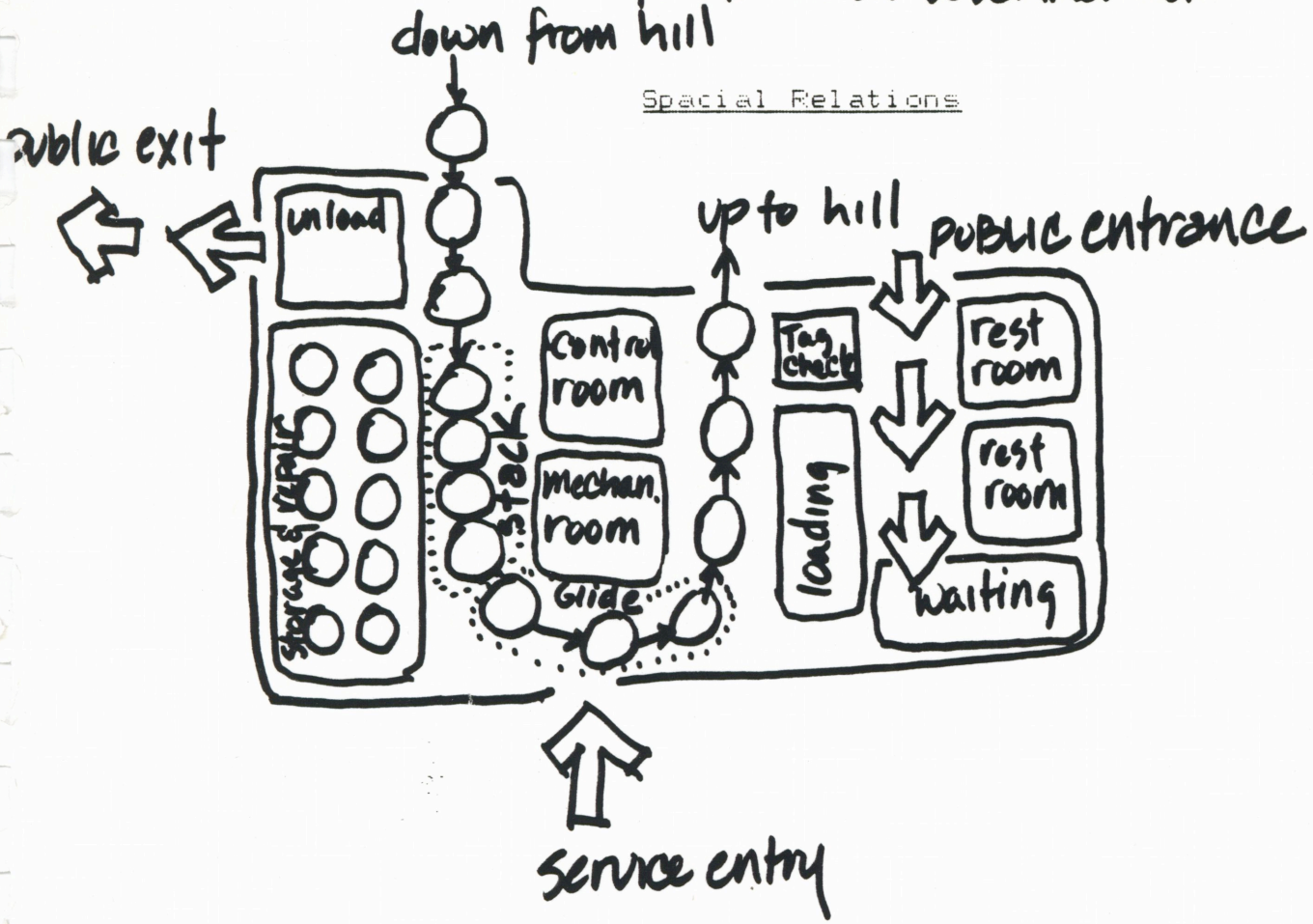
SCHEMATIC DESIGN

Space: Gondola building

Description: Building that houses the mechanism for the lift and serves as a loading space for skiers.

Design Goals: Transitional space. Circulation must be well arranged.

Special Considerations: functional as a summer attraction.



SCHEMATIC DESIGN

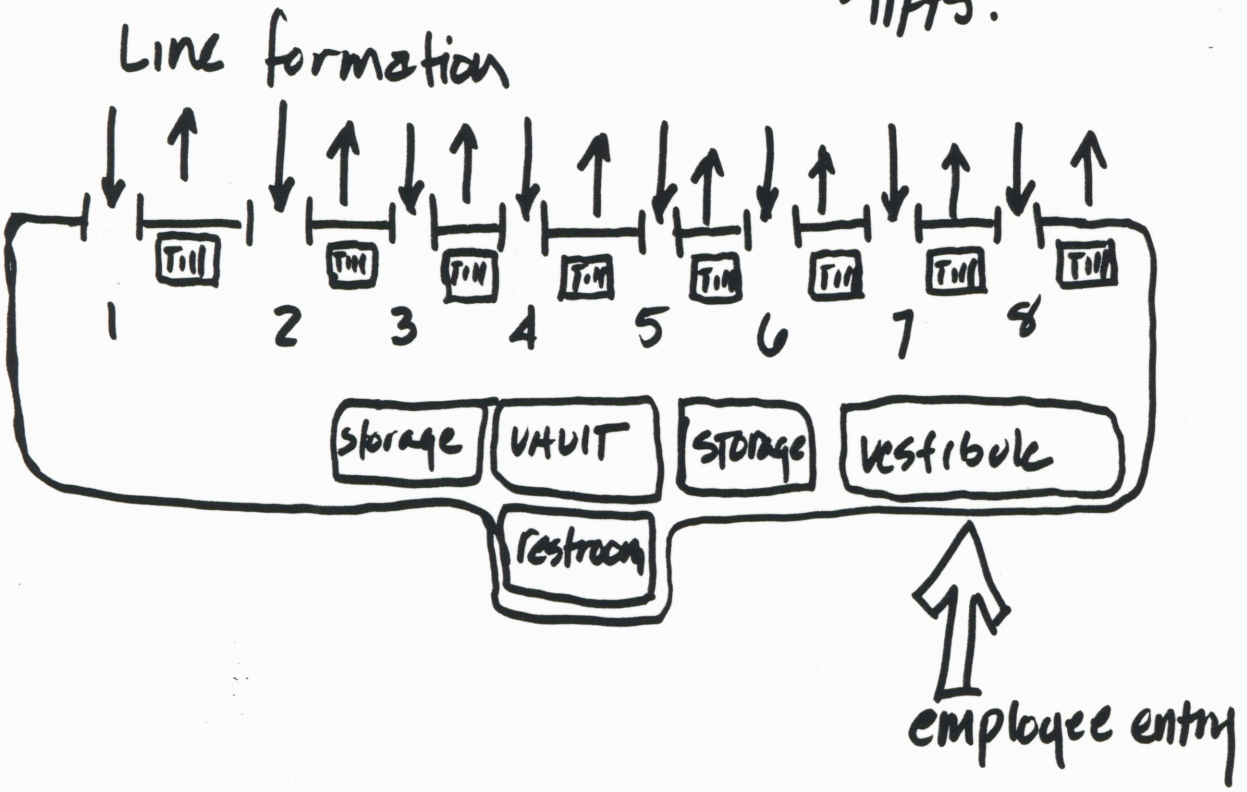
Space: Ticket office

Description: small space with windows for children's lift and Gondola

Design Goals: Total of 8 windows

Special Considerations: must be designed to allow for even flow
must be located directly adjacent to gondola and minor lifts.

Spacial Relations



SCHEMATIC DESIGN

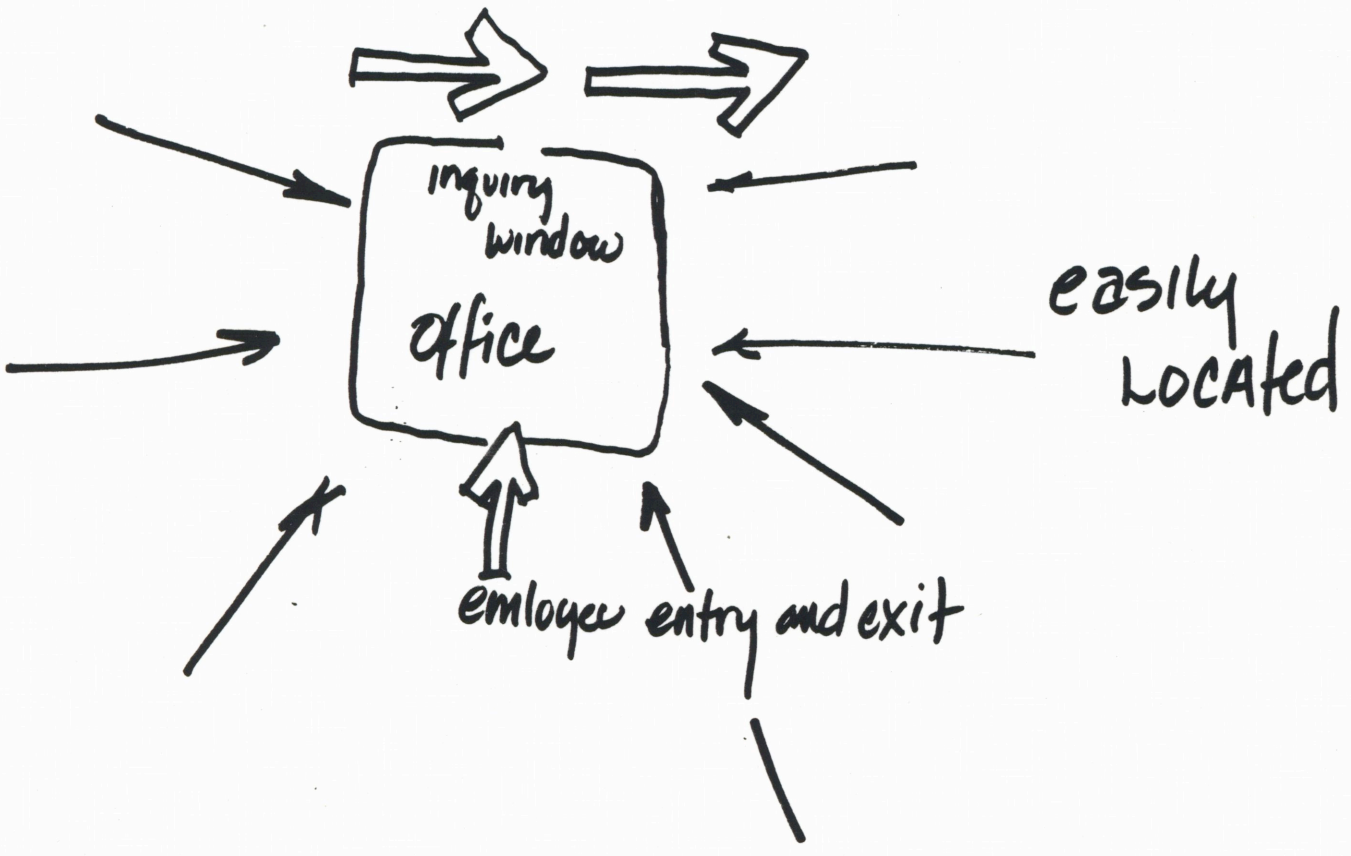
Space: information center

Description: small one room space with inquiry window.

Design Goals: must be centrally located for easy access.

Special Considerations:

Spacial Relations



SCHEMATIC DESIGN

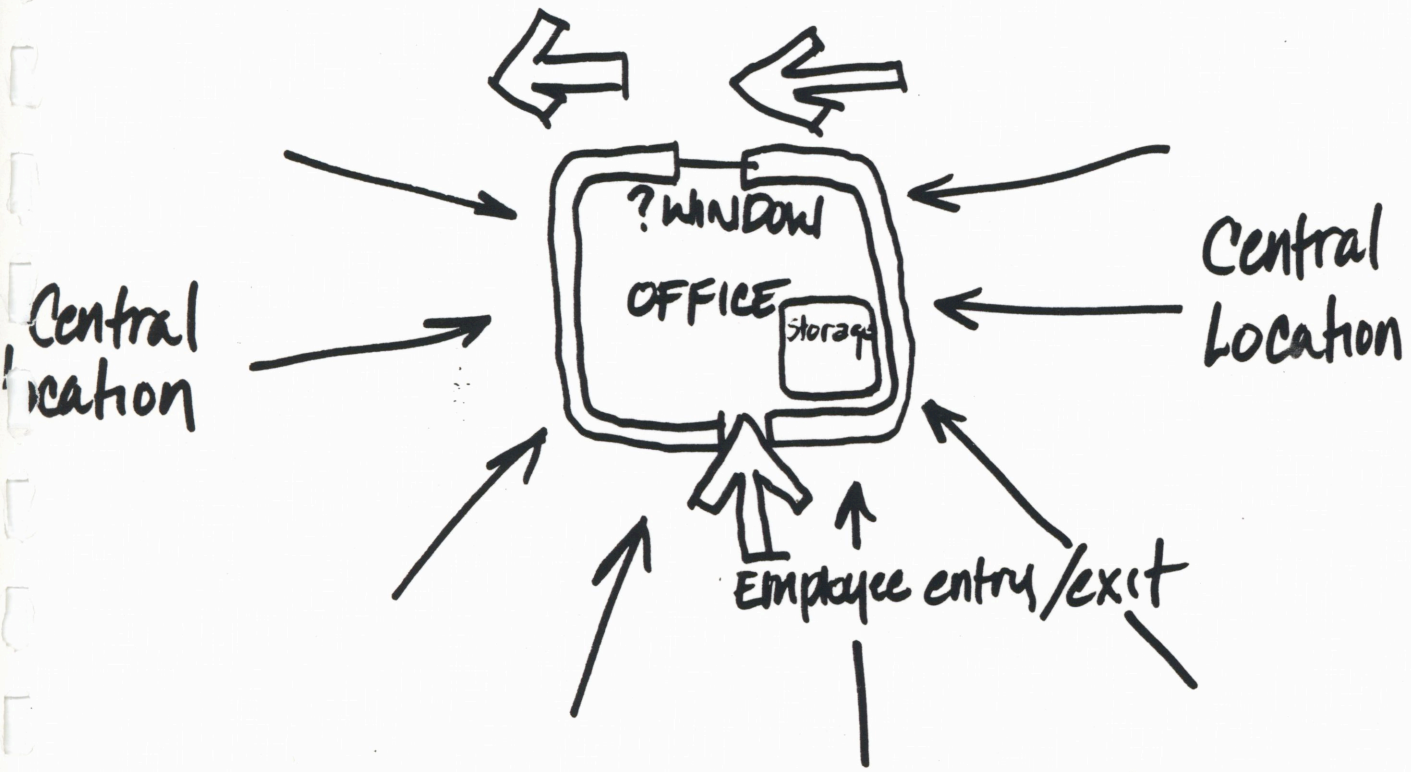
Space: Lost and found

Description: small, one room space

Design Goals: accesible by window to obtain information

Special Considerations: must be centraly located both to and from ski Hill.

Spacial Relations



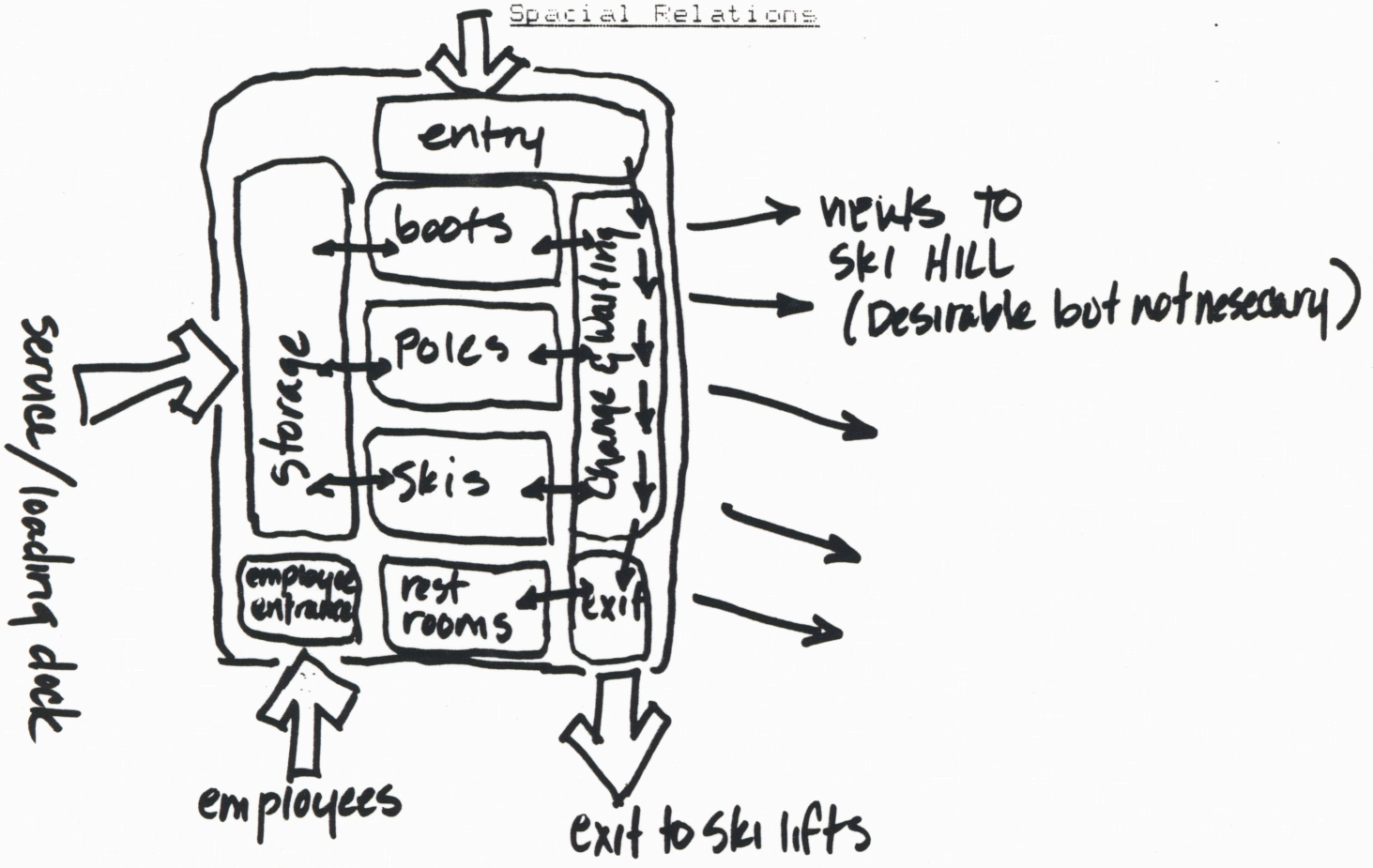
SCHEMATIC DESIGN

Space: Rental Shop

Description: Ski equipment rental space

Design Goals: even flow for easy & fast service.

Special Considerations: should be located near lift lines for easy access.



SCHEMATIC DESIGN

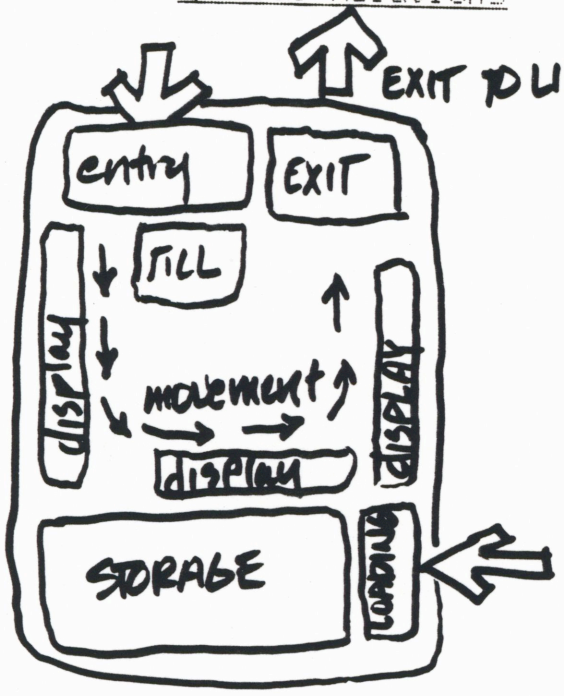
Space: RETAIL SHOPS.

Description: SHOPS THAT CARRY food as well as clothing.

Design Goals: Functional transitionary space.

Special Considerations: Should be ~~[illegible]~~ placed near the "core" of the village near tickets, change rooms & LIFT LINES.

Special Relations



SCHEMATIC DESIGN

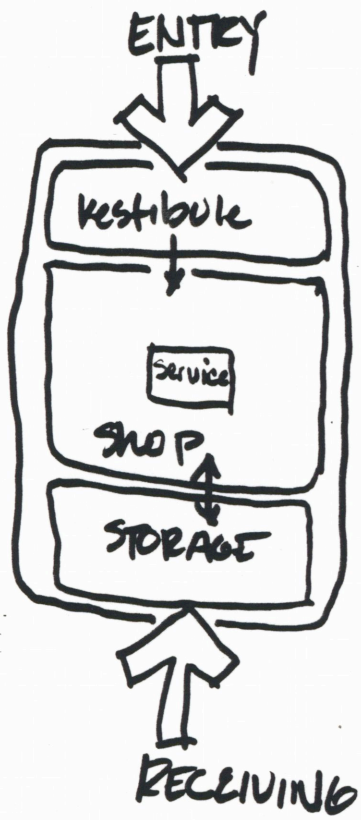
Space: GIFT SHOP

Description: small shop oriented toward the impulse buyer. As such, it should located near a point of entry, or, more importantly, near a point of departure.

Design Goals: GIFT shop oriented toward expensive tastes.

Special Considerations: near point of arrival or departure.

Special Relations



SCHEMATIC DESIGN

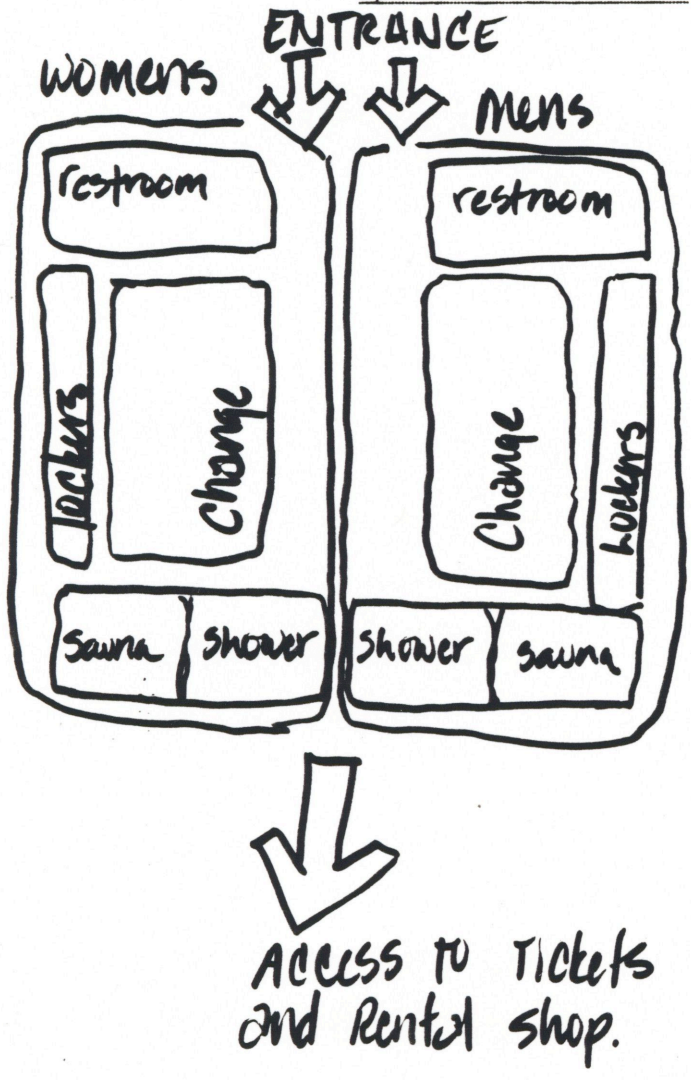
Space: Change Rooms/Lockers

Description: Lockers Capable of storing skis and ski gear as well as clothing. Sauna and showers incorporated

Design Goals: "CLUB" type Atmosphere

Special Considerations: Must be located near ticket and rental shops.

Special Relations



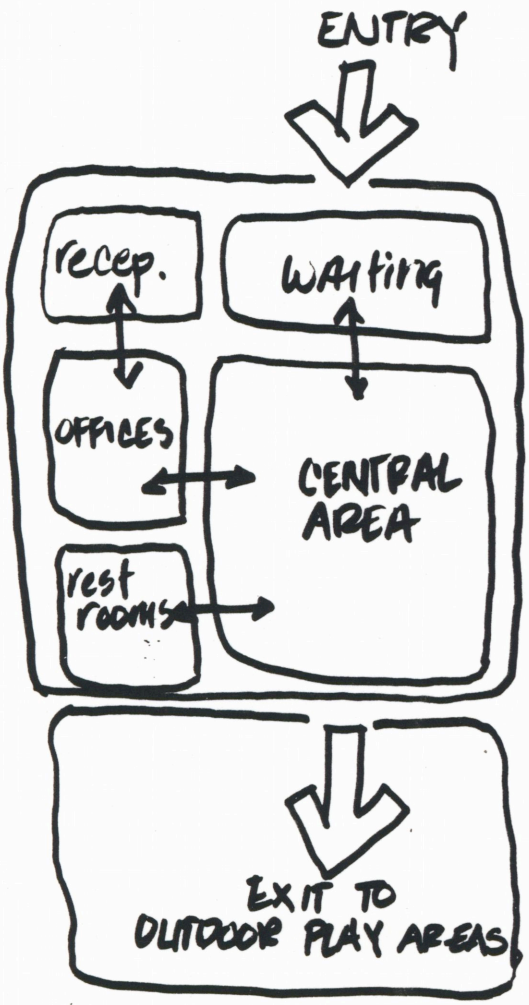
Space: DAY CARE / NURSERY

Description: SOFT SPACE WITH SOFT CORNERS AND EDGES. ARCHITECTURALLY SCALED TO THE CHILD.

Design Goals: PROVIDE ONE EMPLOYEE FOR EVERY 3-4 children. CENTRAL LOCATION FOR EASY DROP-OFF OR PICK-UP.

Special Considerations: DESIGN for child scale equipment.

Special Relations



SCHEMATIC DESIGN

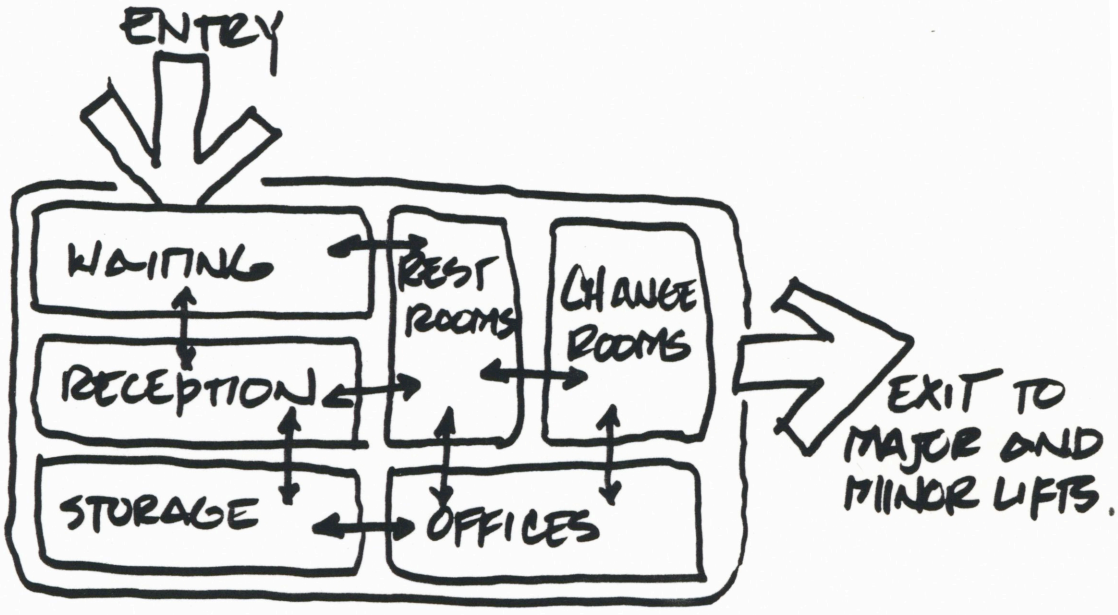
Space: Ski SCHOOL

Description: SMALL SPACE WITH DIRECT ACCESS TO MINOR LIFTS.

Design Goals: ADJACENT TO LIFTS WITH COMFORTABLE ROOMS. SHOULD CONVEY WARMTH AND CONFIDENCE

Special Considerations: MAY BE NEAR Ski PATROL TO SHARE FUNCTIONS SUCH AS CHANGE ROOMS, WAITING AND RECEPTION.

Special Relations



SCHEMATIC DESIGN

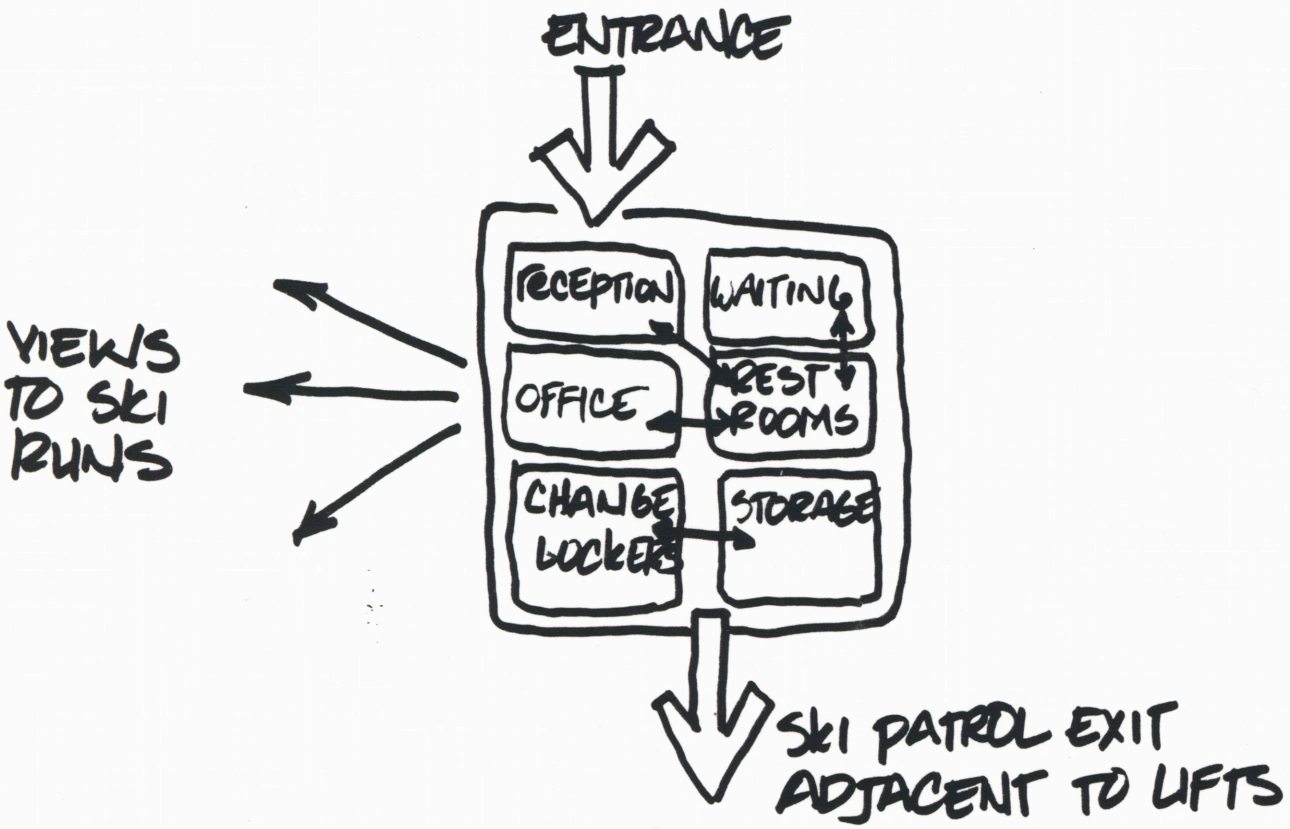
Space: SKI PATROL

Description: SMALL ROOM WITH AREAS FOR BUSINESS AND RELAXATION.

Design Goals: COMFORTABLY. SHOULD CONVEY "WARMTH."

Special Considerations: LOCATED IN AN AREA WHERE THE SLOPES CAN BE OBSEVED.

Special Relations



SCHEMATIC DESIGN

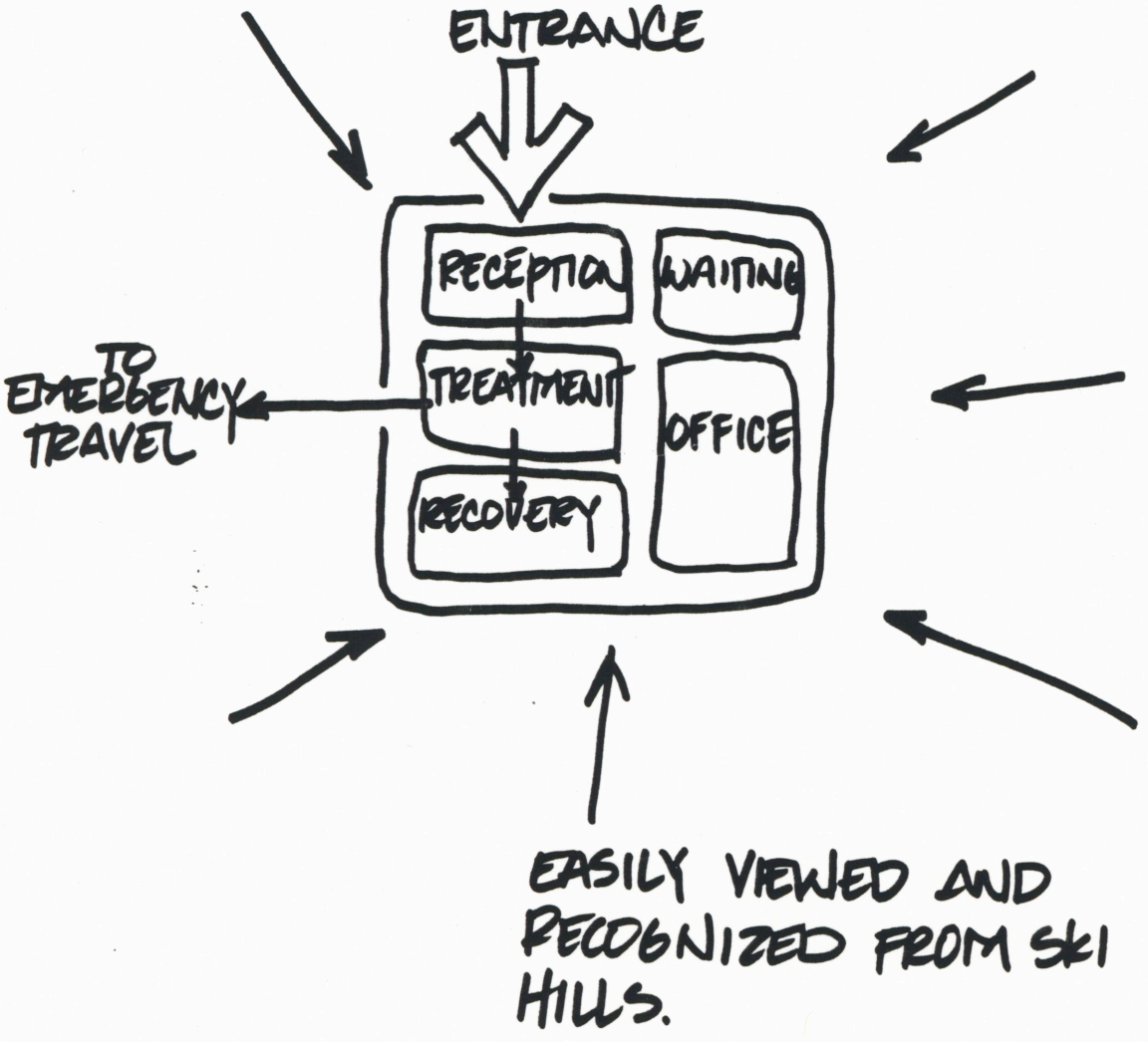
Space: FIRST AID FACILITY

Description: MEDIUM SIZED SPACE GENERALLY LOCATED MID-WAY UP SKI HILL.

Design Goals: COMFORTABLE, [redacted] EMERGENCY AID. NESCESSARY MEDICAL SERVICES PROVIDED. EASY ACCESS TO ROAD TRAVEL OR AIR LIFT.

Special Considerations: EMERGENCY POWER NESECARY. CENTRAL LOCATION ON SKI HILL.

Special Relations



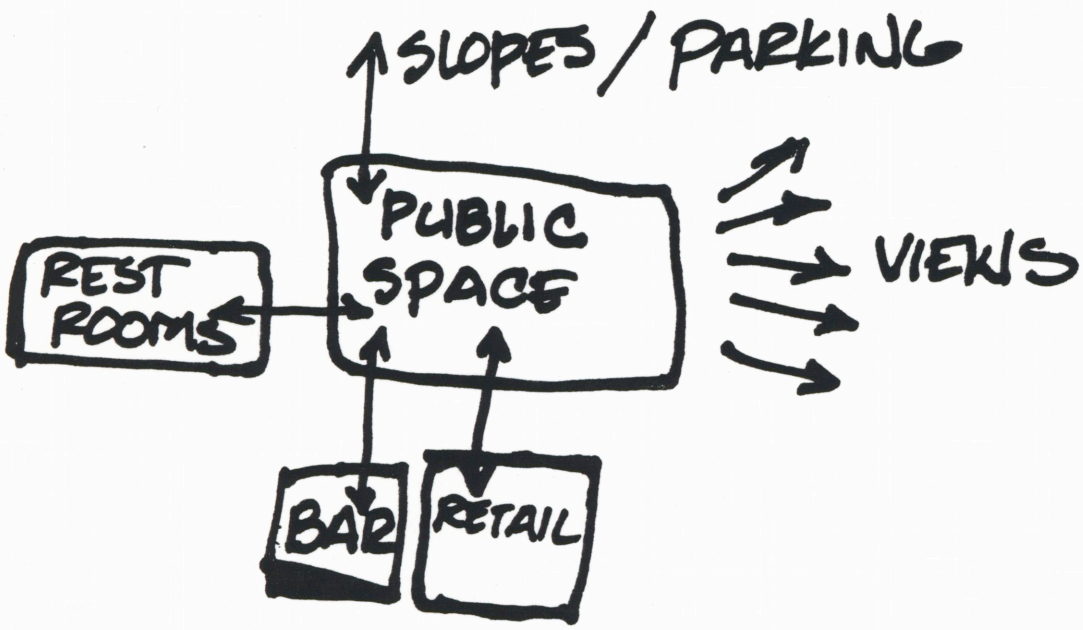
Space: PUBLIC SEATING

Description: BROKEN SPACES FOR LARGE OR SMALL GROUPS. COMFORTABLY FURNISHED.

Design Goals: PERSONALIZED SPACES WITH A VARIETY OF SERVICES.

Special Considerations: WIDELY DISPERSED. FUNCTIONS TO SUPPORT A VARIETY OF ACTIVITIES.

Spacial Relations



SCHEMATIC DESIGN

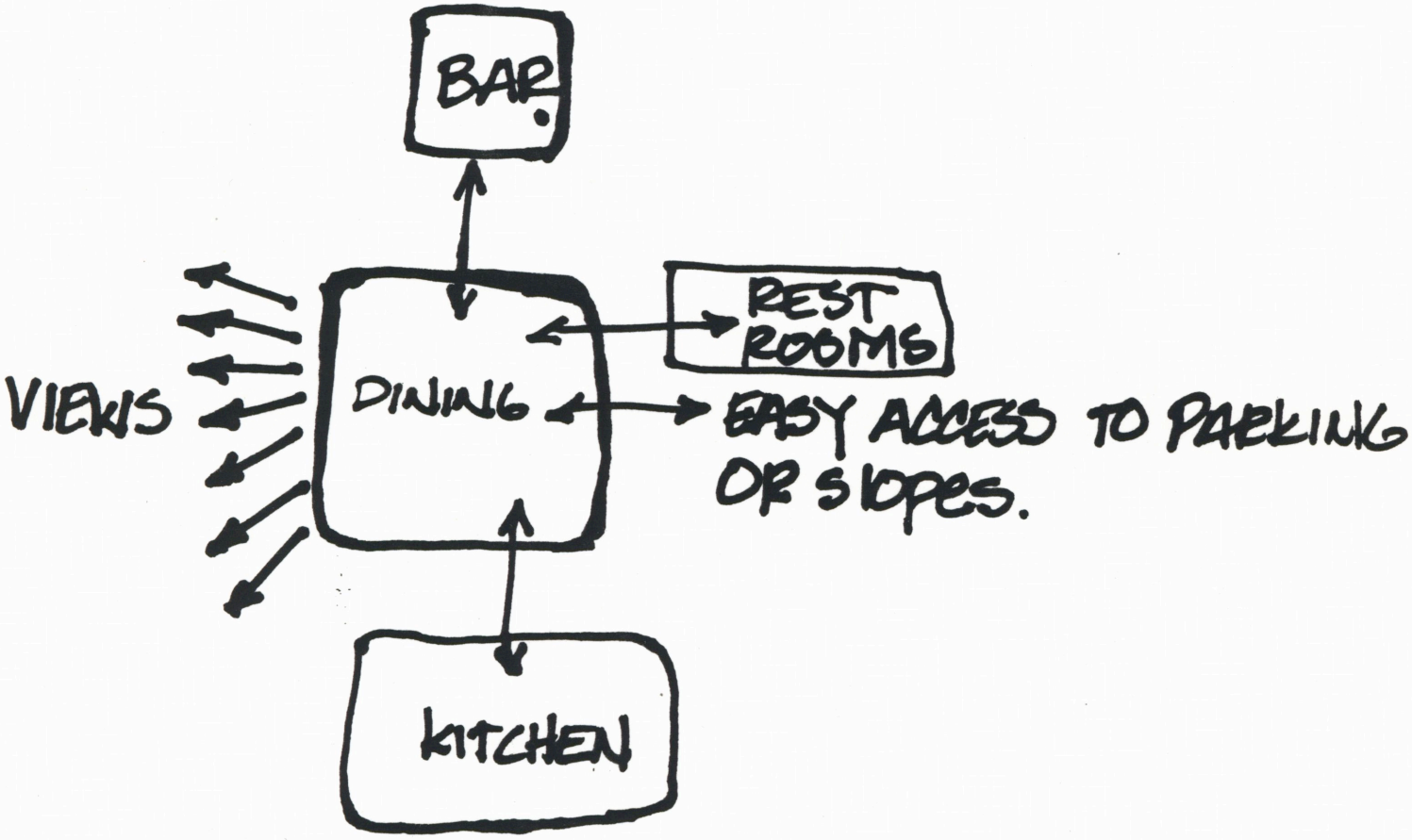
Space: RESTAURANT

Description: ELIGANTLY FURNISHED. APPROXIMATELY 30 ft / TABLE

Design Goals: AMPLE WINDOW TABLES. SCENIC VIEWS EASY ACCESS.

Special Considerations: ONE RESTAURANT CLOSE TO SLOPES TWO RESTAURANTS ELSEWHERE.

Special Relations



SCHEMATIC DESIGN

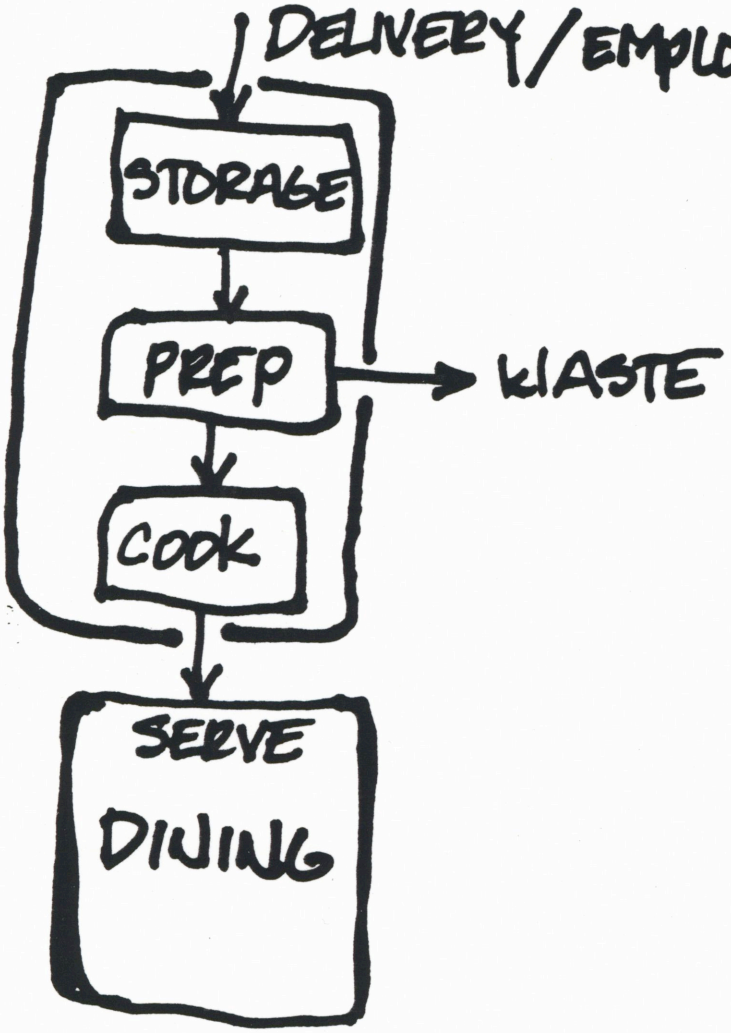
Space: KITCHEN

Description: ADJACENT TO DINING ROOMS

Design Goals: EVEN PREPARATION FLOW

Special Considerations: ONE KITCHEN SERVES MEETING ROOMS AS WELL AS DINING. 2 KITCHENS ELSE WHERE

Special Relations



SCHEMATIC DESIGN

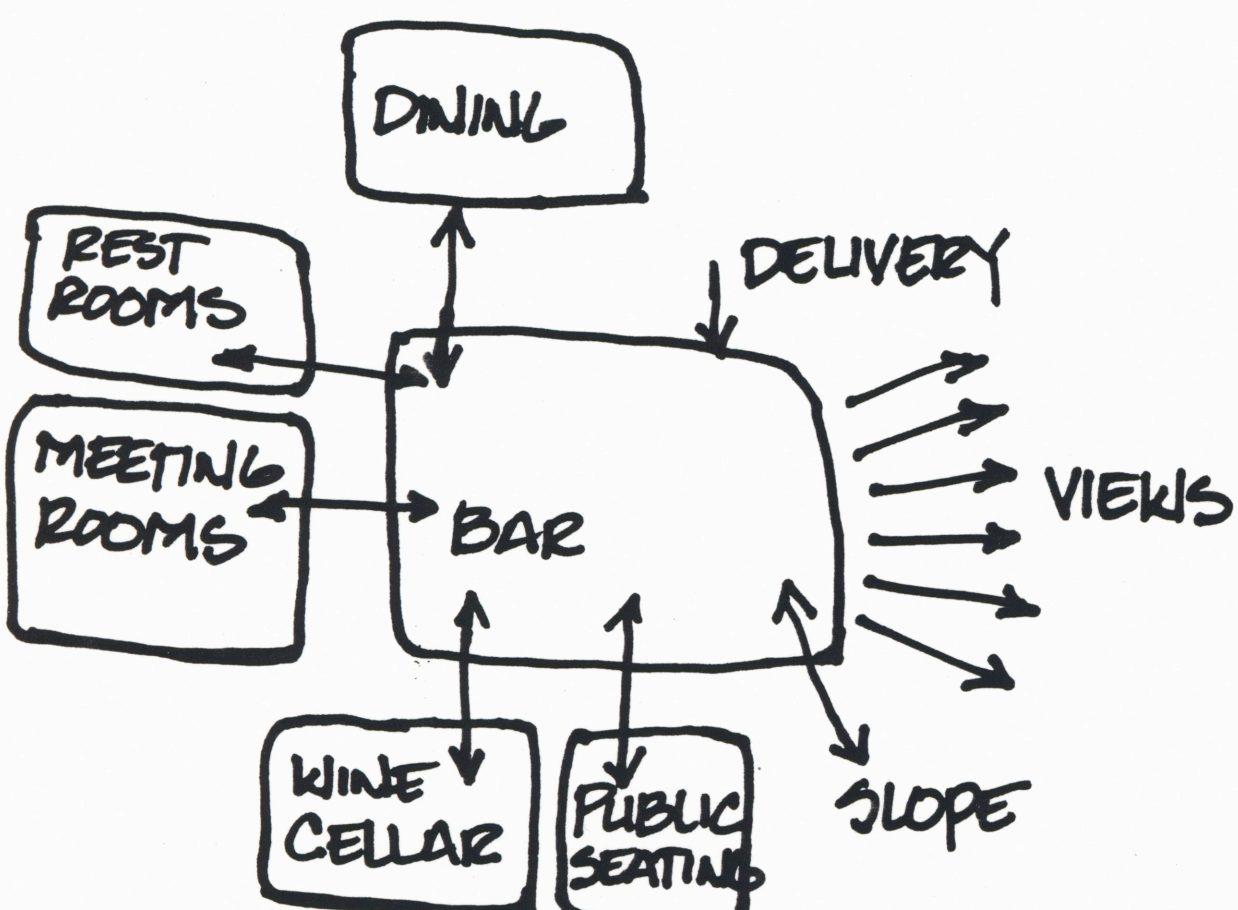
Space: BARS / LOUNGES

Description: ELIGENT FURNISHINGS AND FIXTURES THEMES INCORPORATED.

Design Goals: ADJACENT TO VIEWS. ACCESS TO SLOPES, MEETING ROOMS AND PUBLIC LOUNGES.

Special Considerations: ONE LOUNGE SERVES MEETING ROOMS. TWO ELSEWHERE.

Special Relations



SCHEMATIC DESIGN

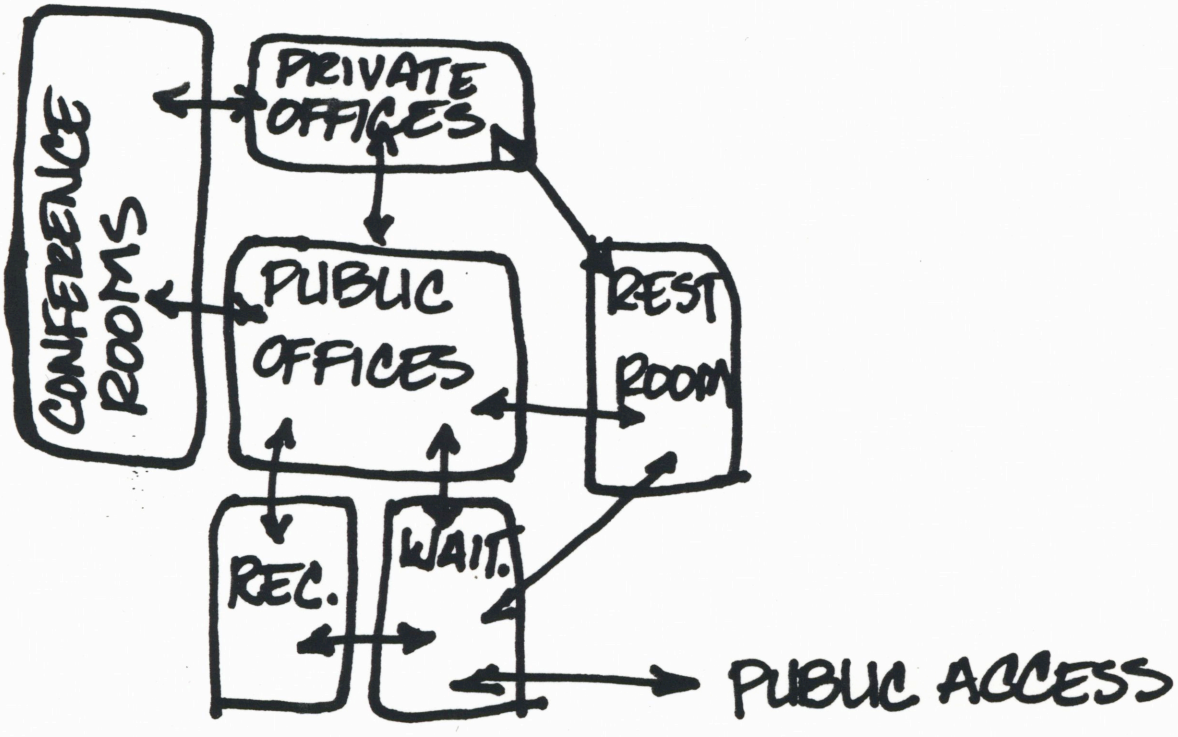
Space: ADMINISTRATNE OFFICES

Description: PUBLIC ACCESS. PLUSH FURNISHINGS.

Design Goals: MUST HAVE CENTRAL LOCATION AND BE ACCESSABLE TO THE PUBLIC.

Special Considerations: PRIVATE OFFICES MUST BE ALLOWED FOR.

Spacial Relations



SCHEMATIC DESIGN

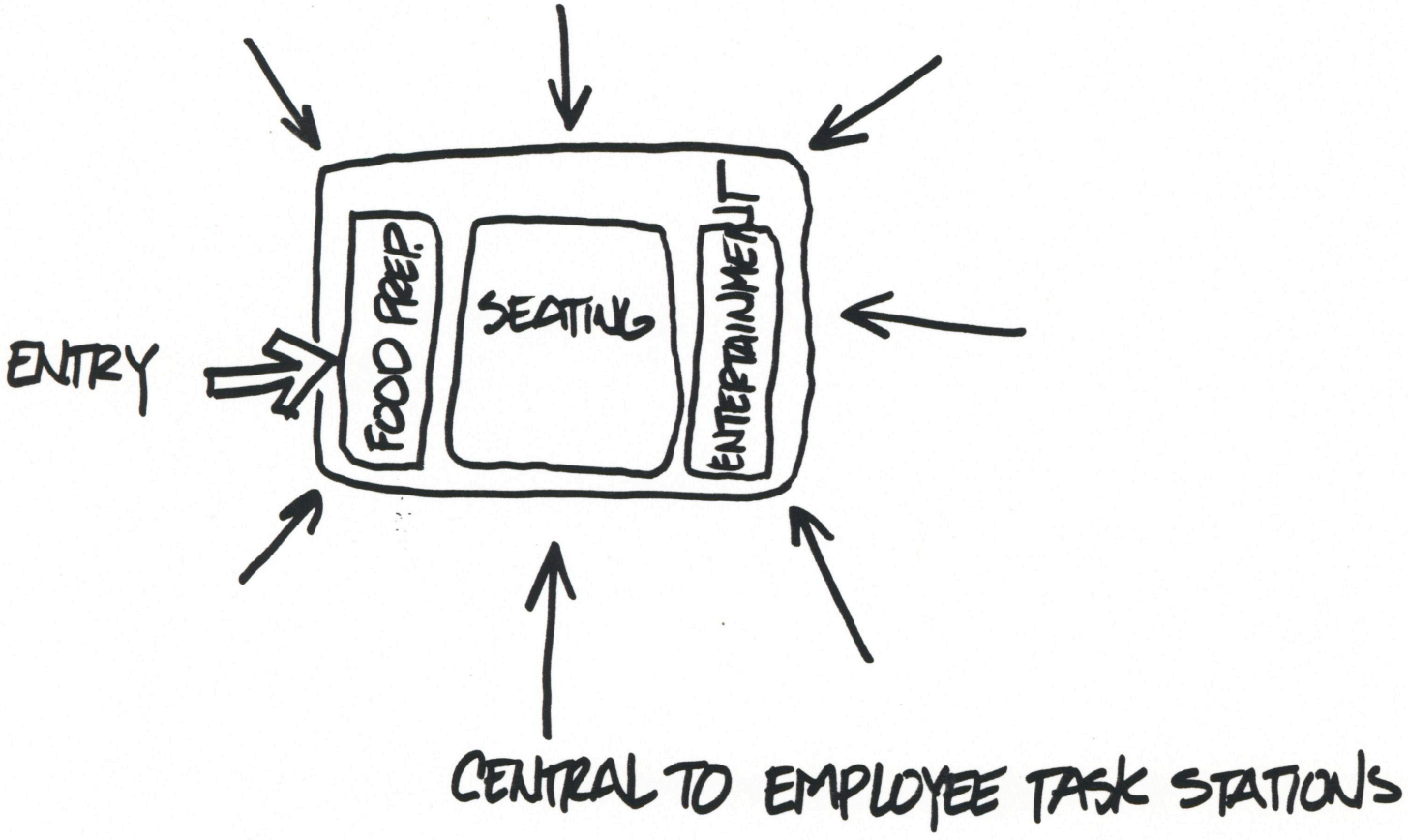
Space: EMPLOYEE LOUNGE

Description: GATHERING PLACE FOR EATING, TALKING AND MINOR RECREATION.

Design Goals: RELAXING ATMOSPHERE BUT FUNCTIONAL FOR HURRIED BREAKS.

Special Considerations: CENTRALLY LOCATED.

Special Relations



SCHEMATIC DESIGN

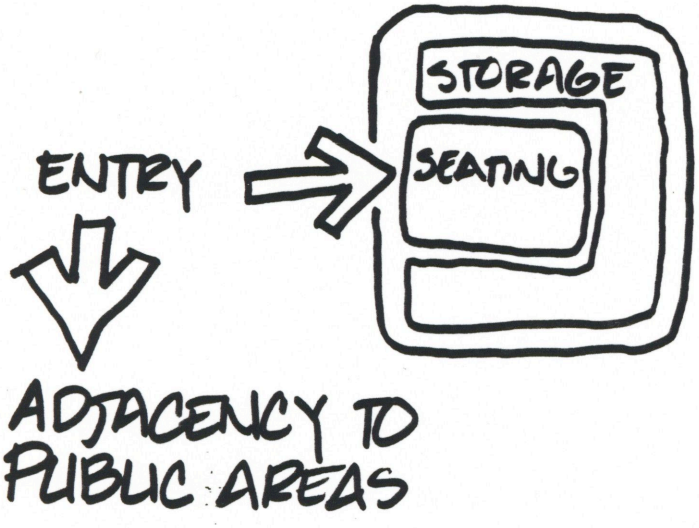
Space: JANITORIAL

Description: PLACED NEXT TO MAJOR PUBLIC AREAS SMALL ROOMS.

Design Goals: CLEAN & NEAT WITH PLENTY OF STORAGE.

Special Considerations: WELL VENTILATED BECAUSE OF CHEMICAL STORAGE.

Special Relations



SCHEMATIC DESIGN

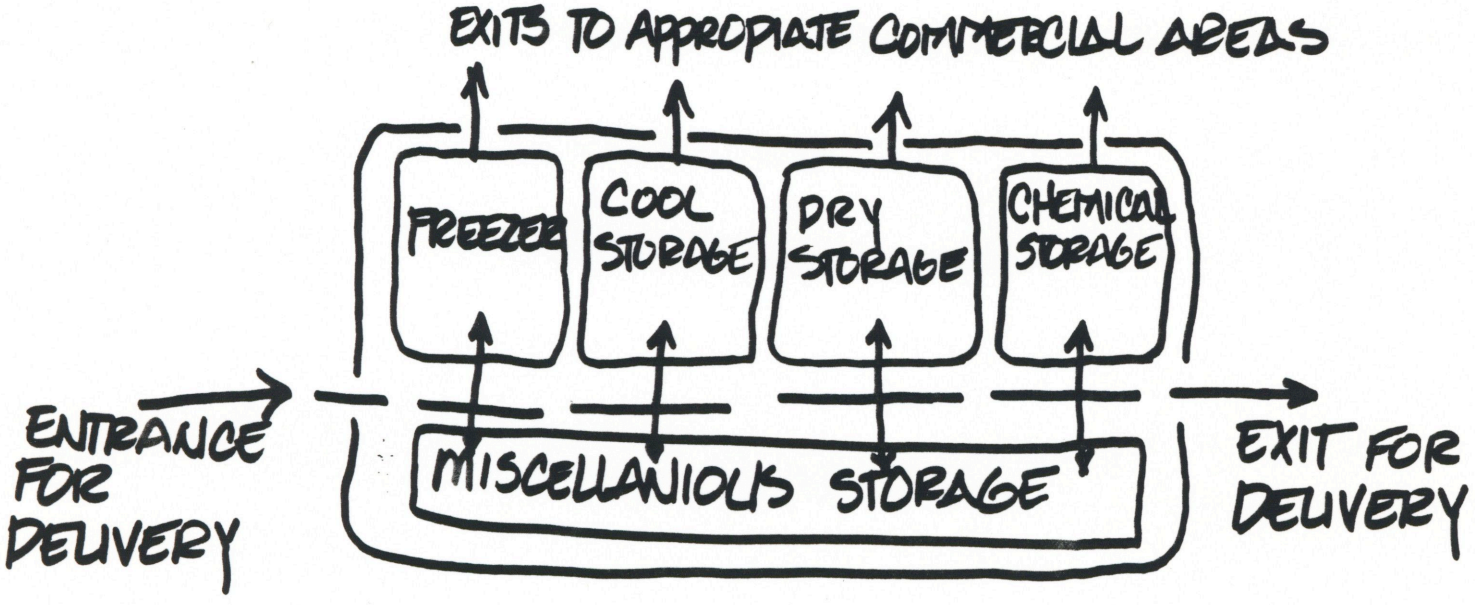
Space: STORAGE

Description: STORAGE OF MATERIAL FOR COMMERCIAL PURPOSES. MAY INVOLVE COOLERS OR FREEZERS.

Design Goals: FUNCTION-STORAGE OF MATERIALS MUST ALLOW FOR EASY ROTATION SO PRODUCTS DON'T STAGNATE.

Special Considerations: EASY ACCESS TO COMMERCIAL BUILDINGS. MAY BE CONCIEVED OF AS A SINGLE WAREHOUSE OR MANY SEPERATE ROOMS.

Special Relations: CENTRAL LOCATION.



SCHEMATIC DESIGN

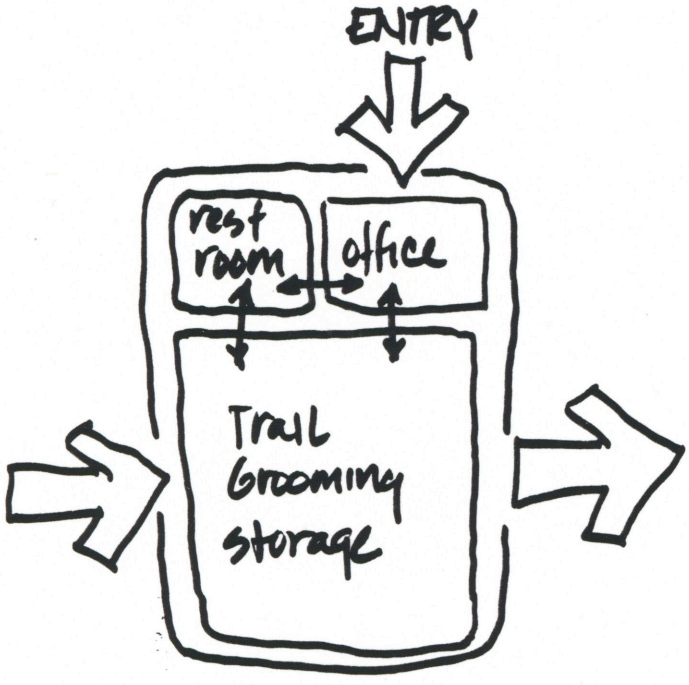
Space: TRAIL MAINTENANCE facility

Description: storage space for grooming equipment w/ small office.

Design Goals: Easy access to most runs. service available to the site.

Special Considerations: located up hill away from central facilities.

Special Relations



Schematic Design

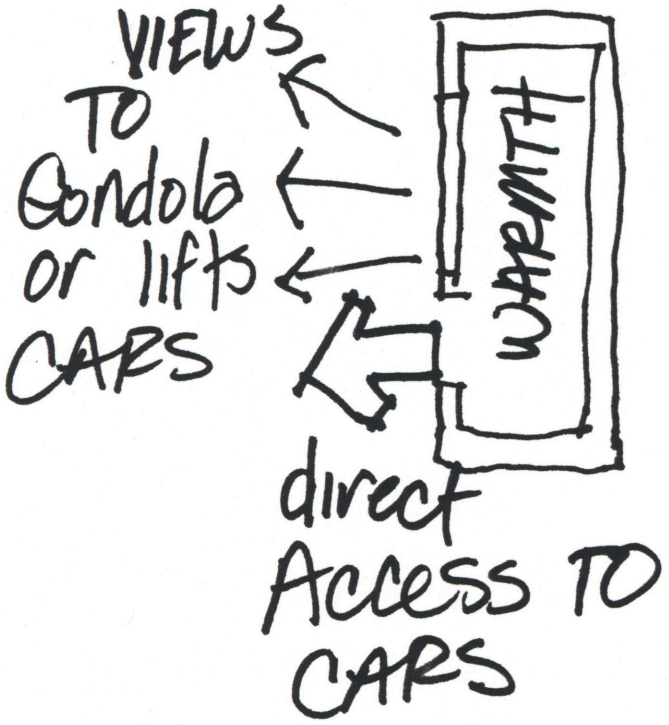
Space: Control rooms

Description: must be with good view of Gondola cars

Design Goals: must be located Adjacent to Lifts.

Special Considerations: must be able to see and stop mechanisms instantly

Spacial Relations



Schematic Design

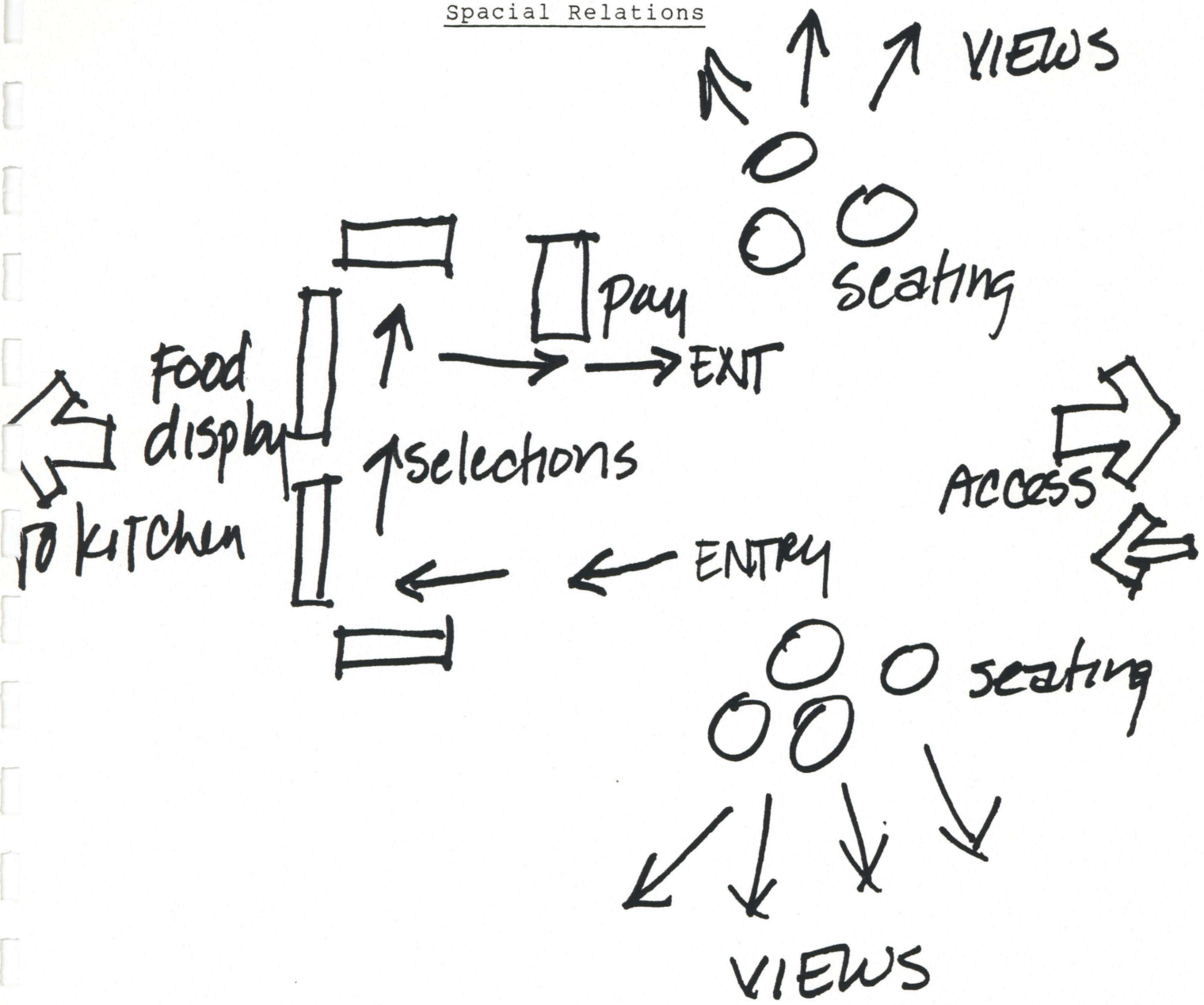
Space: scramble

Description: A space for quick meals w/ good views

Design Goals: EASILY Accessable from slopes w/ views

Special Considerations: non slip floors w/ good circulation

Spacial Relations



Schematic Design

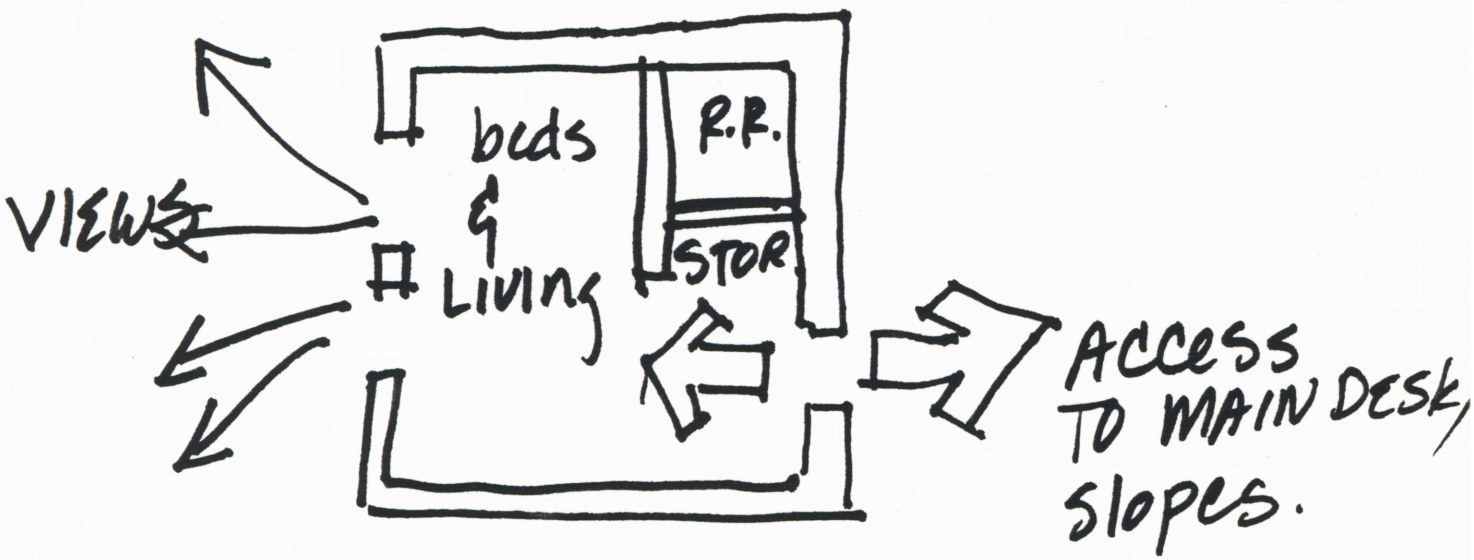
Space: GUEST ROOMS

Description: Rental space, Comfortable, elegant furnishings

Design Goals: Accessable TO VIEWS, slopes And MAIN desk

Special Considerations: Handicapp access.

Spacial Relations




Ski
CLIMATE
Yellowstone

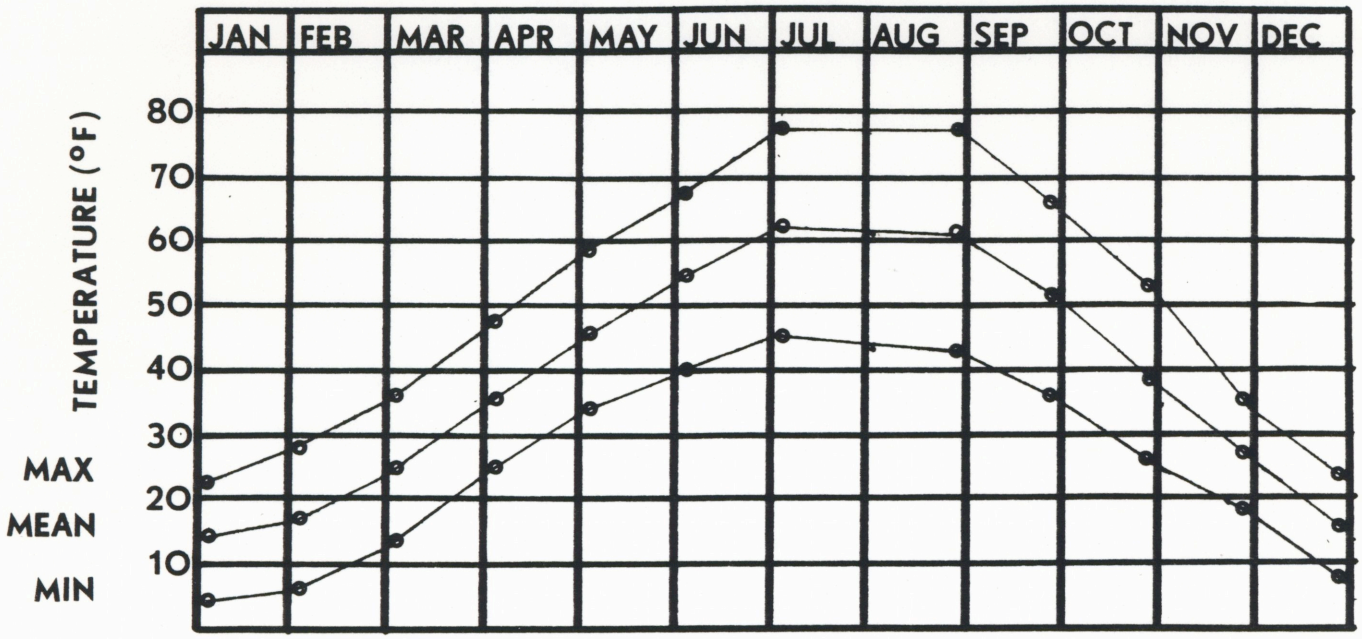
CLIMATE

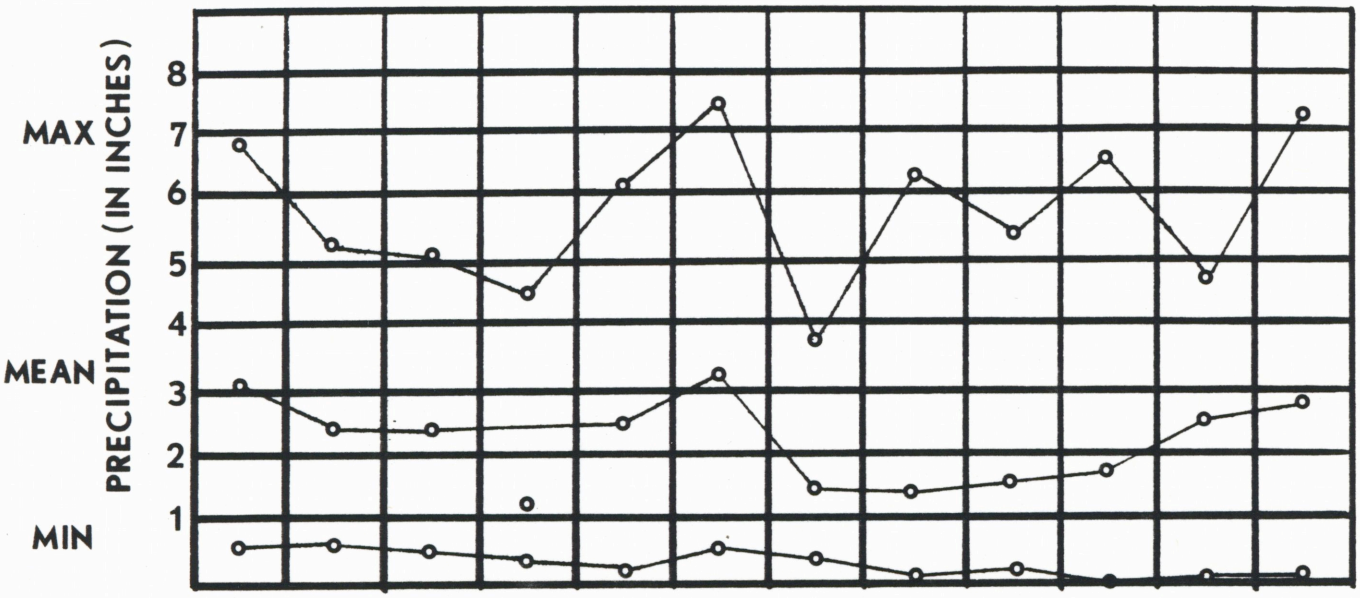
Summers in the Hebgan lake area are short but pleasant. Warm days and cool evenings make it the ideal summer resort location. Winters are long with plenty of sunshine. In fact the West Yellowstone area as the highest solar gain potential in Montana, second only to some parts of eastern Montana.

Winter temperatures are cool enough to maintain a good snow base at Mount Hebgan and winter winds are mild enough to avoid snow erosion. Falls are cool with little precipitation which suggests that the area would not be well suited for early fall skiing. However, the majority of the basin's precipitation is achieved in March and early May. This suggests that the area would have a banner spring skiing season. It is not uncommon to the Yellowstone region to see late season snow storms; sometimes as late as early June. Record temperatures in West Yellowstone have been recorded at a high of 97 to a low of -56 in January of 1981. This would suggest that the design of structures be such that they allow for this extreme potential for expansion and contractions of materials. Winds blow into Red Canyon during the day and out at night at an almost constant rate of 5-10 miles per hour. This is both typical in summer and winter as the protected nature of the canyon is only occasionally interrupted by violent storm systems.

Hebgan lake begins freezing over in November and thaws in late April to mid May. The depth of the late provides a stable enough temperature to allow for a relatively short freeze period. Ice is

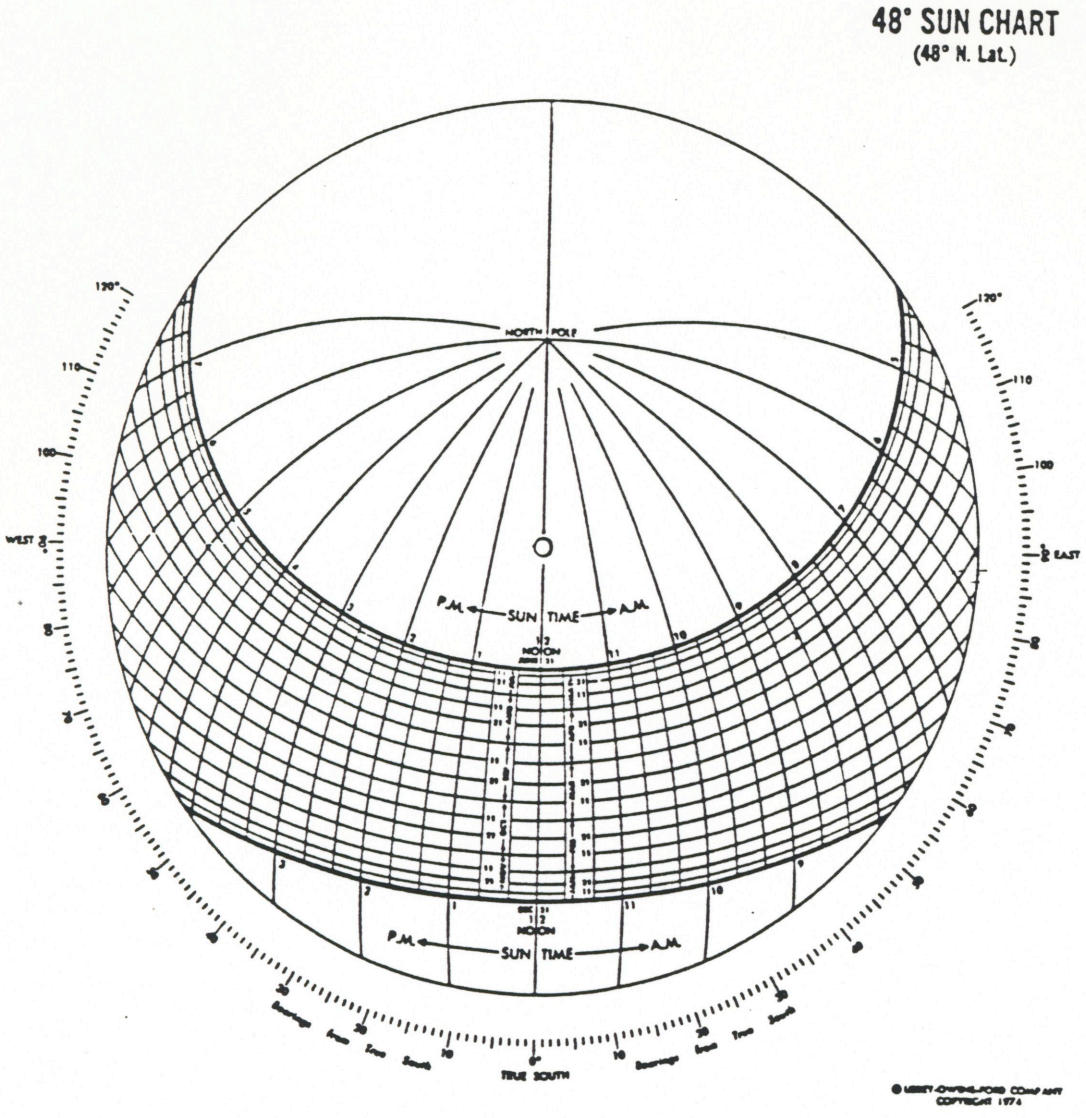
stable from december to early march which makes it a transformed environment for snowmobiling and ice fishing as well as having the potential for the currently unexploited ice skating.


JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC
TEMPERATURE (°F)
80
70
60
50
40
30
20
10
MAX
MEAN
MIN


PRECIPITATION (IN INCHES)
8
7
6
5
4
3
2
1
MAX
MEAN
MIN

climatic design

SUN CHART




Ski
METAPHORS
Yellowstone

NATURAL METAPHORS

In considering the use of a regional architecture it became appearant that there simply aren't any contextural examples of buildings in the park that I can use. This is mainly a resultant of the personal biases that I have. You are probably asking yourself "what does he mean?" By this I simply mean that, for example, a building such as the Old Faithful Inn is an architecture that expresses the year 1912. Sure there are lessons to be learned from the inn, lessons in applications of natural materials, site planning, and roof slopes.

In search of appropriate metaphors I asked myself this question, "How can I address a sloping site and combine all of the required functions under one roof?" My searches led me to Italian Hill towns as a means of expression. After studying the forms and applications to my thesis I determined that it would be impractical to try and design in the literal sense of the Italian hill towns for one main reason, Italian hill towns are built slowly over hundreds of years with each additional building added as required. It is a very personal style of architecture that would not be duplicated easily. If I were to use the hill towns as a literal metaphor I would be designing each space separately and committing to smaller forms long before the overall scheme was complete, after which there would be no turning back, right or wrong.

In the practical sense however, there are applications that have gleaned from the hill town. The most important of those applications are as follows. The use of native and uniform colors and materials acted as a strong means for tying the whole of the project together. This generally is not achieved in a complex or arbitrary fashion, it is a given. The other application that really made a strong impression on me was the fact that the hill town, almost without exception, always exploited a dramatic site, similar to the site I had selected for myself.

Another metaphor that I explored were abondoned mines in ghost towns of the American west. Generally these mines are located on steeply sloped sites and were designed around the required functions of the building. Because of the fact that most of these mines were located in mountainous areas where the desired mineral deposits had eroded away, the builders also had to be quite concerned with shedding snow loads. This, I felt provided an excellent metaphor to work with, and in combination with the Italian hill town, I felt I would have an architectural symphony. It, therefore, will be my task to exploit these forms to offer a language for building form that is regional, contextural and practical.


Ski
TRANSPORTATION
Yellowstone

TRANSPORTATION

Transportation to and from the Yellowstone region commonly is achieved through private cars or by TWA services busses based in Bozeman, Montana. Gallitan Field airport is the closest year-round air facility, located also in Bozeman. Greyhound bus lines serve the area of West Yellowstone only in the summer out of Idaho Falls, Idaho.

West Yellowstone has an airport that is open only during the summer months. Economics has determined that the field be closed during the winter as the cost of maintaining a clear runway would be a burden.

Recently, the only commercial airlines to service the airfield, Western airlines, has pulled out. The state of Montana is currently taking offers from potential buyers of the airfield.

This presents a rare opportunity to the developers of Ski Yellowstone as the publicity and maintenance of a destination resort would depend on such vital links to major cities.


Ski
SKIING TRENDS
Yellowstone

SKIING TRENDS

Research indicates that the ski industry is growing at phenomenal rates. The trend, also is to a family oriented resort. Many consumers are looking for resorts with adequate child care facilities. Polls indicate that consumers are likely to buy at the resort of their destination if the goods are there. Whistler Mountain in British Columbia sells more ski related equipment than the entire city of Vancouver does.

Cross- country ski resorts (separate from the down hill runs) are popping up all over the country. Big Sky's Lone Mountain Ranch has been called by Esquire Magazine one of the country's cre'me de la cre'me cross-country ski resorts because of its remoteness and miles of groomed trails. Rustic operations tend to point to the outdoorsman consumer group here.

Last year, ski industry sales in the United States alone reached 1.3 billion. Particularly of importance is the significant increase in sales of children's equipment. This indicates that the baby boomers are taking their kids skiing. This has its good indications as well as its bad for the ski industry.

Liability insurance rates for the resorts have jumped nearly 400% causing some resorts to operate without the insurance. Others pass the cost off to the customers making the market highly competitive for the middle income bracket skiers.

One thing for sure. The parents of todays young skiers won't have a good time unless the kids are having one. Todays resorts need

to take that into account and some resorts have already happily accommodate that fact. Mammoth Mountain in California have ski schools for kids in different age brackets. They have adequate nurseries and daycare centers to accommodate peak days of skiing.


Ski
the final solution
Yellowstone

The Final Design Solution

The final design is a very satisfying solution for me. It was derived through a clear process that was exhaustive at times and very enjoyable at others. I am writing this section in a very loose fashion for two reason. First, I would like the jury and the reader to understand the intentional aspects of the project so that they may asses differences in approach and opinion. I welcome them all. Second, I would like this to serve as a Thesis diary that I may reflect on in future years, so that I can compare my growth and tastes as they develop.

The predominant element that I continually referred to throughout this process was my love of the Yellowstone region. I had the opportunity recently to work in Minneapolis, Mn. and not a day went by where I didn't wish I were back in that wonderful, isolated region. I had therefore determined upon my arrival back in Montana that I would try with all my ability to create a resort that fit comfortably within the context of the Yellowstone region so that the city slickers from Minneapolis would have a firm image embedded in their minds after a brief visit to the resort.

During the slide presentation I will try to convey these images of the region to the audience. Some will be surprised because they will not be images of buildings. They, instead will be images of landscapes....images that do nothing more than express emotion. They will not be trying to express metaphors or wierd applications to buildings of regionalism. I gave up trying to

force those about seven months ago. They will simply show yellowstone. Maybe then the audience will understand the applications of wood and post and beam construction and a quiet, restrained use of rock. They will also understand the reason for creating a hot springs for the hotel guests to enjoy.

Yellowstone does not have an architectural vocabulary. Nor does it offer a High Style. It does offer peace of mind.

Buffalo covered by frost on a winter morning because they slept standing up near the fog of a thermal pool. Osprey suddenly folding up their wings and slashing into a lake to be weighted by by a large wriggling trout. These are the circumstances in which I grew up and they are the conditions I wish to mandate and convey.

The Project

The project was designed to establish the future development of the area. This is reflected in the easily added onto forms. To further establish the multifuction of the project a separately integrated hotel was annexed to more firmly establish the facility as a catalyst for the development of the area.

The site that was selected was pulled uphill from its designated location for reasons discussed earlier and to allow moose and elk migration along the creek in the spring and fall. Elk also frequent the area in the winter along the sunny south slopes.

Day use parking is located in the flats at the mouth of the canyon and will be hidden by allowing for snow storage setbacks and well as additional vegetation. Access is therefore achieved

by a one-way drop-off loop at personal leisure, a shuttle buss, or along a pedestrian mall which I would like to designate as future development.

The Hotel and the Day Use areas are intentionally given some separation to further the sense of place that I am trying to achieve. This allowed for two outdoor spaces that address the slopes and enhances the sense of pattern that starts to evolve especially when one thinks of the possibilities for future development.

Methods

In striving for a design solution It became apparent that I would like to exploit the dramatic site that I had selected for its views, orientation to the hill, solar access as well as potential to become picturesque. A number of elements that were presented in Thesis I also helped determine the site.

Because of the steep slopes I had determined that the building form and structure should be mutually beneficial. The form therefore became pitched roofs with south facing clerestories.

The structure became a mass of heavy timber that would accommodate the sizable lateral earthquake loads in the area.

In addressing scale of the user, certain patterns began to emerge that are discussed later.

The buildings followed a contour ridge which formed a semi circular meadow that was simply screaming to have form grace it. Later it also suggested the one-way road mentioned earlier.

The major forms were allowed to break from this spine in the following fashion; the gondola building's plan was allowed to be turned in a fashion that was dictated by the preplanned gondola line, the main lodge was allowed to follow the angle of the secondary chair lift and the hotel was allowed to gracefully step down a heavily wooded and rocky ridge, thus combining to create two distinct outdoor spaces. The outdoor space adjacent to the hotel was given life with the addition of an ice-skating rink and direct access to retail shops, a restaurant with views and a lounge area. The outdoor space adjacent to the main lodge was given life by pulling the pro shop from the gondola building to the main lodge so that day users couldn't help but participate in the space. A second dining deck was also added to break down the scale of the main lodge. To maintain the views from the first floor of the lodge an open web steel grating was used for the flooring of the deck. The gondola building and the main lodge, even with these adjustments were still having trouble relating to one another so, in establishing a dialogue between the two I highlighted the roof structure in the main lodge by use of a colored metal roofing, (in thin strips) over the location of the structure. In the gondola building (which Is not heated) I allowed the actual structure to push through the roof . This pattern was extended such that the structure actually was left naked over the area addressing the gondola line. All roof slopes are consistent with the exception of the roof over the hotel desk. This was done so that the line of the clerestory could be maintained with the ridge line of the roof over the office. I

think it is one of the most complex, yet successful ways in which variety is introduced in the project. There is also a different pitch allowed to take place in the area that connects the hotel with the main lodge. This area is meant to be nothing more than a smooth transition between the two and is expressed in the lack of detail. The pitch of the roof is kept intentionally low to allow for early morning sunlight to come through.

The end of the hotel spine is terminated with a skyway that links the hotel to the hot springs, to me one of the most important places on the site in terms of "place". So as to allow this skyway not to be read as entry I offered it some visual competition. The day use skyway was introduced on a larger scale so that it could be read as entry, terminate the open space between the main lodge and the gondola building and define the pedestrian area between the two skyways. This lower level pedestrian mall is terminated to the south with the first aid facility and to the north by the slope and existing vegetation.

Enough said about form.

To introduce a further level of complexity I intentionally left the east facing wall of the hotel units blank to express mass. The main lodge was then completely opened up to windows to introduce variety. When this occurred one begins to see structure so the obvious thing to do in the gondola building was not only open up the wall, but completely open up the structure. This included the clerestory. I at once became infatuated with the transition and allowed everything in between the three elements to become purely transitional; walls opening here and closing

there, structure exposed here and covered there. I feel it added a tremendous amount of flavor to the building.

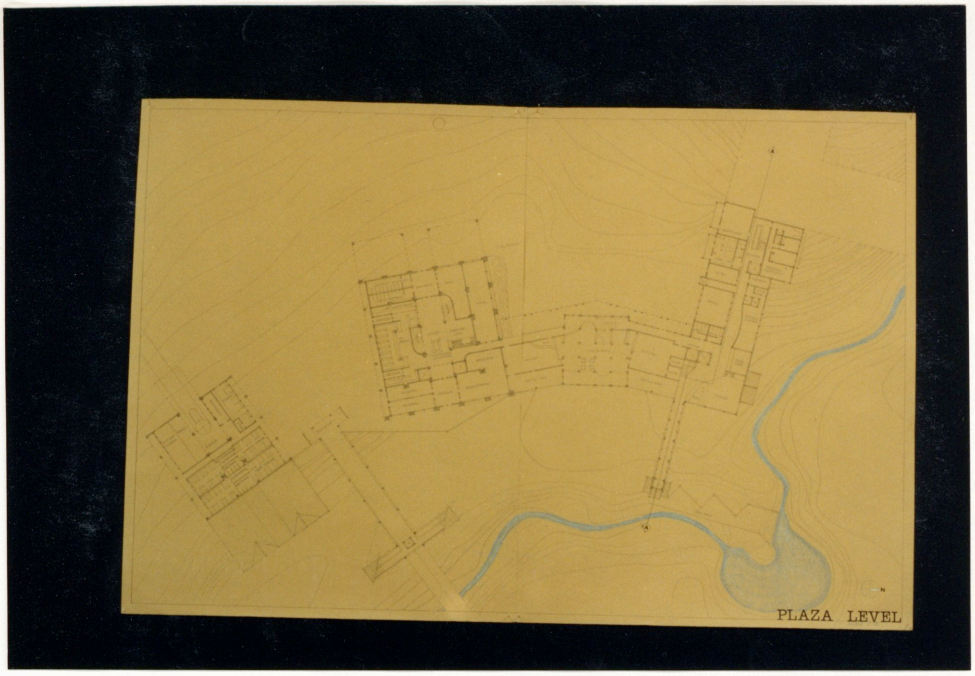
The next two elements that I introduced to the project were structure and rhythm. The structure was expressing a rhythm, so where there was a need for transition I introduced exposed structure. Examples of this are evident in the structure beneath the sky walks as well as the cantilevered north section of hotel units.

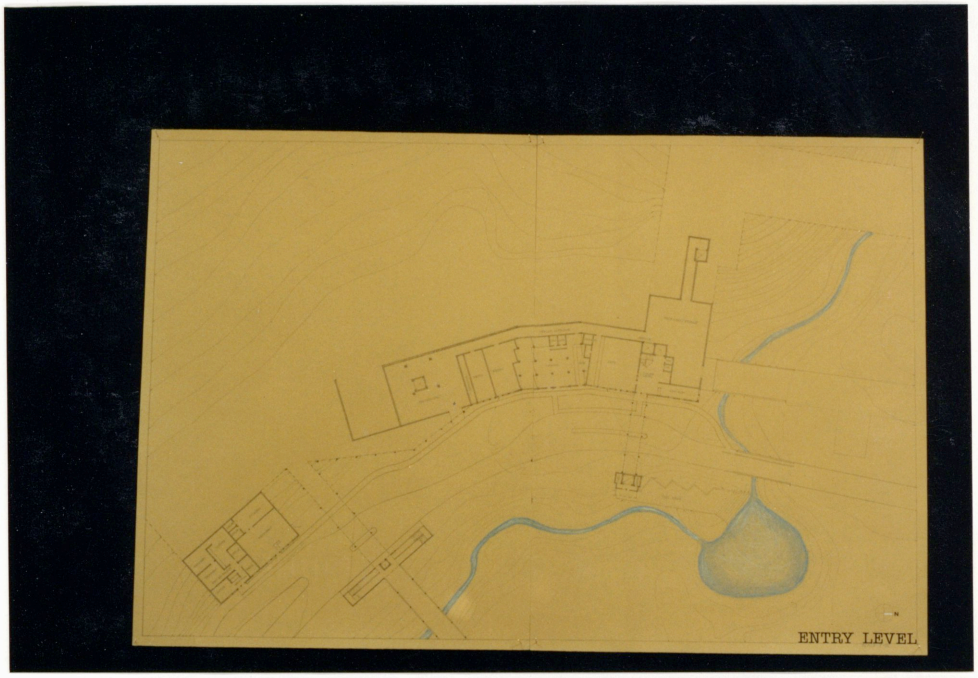
Materials, which were discussed earlier, were the final application that brought the whole of the project together. As proclaimed before the sense of unity that the Italian hill towns conveyed was the answer I was searching for. By unifying the materials, all of the elements work together. The grey metal roof was selected to reflect the color of the exposed natural rock on the site. Natural rock was used so as to establish a firm base on the east side and natural, horizontal wood is used elsewhere.

Landscaping is allowed to screen areas such as the hot springs and to hide cars in the parking area. It is also used to help define edge in important exterior spaces.

I think its time to conclude this explanation (since its 4:58 in the morning for one thing) so I will. I'd like to conclude by saying that right now I am very satisfied with the project- probably more so than with any other project. But I'll let the jury determine that. Good night.

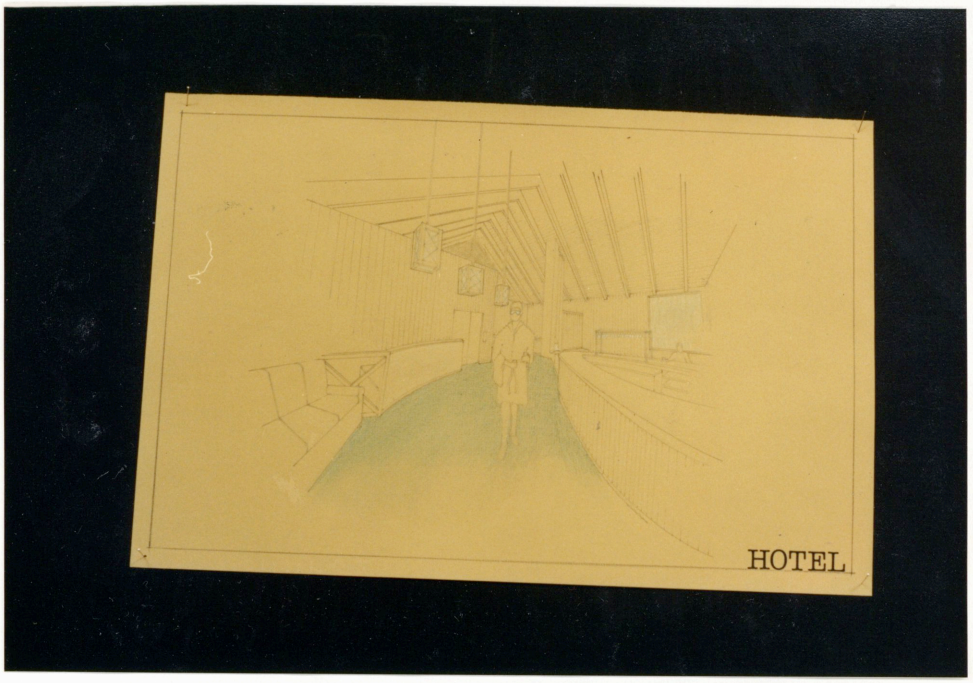

Ski
Photos
Yellowstone

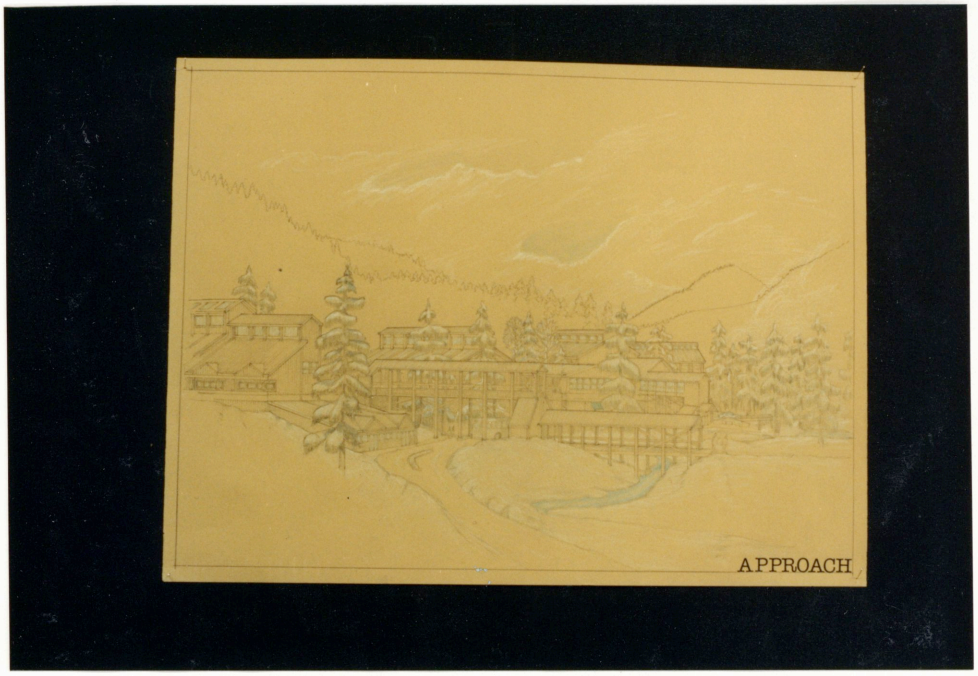

PLAZA LEVEL

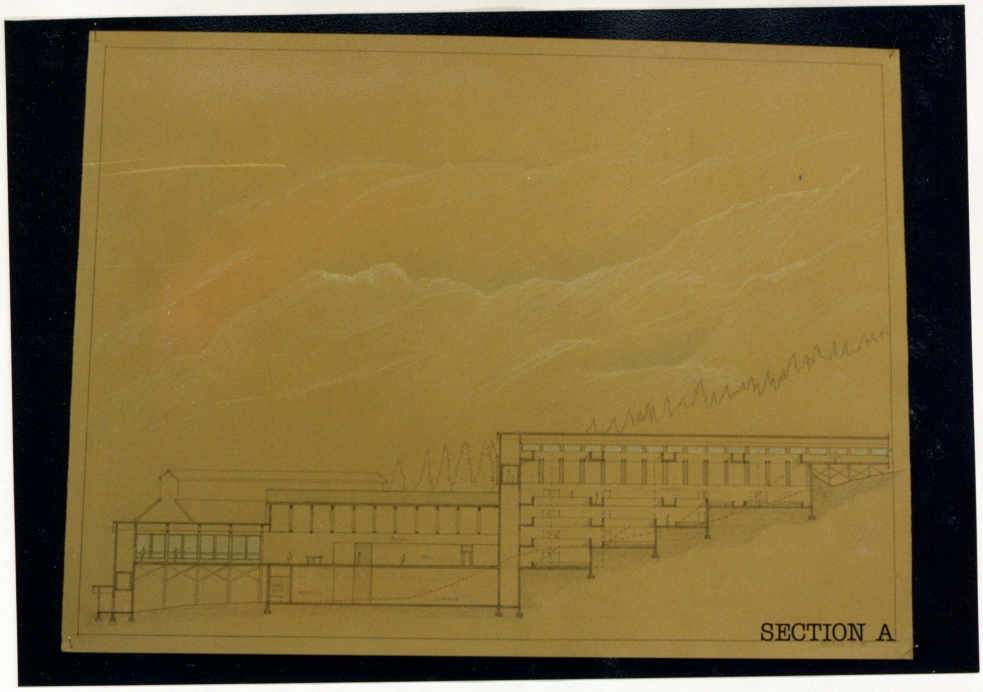

ENTRY LEVEL


SITE PLAN


MAIN LODGE

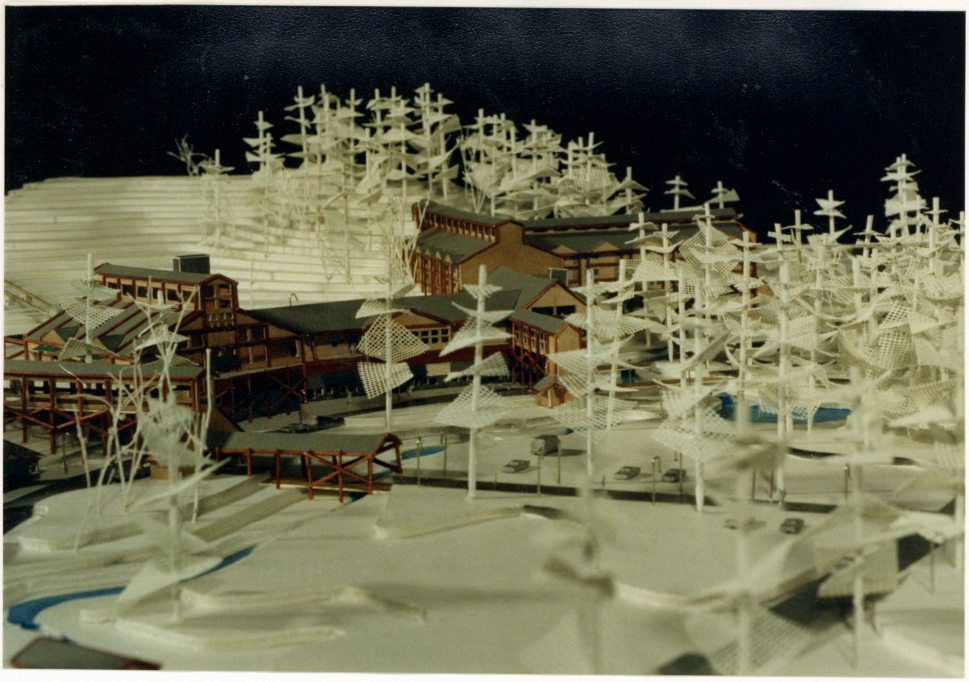

HOTEL


APPROACH

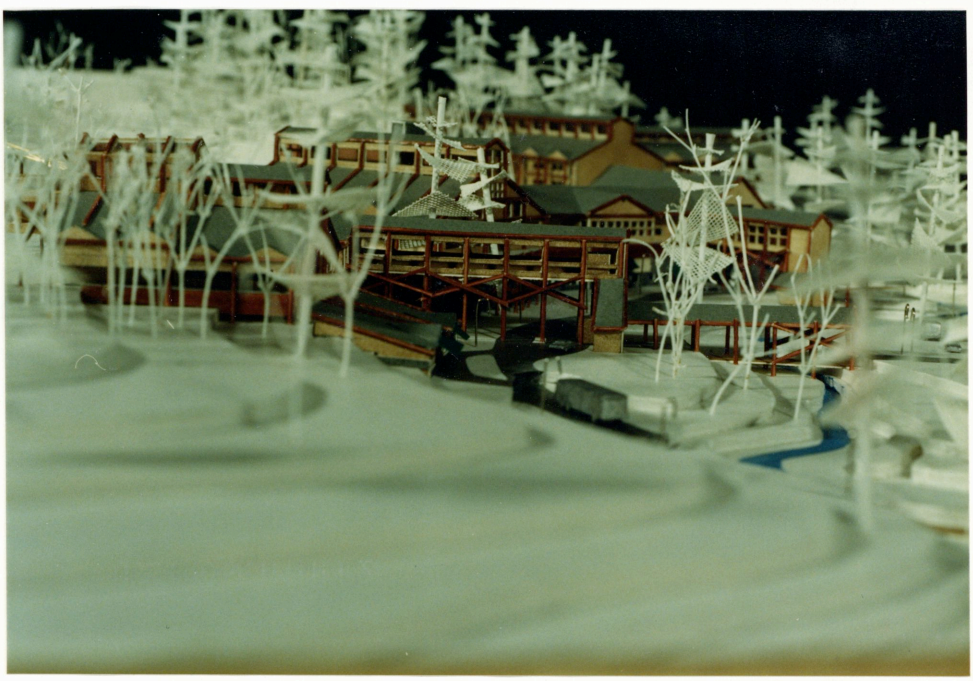

SECTION A

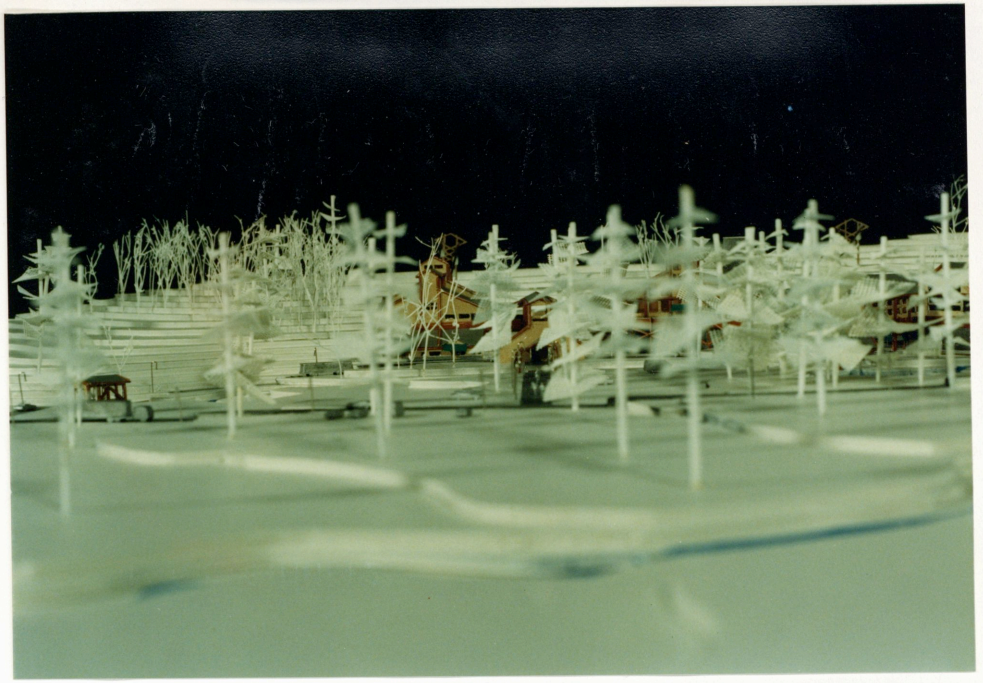

GONDOLA

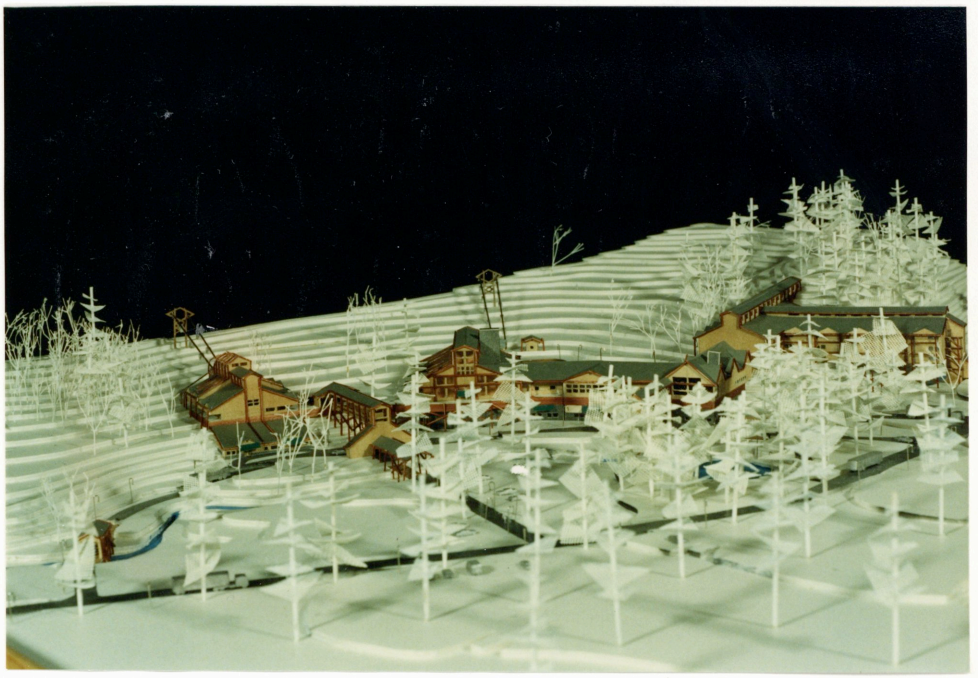

MAIN LODGE

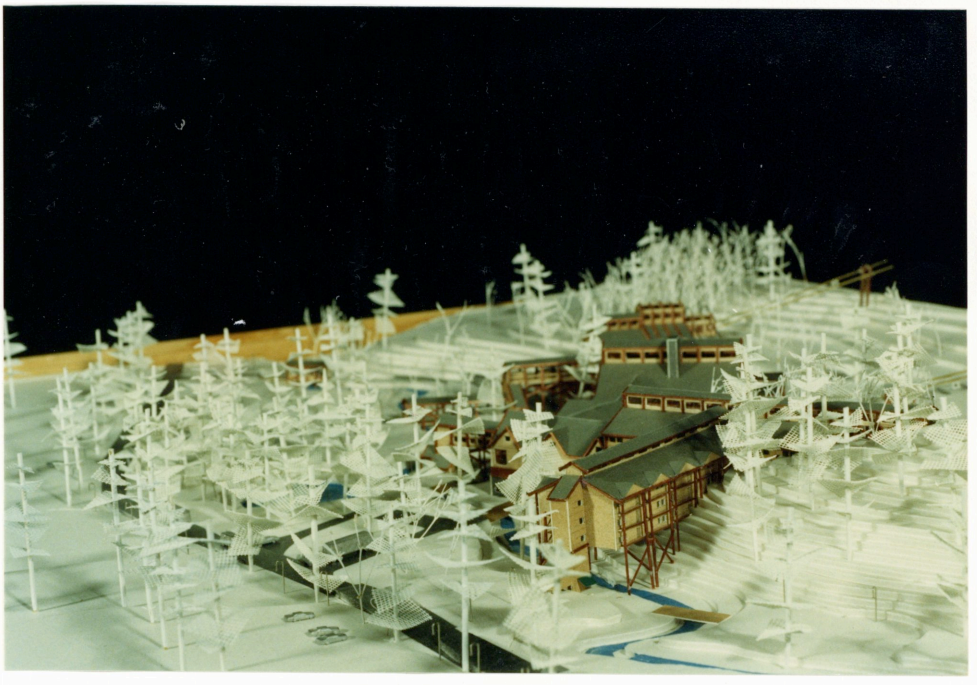


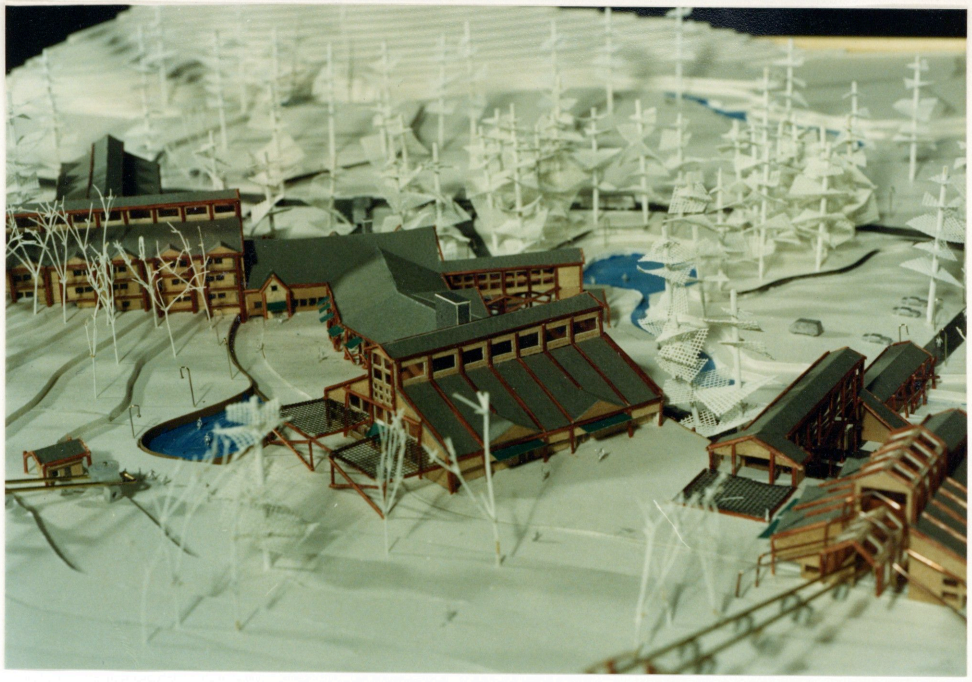


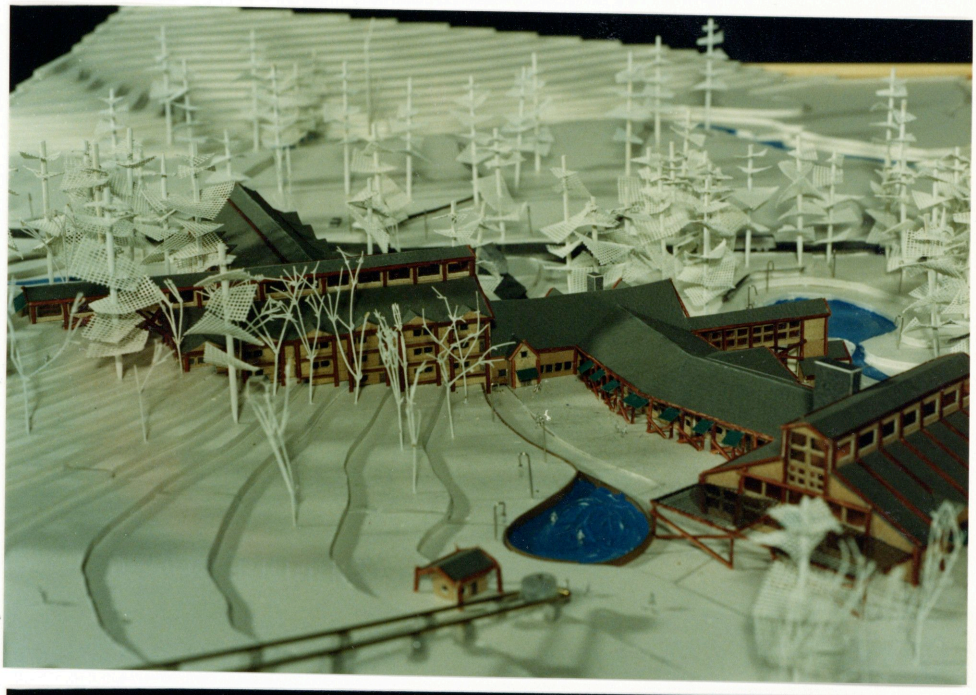


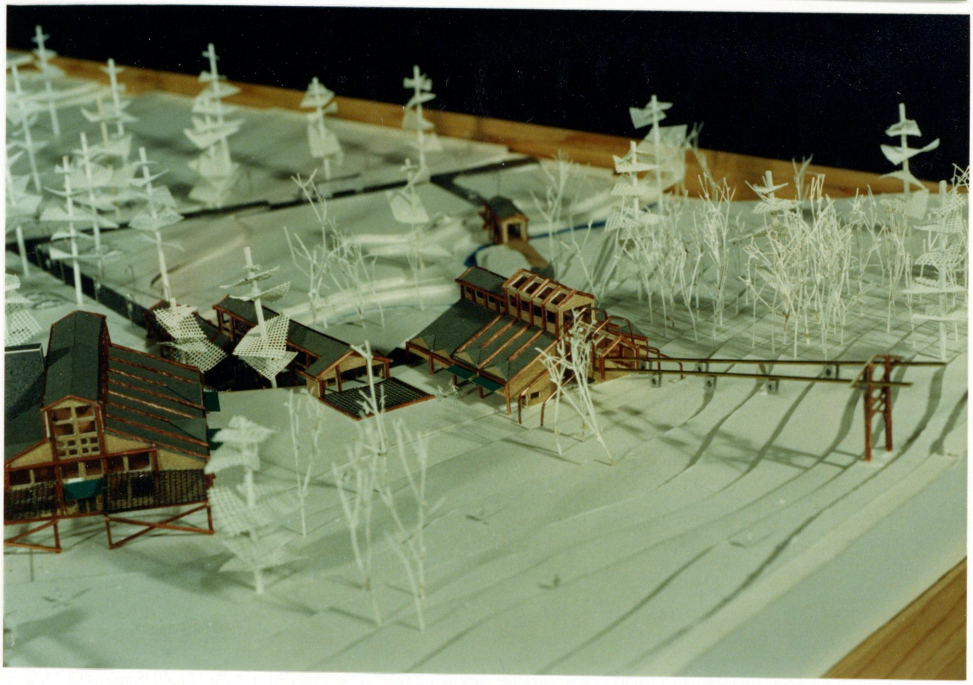














Ski Yellowstone

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