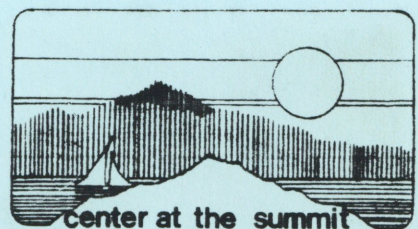


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center at the summit

·waterfront development for frisco, colorado



center at the summit

·waterfront development for frisco, colorado

Timothy Merle Peterson

a professional paper submitted in
partial fulfillment of the requirements
for the degree

of

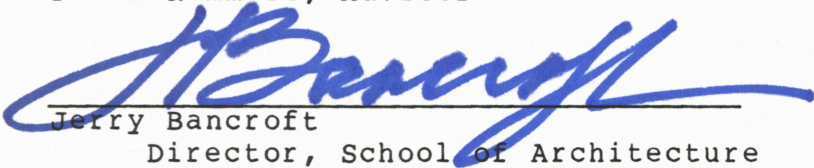
Bachelor of Architecture

Montana State University
Bozeman, Montana

March 1989

Approved:

Peter Kommers, Advisor



Jerry Bancroft

Director, School of Architecture

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Timothy Merle Peterson

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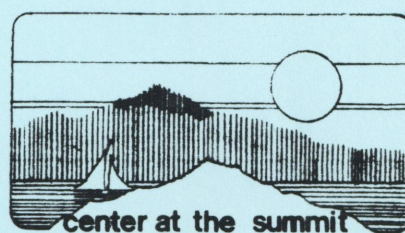
d precedents**e preliminaries****f endnotes****g bibliography****h appendix**

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i presentation

a

·introduction

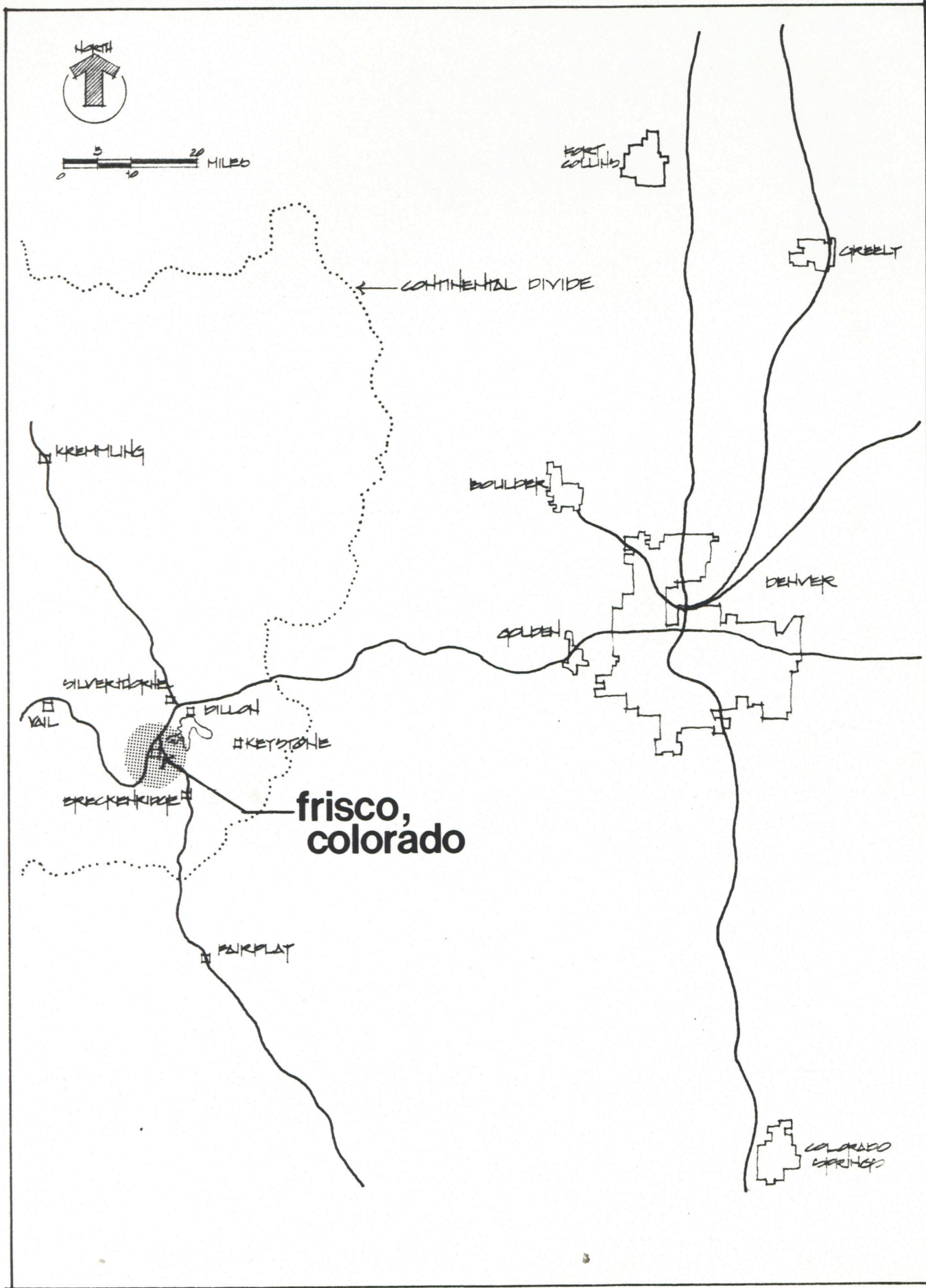


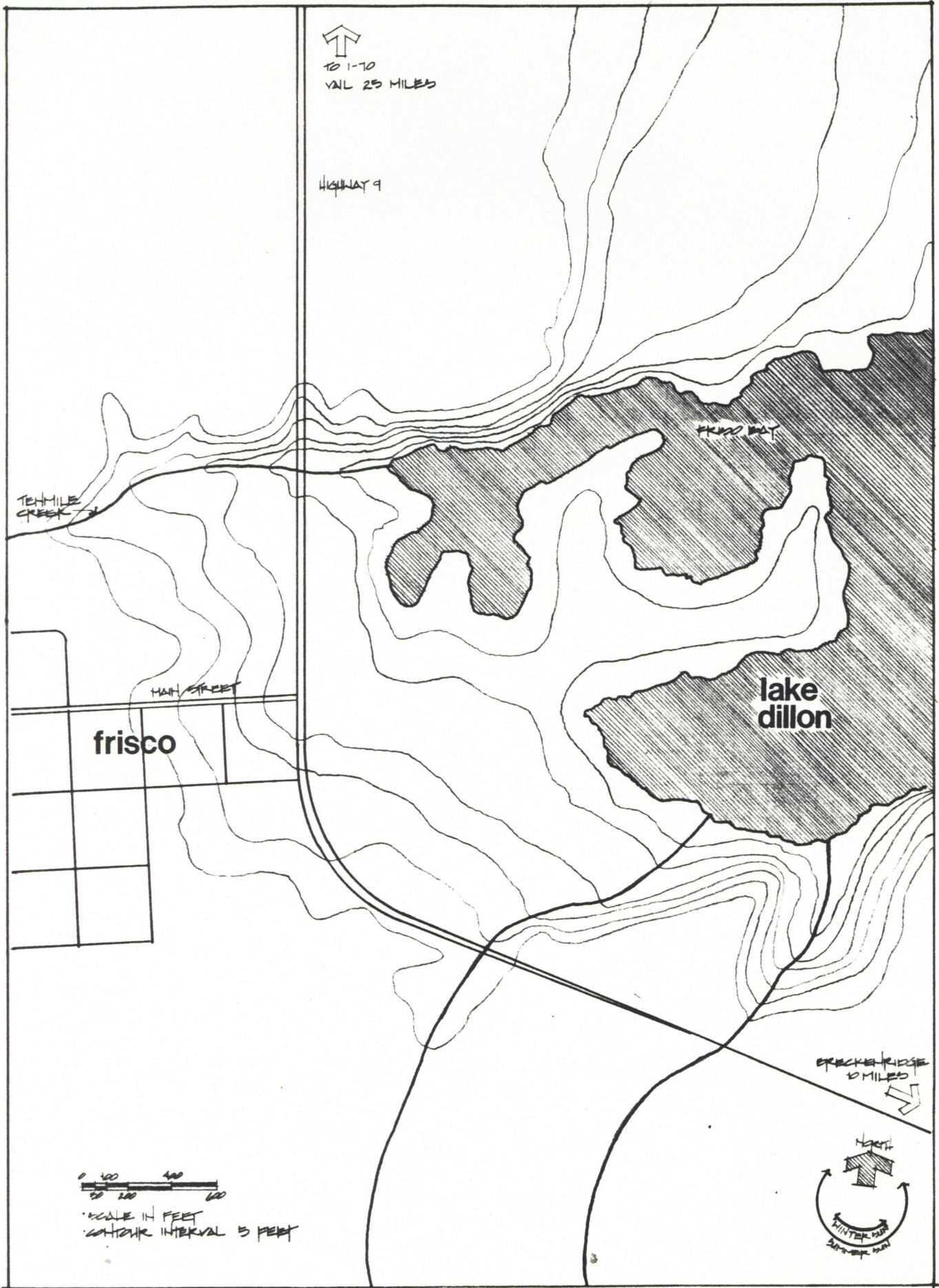
center at the summit

This thesis deals with architecture in a transition; from a small Colorado mountain town, to the vast openness of Lake Dillon. For over 20 years, the people of Frisco have fished, sailed, skated, and skied on Frisco Bay, the arm of Lake Dillon that has always been renowned as the best fishing and the most protected anchorage on the lake. And they talked of building a marina and convention center. The concept has been discussed in Frisco since the lake was filled in 1963.

The town of Frisco has more of an "urban" feeling than one would expect for a small town at an elevation of 9500 feet in the Colorado Rockies. The buildings don't address the fact that the building code stresses up to 200 pounds per square foot snow load. The early buildings are Victorian style, following the trend set in the rest of Colorado in the late 1800's, during the mining booms. The more recent buildings could be found anywhere in the United States. This problem of "contextual" architecture is the main problem I plan to address in my thesis, a transition, in effect, from the urban qualities of Frisco, to a more fitting solution for the site.







The problem I plan to approach in my thesis, is how one builds in the mountain context. Christian Norberg-Schultz, in his book, "Genius Loci", distinguishes the Nordic forest in Norway with similar qualities of the Colorado Rockies.

1. The ground is rarely continuous, but it is subdivided and has a varied relief; rocks and depressions, groves and glades, bushes and tufts create a rich "microstructure".
2. The sky is hardly experienced as a total hemisphere, but is narrowed in between the contours of trees and rocks, and is moreover continuously modified by clouds.
3. The sun is relatively low and creates a varied play of spots and light and shadow, with clouds and vegetation acting as enriching filters. Water is ever present as a dynamic element, both as running streams and quiet, reflecting ponds.
4. The quality of the air is constantly changing, from moist fog to refreshing ozone.¹

As a whole the environment seems to make a mutable and rather incomprehensible world manifest, where surprises belong to the order of the day. The general instability is emphasized by contrast between the seasons and by frequent changes of weather. In general we may say that the Nordic landscape is characterized by an indefinite multitude of different places. Behind every hillock and rock there is a new place, and only exceptionally the landscape is unified to form a simple, univocal space."²

My site fits this description fully. Looking east, one sees Lake Dillon with mountains in the background, looking north and south, one sees thick forest of

countless aspen, spruce, and pine trees, and while looking west, one sees towering Mount Royal, with the town of Frisco in the foreground. Norberg-Schultz goes on to say: "What kind of dwelling is possible in the Nordic landscape? We have already suggested that Nordic man has to approach nature in an intimate sense. Direct participation is thus more important than abstraction of elements and order. This participation however, is not social. Rather it implies that the individual finds his own "hiding place" in nature. My home is my castle is in fact a Nordic saying."³

I plan to produce an architecture that will not only fit into the context of the town of Frisco, but will also enhance the residents and visitors of Frisco views of nature, of the mountains.

Ian Mackinlay, in his writing "Snow Country Design", expresses his ideas on mountain architecture. "I am far from asserting that it is impossible to build in an up to date fashion in the mountains, because I find, on the contrary, that glass, cement, and steel match very well with rocks, rhododendrons, pine trees, and the horns of cows.....is there then only one alpine style? I should like to answer; yes, when a house is built with common sense, using local materials properly and taking into consideration the peculiarities of the site, the

climate, the winds, the view, and above all, the use of the building in question."⁴

Norberg-Schultz says the Nordic landscape is an "infinite multiple of different spaces with many complex details"; in my design I will attempt produce several individual components, rather than a large structure engulfing the landscape. And as Mackinlay stresses, I will utilize local materials, wood being obviously local, but I will not hesitate to use other materials, such as steel and concrete. I will stress structure, as I feel it should be in this context, with the heavy amounts of snowfall and the dramatic changes in landscape.

These dramatic changes in landscape will be fully taken advantage of in my design, by keeping it as natural as possible, and allowing my building to fully interact with nature by opening it up to the outside as much as possible.

Lake Dillon is located approximately 70 miles west of Denver, Colorado, high in the Rocky Mountains. (Arapaho National Forest) It was established by the Denver Water Board in 1963, by damming the Blue River. Although it was used primarily for a water supply for neighboring Denver, recreation has become an ever-increasing function of the lake, known for it's world class trout fishing, and breathtaking views of Colorado's central Rockies from every direction.

Begun as a silver mining camp in the 1870's, the town of Frisco was incorporated in 1880 and enjoyed an early history of the boom and bust of a young mining town. Many of the early log structures exist to this day. Frisco's population dwindled after the turn of the century to a low of approximately thirty people in the 1950's.

A decade later, two dramatic events changed Frisco's destiny. The first of several nearby ski areas opened in Breckenridge in 1961, and in 1963 Lake Dillon was flooded by the Denver Water Department. Frisco found itself located at the crossroads of two state highways, with a 6.5 square mile lake located at the foot of main street.

Today, Frisco is the geographic and transportation hub of Summit County. Now the most populous town in the county, Frisco's permanent population in 1985 was 1,700, with a second home population of 4,800, and a 425 bed lodging base. Frisco has become the service commercial center of the county, with 240,000 square feet of retail commercial space in 1987, and another 143,000 square feet under construction in 1988.

Frisco is located at the mouth of Ten Mile Canyon in the Colorado Rockies, only eleven miles west of the Continental Divide and at an elevation of 9,097 feet above sea level. Behind the town rise the peaks of the

Gore and Ten Mile ranges, while below it stretches the 4,000 acre surface of Lake Dillon. Frisco's main street actually runs into the lake at the east end of town. There are now four major ski areas in Summit County, the furthest of which is located ten miles from Frisco. U.S. Interstate 70, the primary east-west route across Colorado, forms Frisco's North and West boundary, and provides direct all-weather access to Denver, one hour's driving time to the east. Vail is located 25 miles to the west.

Frisco is surrounded with all the splendor one expects from the Colorado Rockies. Several adjacent peaks are 13,000-14,000 feet. All lands below 12,000 feet are thickly forested with pine, aspen, and spruce for as far as the eye can see.

While Summit County is famous for the long winters that produce world famous "Colorado powder," the spring, summer, and fall are no less spectacular. Here one finds endless alpine and forest trails, world class trout fishing, and elk and deer within site of Frisco's downtown.

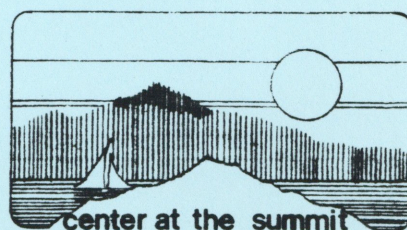
Source: Frisco Waterfront Development Master Plan.

There are eight main goals I would like to achieve in my design.

1. To integrate the design into the mountain context of of Frisco, Colorado.
2. To also integrate the design into the existing fabric and character of Frisco and the rest of Summit County.
3. To produce a multi-use complex, catering to both the needs of the local people of Summit County and to the visitors; tourists and convention delegates.
4. To create a structure that will stand out as a landmark for Summit County.
5. To express structure in the design; both interior and exterior.
6. To spread the buildings out over the site, to integrate with the site more naturally.
7. To leave the site as natural as possible.
8. To address both the lake and Frisco with my building facades.

b

analysis



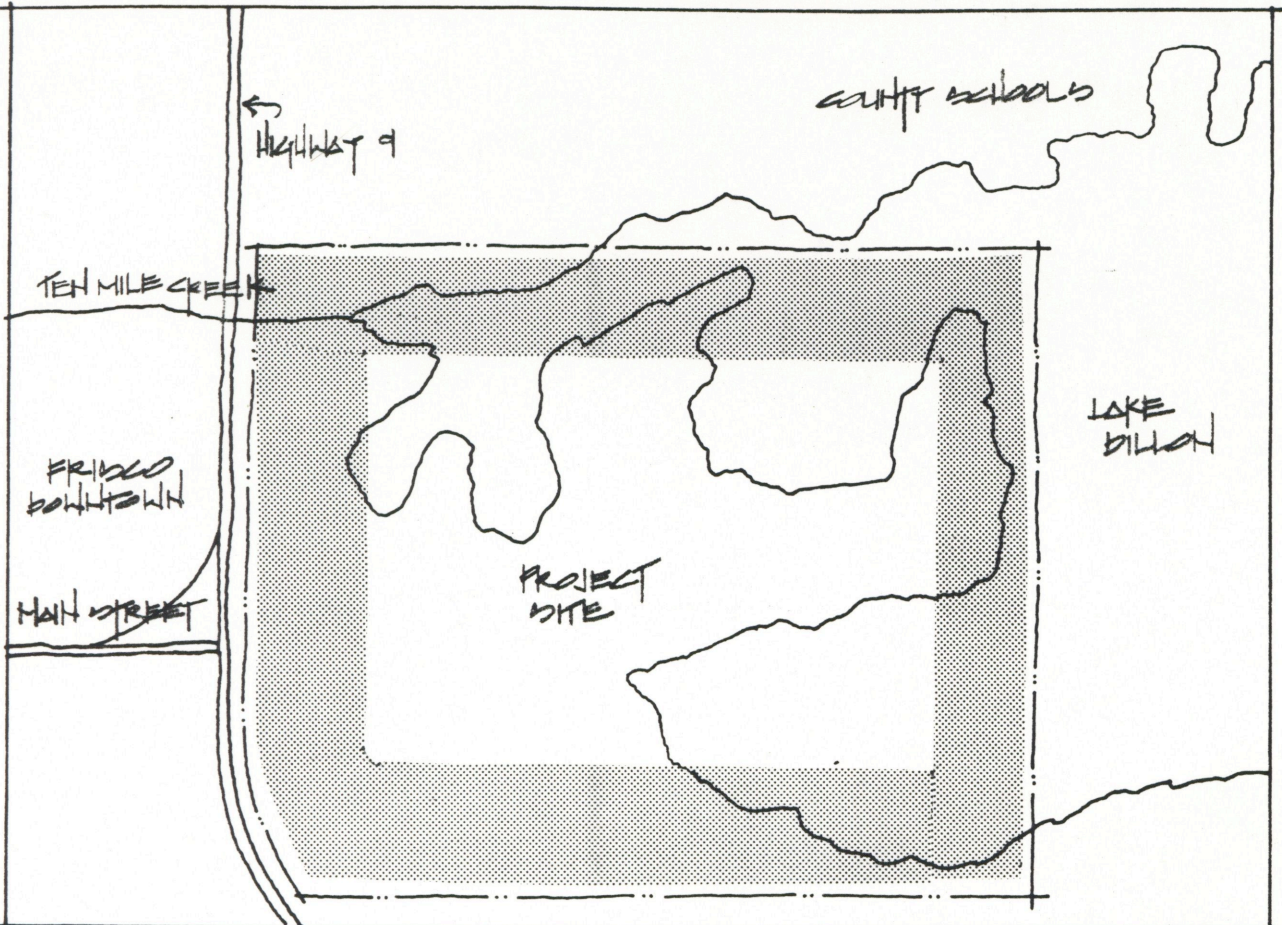
·factors

I began my analysis by assessing the factors that will affect my design. These factors include physical factors (landscape, topography, circulation paths through the site, etc.), climatological factors (wind, precipitation, sunpath, etc.), and an analysis of the existing architecture of Summit County. This culmination of ideas will help me derive a solution.

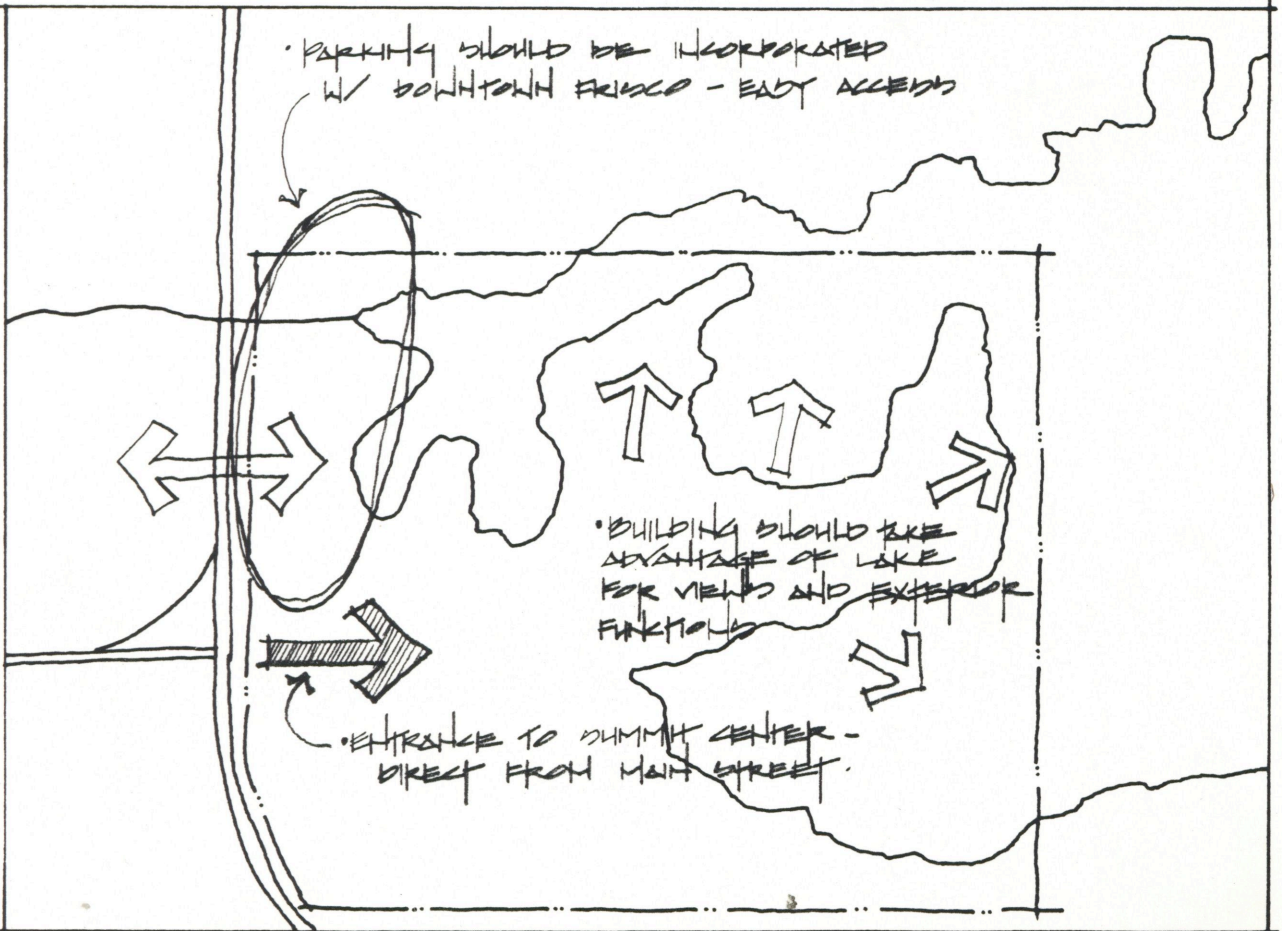
·climate

The location of the site , located high in the Rocky Mountains in central Colorado is indicative of the climate one would expect. Summers are short, with a relatively low daily temperature range. The winters are very cold and long, lasting from November to May, with 0 degrees and below common. Precipitation averages around 18 inches per year, most of which falls as snow, making ideal ski conditions for the four ski resorts within 15 miles of Frisco. At an elevation of almost 10,000 feet, the summer sun is very intense; winter sun is also, making solar gain a good possibility during cold winter days.

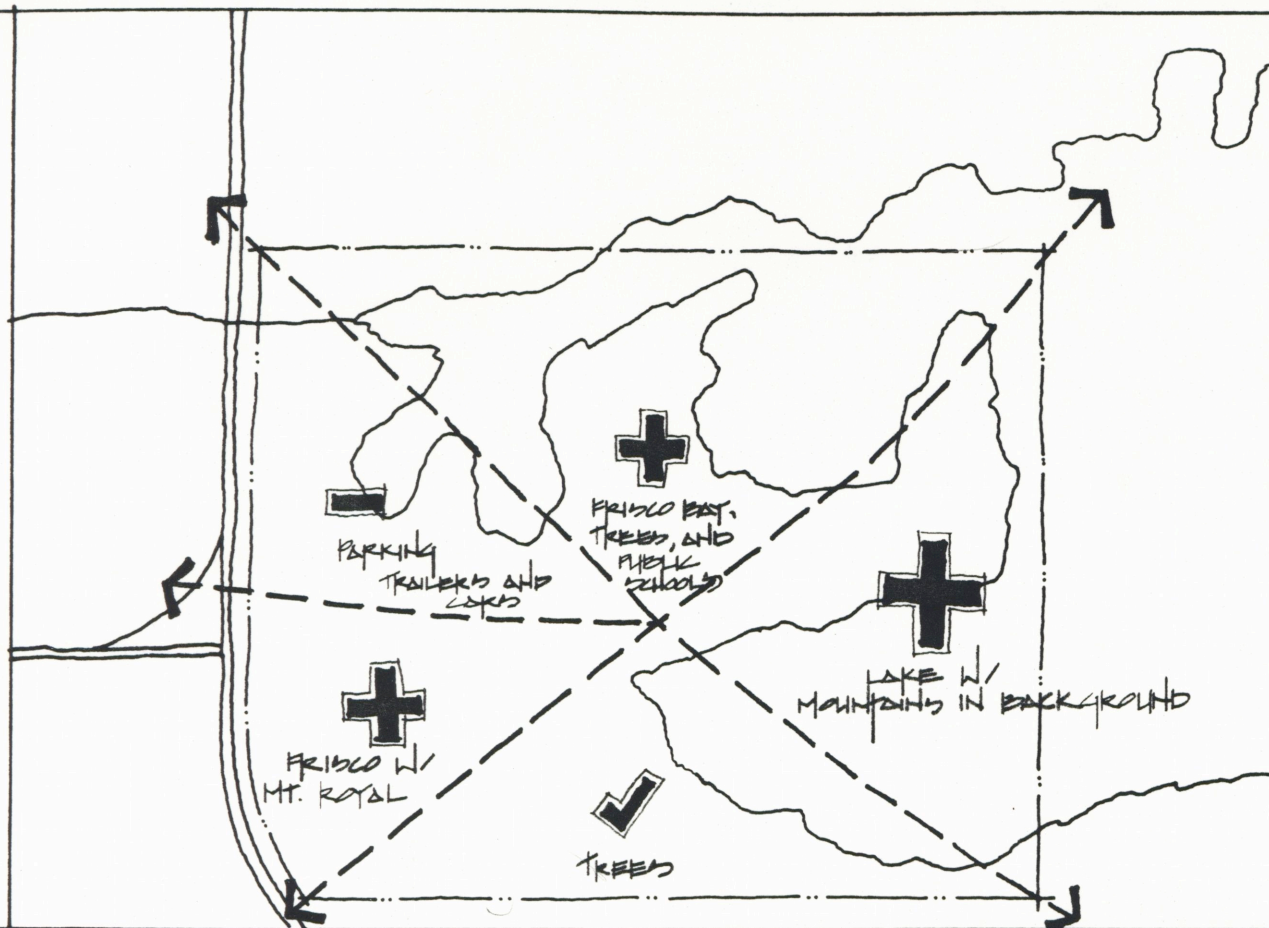
site conditions



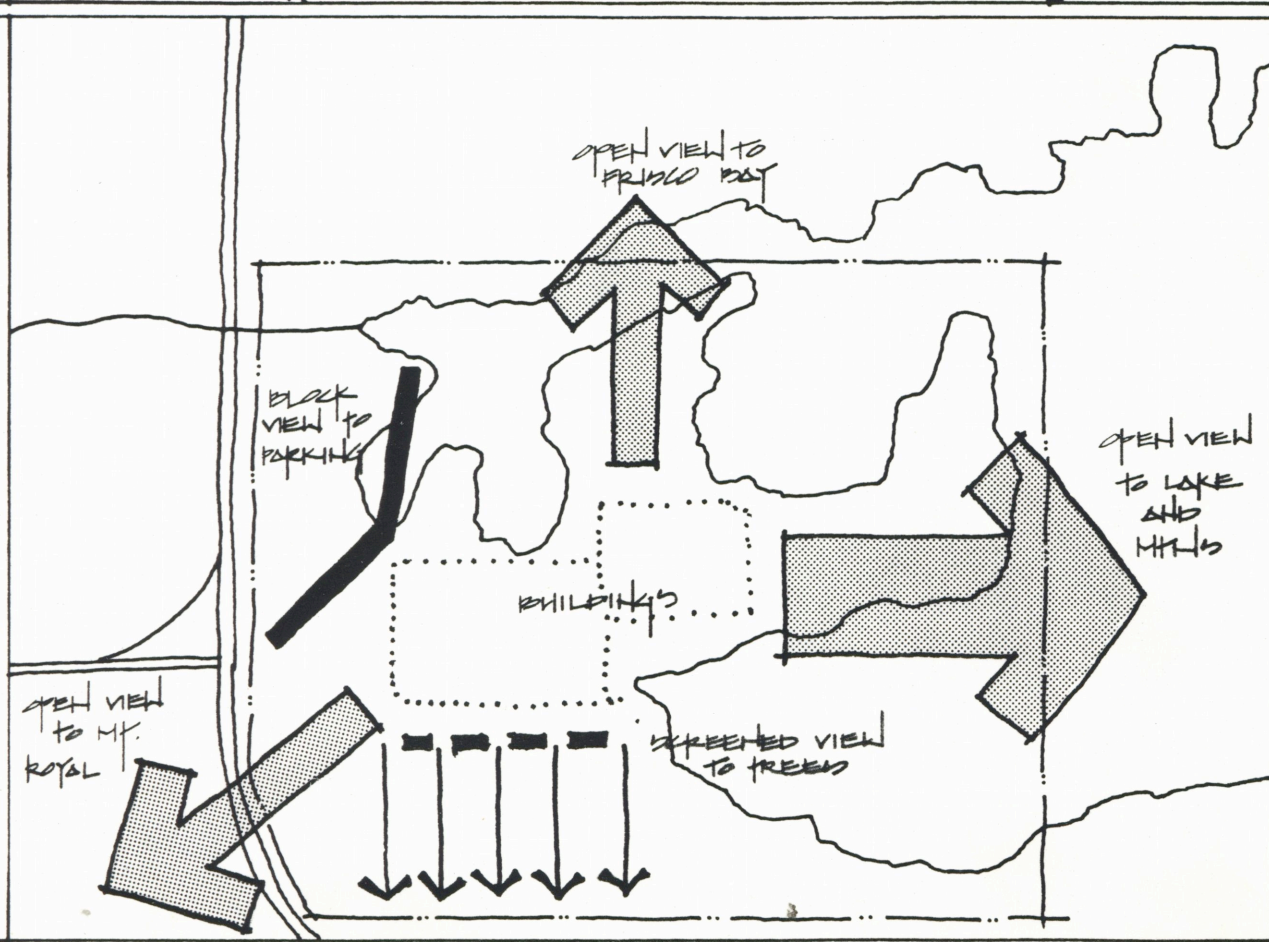
design response



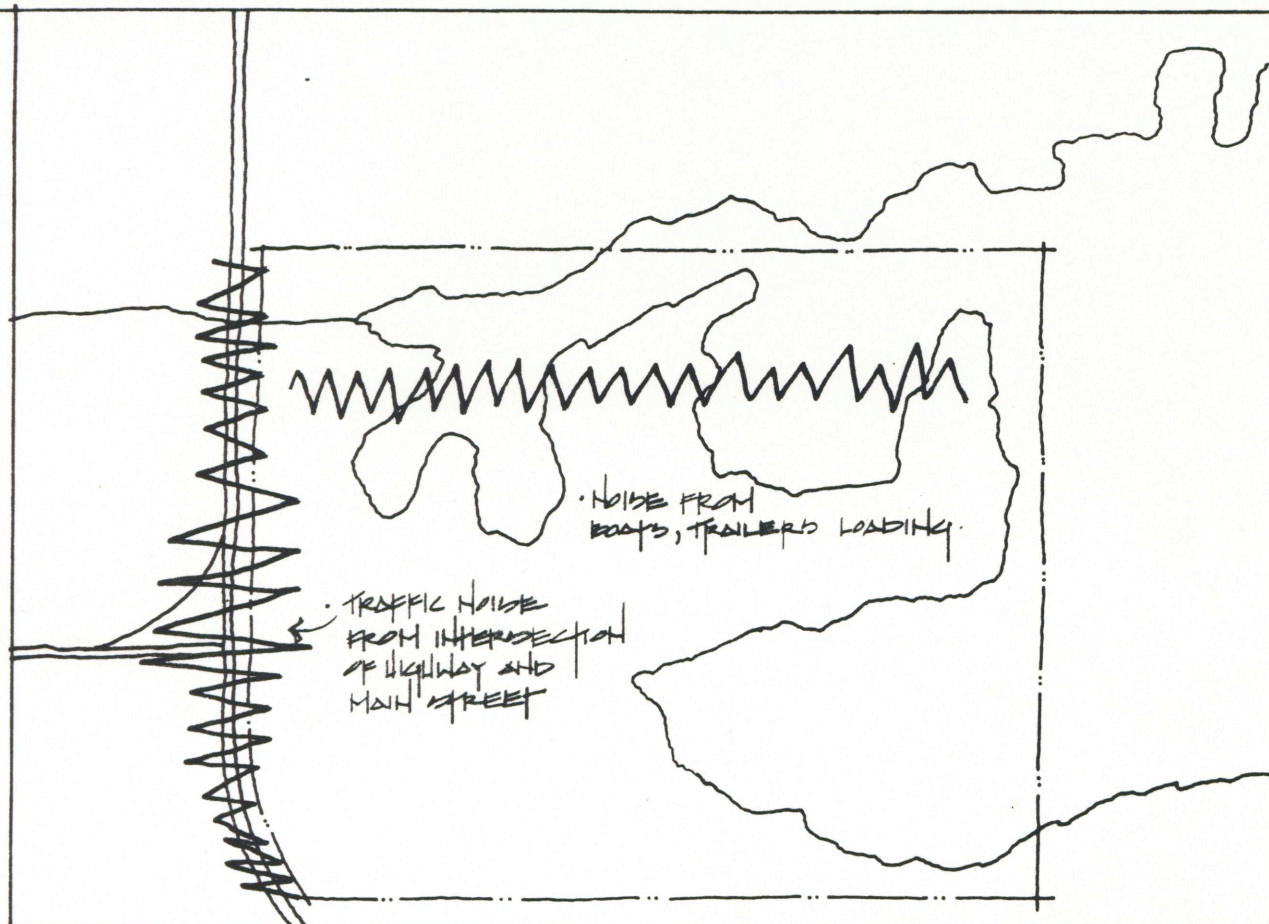
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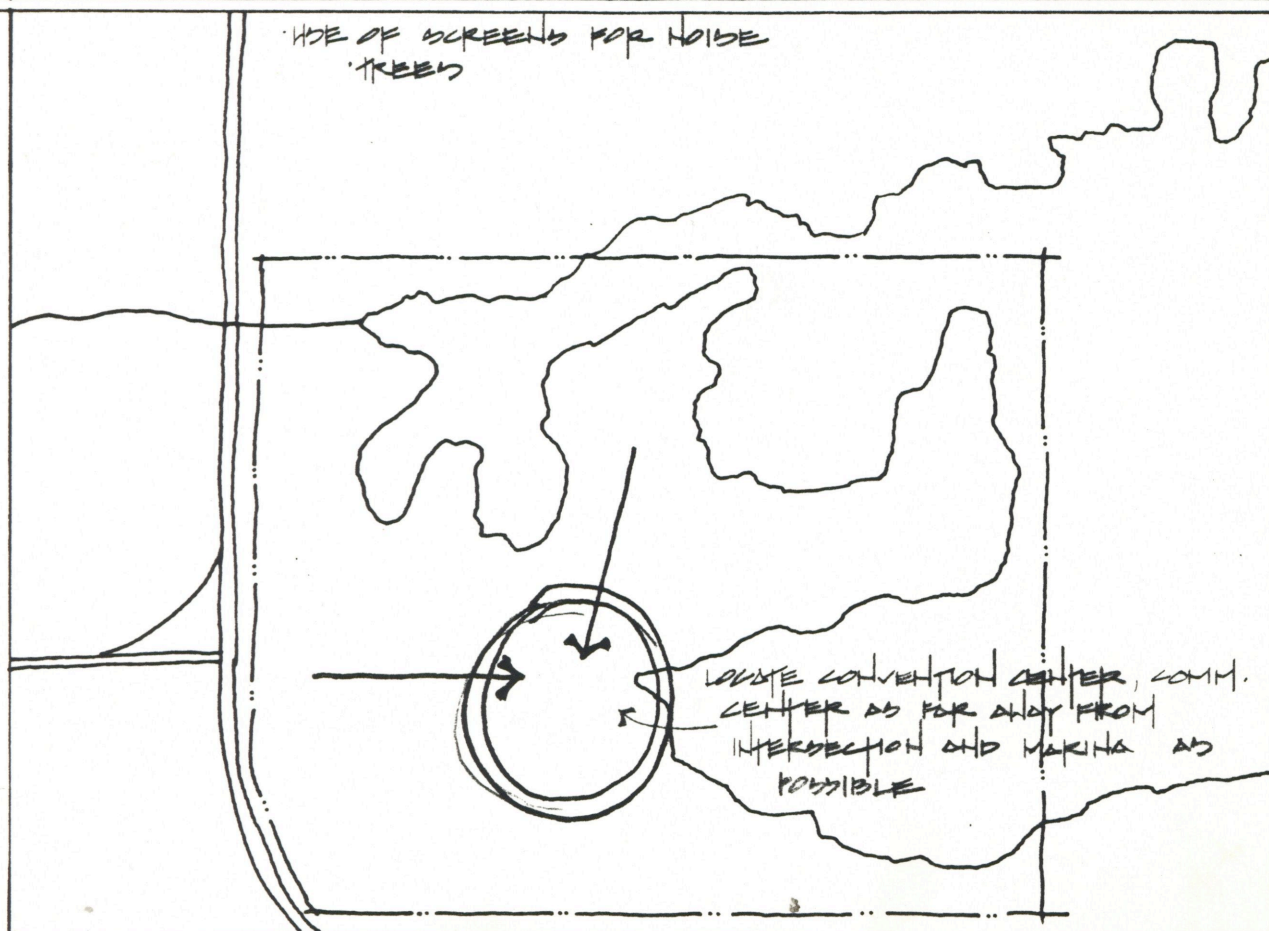
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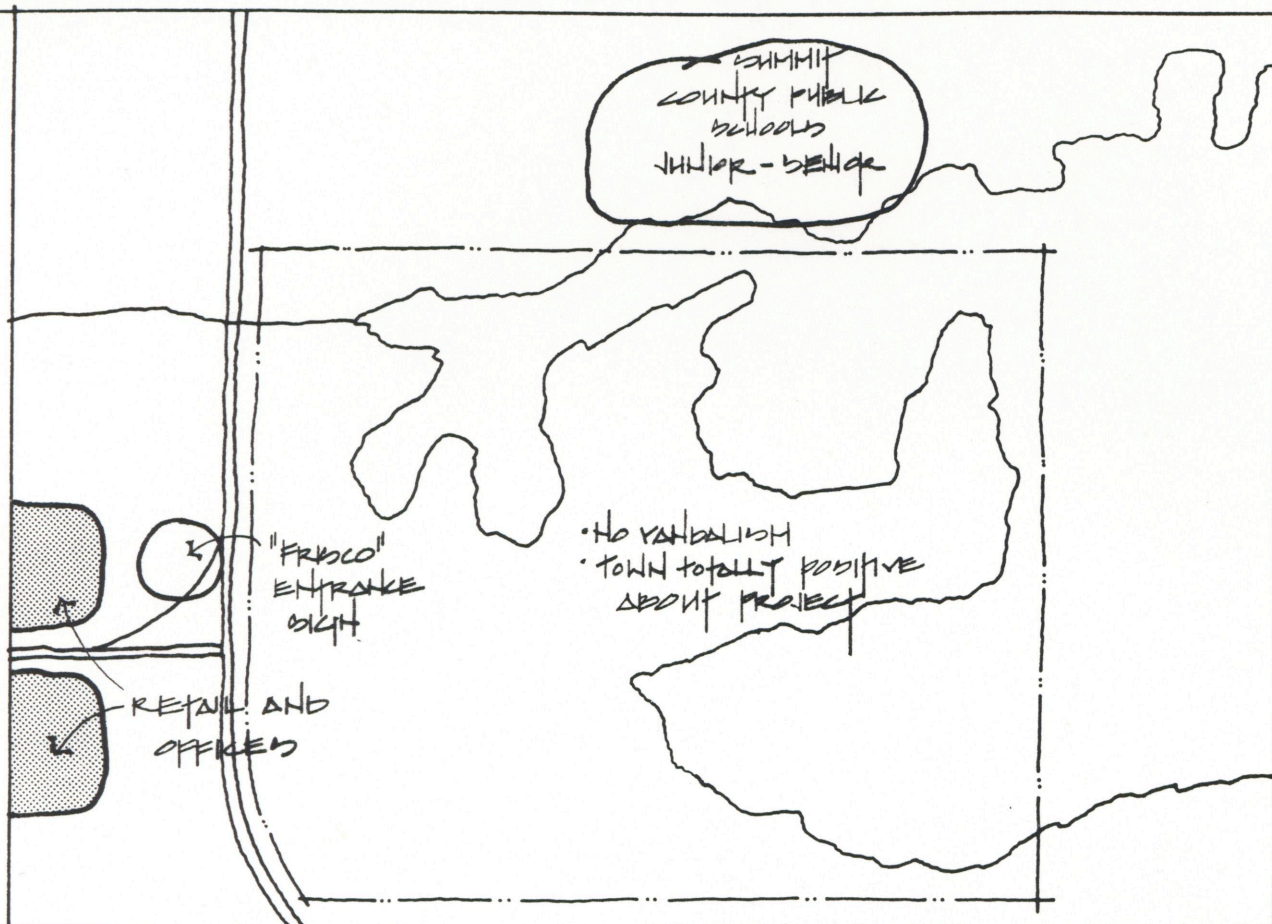
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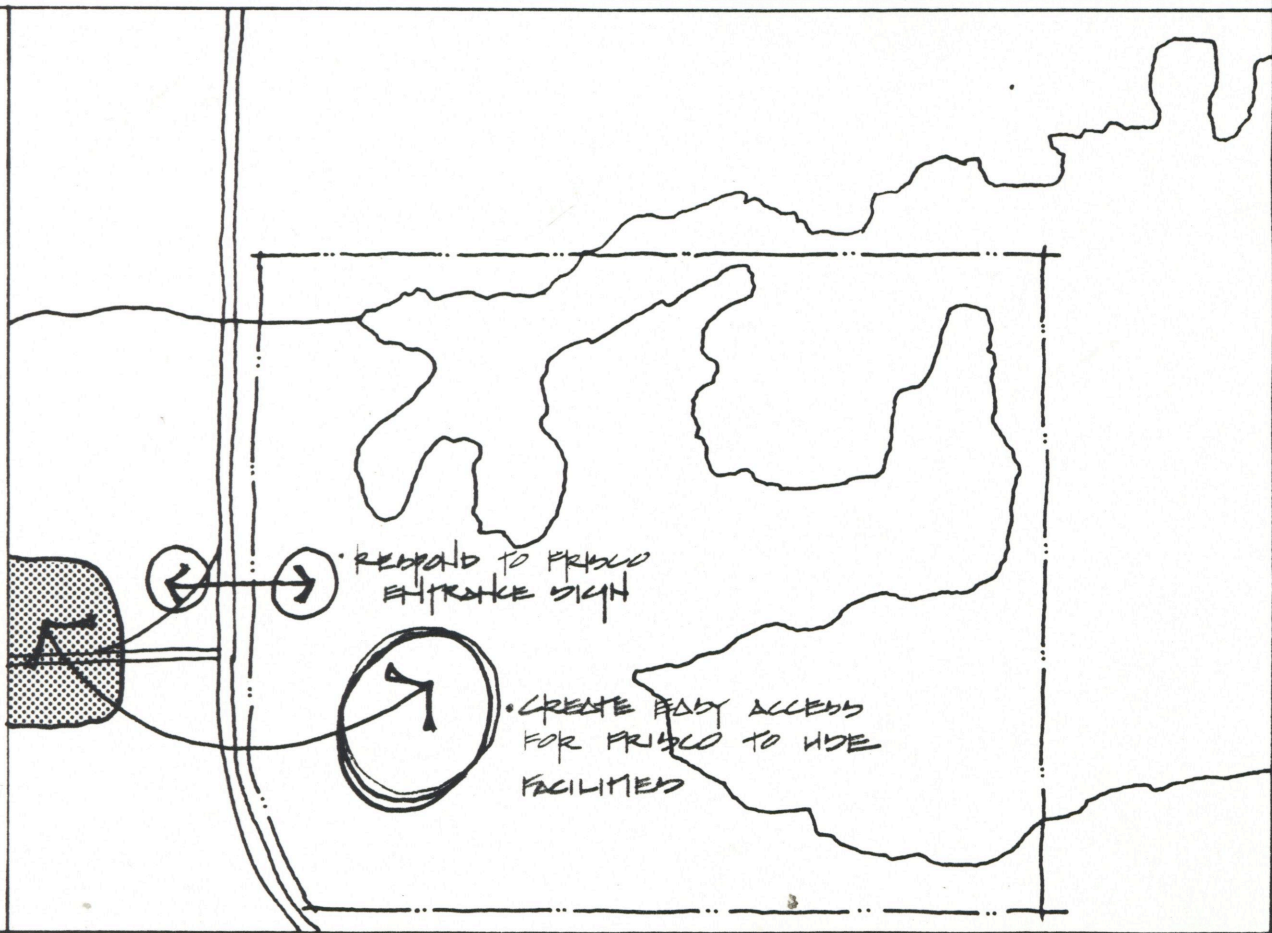
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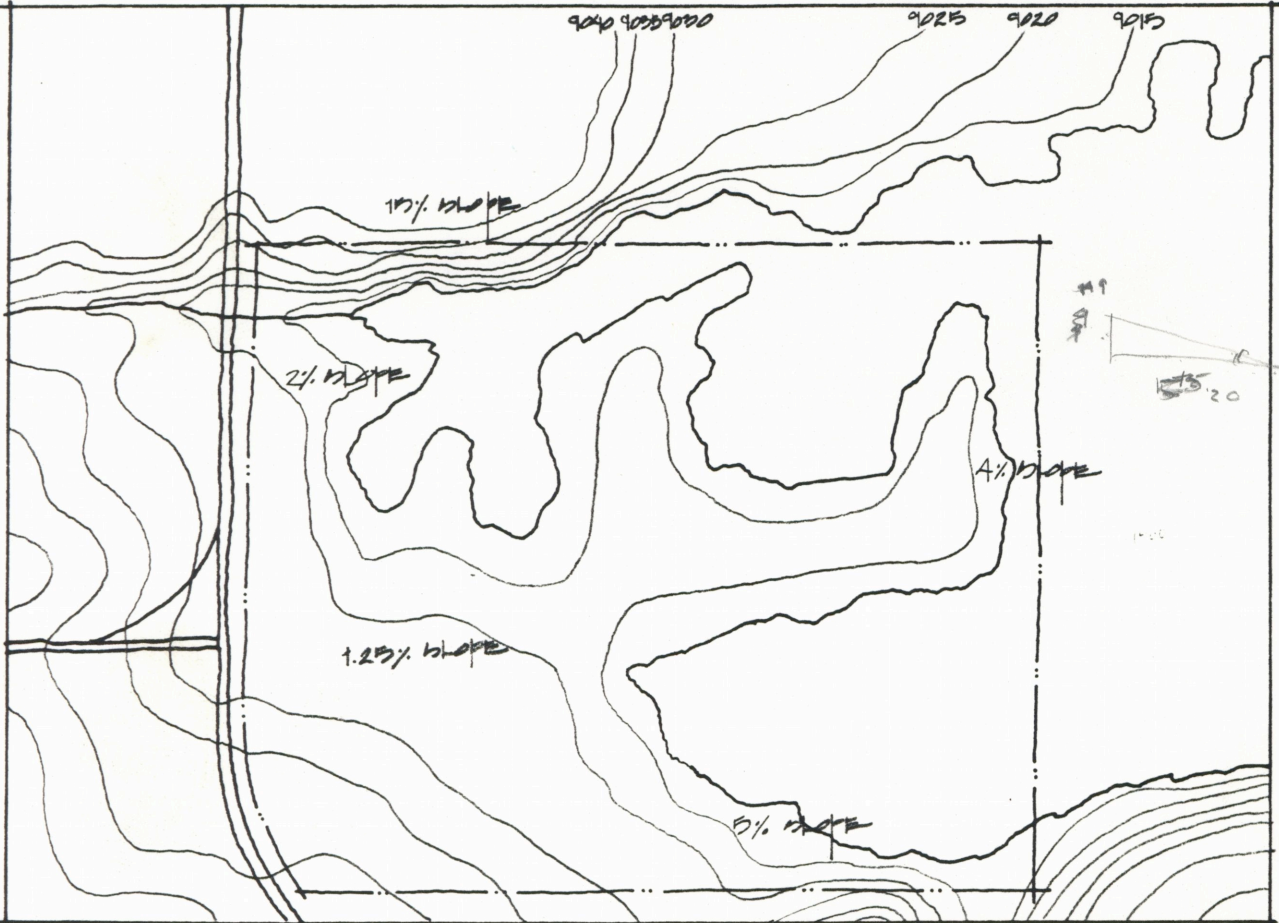
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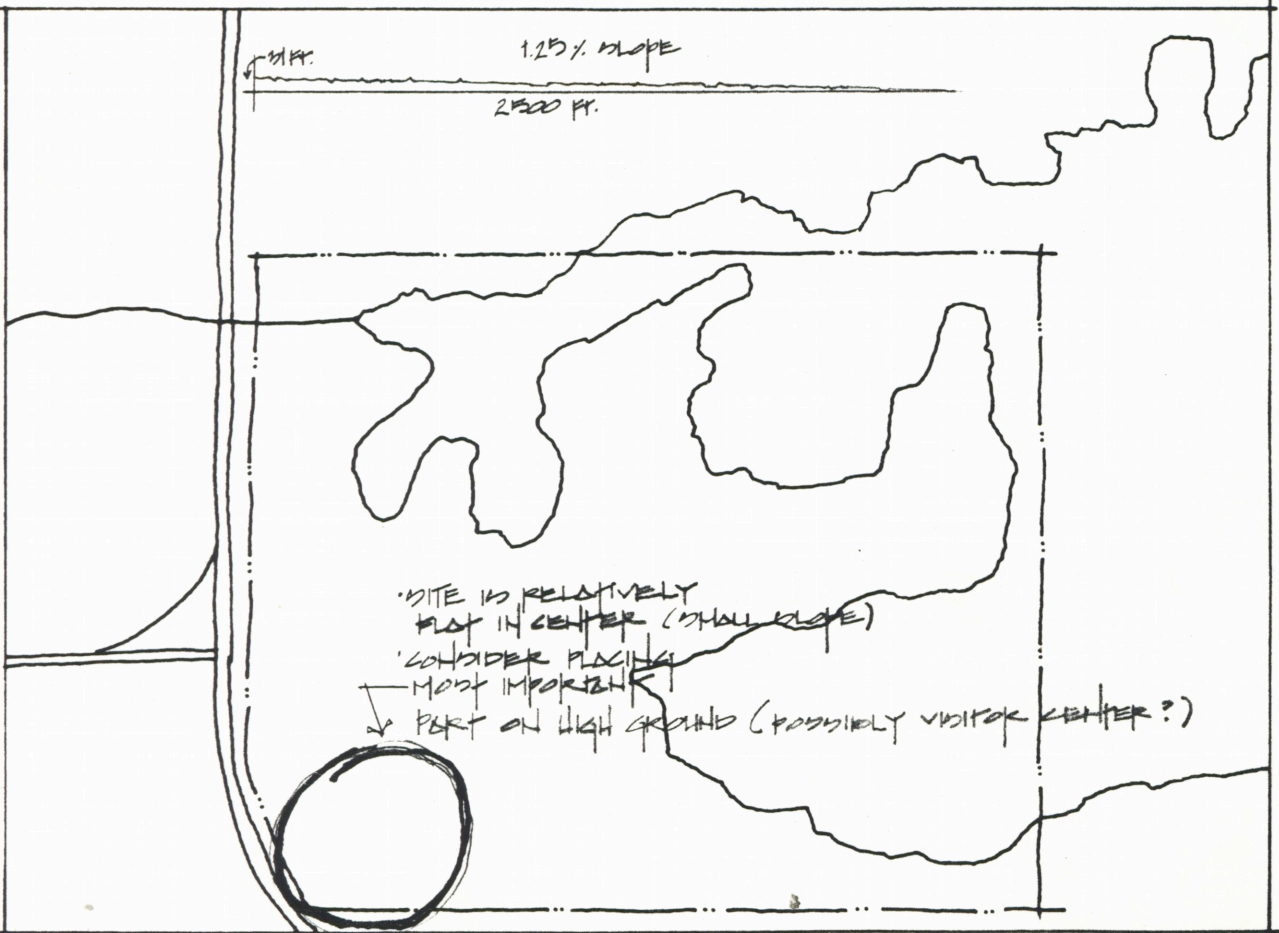
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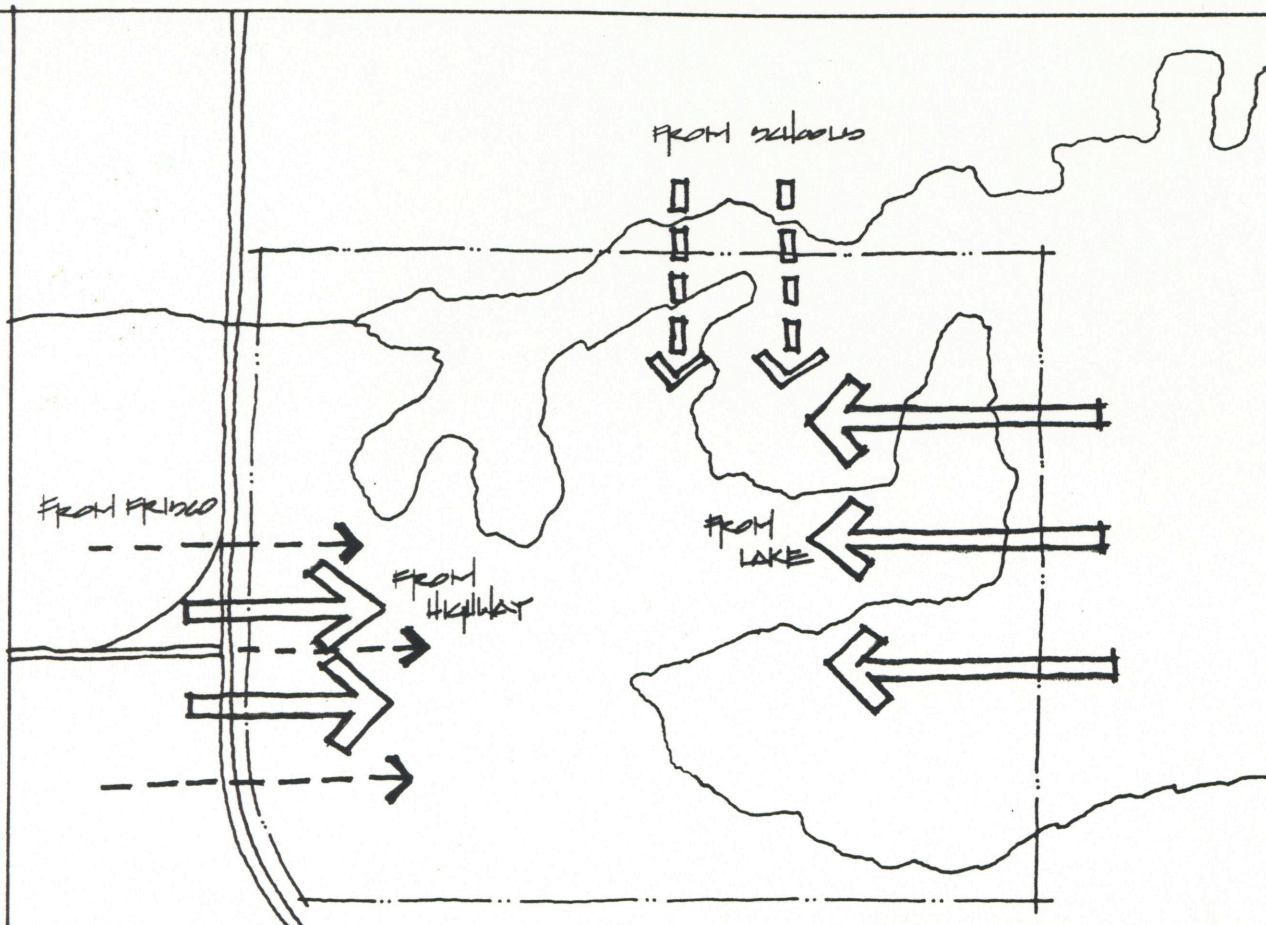
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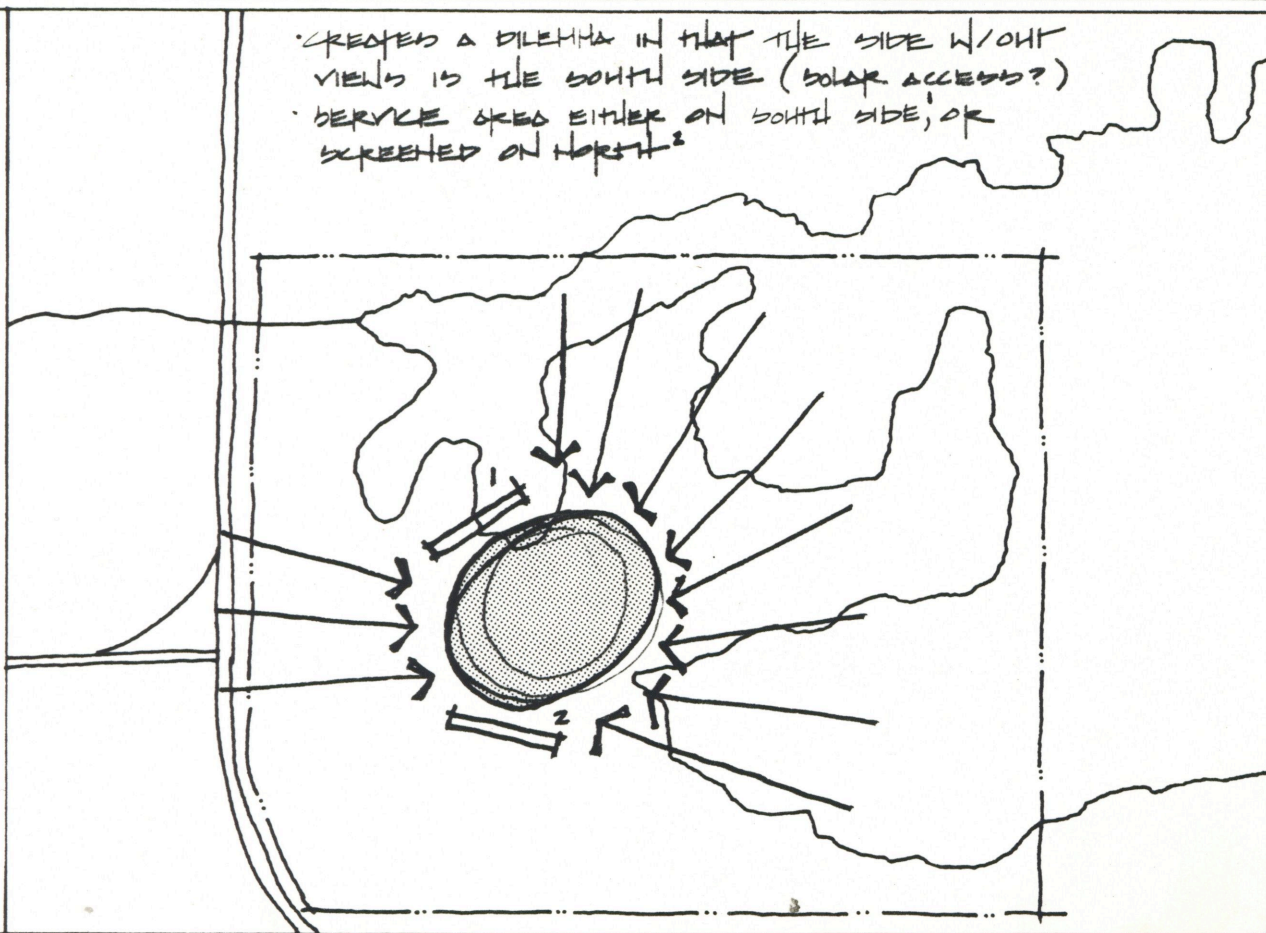
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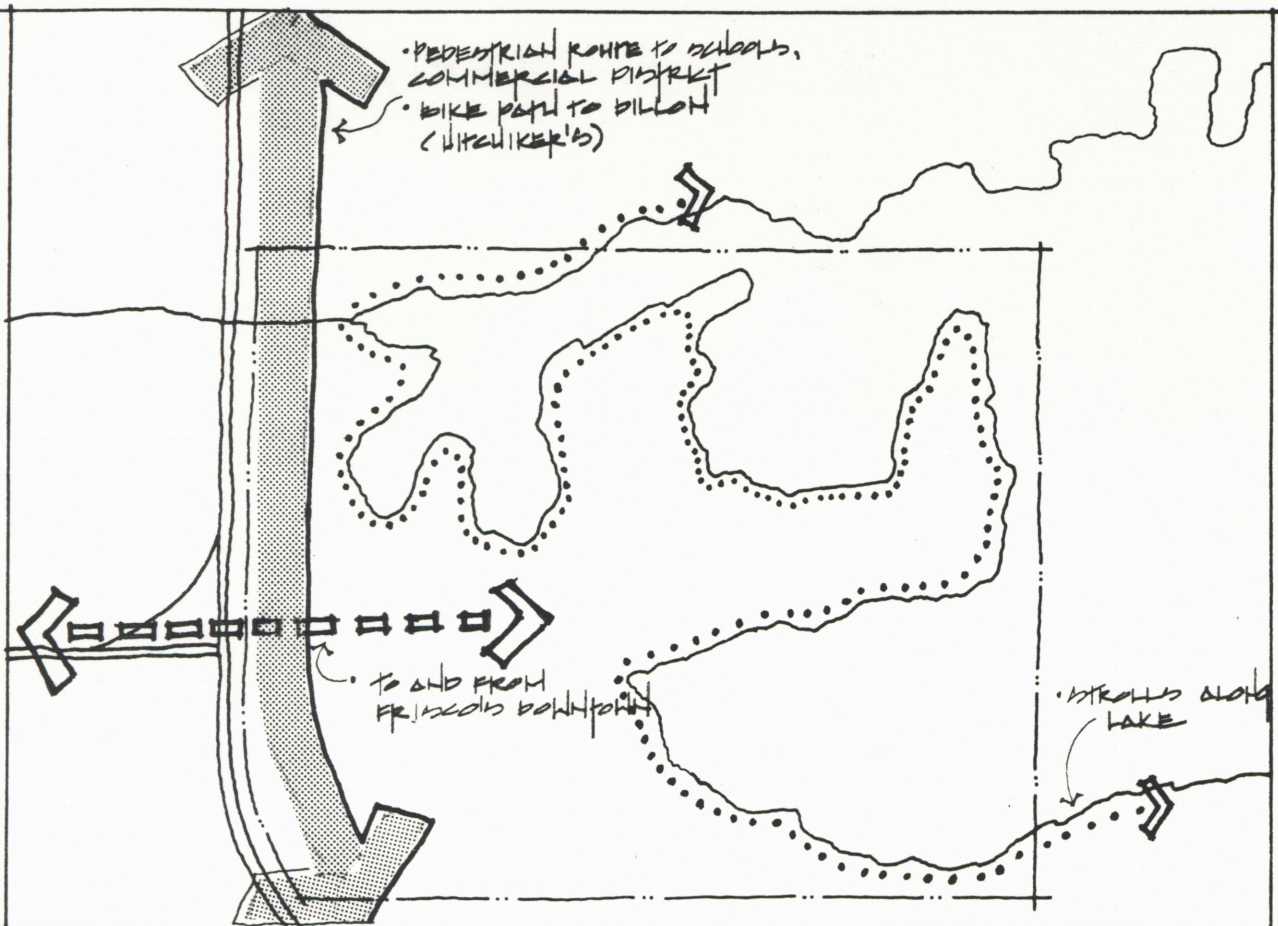
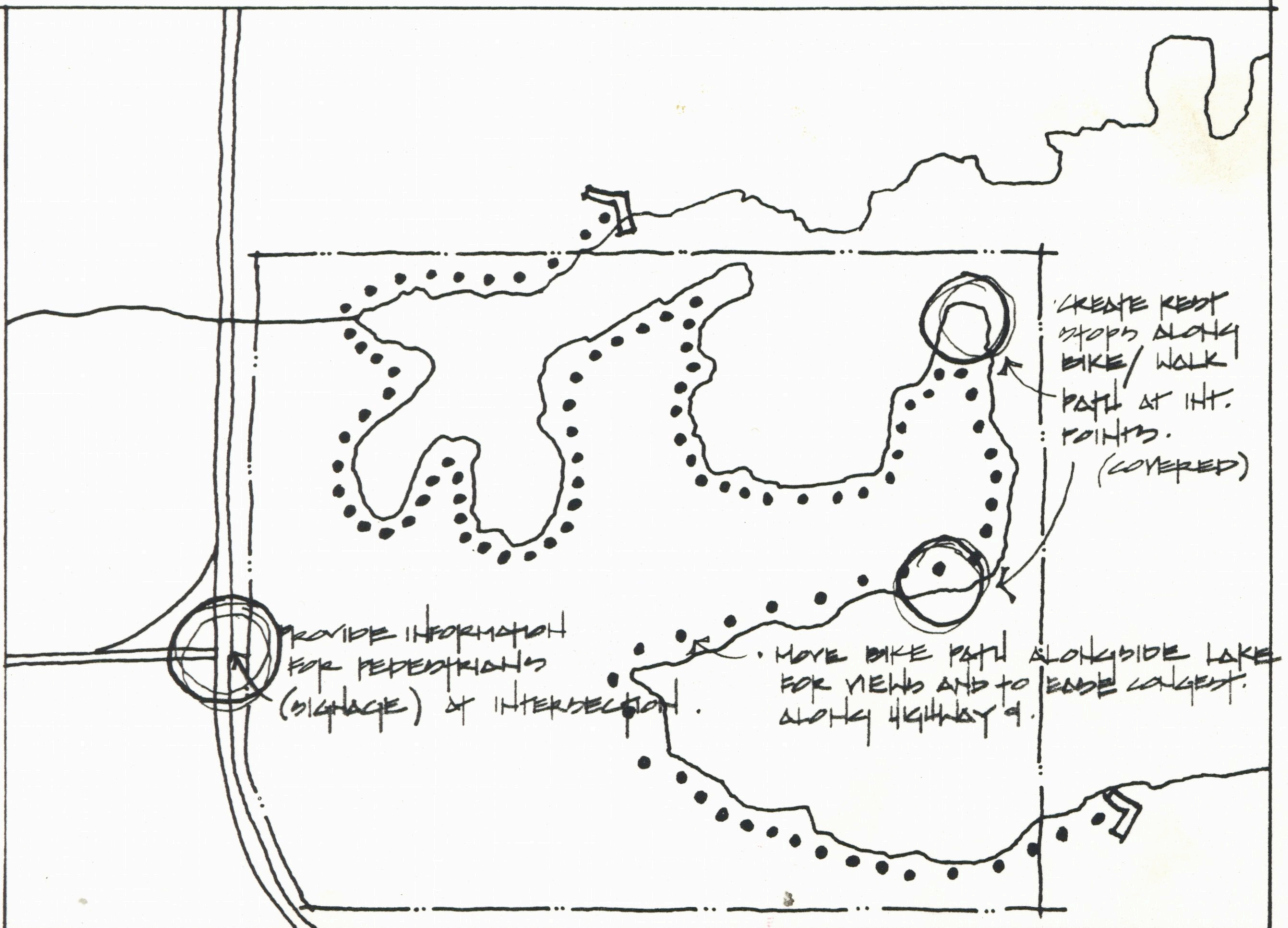


site conditions

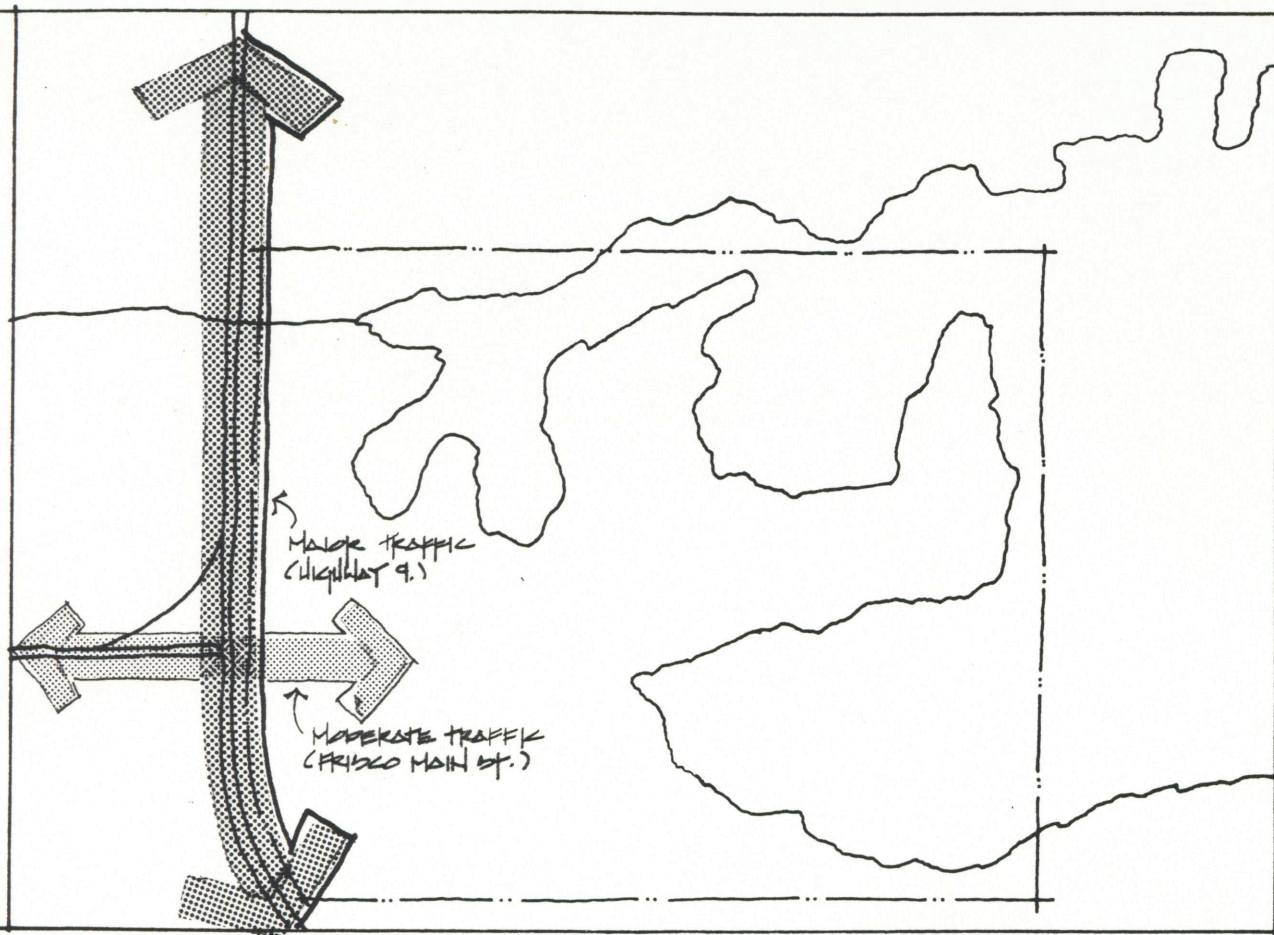


design response

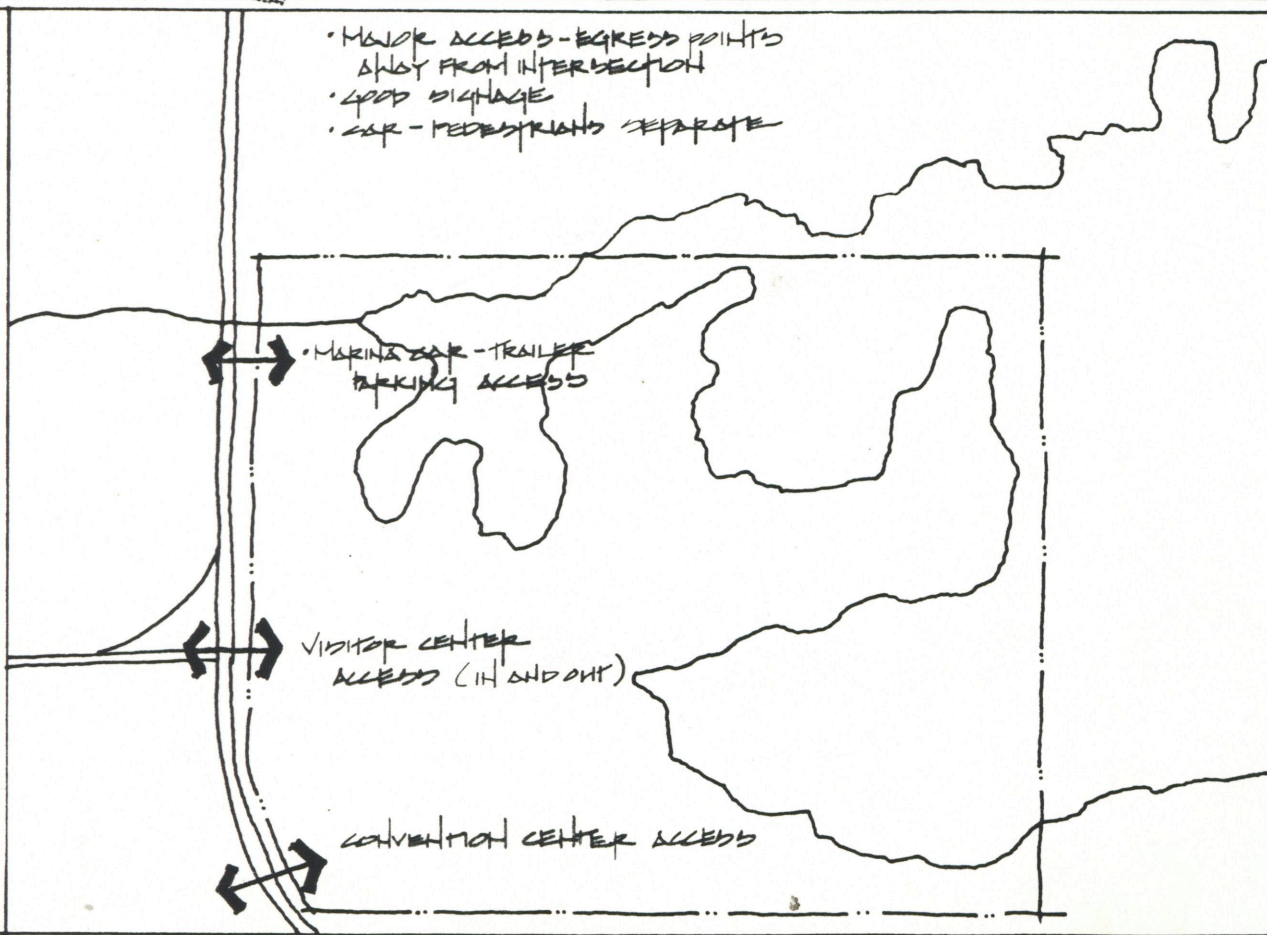


b**site analysis · pedestrian circulation 8****site conditions****design response**

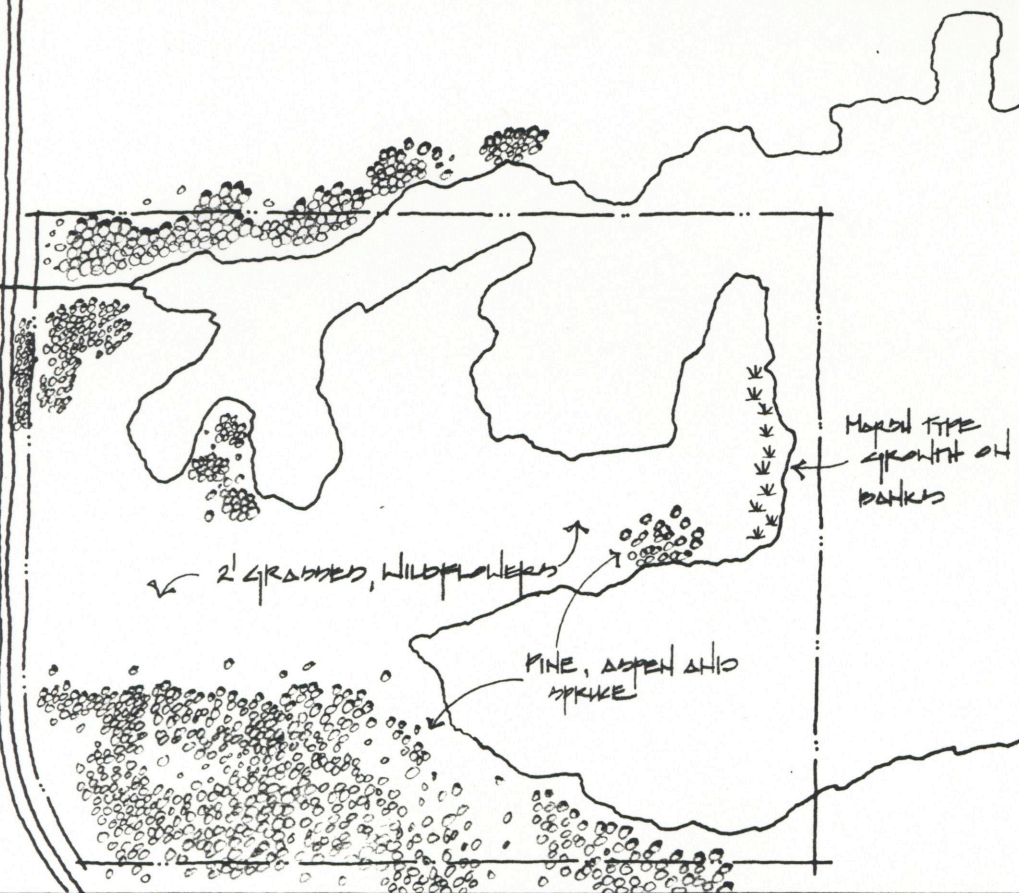
site conditions



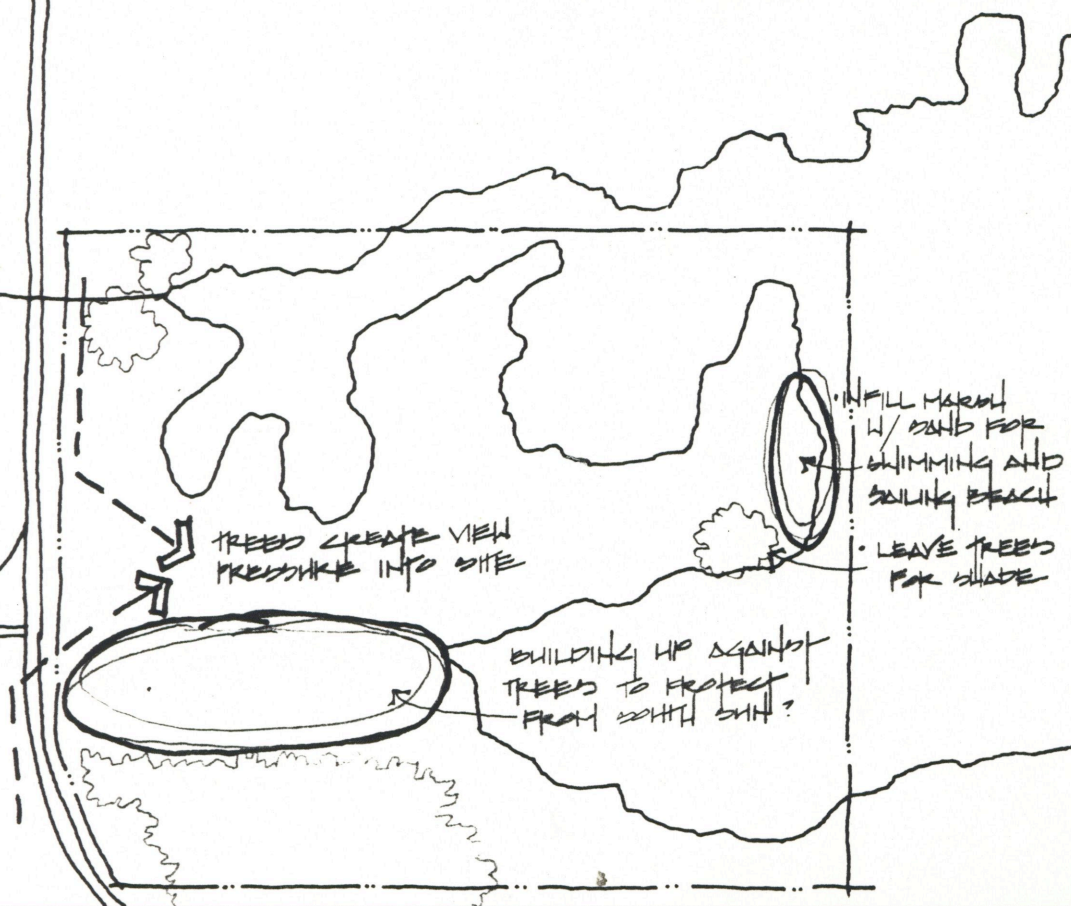
design response



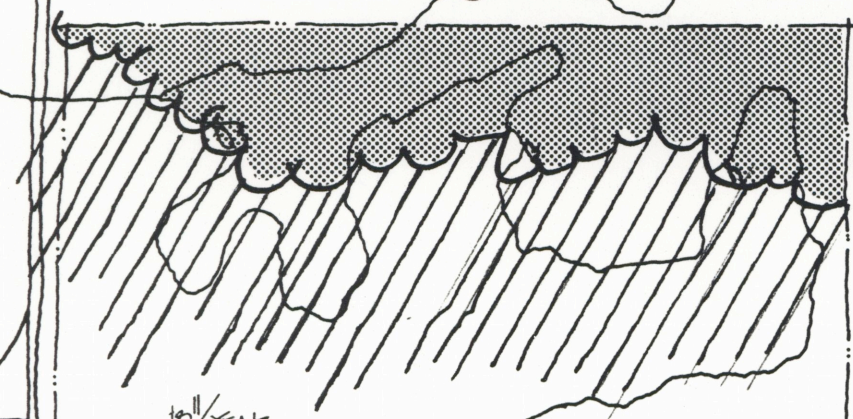
site conditions



design response

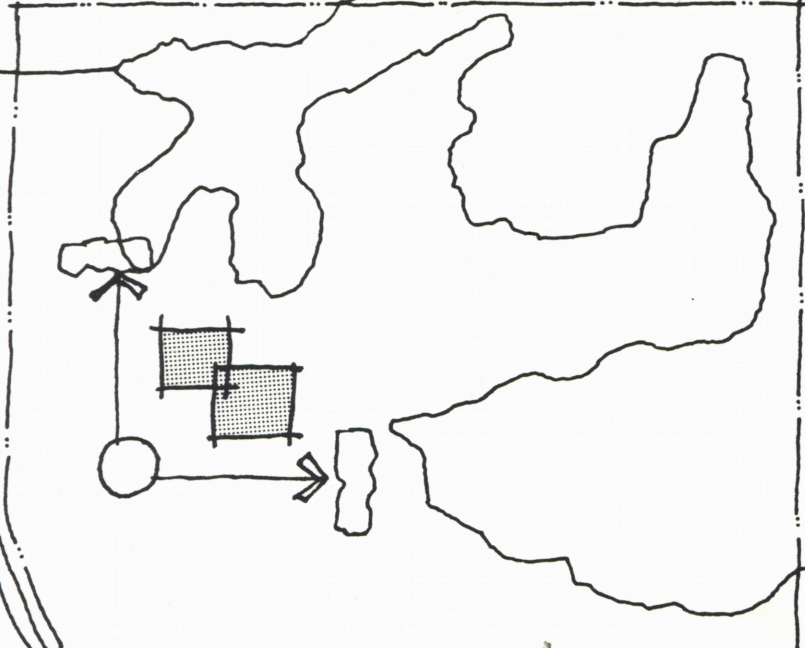


site conditions

- 
- 10"/YEAR
(MOST FALLS AS SNOW)
 - 7"/MONTH MAX.

design response

- AVOID BUILDING CONFIGURATIONS THAT TRAP WATER
- PLAN FOR SNOW STACKING



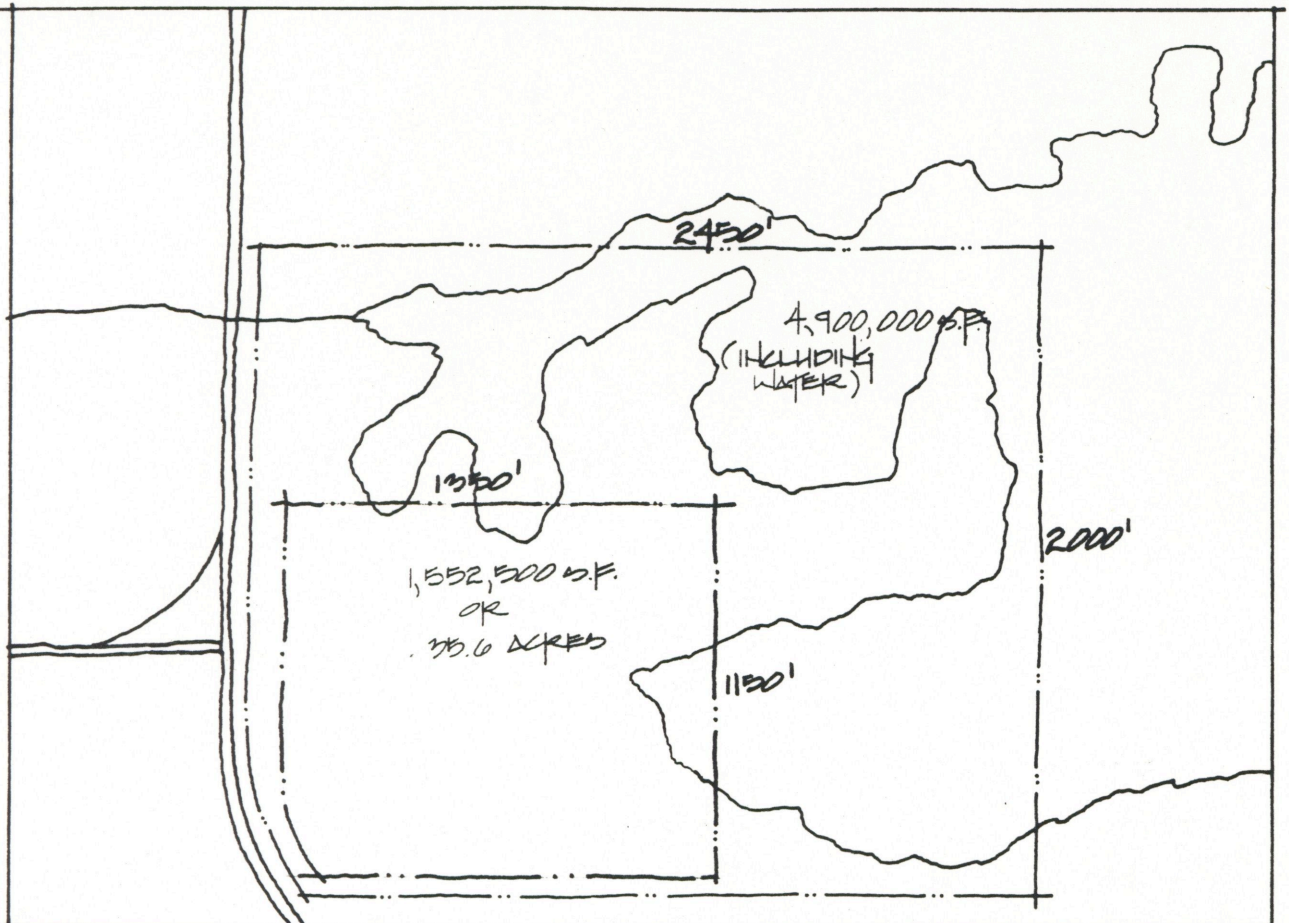
HEAVY STRUCTURE
FOR SNOW
LOADS

SLOPED ROOFS

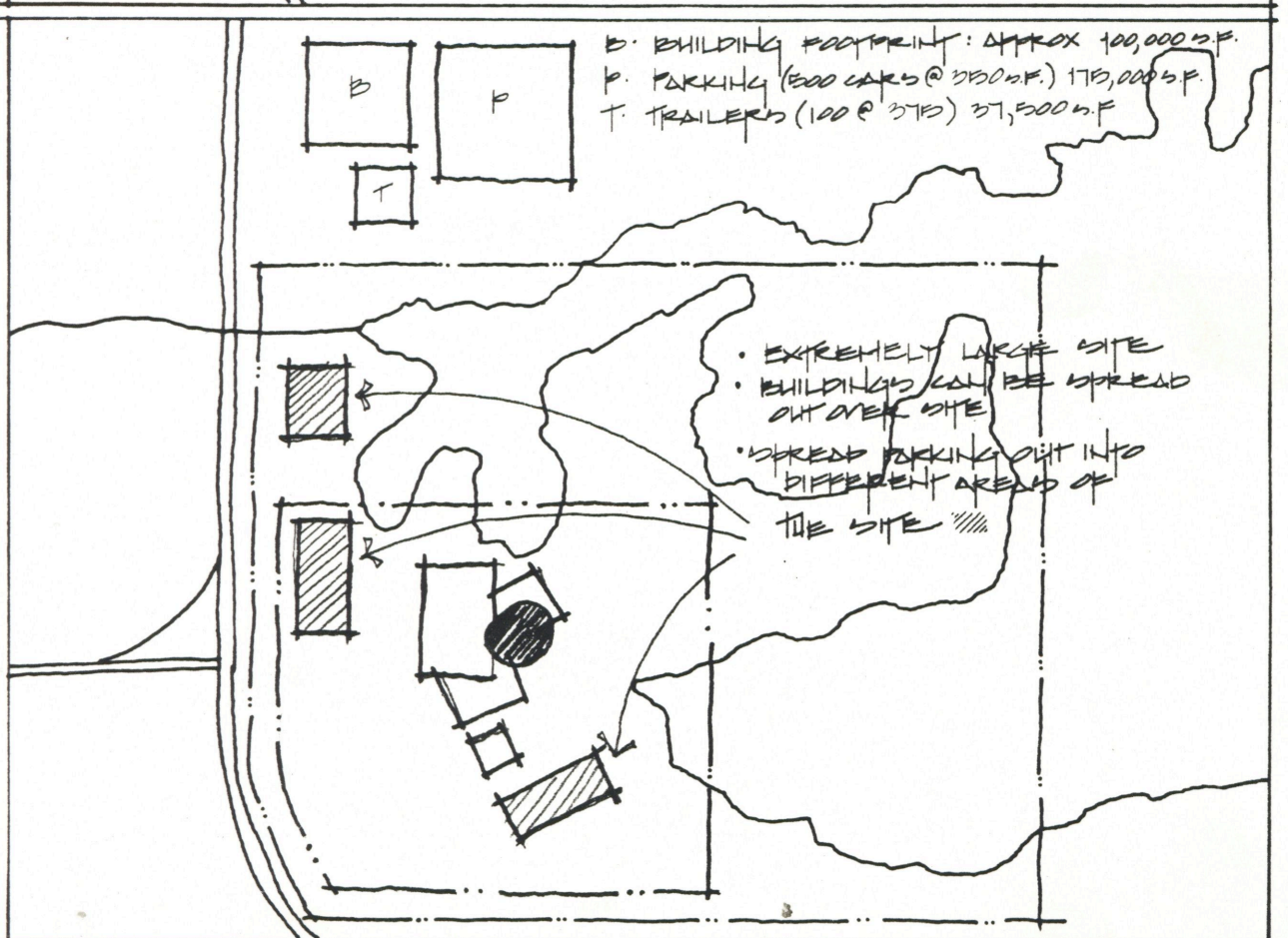
PREVENT ICE
BANKS

COLD ROOF
SYSTEM

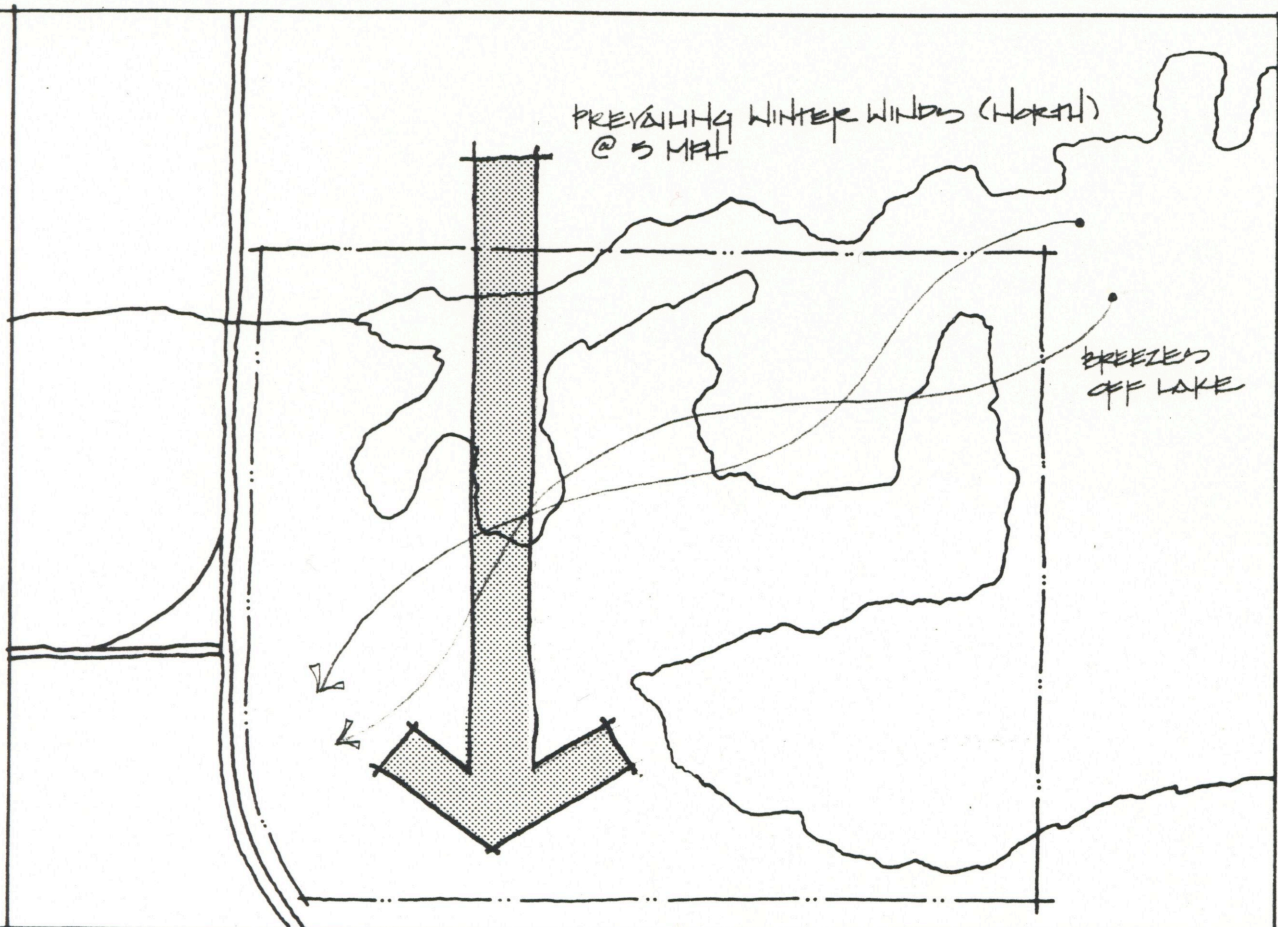
site conditions



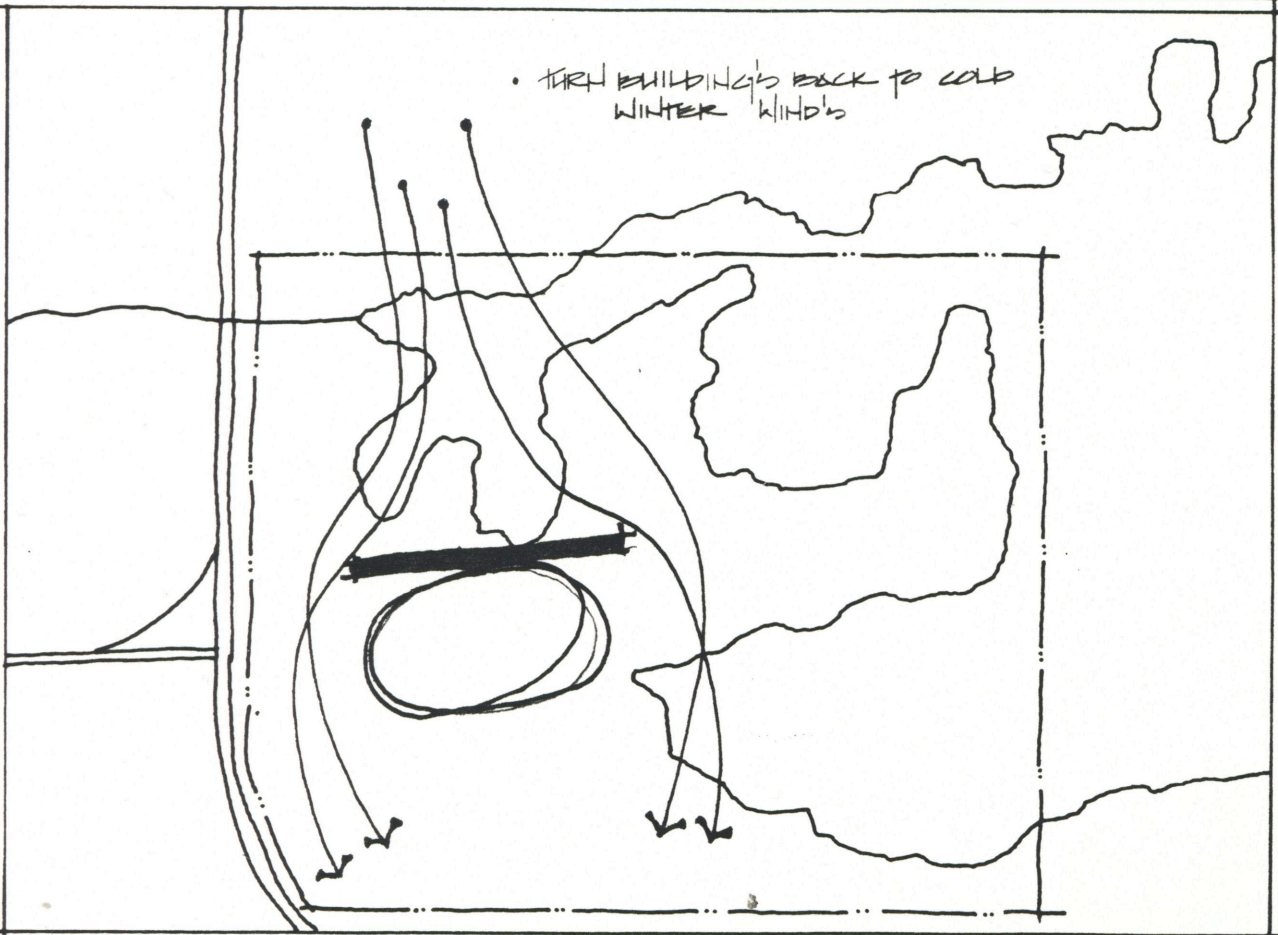
design response



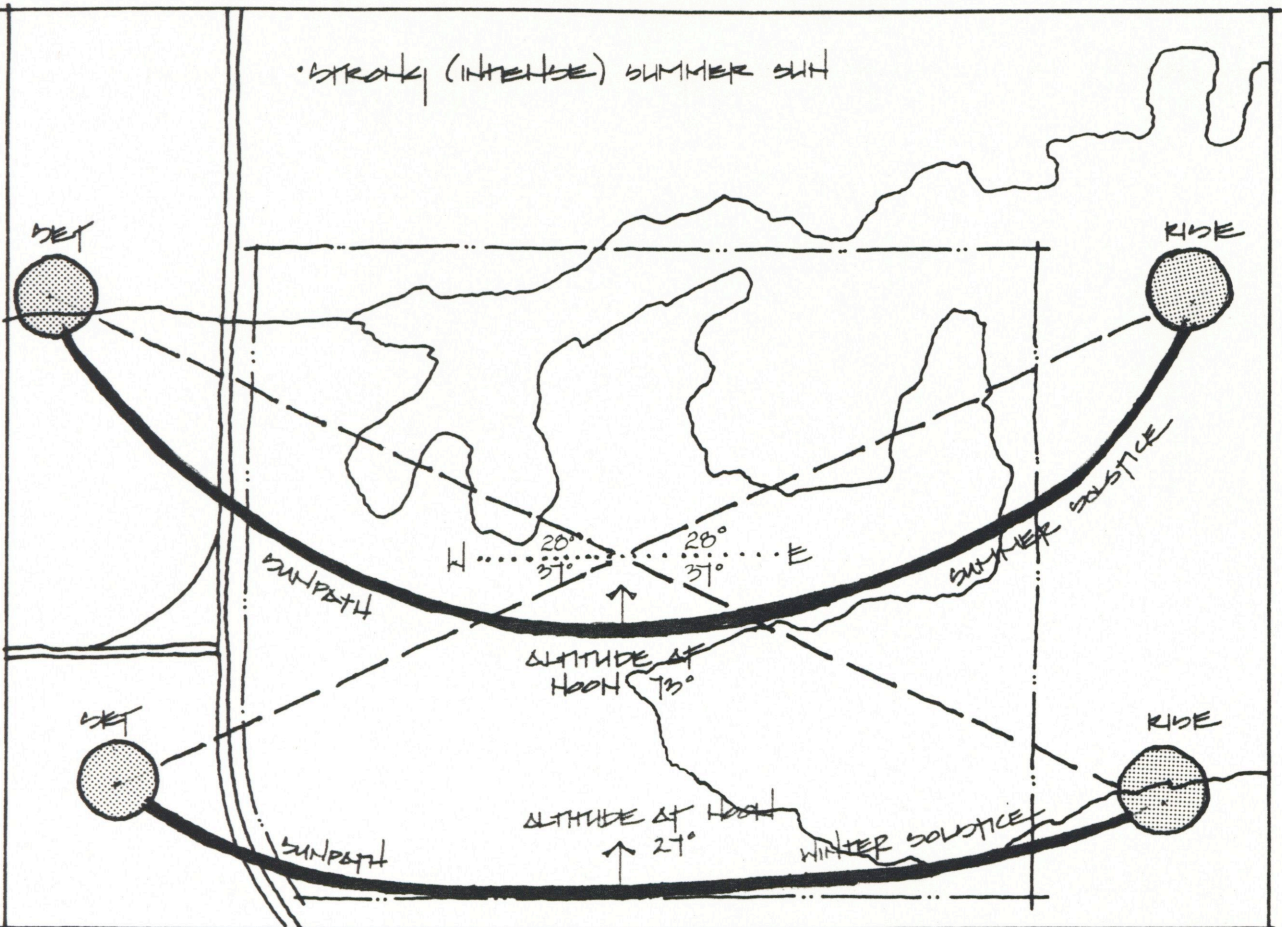
site conditions



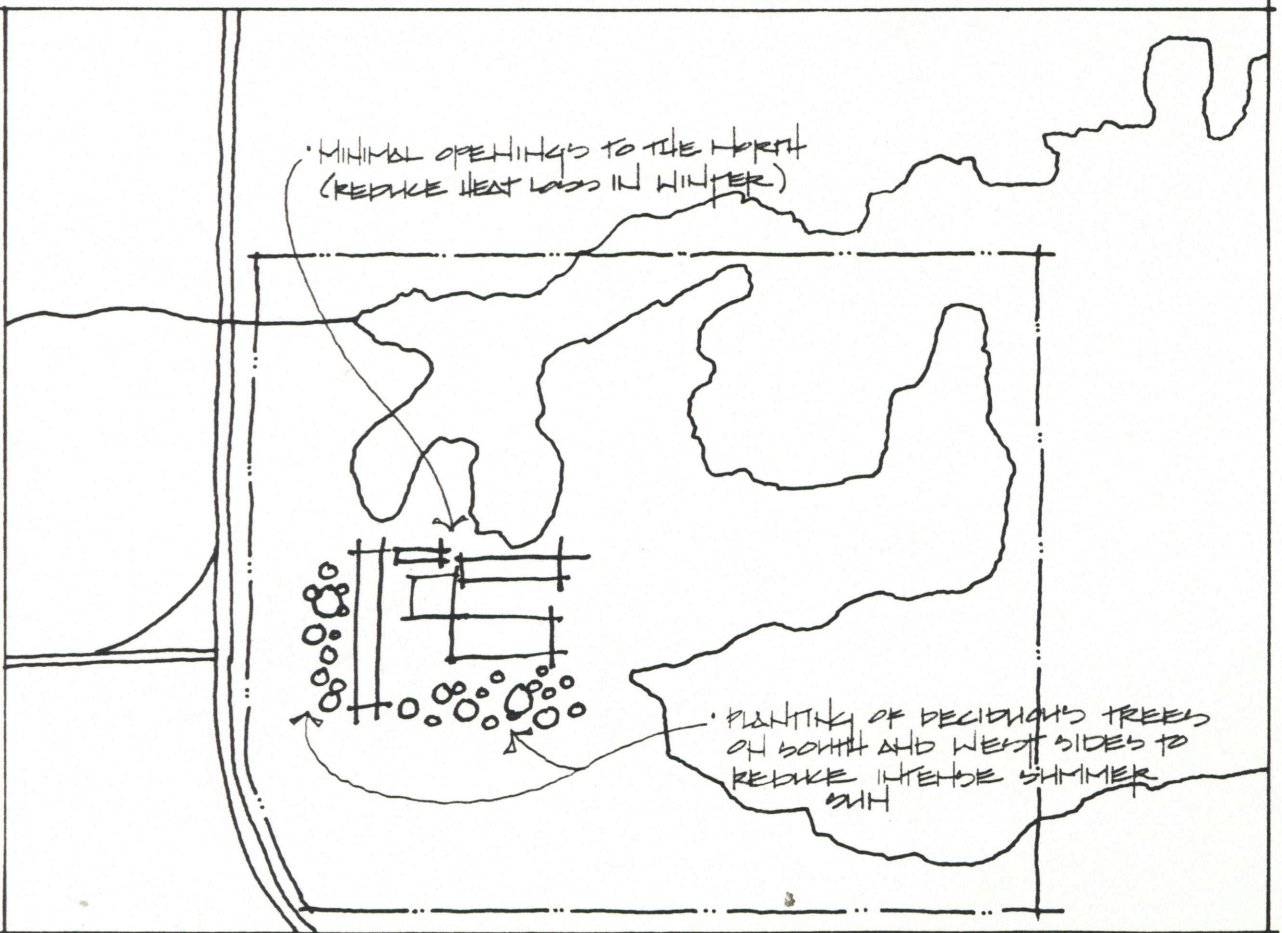
design response



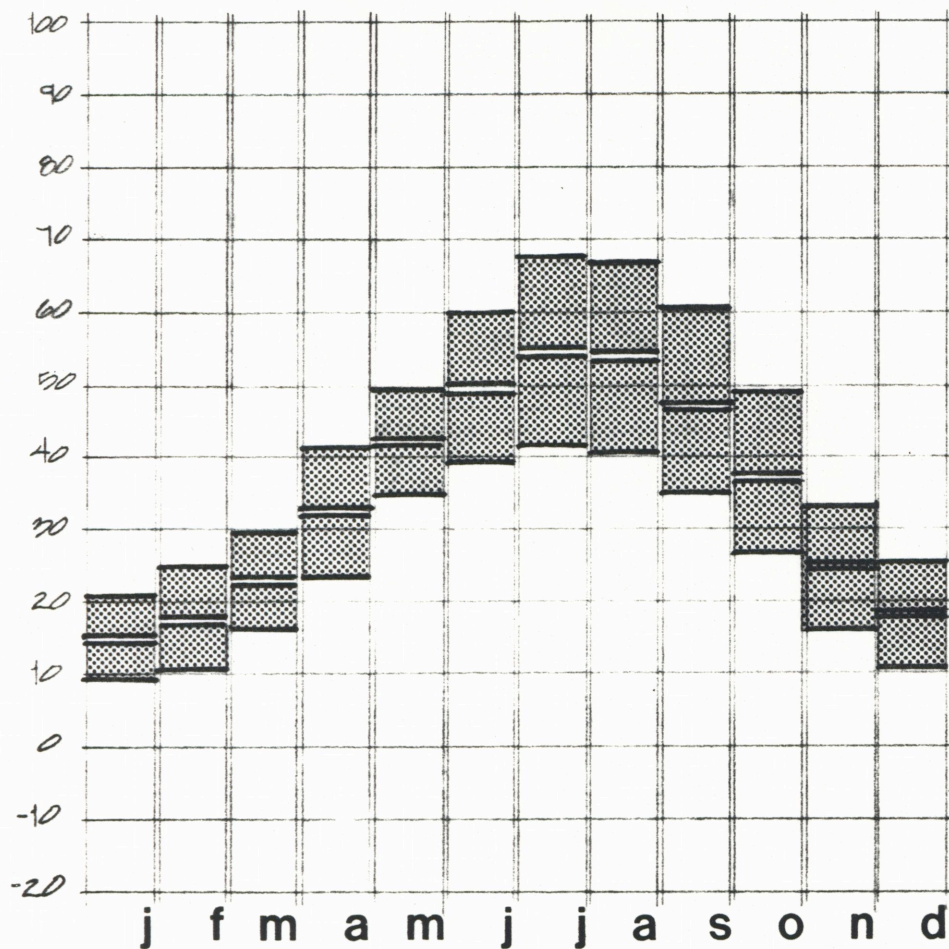
site conditions



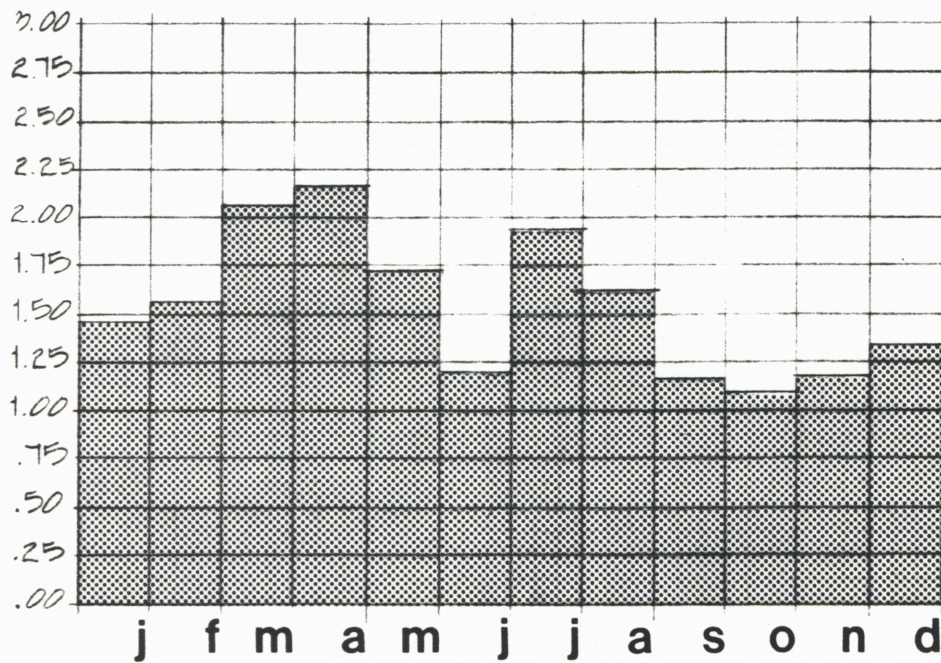
design response



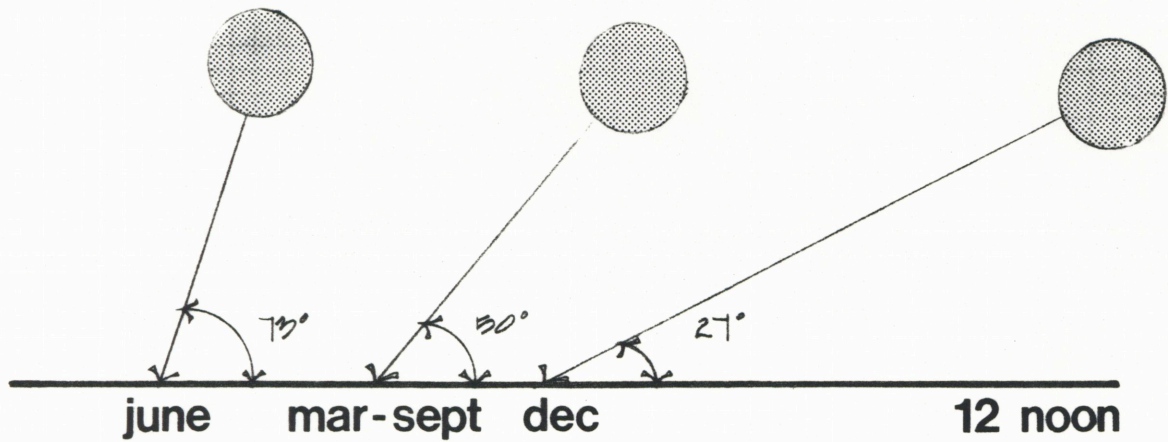
· temperature avg °f



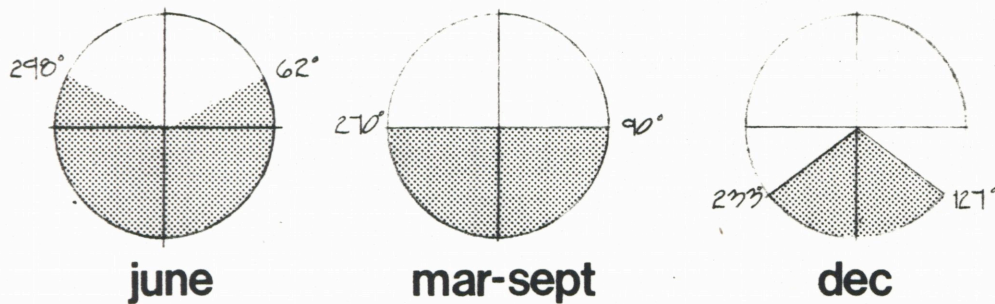
• precipitation in.



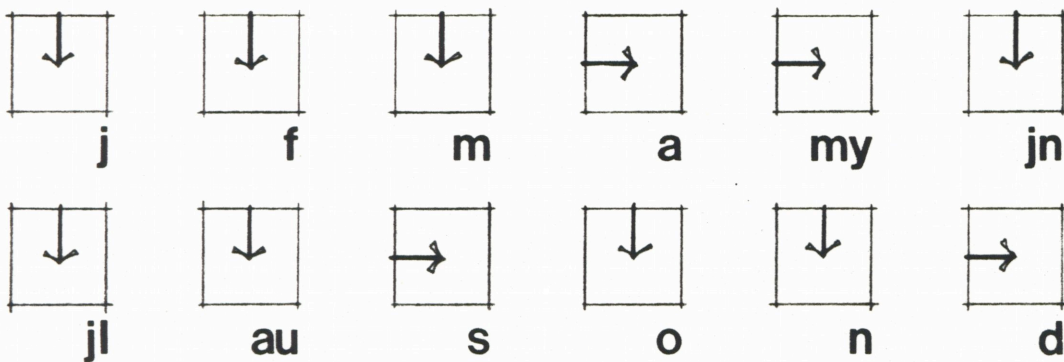
• sun altitude



• azimuth



• wind direction



In examining the existing architecture of Summit County, it is difficult to pinpoint one existing "style", because none really exists. Instead, each area has its own unique style.

Breckenridge, located ten miles south of the site appears to be a "disneyland" of Bonanza Victorian architecture. A few of the original buildings from the mining camp days still exist, and the new projects that have gone up since (in the last twenty years), have attempted to repeat this Victorian style, successfully or unsuccessfully, depending on who is judging. It has created a total "retail" atmosphere, with ornament and bright colors the tools to attract the heavy amounts of visitors the town gets from neighboring Denver and beyond. This solution seems to work great for the retailers, but seems inappropriate for the mountains. (see page b-20)

Dillon, located five miles east of Frisco on I-70, consists of architecture all constructed after Lake Dillon was constructed in 1963. The town was originally in the valley, but the resident's property was bought by the Denver Water Board for the lake. The architecture consists mostly of modernistic apartment complexes, totally disregarding context. (see page b-21)

Keystone, located on the opposite side of Lake

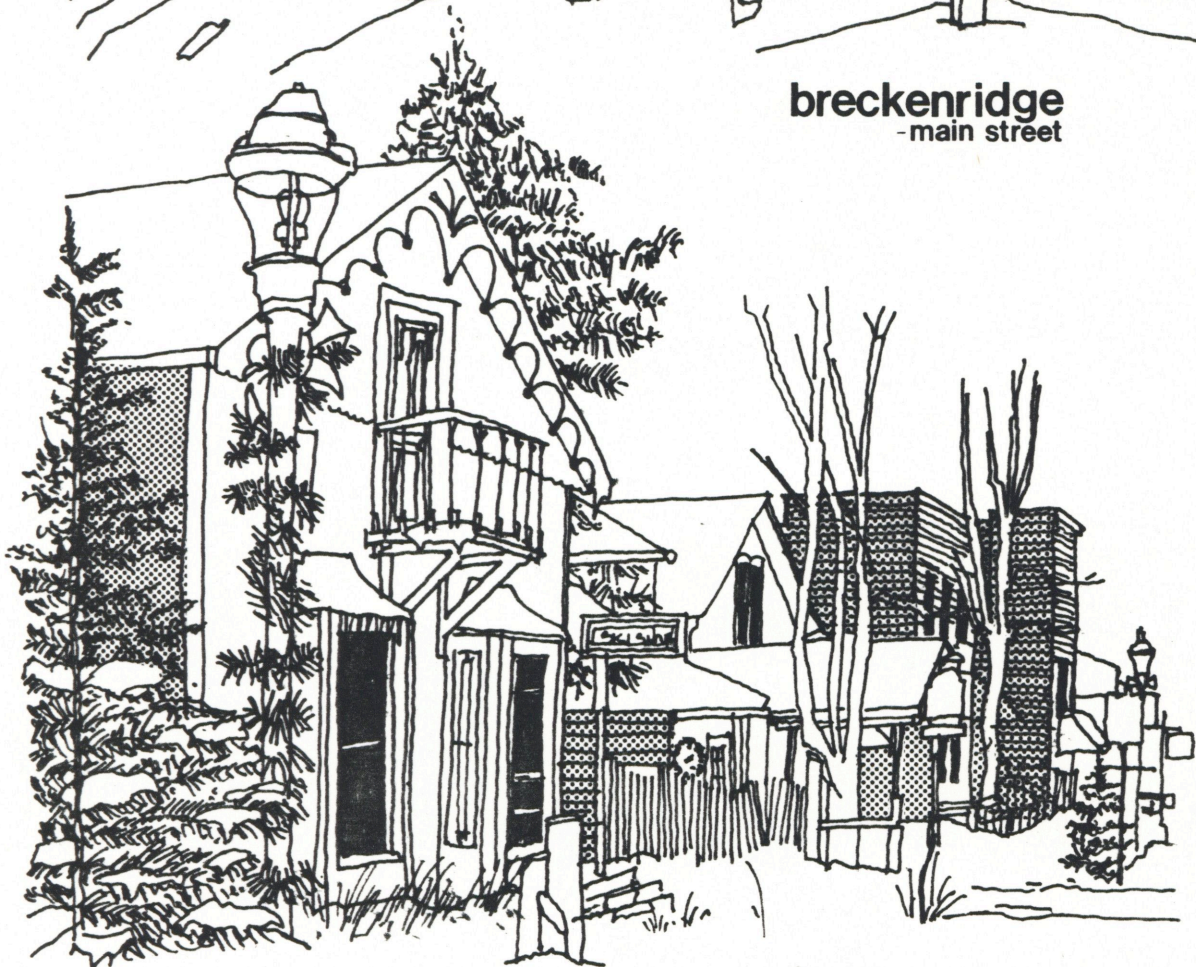
Dillon approximately 10 miles from Frisco, mostly consists of architecture built in the 70's and 80's, after the opening of the ski resort. It's buildings tend to be more sympathetic to context in comparison to Breckenridge and Dillon. Wood is heavily used as a local material, and sloped roofs are very common, helping the architecture fit into the mountain setting. (see page b-22)

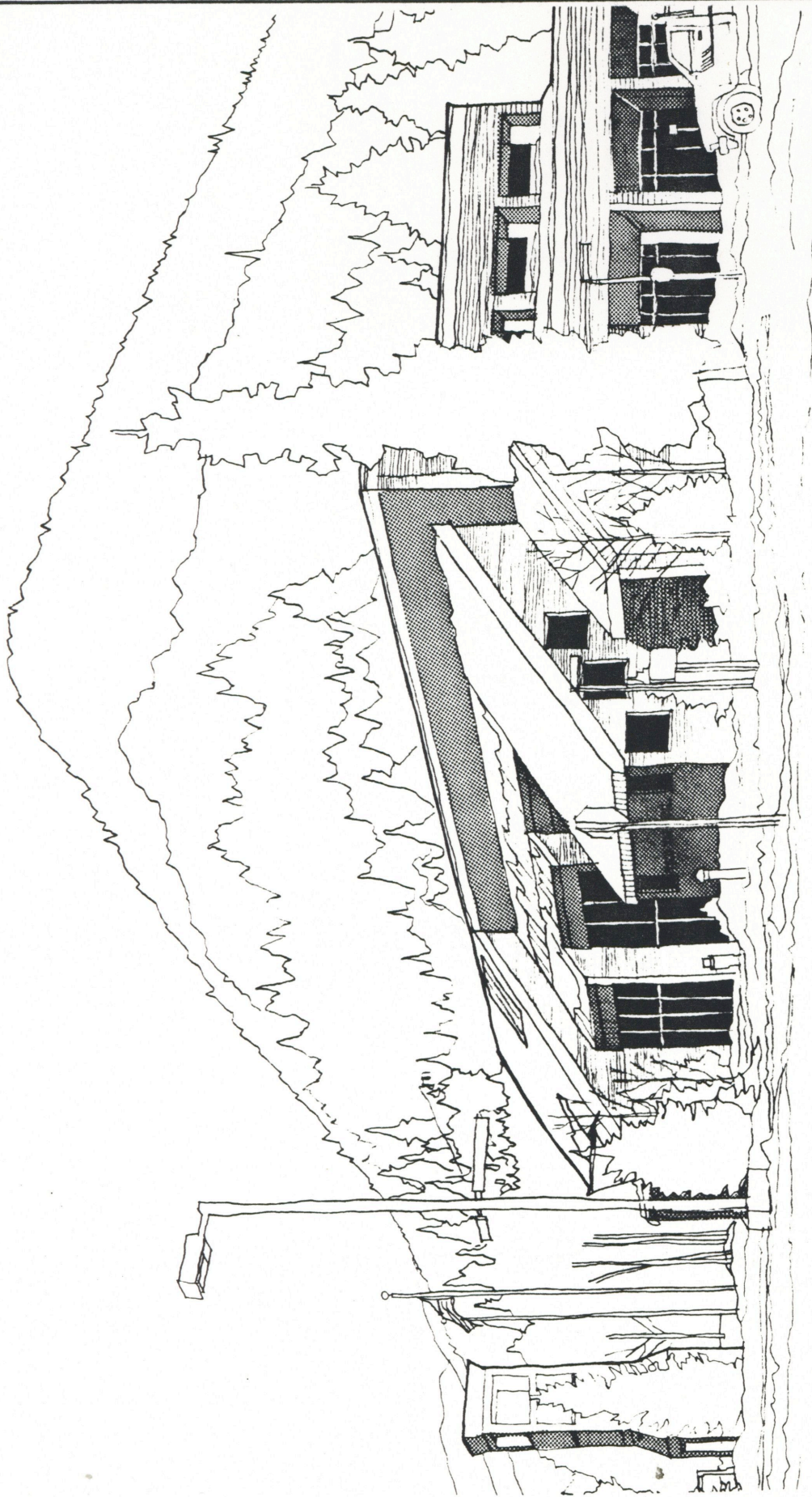
Frisco, the town in which the site is situated, has more of an urban feeling in its architecture than anything else. This could place its architecture in many different contexts, not just the mountains. They make use of local materials, but the urban feeling one gets when driving down Main Street Frisco, population 2,000, with an elevation of 9,500 feet above sea level, seems inappropriate. (see page b-23)

My problem, as I stated before in the project development, will be to create an architecture that will fit in the context of the mountains, and with the exception of Keystone, the existing architecture will be of little help to me. Although I will try, if possible, to relate my design in some ways to the town of Frisco, and to Summit County as a whole, as it is they who will benefit from the project, both economically and aesthetically.

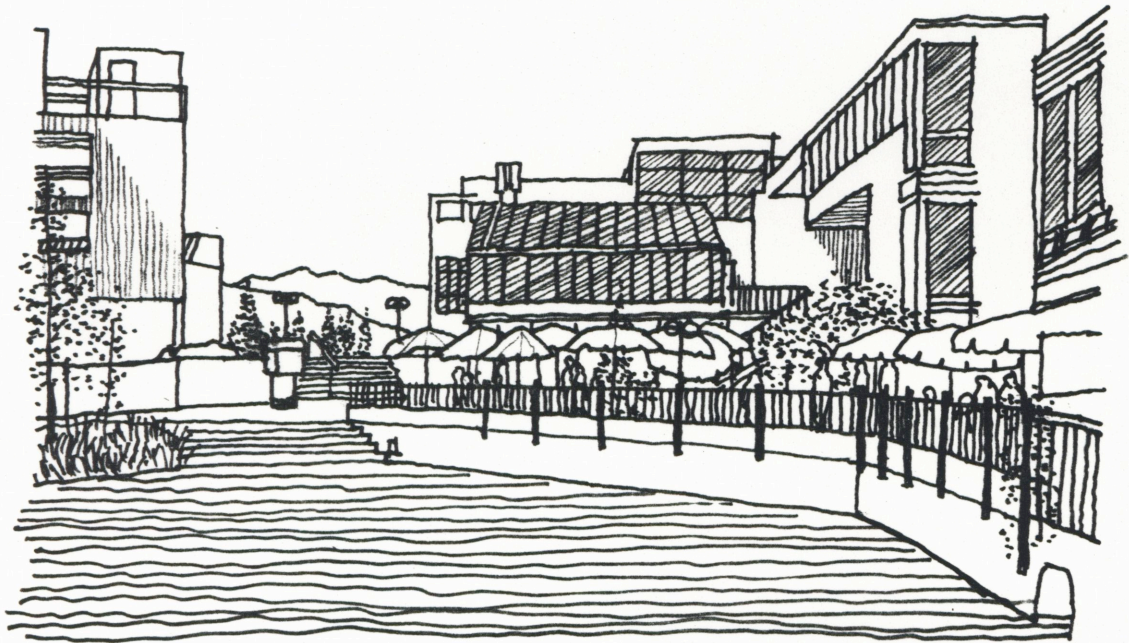


breckenridge
-main street

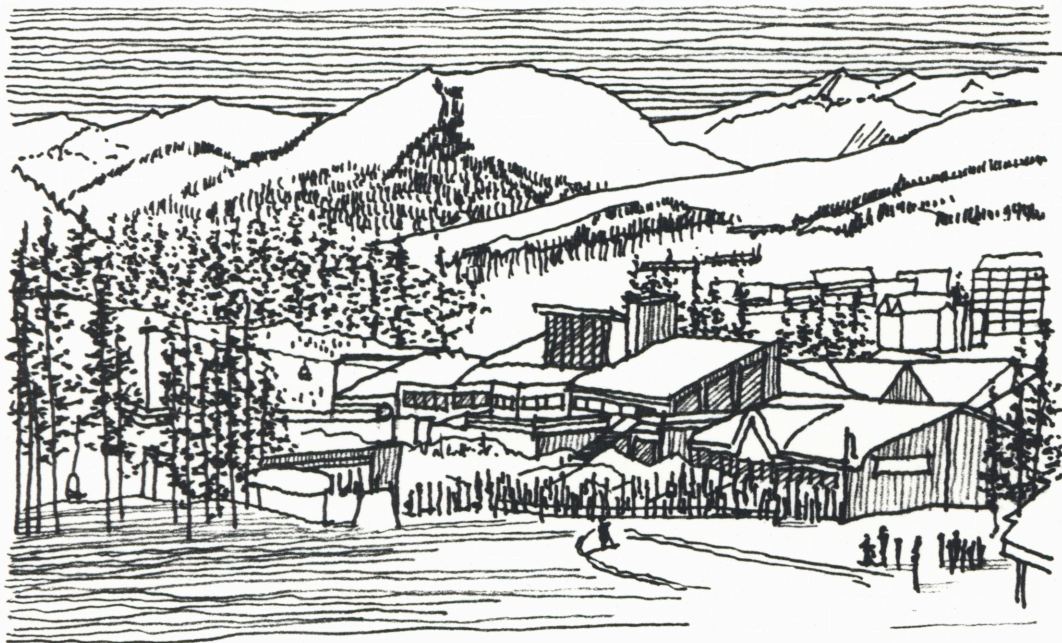




frisco
-court house



keystone
-ski resort





frisco
-main street



breckenridge
-french street

A convention center will generate several types of economic activity. The following chart illustrates the percentage distribution of a convention dollar.

	%
Hotel room and incidentals	37.66
Hotel restaurants	15.99
Other restaurants	16.18
Beverages	6.01
Retail Stores	10.28
Local transportation, sight seeing, theaters	3.82
Night clubs, sports events	3.51
Automobile service	1.75
Other items	4.80
	<u>100.00</u>

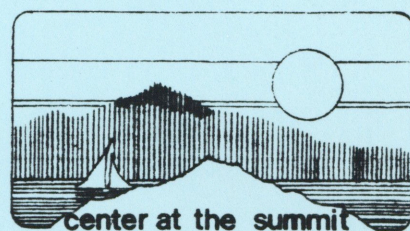
Source: International Association of Convention and Visitors Bureaus, 1978.

Where the money being spent originates must be considered. Since most of the capital will be brought in from out of Summit County, it will increase the capital in the area.

Since this is such a unique situation and setting, certain groups will benefit more than the chart indicates. The four ski areas will benefit greatly, and as the county is retail oriented, the percentage of the dollar going toward retail will increase significantly.

C

• program



A. Convention Center	80960
1. Entrance	500
2. Operations Desk/Registration	200
3. Administration	1820
a. Building manager	200
b. Show manager	300
c. General office/storage	800
d. Reception/waiting	400
e. Restrooms (2)	120
4. Reception Lobby	6700
a. Assembly and meeting space	5000
b. Public telephones	100
c. Lounge area	1500
d. Duplication/mail room	100
5. Promenades and Galleries	5000
6. Banquet Hall	4480
a. Banquet room	3000
b. Kitchen	200
c. Storage for kitchen	50
d. Restrooms	240
e. Storage area	450
f. Stage	540
7. Ice Rink/Exhibit Floor	34750
a. Ice rink	17000
b. Seating for 2000	16000
c. Concessions	1000
d. Storage for stage, etc.	750
e. Restrooms (4)	800
8. Auditorium	4200
a. Seating for 400	3200
b. Stage	500
c. Projection Booth	200
d. Storage AVA equipment, etc.	300

9. Smaller Meeting Rooms	2300
a. 2 (25 people) can be combined	2(550)
b. 4 (10 people) can be combined	4(220)
c. Restrooms (for aud. and conf.)	320
10. Auditorium Foyer	400
11. Maintenance Shop	1310
a. Ice maintenance	500
b. Chief engineer	100
c. Storage	300
d. Loading dock	200
e. Refuse storage	150
f. Restroom	60
12. Mechanical	3500
13. Circulation (25%)	19500
B. Community Center	4876
1. Auditorium (shared w/ conv. center)	
2. Restrooms (2)	200
3. Kitchen Facility	160
4. Storage Areas (3)	300
5. Community Gathering Space	3000
6. Circulation (25%)	1116
C. Visitor Center	3050
1. Entry/Reception Area	240
2. Receptionist/Administration	400
3. Exhibit Space	500
4. Temp. Exhibit Space	400
5. Lab	150
6. Storage Area	200
7. Restrooms	200
8. Library	150
9. Collection	200
10. Circulation (25%)	610
D. Amphitheater/Ice Rink	
1. Size to be determined	
2. Tennis courts, winter snow stacking	

E. Marina/Nordic Center	2638
1. Year Round Shelter	988
a. Snack bar	200
b. Map and bulletin board	50
c. Seating (for 16)	200
d. Telephone	20
e. Restrooms	160
f. Office for caretaker	200
g. Circulation (25%)	158
2. Repair Shop and Fueling	1750
a. Split level fueling	1000
b. Bench	50
c. Restroom	30
d. Storage	100
e. Register counter	40
g. Shop area	180
h. Tanks	
i. Circulation (25%)	350
3. Sailing/Swimming Beach	
a. Tables	
b. Lighting	
c. Fire containers	
d. Markers	
e. Refuse receptacles	
4. Dock System	
a. 300 slips	
b. Launch area (40 ft. wide)	
c. Lighting	
d. Emergency devices	
e. After hour gates	
5. Trailer Storage	
a. Markers	
b. Gate	
c. Hidden from direct view	
d. 100 spaces	

F. Parking

1. Allow for 750-1000
2. Spread out over site-different parking for Community Center, Visitor Center, Marina, and Convention Center.

Main Entrance

Function: point of public access to building, providing a transition from exterior to interior.

Area: 500 s.f.

Hard Requirements: easy access to registration, view of reception lobby essential to attract attention inside, (large amounts of glazing) doors in view of reception desk for security.

Soft Requirements: should be easily remembered by clientele, a contained inside vs. outside feeling, then open up into the reception lobby.

Registration

Function: registration of convention delegates, ticket selling for sports events, exhibitions.

Area: 200 s.f.

Hard Requirements: counter for ticket selling, clearly defined circulation lanes to and from registration, storage behind counter, coat room.

Soft Requirements: hospitality, inviting, informal desk setting with possible pictures, screens of local landscape, animals, etc., well lighted.

Administration

Function: offices for building manager, show manager, and a general office with reception desk, including spaces for team managers, etc.,

Area: 1820 s.f.

Hard Requirements: two restrooms, separated from main area but easily accessible, employee entrance

Soft Requirements: above lighting, but most lighting at personal level (at desks), large space partitioned off accordingly.

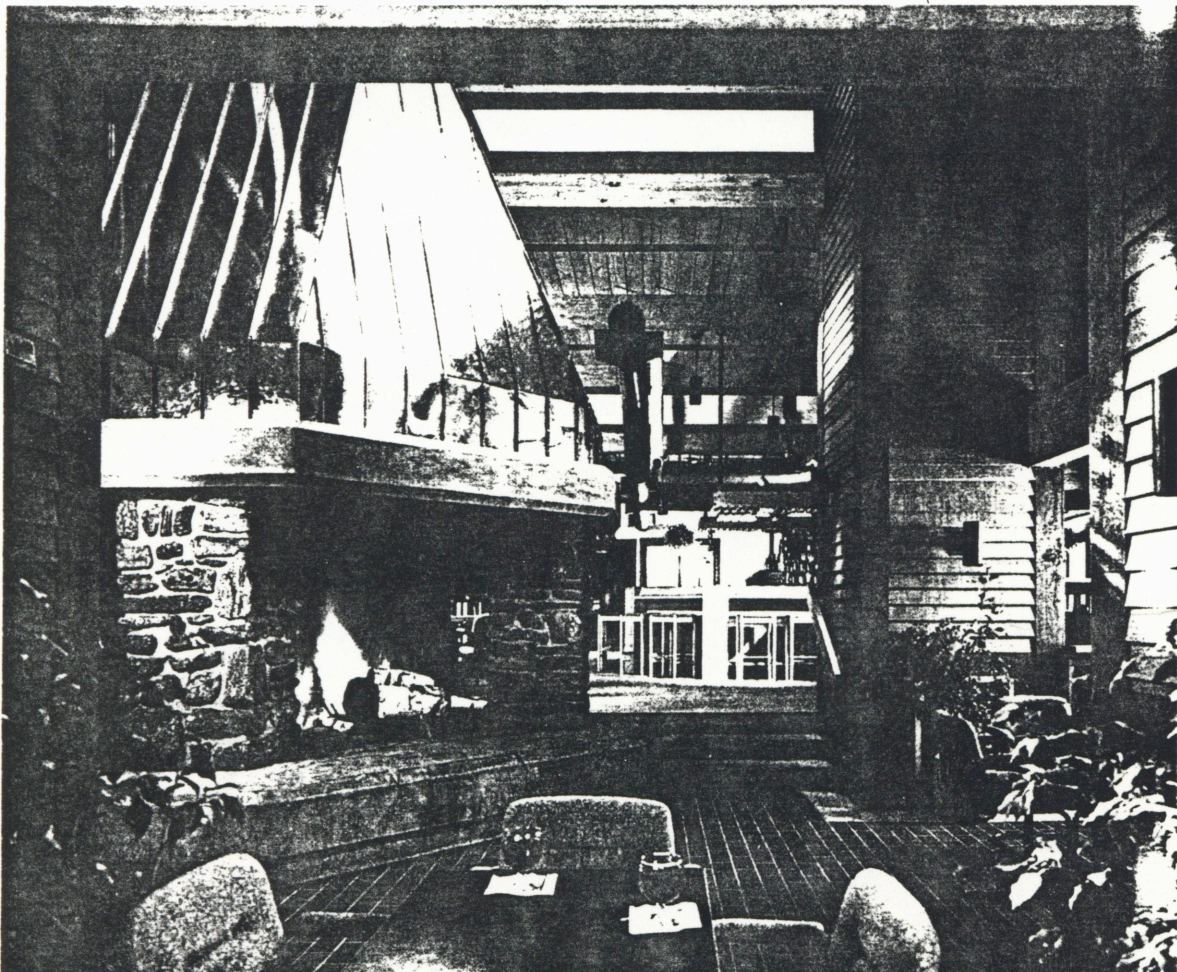
Reception Lobby

Function: main hub of circulation, serving as an assembly and meeting space, providing information, direction, etc., main waiting area for main exhibit hall.

Area: 6700 s.f.

Hard Requirements: should include; public telephones, lounge area, adjacent restrooms, places for information.

Soft Requirements: A very soft lounging atmosphere with good views of the mountains and/or lake, use of wood, heavy structure, tile and carpeting, changing of levels, skylights for natural light and side incandescent lighting, possible fireplace.



Wachusett Mountain Lodge, Princeton, MA
Lindsay Shives and Associates

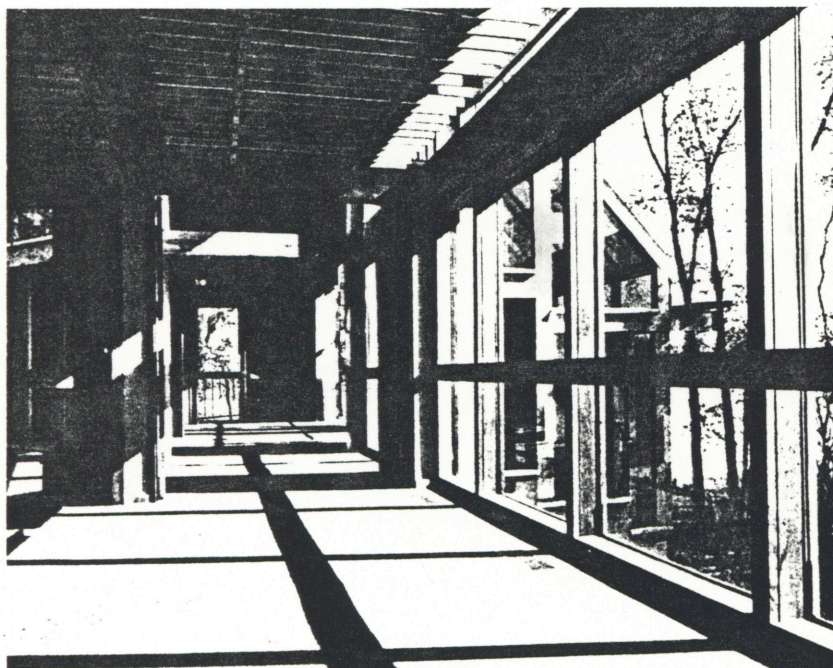
Promenades and Galleries

Function: small rooms off of reception lobby to serve as overflow for assemblies, exhibition space, and possible lounge areas.

Area: 5000 s.f.

Hard Requirements: large amounts of glazing, track lighting for art exhibitions, etc., seating, ability to be partitioned off.

Soft Requirements: heavy landscaping, nice relaxing areas with views of site.



Desoto Visitor Center, Iowa
Neil Astle Associates

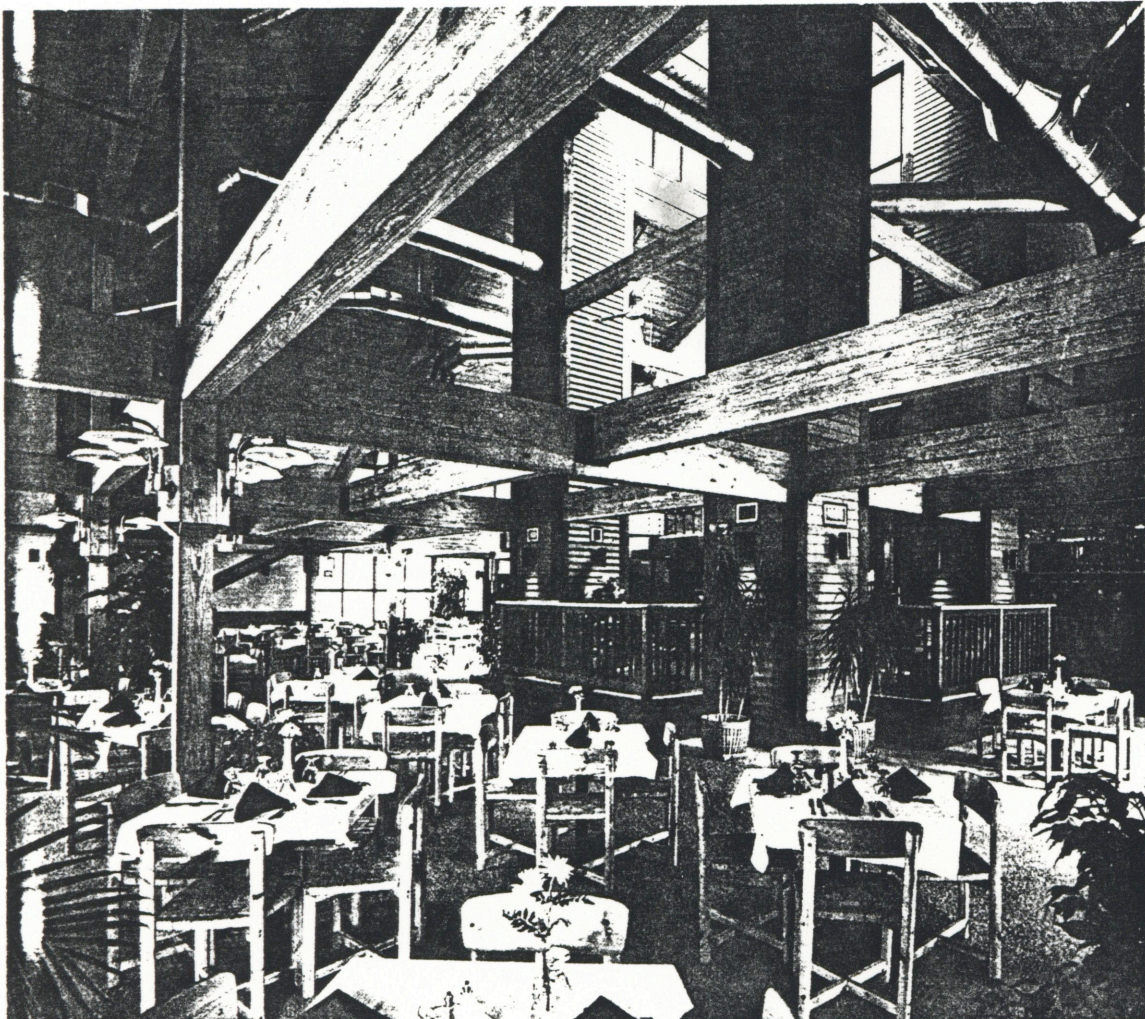
Banquet Hall

Function: to serve up to 300 people, receptions or conventions.

Area: 4480 s.f.

Hard Requirements: tall ceiling to allow for suspended lighting, central stage, large banquet kitchen, storage for chairs, portable bar.

Soft Requirements: partially carpeted, indirect lighting, good views, plants, warm earth tone colors.



Wachusett Mountain Lodge, Princeton, MA
Lindsay Shives and Associates

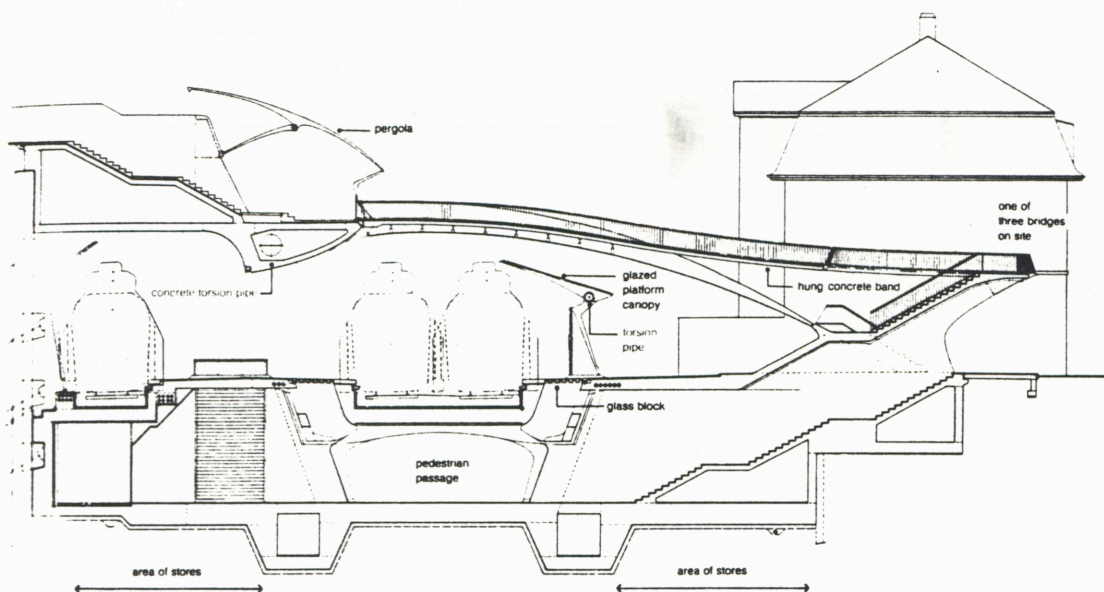
Exhibit Floor/Ice Rink

Function: large exhibitions, conventions, or local sports events (basketball or hockey).

Area: 34750 s.f.

Hard Requirements: seating for 2000, concessions area, heavy structure for the long spans, access to restrooms, vehicle access doors.

Soft Requirements: partially underground for aesthetics, stress structure-penetrating outside, nicely lighted space, very tall ceiling, keep from feeling cold when ice is on the floor.



Stadelhofen Train Station, Zurich, Switzerland
Santiago Calatrava

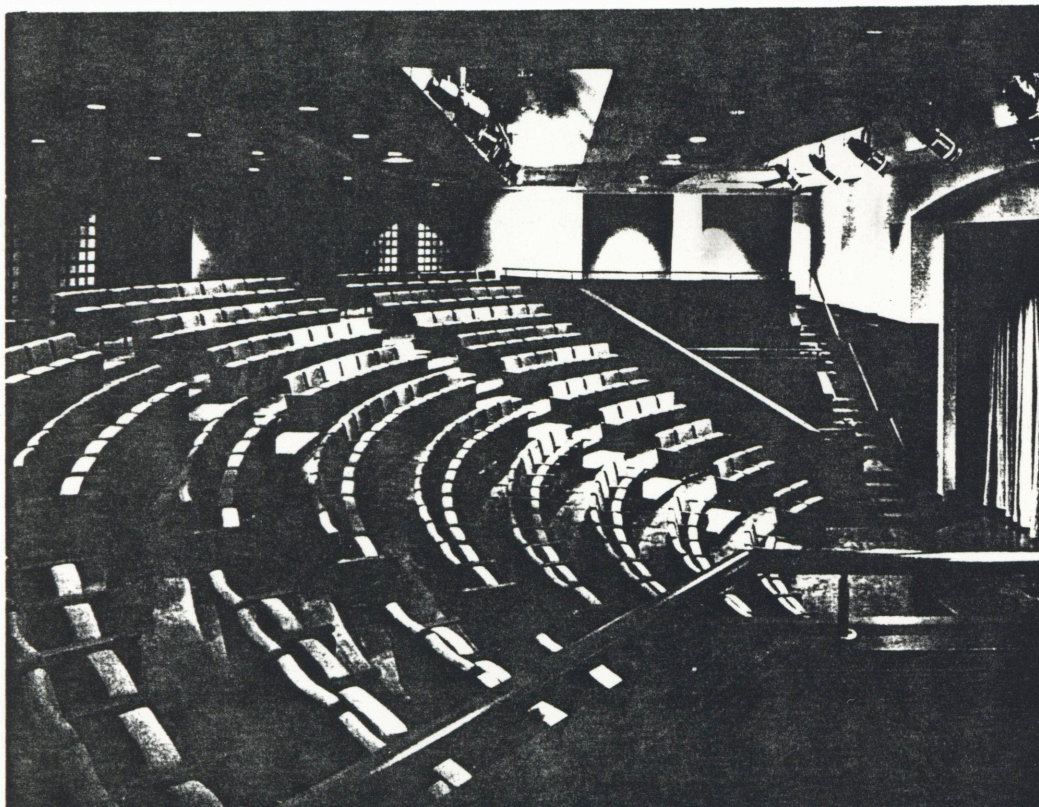
Auditorium

Function: for smaller conventions, shared with community center, local lectures, movies.

Area: 4200

Hard Requirements: parabolic seating, enclosed from outside light and sound, seating for 400, stage, projection booth, and storage for AVA equipment, etc.

Soft Requirements: soft space, relaxing, incandescent lighting around sides, carpeted.



Codex World Headquarters, Boston, MA
Koetter Kim and Associates

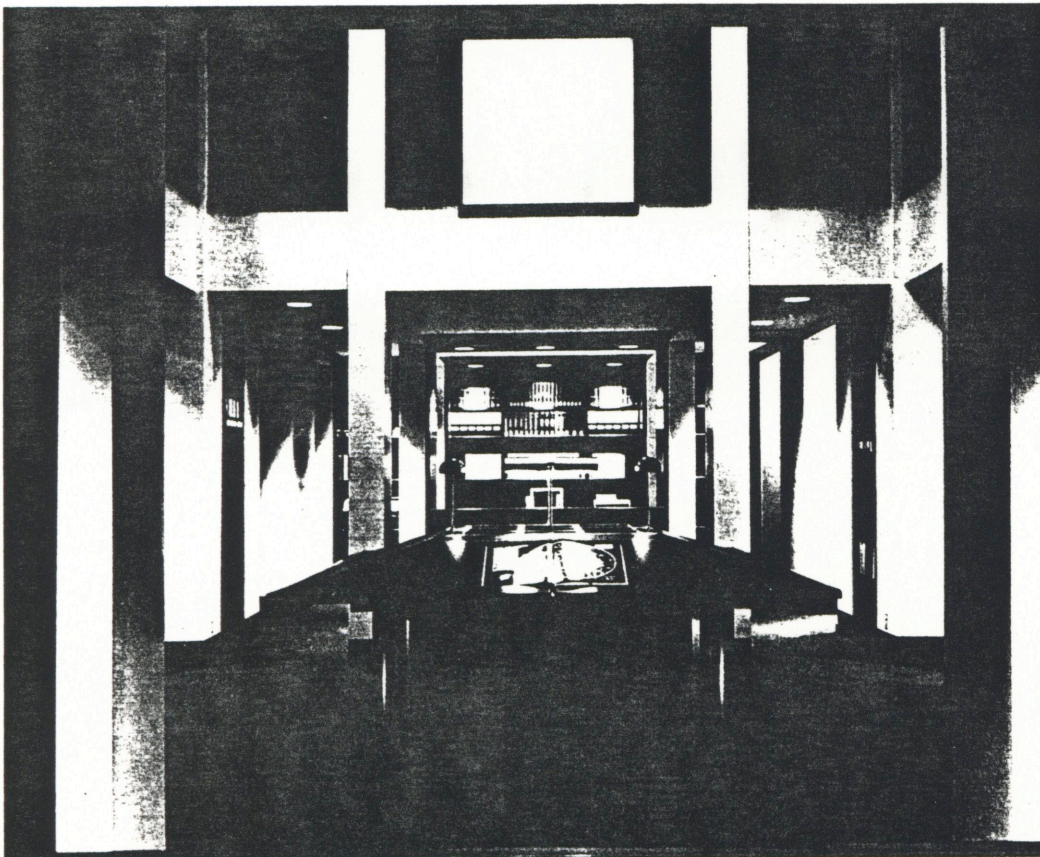
Smaller Meeting Rooms

Function: use for committee groups in conventions, smaller meetings, shared with convention center.

Area: 2300 s.f.

Hard Requirements: well separated, but possibility of combining them, ceiling lighting, and windows for views and natural lighting, place for storage, access to restrooms.

Soft Requirements: carpeted, relaxing space, some plants, direct lighting on tables.



Hastings-Tapley Insurance Building, Cambridge, MA
Koetter Kim and Associates

Auditorium Foyer

Function: waiting area for auditorium.

Area: 400 s.f.

Hard Requirements: some seating, easy direction into theater, place to take tickets.

Soft Requirements: should have a nice view for convention delegates spending most of the day inside auditorium, soft space, carpeted and landscaped.

Maintenance Shop

Function: workroom for whole center.

Area: 1310 s.f.

Hard Requirements: space for ice maintenance equipment, chief engineer's office, storage, loading dock, refuse storage, restroom.

Entry/Reception Area

Function: introduces visitors to Summit County, directs them to the various spaces.

Area: 240 s.f.

Hard Requirements: easy accessibility to the exhibits, receptionist desk, information boards.

Soft Requirements: skylights, plants, very inviting space.

Administration

Function: running visitor center and its functions.

Area: 400 s.f.

Hard Requirements: close to entry, behind reception.

Exhibit Space/Temporary Exhibit Space

Function: to show full time and temporary exhibits, photographs, etc., of Frisco, Summit County, and Lake Dillon.

Area: 500/400 s.f.

Hard Requirements: neutral space, as to not take away from exhibits, track lighting.

Soft Requirements: soft space, skylights for natural above lighting.

Lab

Function: preparing exhibits, restoring prints, etc.

Area: 150 s.f.

Hard Requirements: closed off from outside light, darkroom in space, multiple benches, work spaces.

Year Round Shelter

Function: shelter for marina, Nordic Center, and amphitheater.

Area: 988 s.f.

Hard Requirements: include snack bar, maps, telephone, seating for 16, restrooms, office for caretaker.

Soft Requirements: well lighted, open to natural light, with views toward marina.

Repair Shop and Fueling

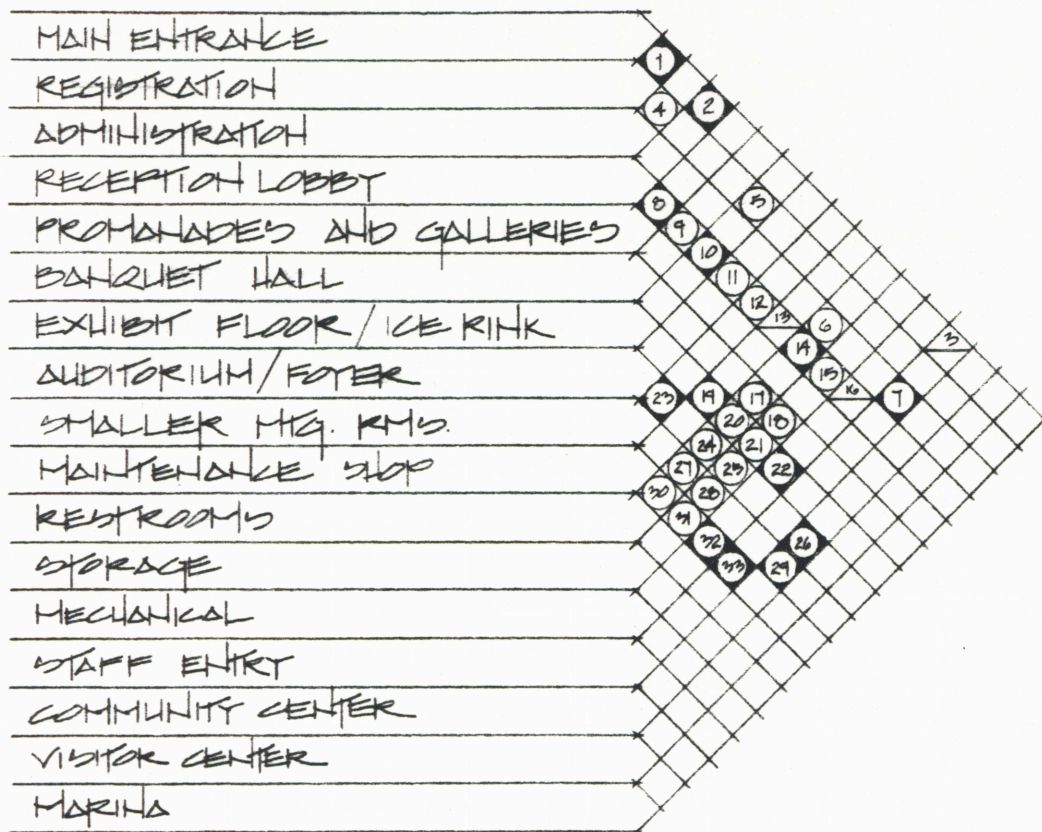
Function: repair shop for boats, fueling for boats and automobiles.

Area: 1750 s.f.

Hard Requirements: split level fueling for cars and boats, workroom with bench (over water), register area, adjacent to year round shelter.

Soft Requirements: separate work area from register.

convention center



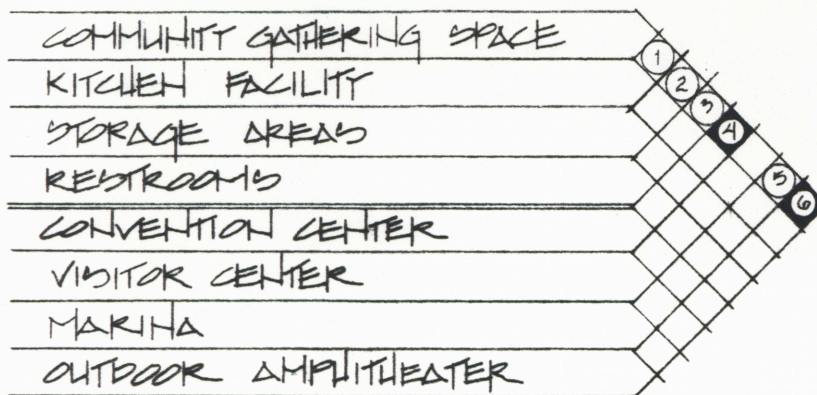
·legend

- ◊ MANDATORY FUNCTIONAL RELATIONSHIP
- ◊ DESIRABLE
- ◊ NEUTRAL
- ◊ NEGATIVE

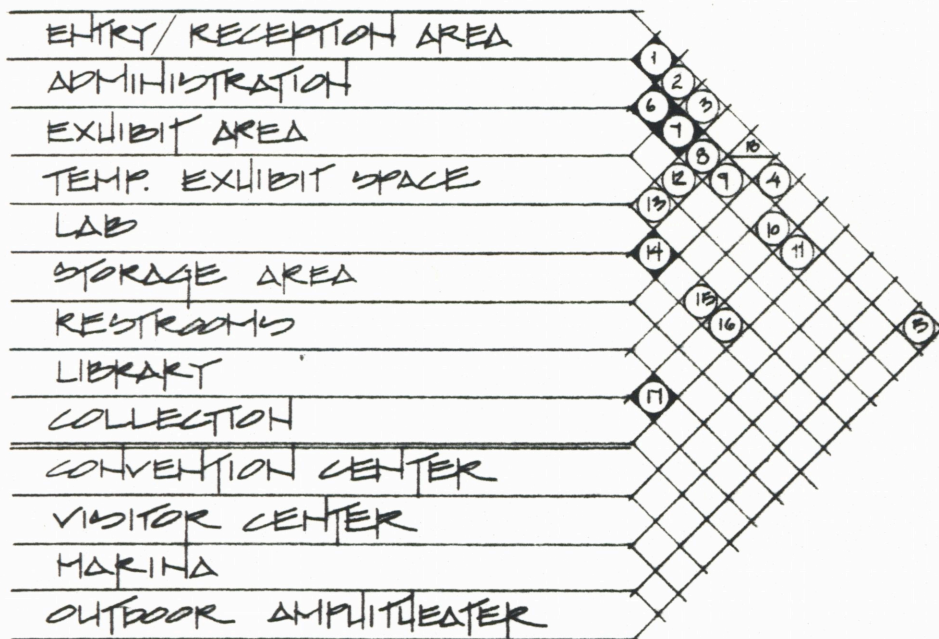
convention center

- 1 Registration should be in easy view for delegates as they enter.
- 2 Reception lobby should be open space in direct contact with entry.
- 3 Staff entry should be separate from main entry; avoid confusion about where to enter the convention center.
- 4 Registration and administration act together.
- 5 Main exhibit floor should be easily accessible after delegates have registered with convention registration. Also, in the case of Hockey games or Summit High School functions, registration can be used as a ticket booth.
- 6 Administration should have own rest room.
- 7 Frequent staff entry and exit throughout day.
- 8 Promenades serve as overflow from reception area, also galleries, exhibit space.
- 9 Kitchen can be used for gatherings in reception area. Should be easy accessibility for waiters, etc.
- 10 Reception lobby is transition space to main exhibit area.
- 11 Signage can tell delegates directly where they have to go, to a certain meeting room, etc. Closer-better.
- 12 Same as 11.
- 13 Maintenance should be kept separate from main crowd of people. Try to push it to back of building.
- 14 Rest rooms should be easily seen from reception lobby-main hub of convention center.
- 15 Storage should be adjacent to contain portable bar, tables and chairs for lobby.
- 16 Noise, smell, etc. kept away from lobby.
- 17 Rest rooms should be close to banquet hall-easy to find.
- 18 Storage for chairs, tables, accessories for stage, portable bar.
- 19 Maintenance contains ice maintenance-lights for exhibit arena.
- 20 Adjacent to both sides of the arena.
- 21 Storage for space separators, basketball floor, sports accessories.
- 22 Mechanical room will include refrigeration for ice rink.
- 23 Both will be used in conjunction with the community center.
- 24 Should be close.
- 25 AVA equipment, extra chairs, etc.
- 26 Used with community center.
- 27 Should be close.
- 28 Same as 25.
- 29 Same as 26.
- 30 Could be the same rest room as administration-or include it in the maintenance room.
- 31 Maintenance has own storage, for ice equipment, electrical, power tools, etc. .
- 32 Maintenance should have close contact to mechanical systems

community center



visitor center



legend

- ◆ MANDATORY FUNCTIONAL RELATIONSHIP
- ◇ DESIRABLE
- ◇ NEUTRAL
- ◇ NEGATIVE

- 33 Maintenance should have their own entry, or share with administration.

community center

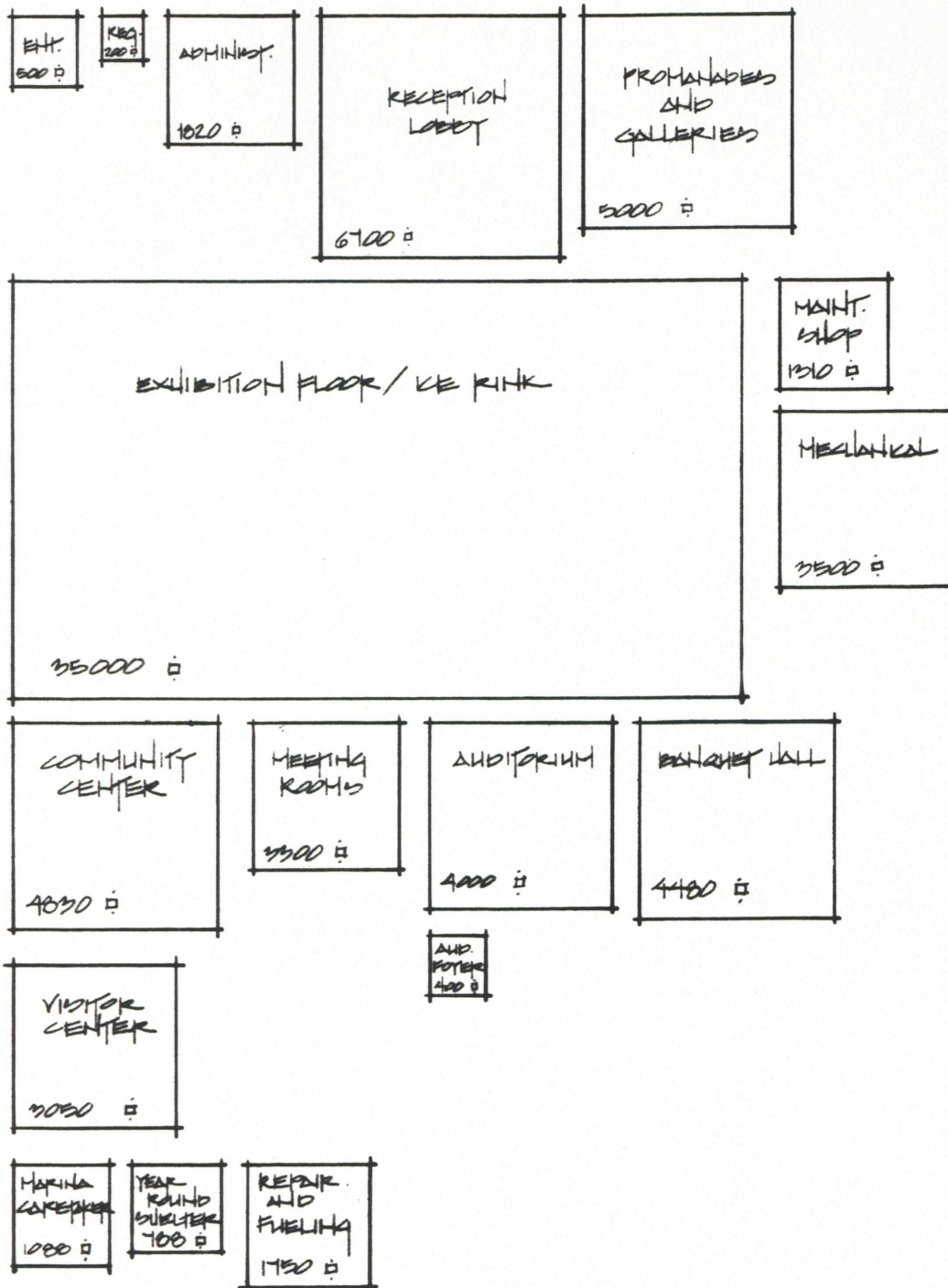
- 1 Kitchen facility should be close for convenience.
- 2 Storage areas for different community groups, should be adjacent to gathering space.
- 3 Should be close-possibly shared with auditorium and smaller meeting rooms.
- 4 Shares auditorium and smaller meeting rooms with convention center. Also some community things will be held in exhibition space. (high school basketball, hockey, etc.)
- 5 Overlook marina and Lake Dillon. Some activities could be held including both marina and community center.
- 6 Serve as border for one side of amphitheater.

visitor center

- 1 Reception combined with administration. Cluster together for convenience.
- 2 Easy access to exhibits from entry.
- 3 Same as above.
- 4 Rest rooms easily accessible from entry.
- 5 Could be used for outdoor shows with visitor center.
- 6 Questions visitors may have, should be close.
- 7 Same as above.
- 8 Close for administration for convenience, as they will be working in the lab.
- 9 Storage of partitions, materials used for displays.
- 10 Library controlled by administration.
- 11 Collection controlled by administration.
- 12 Lab used to prepare exhibits.
- 13 Same as above.
- 14 Storage of future/previous exhibits. Storage of preparation materials.
- 15 Lab used to repair books, etc.
- 16 Same as above.
- 17 Both used by administration simultaneously.

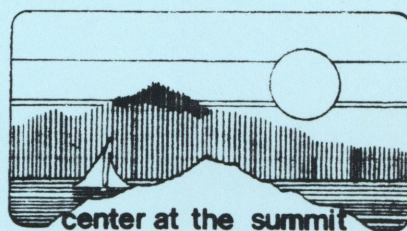
c

space adjacency · square footage 20



d

• precedents



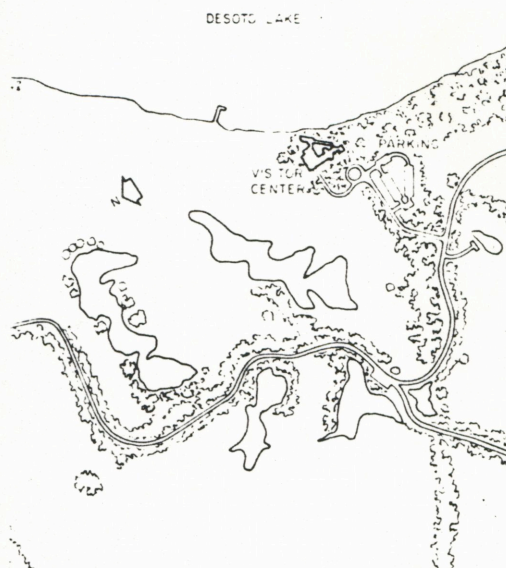
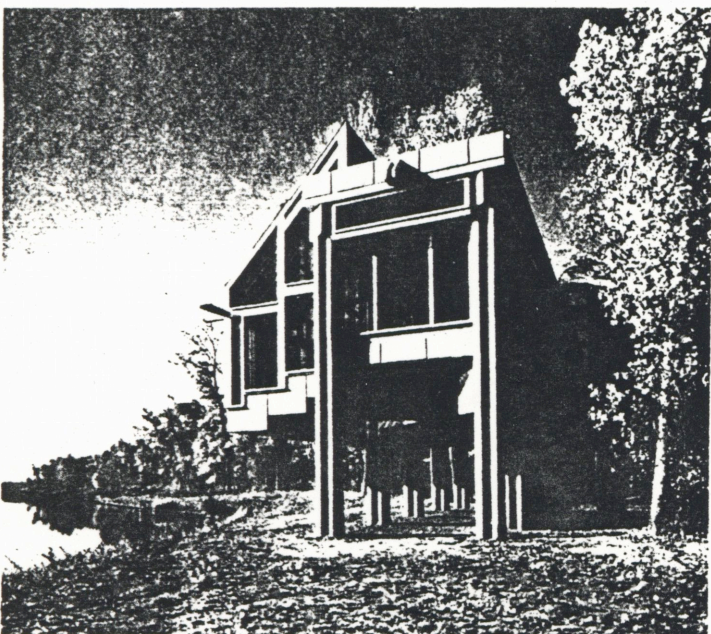
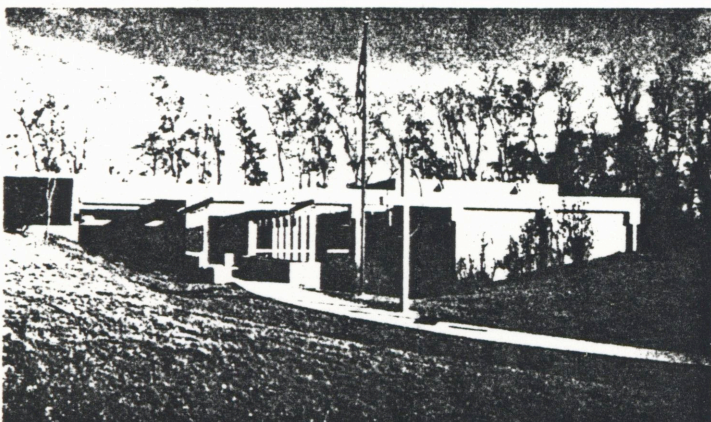
Desoto Visitor Center

Desoto National Wildlife Refuge, Iowa

The rooms are arranged in a careful sequence that culminates in a viewing gallery over the water. The building is reached by a long entrance drive past woods and ponds, with stopping points for views. To help make the structure harmonious with the site, the architects have made ample use of wood infill panels and earth berms, and have divided the building into several parts to reduce its scale.

Implications:

1. long entrance to building to experience site more.
2. building will be in parts to reduce its scale on site.
3. use of local materials and earth berms.



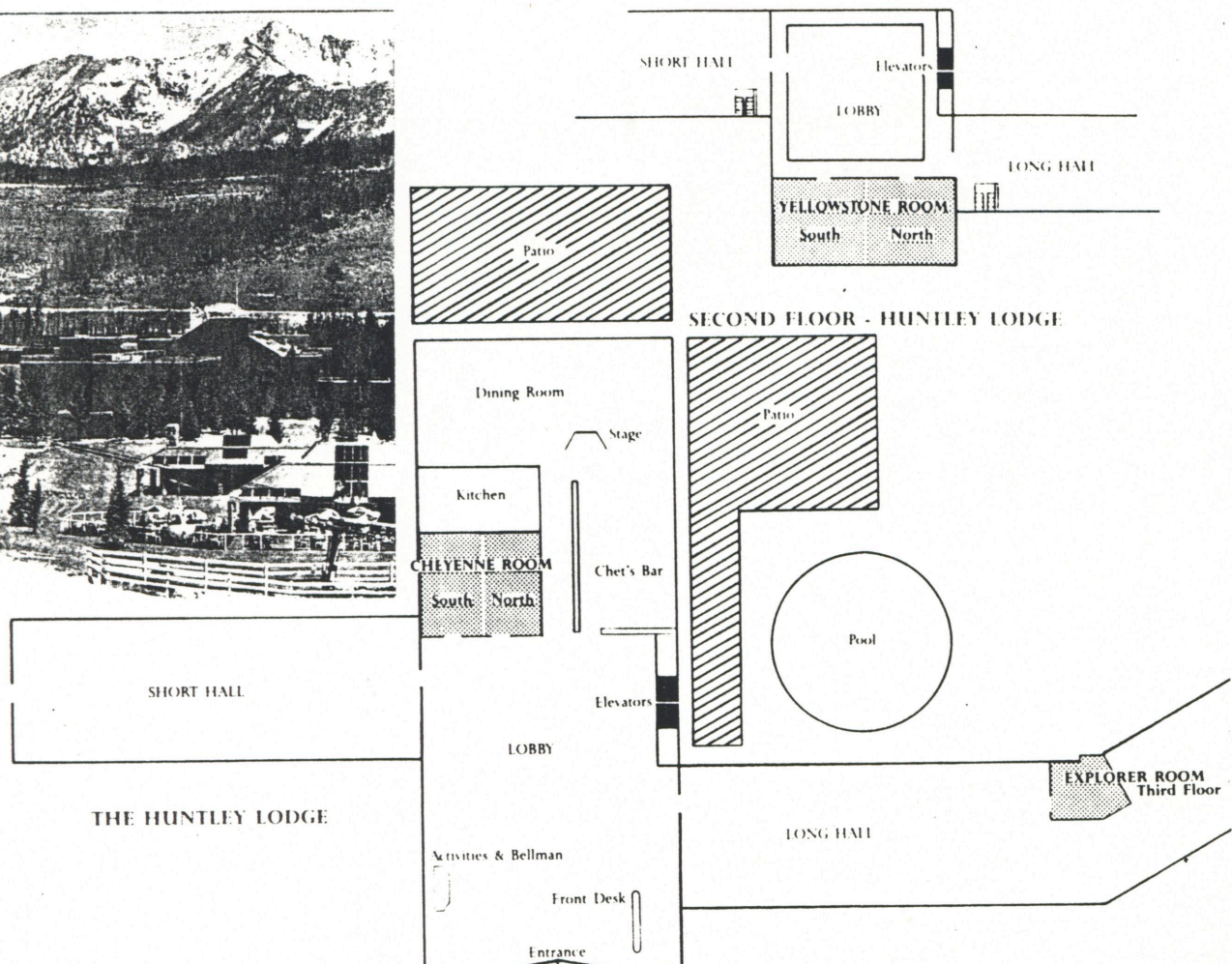
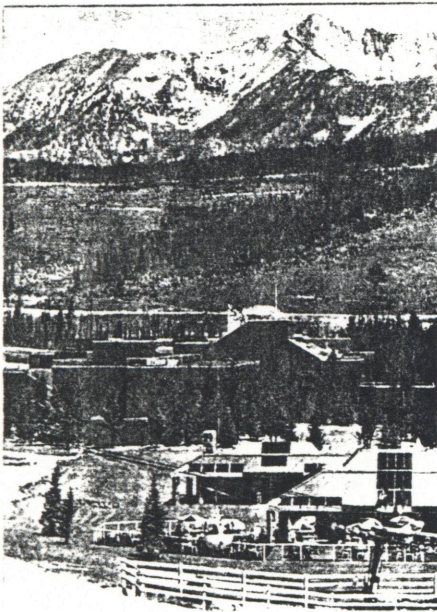
Huntley Lodge

Big Sky Resort, Big Sky, Montana

It is situated in a very similar location as Frisco, surrounded by mountains and by a small lake. It takes advantage of outdoor amenities with the use of large windows for view, and many outdoor spaces (patios). Huge stone fireplaces, natural wood interiors, and warm earth colors project a mood of informality. Based at the bottom of a ski hill, it offers two bars, a restaurant, and a cafeteria, to serve the skiers.

Implications:

1. use of many outdoor spaces to take advantage of site.
2. natural wood interiors, warm earth colors, to project informality.
3. large amounts of glazing for views.

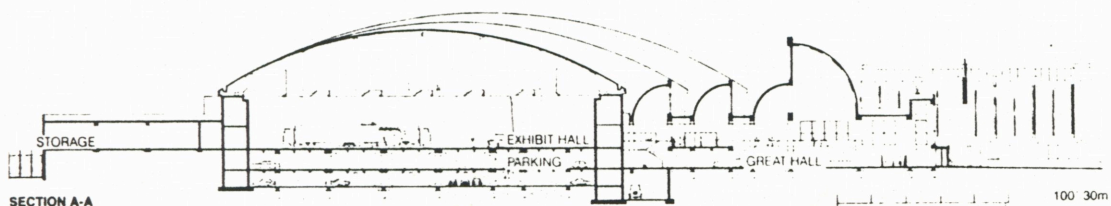
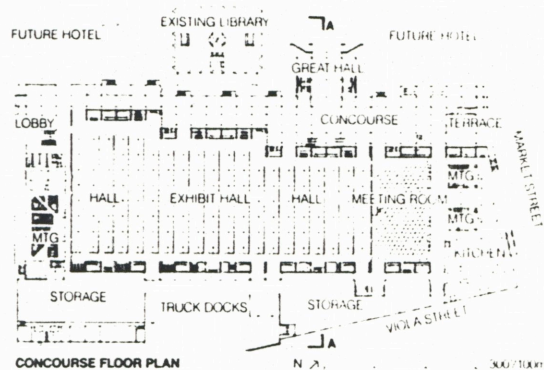
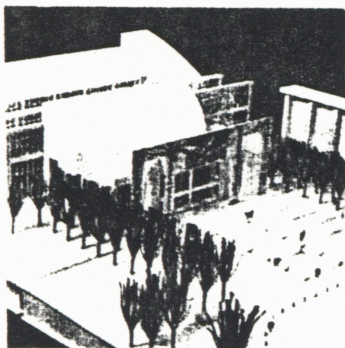
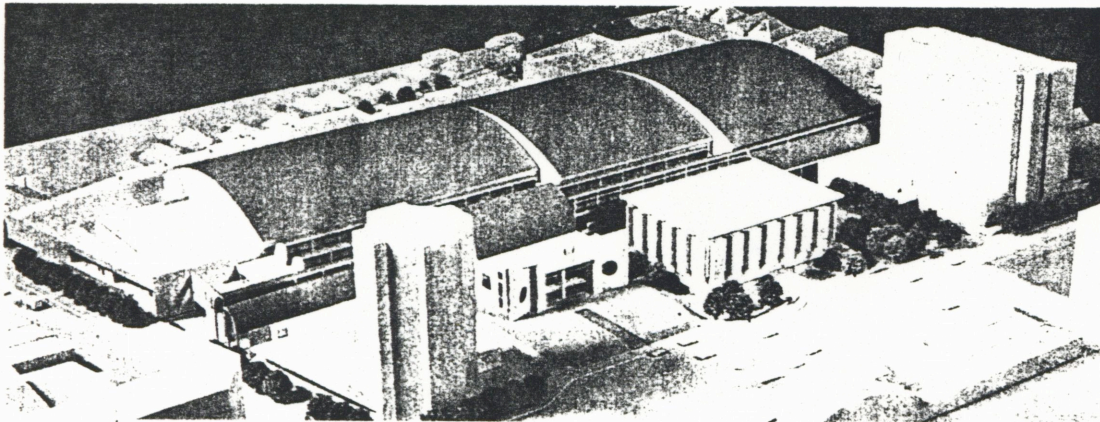


San Jose Convention Center San Jose, California

These halls are separated from meeting rooms with a circulation spine which will be extended to link future hotels to the facility. The halls are completely column free; structural piers, set 30 feet on center, that support the halls' bow trusses are located in adjacent service spines.

Implications:

1. Circulation spine used to link future expansions.
2. Column free exhibition space.

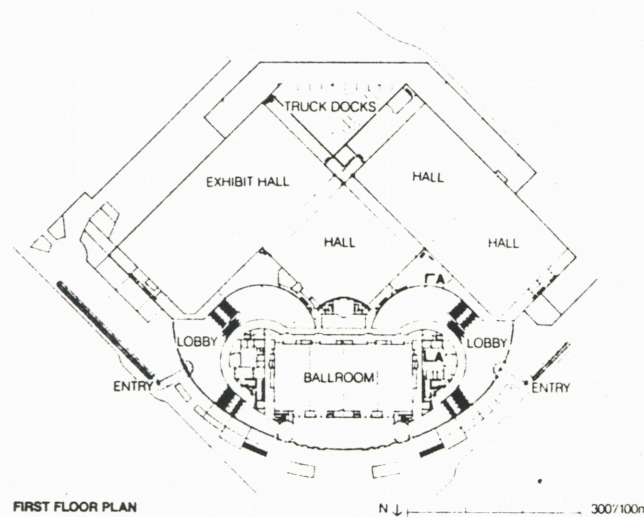
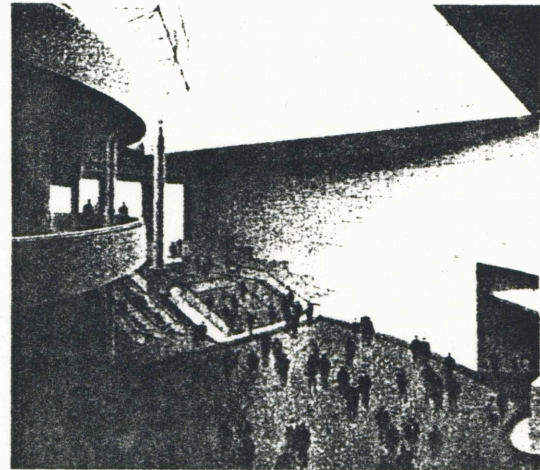
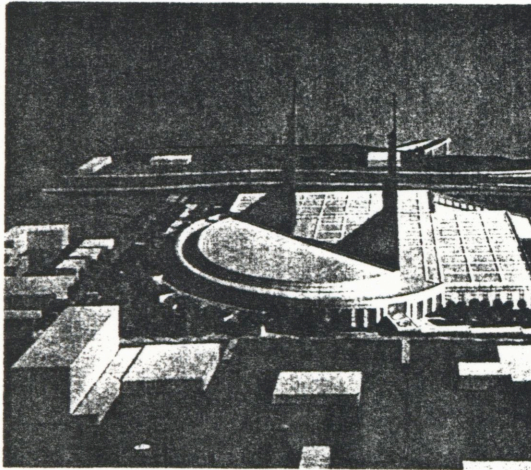


Oregon Convention Center Portland, Oregon

Visitors enter two 31 foot high lobbies and either ascend half a level to the ballroom or descend half a level to registration, exhibition, and meeting rooms. The halls can be divided into 5 equal modules. A steel truss system spans the column free space.

Implications:

1. Split level plan. (change of levels for spaces)
2. Possibility of dividing halls.

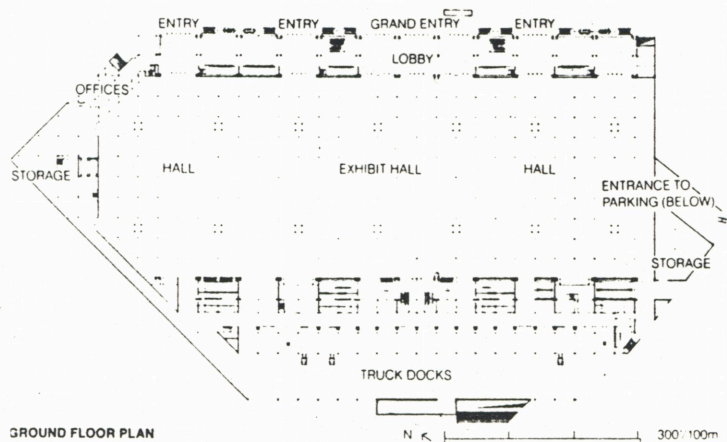
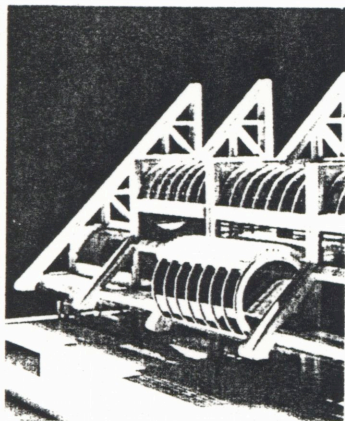
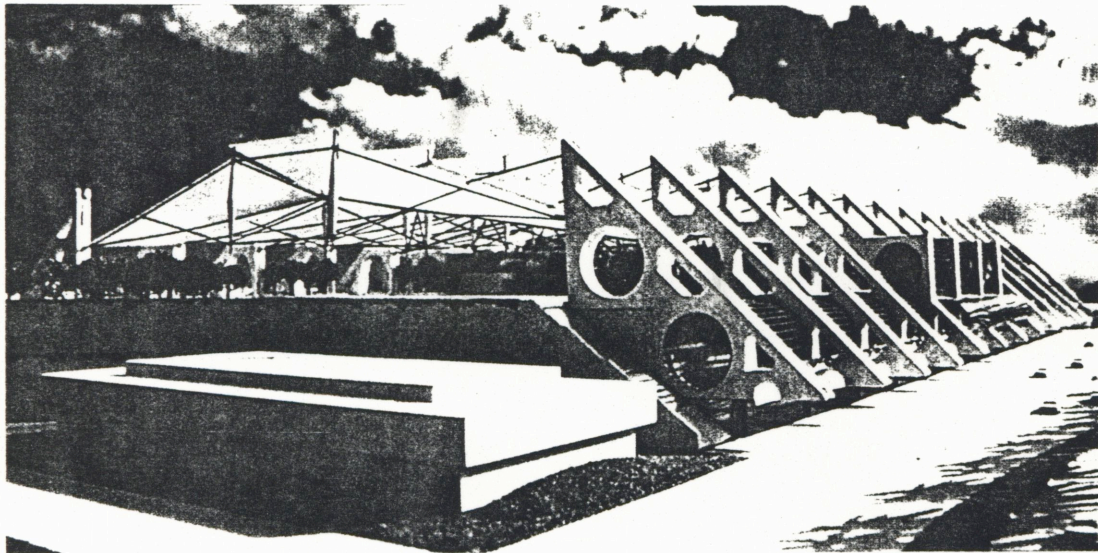


San Diego Convention Center
San Diego, California

Designed for a waterfront site, distinguishing active uses of arrival, reception and circulation concourses through the use of structure. Its constructed of cast in place concrete and long span steel. Parking for 2000 cars is located below grade.

Implications:

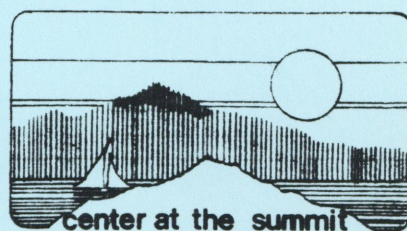
1. Use of structure to distinguish active uses.
2. Possibly parking below grade.



GROUND FLOOR PLAN

e

• **preliminaries**



center at the summit

scheme 1

This was the first scheme I accepted. It is based on a abstract approach, but I was thinking about function when I came up with it. It is also partially based on circulation through the site. Structure is emphasized to show the main circulation through the building. A rotated grid is used so one part can address the lake, and the main entrance can address Frisco's Main Street.

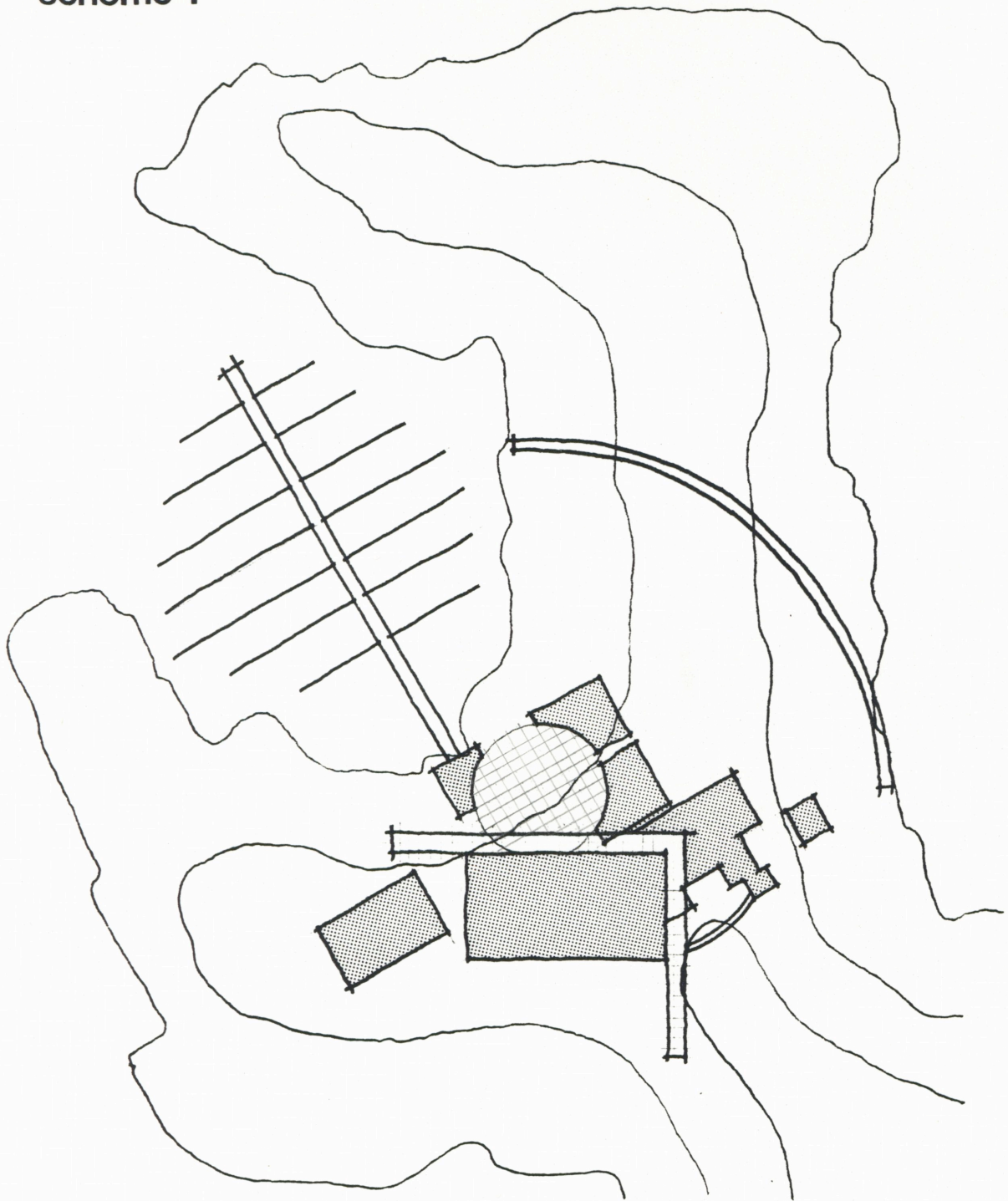
scheme 2

This scheme is based more on function, less on the aesthetic side. It is based mainly on the matrix charts in the space adjacency analysis in a previous chapter.

scheme 3

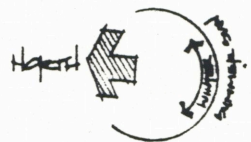
In this scheme, I attempted to combine the two previous schemes, 1 and 2, taking the best elements of each.

·scheme 1

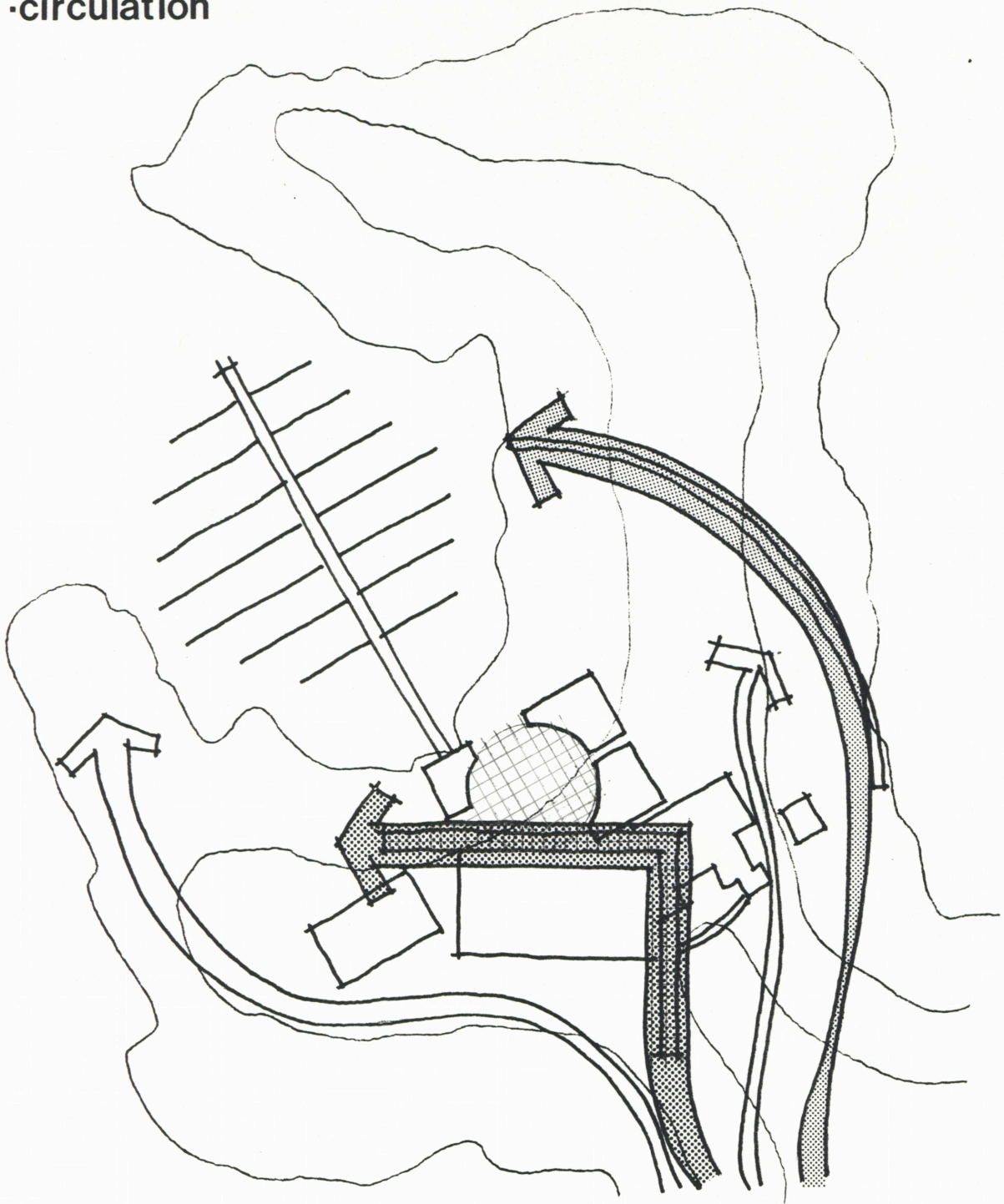


·SCALE IN FEET

·CONTOUR INTERVAL 10 FEET



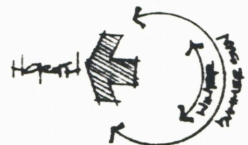
·circulation



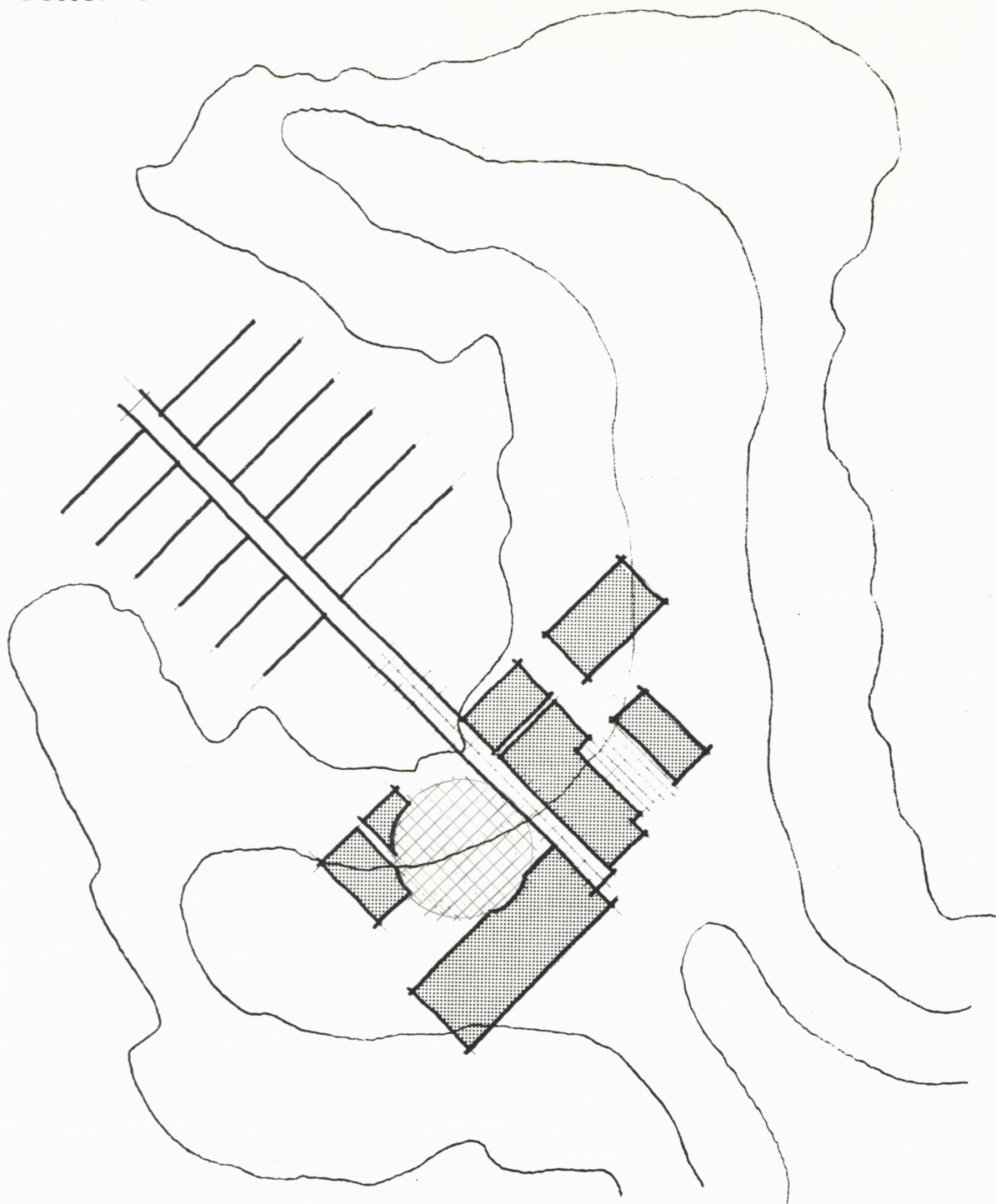
0 100 200 400
SCALE IN FEET

·CONTOUR INTERVAL 10 FEET

-  PEDESTRIAN/INTERIOR
-  VEHICULAR
-  BICYCLE PATH

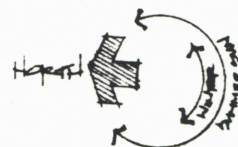


scheme 2

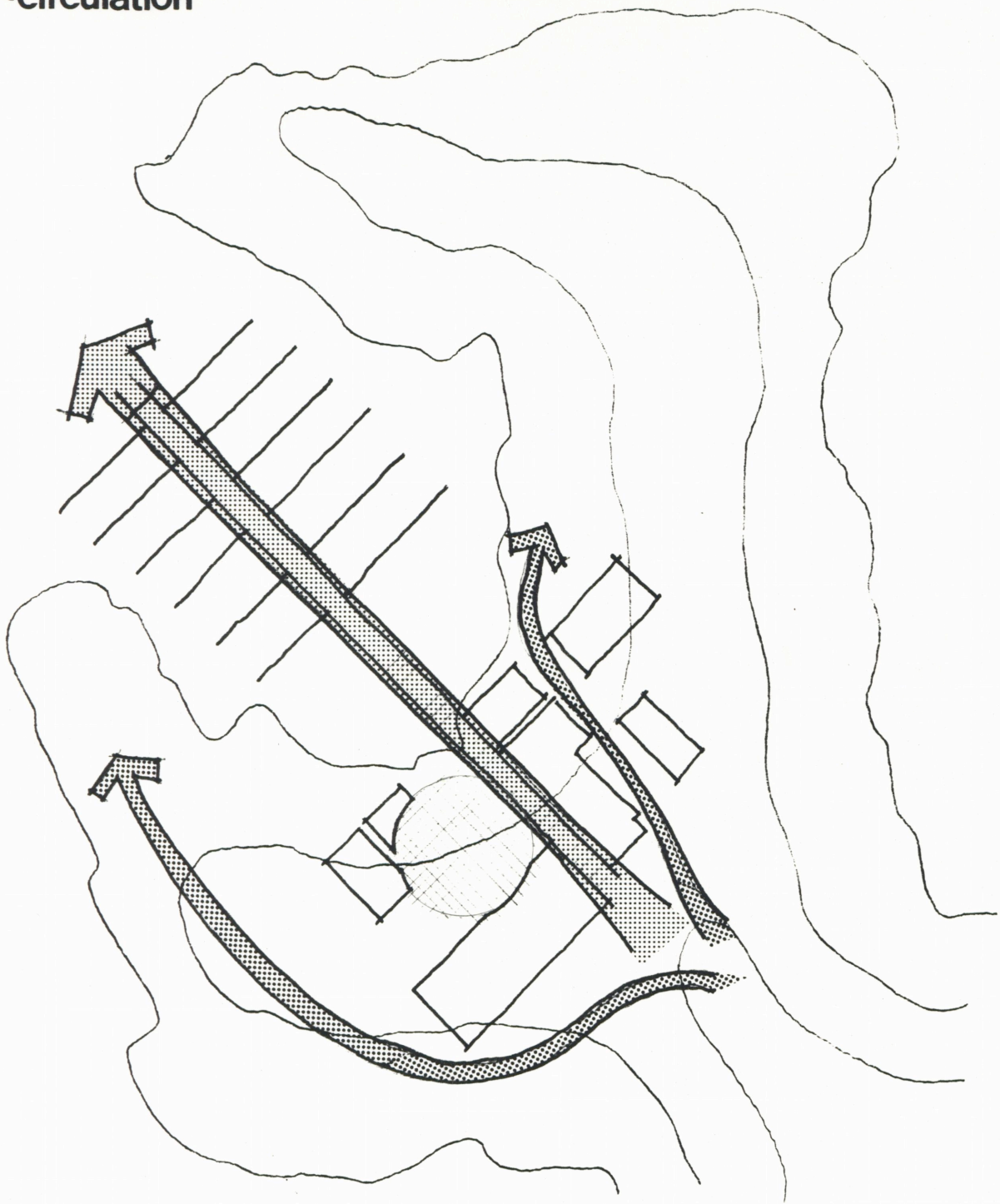


• SCALE IN FEET

• CONTOUR INTERVAL 10 FEET



•circulation

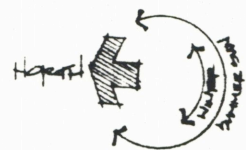


•SCALE IN FEET

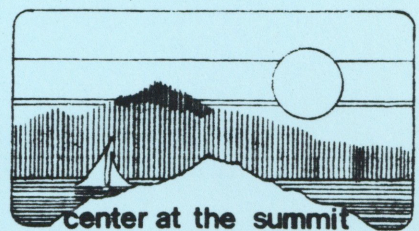
•CONTOUR INTERVAL 10 FEET

PEDESTRIAN

VEHICULAR



•endnotes



¹Cristian Norberg Schultz, Genius Loci. New York: Rizzoli, pg. 40.

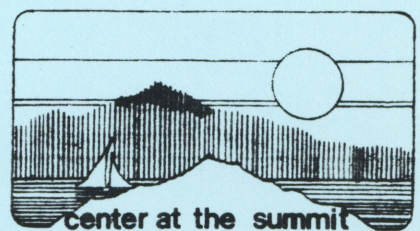
²Ibid., pg. 40.

³Ibid., pg. 41.

⁴Ian Mackinlay, Snow Country Design. University of Colorado Press, pg. 10.

g

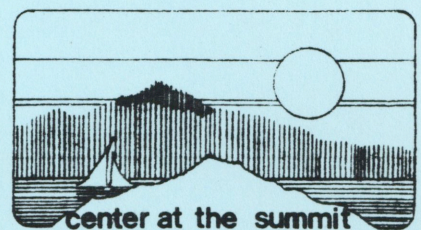
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· appendix



SUMMARY OF MONTHLY CLIMATIC DATA FOR DILLON 1 E COLORADO FOR YEARS 1931-1987 SUBSTATION NO. 52281 DIVISION 2

LATITUDE - 39 38 LONGITUDE - 106 2 ELEVATION - 9070 FEET

MONTHLY PRECIPITATION (IN)

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN
AVE.	1.14	1.22	1.81	1.68	1.53	1.19	1.84	1.88	1.27	0.97	1.01	1.14	18.28
MAX.	4.06	6.97	4.81	6.01	3.08	3.10	6.09	4.33	4.26	2.86	2.81	4.84	26.76
YEAR	1936	1936	1932	1933	1934	1949	1936	1938	1961	1947	1950	1951	1936
MIN.	0.13	0.14	0.36	0.46	0.19	0.00	0.33	0.42	0.00	0.05	0.13	0.17	10.20
YEAR	1968	1969	1966	1969	1974	1980	1979	1985	1944	1952	1933	1979	1968
YEARS OF RECORD	57.	57.	57.	57.	57.	57.	57.	57.	57.	57.	57.	57.	57.

GREATEST DAILY PRECIP (IN)

AMOUNT	0.69	0.70	0.80	1.00	1.20	1.35	1.63	1.27	1.21	1.03	0.88	1.22	
YEAR	1956	1958	1977	1961	1960	1940	1940	1968	1959	1960	1950	1950	
YEARS OF RECORD	40.	40.	39.	38.	38.	40.	40.	40.	40.	39.	40.	40.	

MONTHLY SNOWFALL (IN)

AVE.	21.0	20.8	25.3	19.9	8.1	1.0	0.0	0.0	1.6	7.0	16.3	19.9	141.9
MAX.	59.0	73.3	59.0	55.0	24.5	14.0	0.0	0.0	24.0	44.0	38.0	67.0	261.5
YEAR	1957	1936	1943	1933	1933	1947	1931	1931	1959	1969	1945	1951	1951
MIN.	2.0	3.5	8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	155.7
YEAR	1977	1985	1973	1963	1963	1987	1987	1987	1987	1977	1932	1931	1931
YEARS OF RECORD	54.	55.	55.	56.	55.	57.	57.	57.	56.	57.	55.	54.	52.

GRTST DEPTH SNOW ON GRND IN MON (IN)

YEAR AND DAY	1980	1980	1980	1980	1980	1980	1980	1980	1980	1980	1980	1980	1980
OF RECORD	27.	34	27.	27.	25.	38.	40.	39.	34.	28.	26.	26.	26.

NO DAYS PRECIP GTR OR EQ 0.1 IN

AVE.	4.3	4.0	5.4	5.4	5.4	4.3	6.3	6.4	4.5	3.4	3.9	4.5	56.8
MAX.	15	10	16	15	12	15	14	17	10	6.9	18	16	111
YEAR	1951	1948	1948	1951	1949	1949	1953	1952	1961	1969	1948	1948	1948
MIN.	0	0	0	0	0	0	0	0	0	0	0	0	31
YEAR	1981	1985	1986	1981	1986	1980	1979	1985	1979	1965	1980	1979	1968
YEARS OF RECORD	39.	36.	39.	39.	38.	40.	40.	39.	40.	38.	40.	40.	33.

NO DAYS PRECIP GTR OR EQ 0.5 IN

AVE.	0.2	0.1	0.2	0.4	0.5	0.4	0.7	0.4	0.5	0.2	0.1	0.2	3.3
MAX.	2	1	1	4	3	4	4	2	4	5	1	3	11
YEAR	1948	1986	1978	1948	1982	1949	1949	1969	1949	1949	1985	1951	1948
MIN.	0	0	0	0	0	0	0	0	0	0	0	0	0
YEAR	1987	1987	1987	1987	1987	1987	1987	1987	1987	1987	1987	1987	1987
YEARS OF RECORD	39.	39.	39.	38.	39.	39.	39.	39.	39.	39.	39.	39.	38.

NO DAYS PRECIP GTR OR EQ 1.0 IN

AVE.	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.3
MAX.	0	0	0	0	0	1	1	1	1	1	0	1	1
YEAR	1948	1948	1948	1961	1976	1984	1981	1981	1959	1969	1948	1951	1984
MIN.	0	0	0	0	0	0	0	0	0	0	0	0	0
YEAR	1987	1987	1987	1987	1987	1987	1987	1987	1987	1987	1987	1987	1987
YEARS OF RECORD	39.	39.	39.	38.	39.	39.	39.	39.	39.	39.	39.	40.	36.

NUMBER OF DAYS WITH HAIL

AVE.	0.0	0.0	0.0	0.0	0.1	0.6	0.6	0.4	0.6	0.0	0.0	0.0	2.3
MAX.	0	0	0	0	1	4	3	3	4	1	0	0	11
YEAR	1956	1956	1956	1956	1976	1982	1961	1969	1967	1962	1956	1956	1962
MIN.	0	0	0	0	0	0	0	0	0	0	0	0	0
YEAR	1981	1981	1981	1981	1981	1981	1981	1981	1981	1981	1981	1981	1981
YEARS OF RECORD	26.	26.	26.	26.	26.	26.	26.	26.	26.	26.	26.	26.	26.

NO. OF DAYS WITH SNOW ON GROUND

AVE.	28.7	26.0	24.0	11.0	2.8	0.3	0.0	0.0	0.5	3.7	14.4	26.7	143.9
MAX.	31	29	31	30	15	3	0	0	5	18	25	31	202
YEAR	1987	1984	1984	1984	1983	1979	1963	1963	1985	1964	1985	1986	1984
MIN.	10	10	10	0	0	0	0	0	0	0	1	5	88
YEAR	1981	1971	1971	1969	1975	1987	1987	1987	1987	1977	1974	1980	1981
YEARS OF RECORD	25.	25.	24.	23.	24.	25.	25.	25.	25.	24.	25.	23.	19.

(GTR OR EQ 1 INCH ON GROUND)

AVE.	28.7	26.0	24.0	11.0	2.8	0.3	0.0	0.0	0.5	3.7	14.4	26.7	143.9
MAX.	31	29	31	30	15	3	0	0	5	18	25	31	202
YEAR	1987	1984	1984	1984	1983	1979	1963	1963	1985	1964	1985	1986	1984
MIN.	10	10	10	0	0	0	0	0	0	0	1	5	88
YEAR	1981	1971	1971	1969	1975	1987	1987	1987	1987	1977	1974	1980	1981
YEARS OF RECORD	25.	25.	24.	23.	24.	25.	25.	25.	25.	24.	25.	23.	19.

YEARS OF RECORD

AVE.	28.7	26.0	24.0	11.0	2.8	0.3	0.0	0.0	0.5	3.7	14.4	26.7	143.9
MAX.	31	29	31	30	15	3	0	0	5	18	25	31	202
YEAR	1987	1984	1984	1984	1983	1979	1963	1963	1985	1964	1985	1986	1984
MIN.	10	10	10	0	0	0	0	0	0	0	1	5	88
YEAR	1981	1971	1971	1969	1975	1987	1987	1987	1987	1977	1974	1980	1981
YEARS OF RECORD	25.	25.	24.	23.	24.	25.	25.	25.	25.	24.	25.	23.	19.

YEARS OF RECORD

AVE.	28.7	26.0	24.0	11.0	2.8	0.3	0.0	0.0	0.5	3.7	14.4	26.7	143.9
MAX.	31	29	31	30	15	3	0	0	5	18	25	31	202
YEAR	1987	1984	1984	1984	1983	1979	1963	1963	1985	1964	1985	1986	1984
MIN.	10	10	10	0	0	0	0	0	0	0	1	5	88
YEAR	1981	1971	1971	1969	1975	1987	1987	1987	1987	1977	1974	1980	1981
YEARS OF RECORD	25.	25.	24.	23.	24.	25.	25.	25.	25.	24.	25.	23.	19.

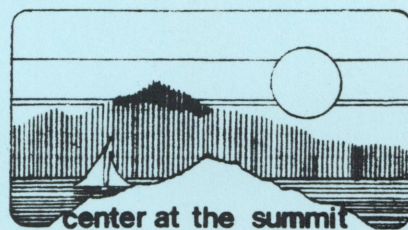
YEARS OF RECORD

AVE.	28.7	26.0	24.0	11.0	2.8	0.3	0.0	0.0	0.5	3.7	14.4	26.7	143.9
MAX.	31	29	31	30	15	3	0	0	5	18	25	31	202
YEAR	1987	1984	1984	1984	1983	1979	1963	1963	1985	1964	1985	1986	1984
MIN.	10	10	10	0	0	0	0	0	0	0	1	5	88
YEAR	1981	1971	1971	1969	1975	1987	1987	1987	1987	1977	1974	1980	1981
YEARS OF RECORD	25.	25.	24.	23.	24.	25.	25.	25.	25.	24.	25.	23.	19.

PREPARED BY : COLORADO CLIMATE CENTER
DEPARTMENT OF ATMOSPHERIC SCIENCE
COLORADO STATE UNIVERSITY
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** NOTE : MANY WEATHER STATIONS DO NOT RECORD ALL HAIL OCCURRENCES. THEREFORE THESE DATA MAY NOT BE REPRESENTATIVE.

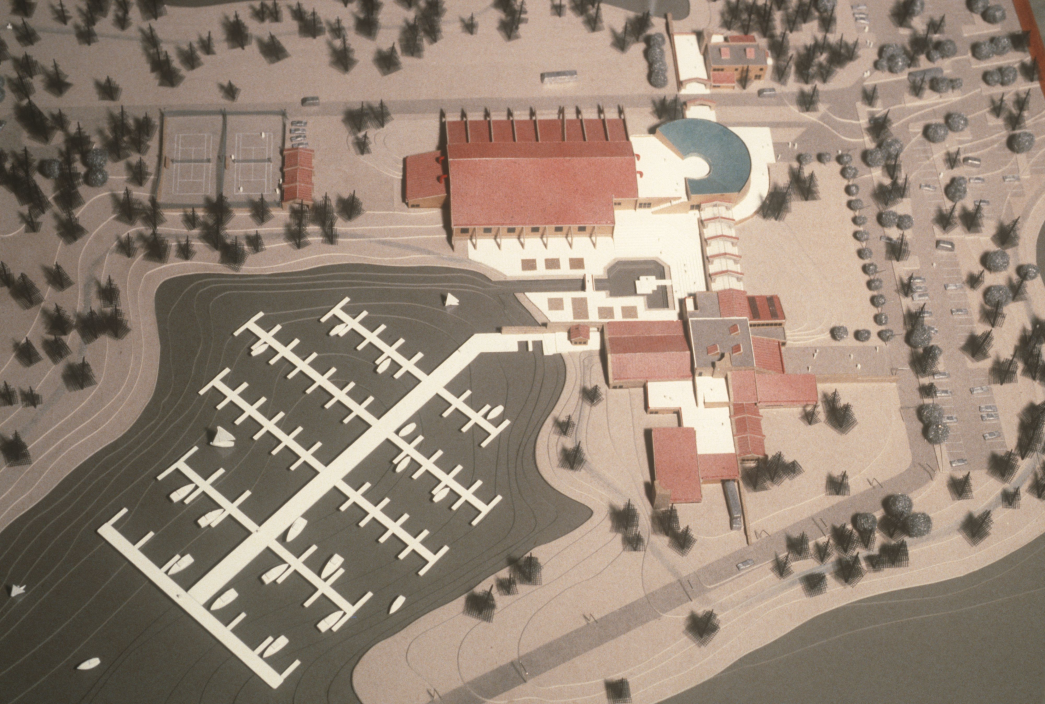
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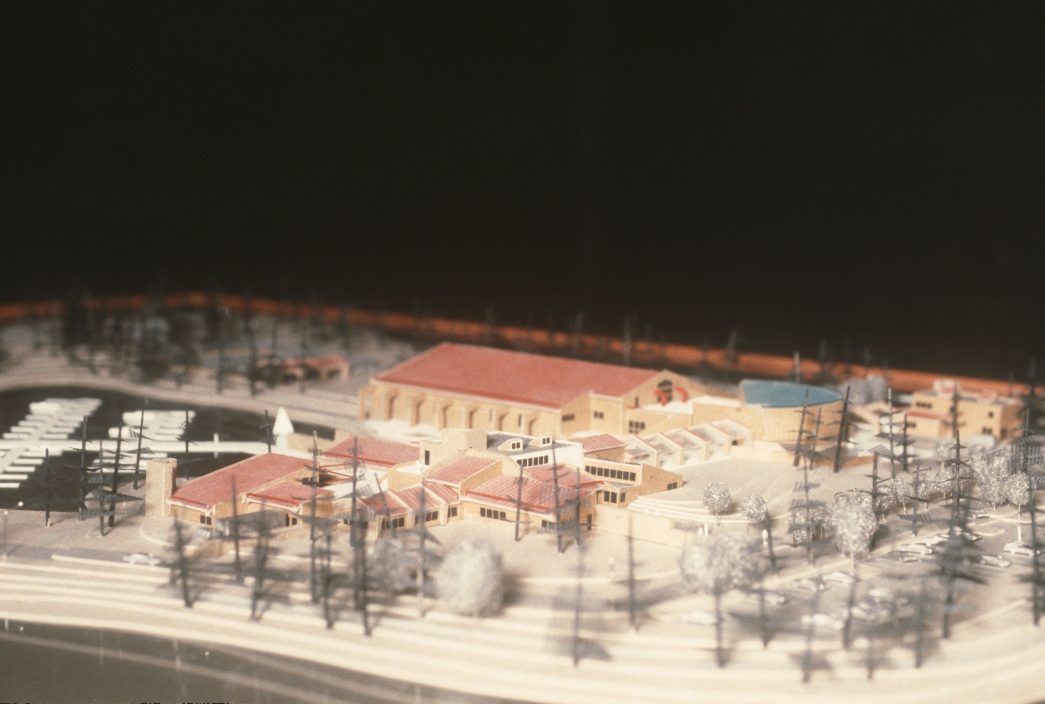


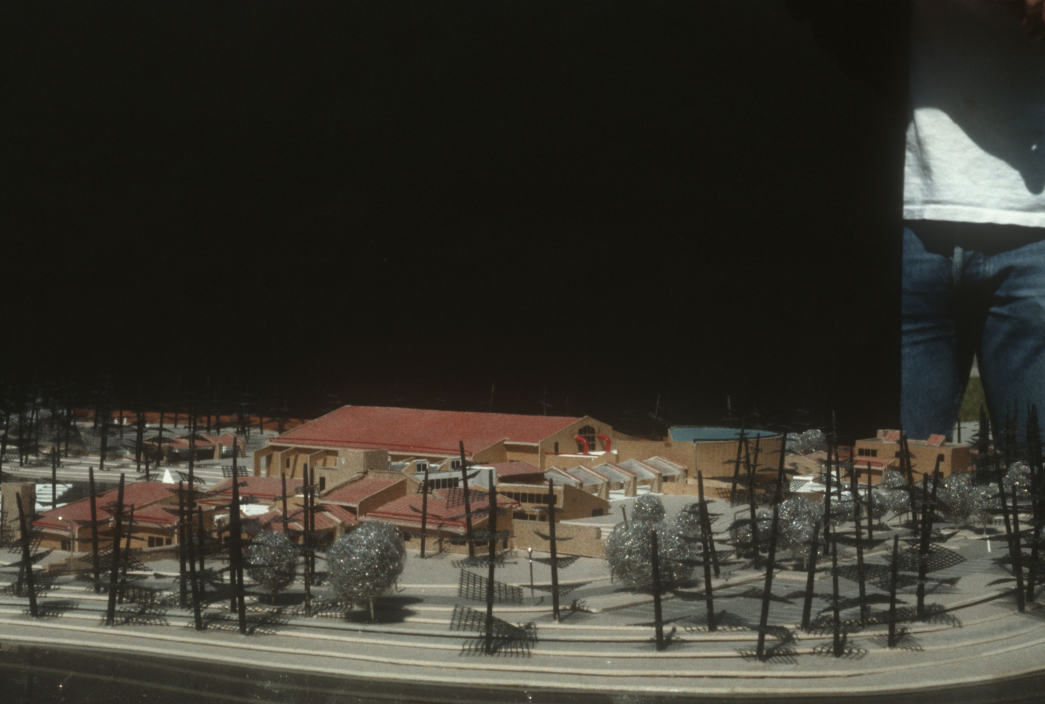


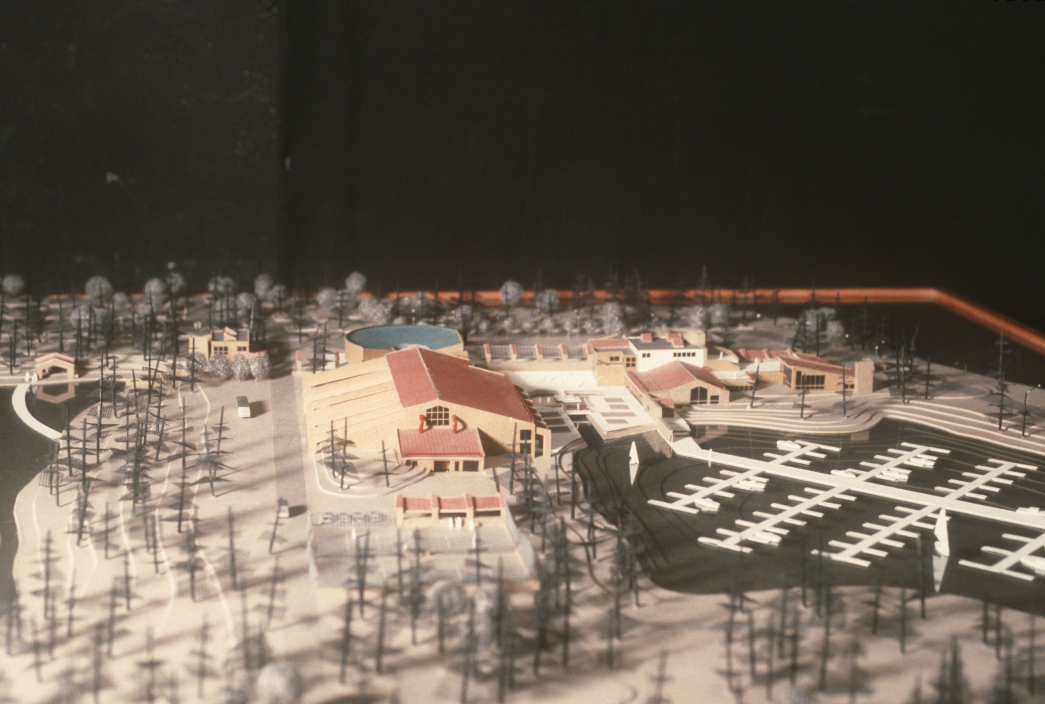






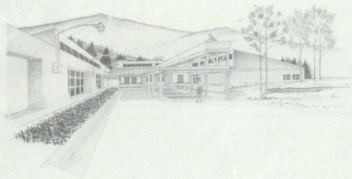




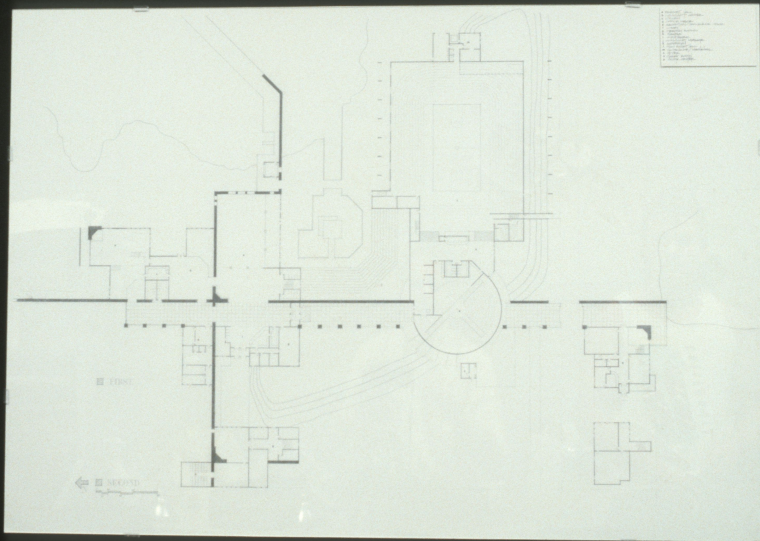




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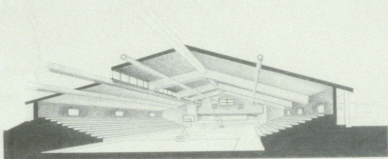
EDWINE ENTRY



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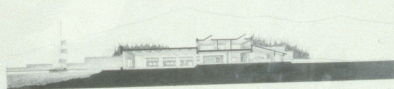
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