STICKS AND STONES - A BLUE RIDGE MOUNTAIN RETREAT

by

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(ABSTRACT)

Given a sloping wooded site in the Blue Ridge Mountains of North Carolina, the problem of the thesis project was to design a retreat that would fit the environment and the people that would inhabit it. It was a searching for the interdependence between the landscape and the building. Equally important was a search for a structure that would give architectural integrity to the house.

The design process included a time of discovery and clarification of values and priorities. Two additional steps during the schematic design were processes architect Charles Moore referred to as "mapping" and "collecting". These processes help to establish relationships between the inhabitants and things they recognize.

Structural elements of post and beam construction gave a sense of order in the design layout and helped to organize the spaces within the form of the house. A system of equidistant

columns formed by four wood posts also provided the physical linkage between the building and the site. Native field stone was used for the large piers that supported the columns as well as for the perimeter walls of the living room structure.

The inner landscape of the house, the pathways, the rooms and the machines within them, developed from the basic idea that the building would grow from a central axis or "spine" that originated from the outside at the street's edge, extended across the site, and moved into the building to become the main artery of the structure as well as the connection between outside and inside.

ACKNOWLEDGEMENTS

The author wishes to express her appreciation to the following persons for their assistance in the completion of this design project:

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Special thanks to my parents for their continual support and understanding, to for his empathy and encouragement, to , , and for the use of their computers and help with word processing, and to for his much appreciated photographic assistance and for helping me survive this long thesis process.

TABLE OF CONTENTS

In order to give this portion of the thesis book the organization and clarity of thought that I tried to give to the design, I have attempted to develop an ordering system in the form of an outline that will hopefully enable the reader to more clearly understand the design process and the decisions that were ultimately made as a result of the design investigation.

The outline includes five sections:

1. Beginnings - selection of the design project
2. The Site
3. Early Design Concepts
4. Structure and Design Development
5. Final Design Solutions

Beginnings

It had never been my intention to design a house as a thesis project, particularly a house for my parents on land they had purchased nearly fifteen years before the project was to begin. As the time for starting the thesis grew closer, the possibility of designing a house for this site seemed more and more a challenging proposition. A brief stop to look at the site while visiting nearby Black Mountain, N.C. started the questioning of the type of structure that would best be suited for the sloping site. I had a real design problem with an actual site and certain limitations for building in this community, and this house was to be a vacation retreat. The selection of a

thesis project seemed obvious.

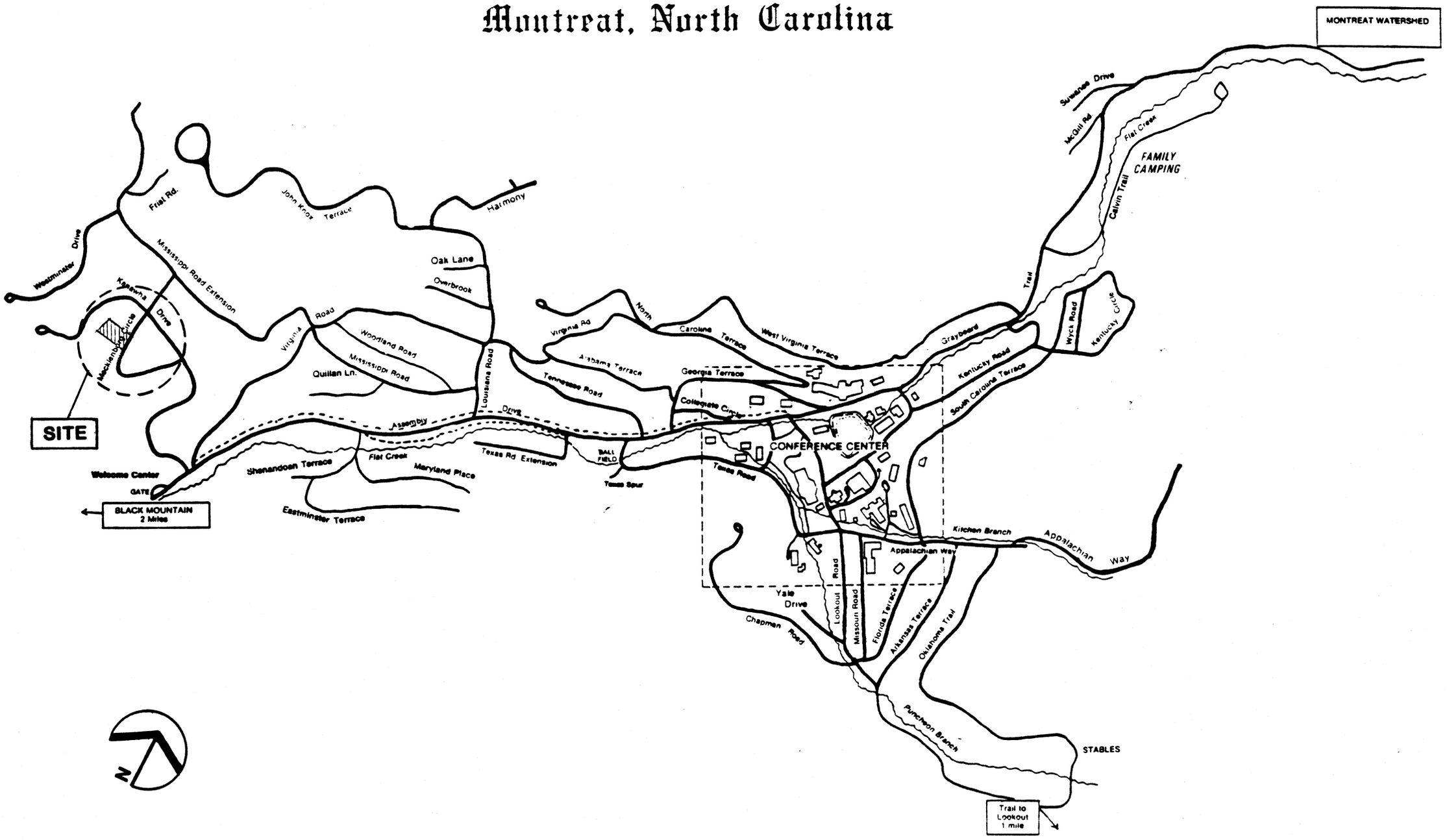
In his book The Concept of Dwelling, Christian Norberg-Schultz says the word "dwelling" means more than a roof and a certain number of square feet at our disposal. Private dwelling takes place in a house - a refuge where man gathers and expresses those memories which make up his personal world. It should be a retreat where the individual and the family could prosper. To dwell also means to become friends with a natural environment. An interdependence between the house and the landscape should exist.

The purpose of this thesis was to design such a dwelling that would give an identity to the individuals living there, provide a secure place away from life's everyday pressures while responding to the land on which it rests. Equally important was a search for a structure and a plan that would give it integrity and an architectural form.

The Site

Montreat is a small town in western North Carolina nestled in the Blue Ridge Mountains, two miles from the more well known town of Black Mountain. The nearest city is Asheville, 25 miles away. Montreat feels more like a community, comprised of both full and part time residents commonly known as cottage owners. Montreat is most alive during the summer and early fall when the part time residents are there in full force and tourists are coming to visit from all parts of the country. Although Montreat is very small, it is the Conference Center for the Presbyterian Church US and the home of Montreat-Anderson College. Even when it becomes the gathering place for

Montreat, North Carolina



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LOCATION MAP

thousands in the summer months, it still maintains the feeling of a serene little mountain community where neighbors visit on a regular basis.

In studying the layout of the town, there is only one road into Montreat called Assembly Drive. This road serves as the major axis of Montreat that begins with passing through the huge stone entrance gate just inside the town limits. Assembly Drive continues from the gate through Montreat to a town landmark and primary gathering place called Assembly Inn, the final destination for many visitors. At this point the main axis of Montreat ends and branches off to secondary roads.

The layout of the town had an effect on the design concepts of my house. The idea of axis and passageway eventually became the basis for the plan of the house.

It was important to incorporate the unique traits of small town community living into the general scope of the design. This meant not only an examination of building types and materials, but a study of life patterns in Montreat, particularly the way residents and visitors alike related to one another.

One observation was that pedestrian travel occured much of the time, especially in temperate months. The narrow tree-lined roads that generally followed a mountain stream were wonderful pathways for going from place to place, whether walking to the Post Office, to the Inn or meeting at a neighbor's house. Walking seemed to be a ritual for residents. The features of this environment and the feeling of a close community had made an impression on my list of design requirements. I wanted the mountain house to have the same sense of place

that Montreat did.

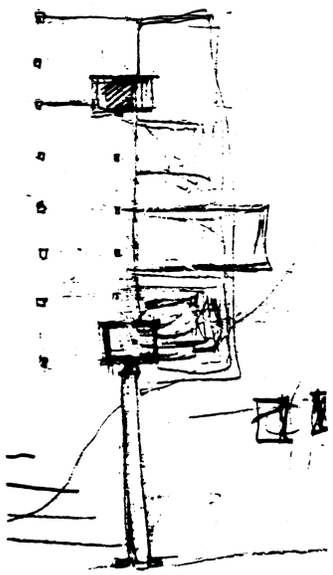
Early Design Concepts

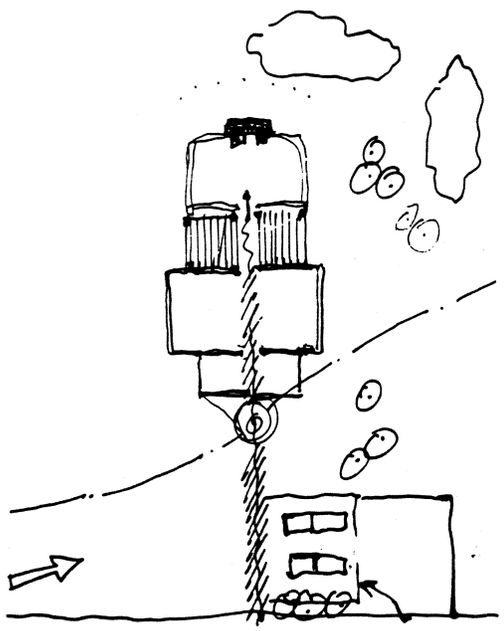
When it became evident that guidelines for beginning the design were needed, I made a list of given conditions. First, there were some covenants for the owners and minimum setbacks for property lines. It was decided that the house would be of wood or stone or a combination of both. The requirements for a second or vacation home would also be somewhat different than that of the primary residence.

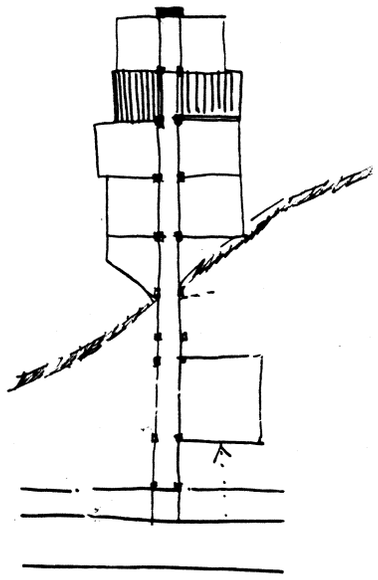
The site, full of rhododendrons, dogwood, oak and poplar trees, was to be left in its natural state as much as possible. Site orientation was a major factor for consideration. The road along the front of the site runs approximately in the north - south direction. The best view of the mountain ridges is in the southeastern direction.

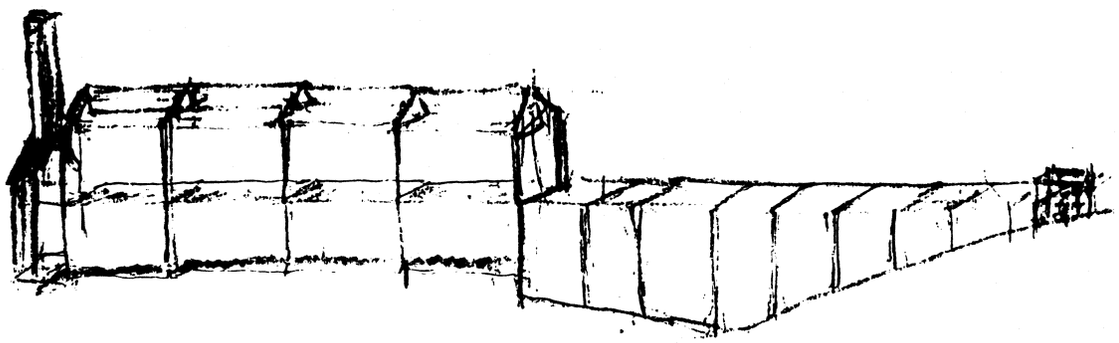
Given these conditions, coupled with my desire to form a physical link with the neighborhood and continue the already present interaction of the residents, resulted in the central axis/elevated walkway idea. It was a symbolic gesture as well as a tangible component in making the architecture.

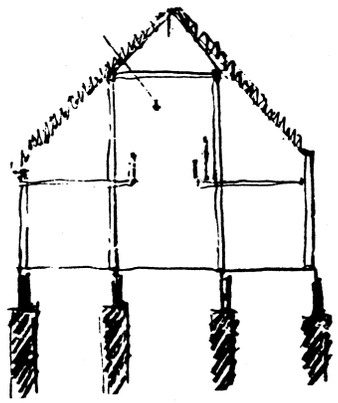
The central axis was where the house began to grow and take form. It was the "spine" of the building and the bridge across nature linking the house to the street. The axis/walkway did several things in helping to create a cohesive design. It provided the logical orientation for the building, dividing the house into two zones, a southern exposure and a northern exposure, it gave it an organization and beginning ordering principles, and it was the main artery of the building, the only way to reach all of the rooms. It











BEGINNING DESIGN IDEAS & CONCEPTS

also became the connection between the outside and inside.

Le Corbusier wrote that an axis is "perhaps the first human manifestation" and "the means of every human act". Paths represent the possibility of movement in contrast to the experience of getting "lost".

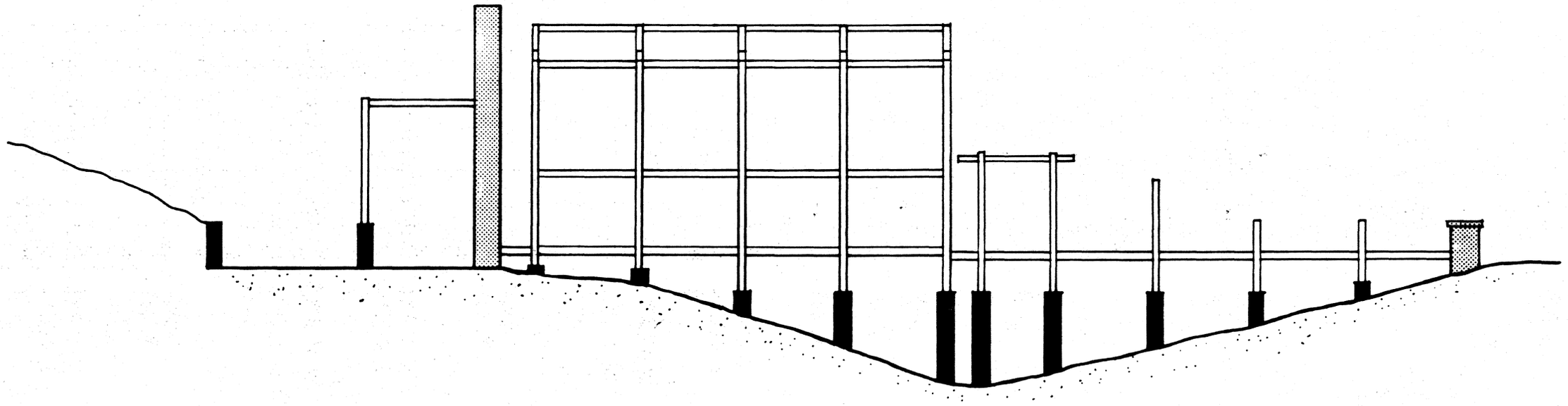
Even as the house developed to a second level, the spine remained a central force forming a parallel axis above and an open walkway for traveling between rooms and an outside space. At this stage, a defined structural system had not been determined except for a single idea. There was to be a series of columns that would carry the structure across the sloping site and act as markers for rooms along either side of the central hallway. Short piers would start at the street's edge to support a walkway, bridging the stream below, and change in height as the land sloped downward and then back up again. The same rhythm of columns would continue through the house.

Since the axis of the house ran in an east-west direction perpendicular to the street, the floor plan would be divided into an visually open south side for public spaces and a more private north side for sleeping, bath and utility areas.

Structure and Design Development

After the initial design concepts were studied and decisions were made, the floor plan and the overall form of the house still lacked a feeling of wholeness. The building had no real architectural statement as a form, rather it was merely a composition of smaller architectural ideas.

After searching for ways to express those columns points along the



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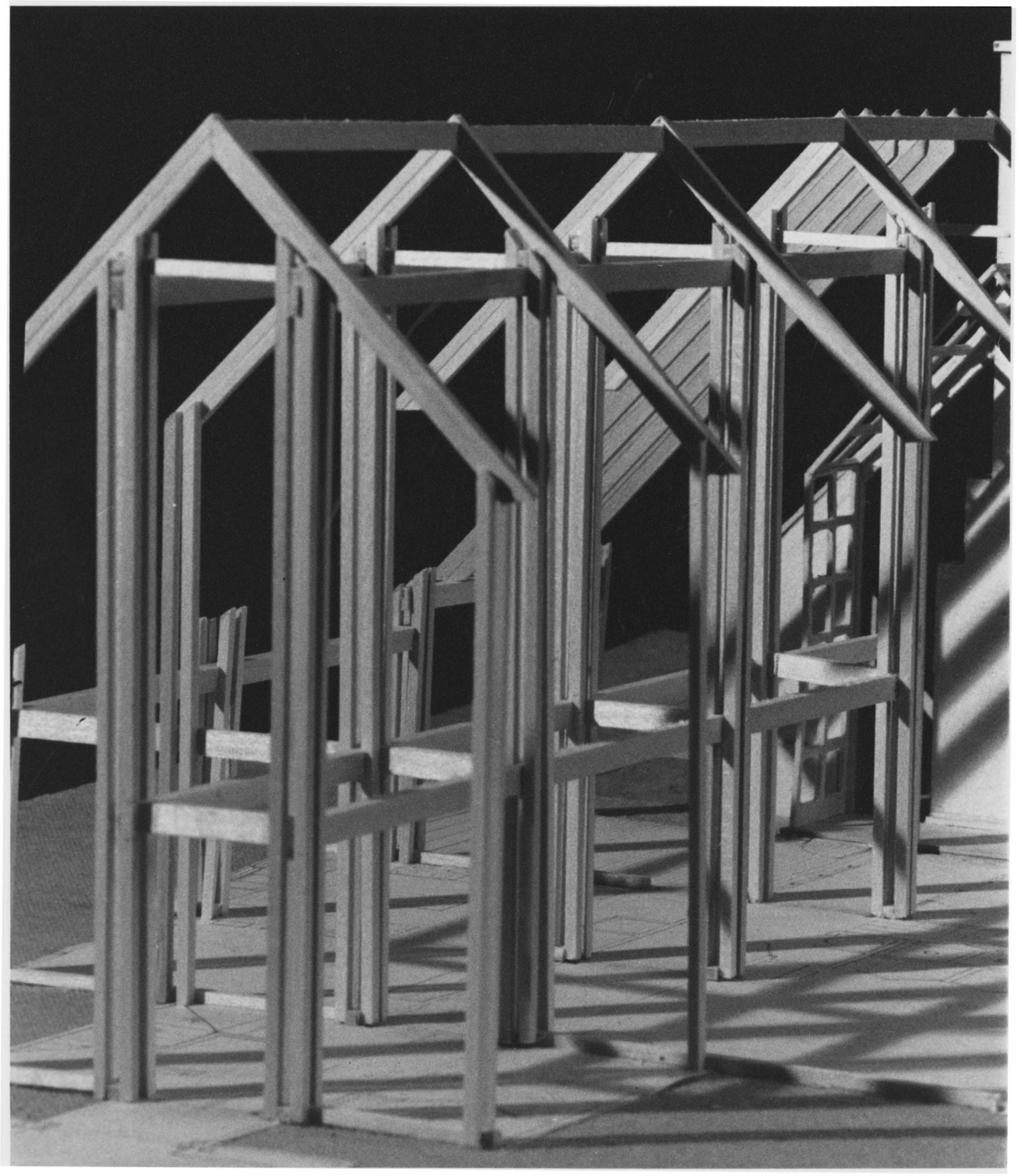
SITE SECTION DIAGRAM

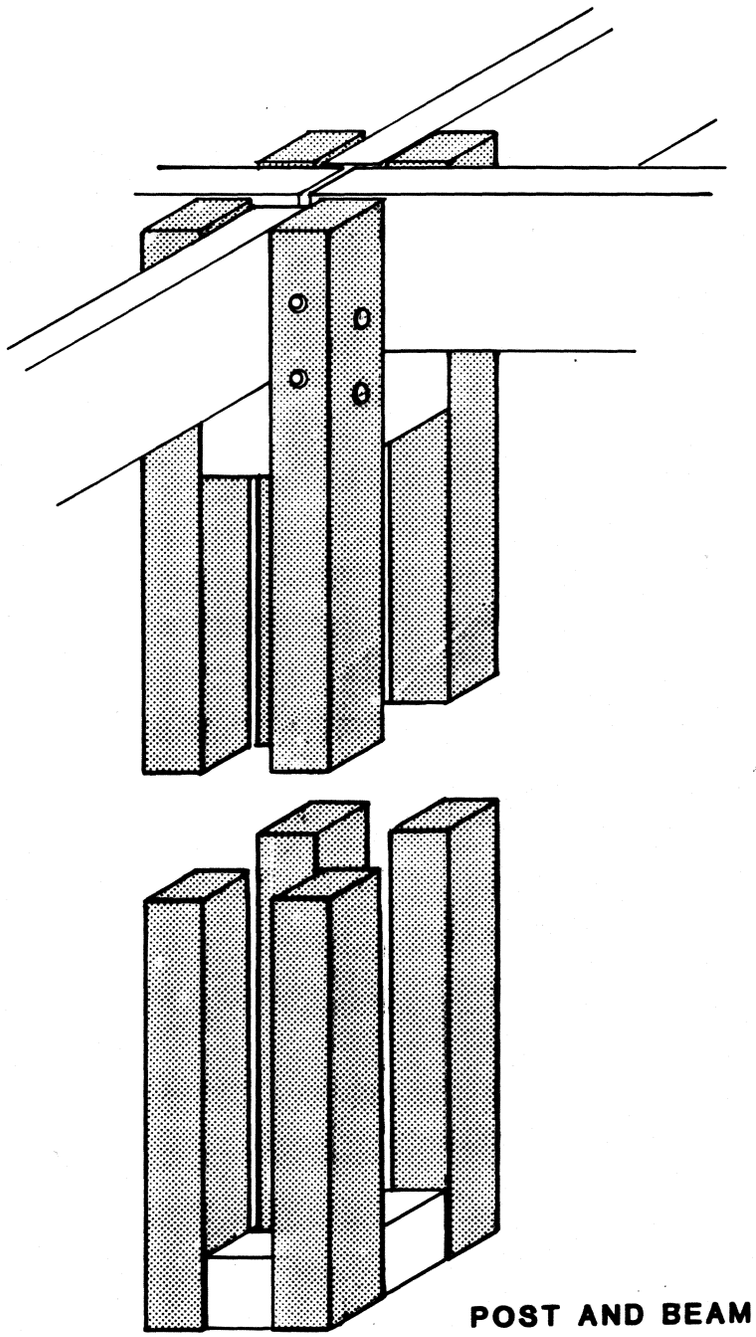
axis as the earlier diagram had shown, each column was now made of four elements. Four wood posts equally spaced with a beam penetrating the center formed the structure that would give the design a sense of completenesss. The large central columns along the axis are made of 4 x 4 heavy timber posts that are set twelve feet on center. The grid of posts and beams forms a sort of lattice work through the main part of the house defining the twelve foot bays that represent a different room or space.

Traveling down the four foot wide central corridor, one can view each space almost as a series of dialy activities in a family's life. Except for bedroom and bath areas, the spaces are open with room divisions created only by the columms and beams and built-in cabinetry. The posts and the 4 x 10 beams they carry are exposed wherever possible. The four inch space created between the posts allows for the stud wall to fit snuggly against the structural column. The idea was to have the walls appear to pass through the columns and continue through to form the next wall section. The four post columns are set into two foot by two foot stone piers with a masonry core and bolted to a metal seat which is anchored into the pier.

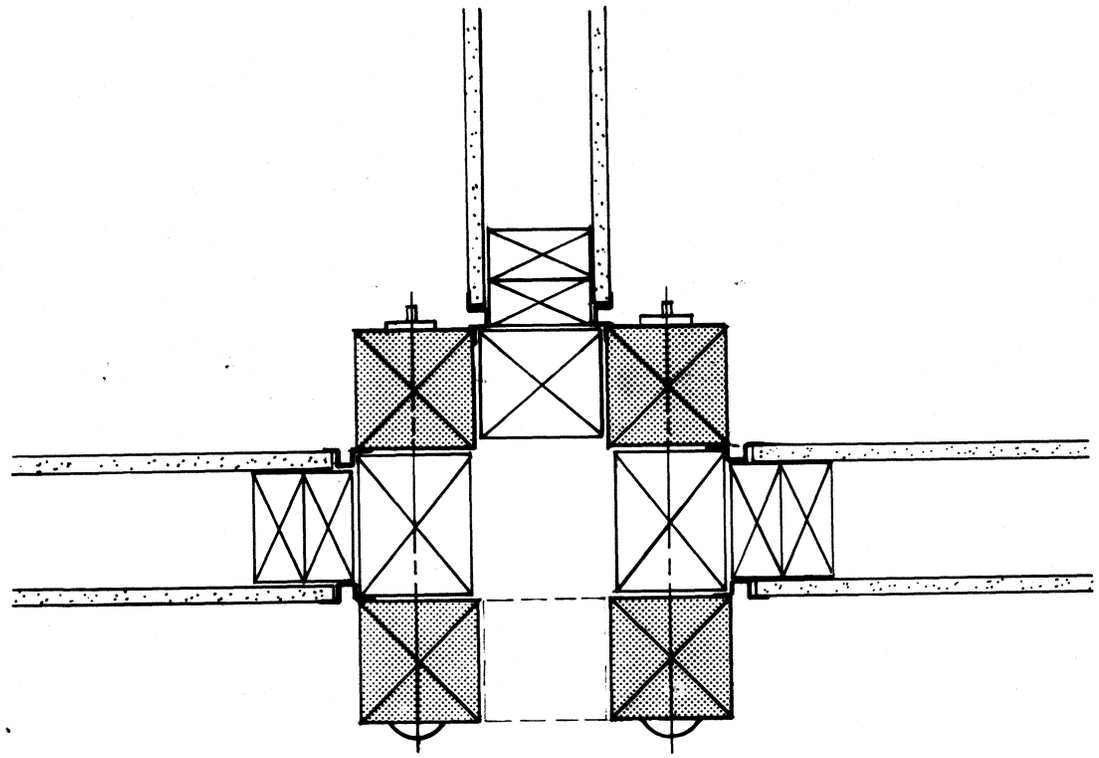
Only when moving from first to second floor does the path take a detour up and around the stairway to the bedrooms and roof deck. When reaching the second level landing, one has a view of the outside walkway below as it moves across the site to the street and the inside corridor below which is the continuation of that outside path. At this point, the overall structural system can be seen in a progression down the spine of the house.

After the basic scheme for a floor plan was decided, the question





POST AND BEAM CONNECTION



DETAIL
PARTITION WALL AT COLUMN

NO SCALE

of plumbing and mechanical systems had to be addressed. The plumbing from first to second floor would be stacked where possible, and the cantilevered center bays on either side of the first floor axis would be designated for plumbing and mechanical areas, forming a sort a cruciform in plan. The framing of the house was designed for the layout of the ductwork for the heating system and a small basement under the living room section would house the heating unit. Ceiling fans and ventilating skylights near the roof ridge provide cooling the summer months. Due to the general temperate climate and low humidity, no central air conditioning was planned.

The living room structure is of a different language than the main portion of the house. It is the primary gathering place for family and friends. By placing the room at the end of the axis, it symbolizes a terminating point of the journey through the house. The decision was also made to physically separate this space from the main axis with a small transitional space. A change in floor levels occurs at the entrance to the living room, which relates to the building's position on the landscape. Here the house rests in the hillside instead of floating above it as the rest of the structure does.

Material changes, as well as structural ones, occur in the living room with the addition of native field stone around the perimeter of the building. The east facing wall is field stone from floor to ceiling and contains the large fireplace. On the remaining exterior walls, a three foot high eighteen inch thick perimeter stone wall supports a standard wood frame structure above. The cathedral ceiling and large windows on the south and west walls were designed to make the space open and filled with natural light. Glass doors open out to

the terrace and the hill of natural vegetation behind it. The living room structure, as well as the main part of the house, has vertical cedar siding.

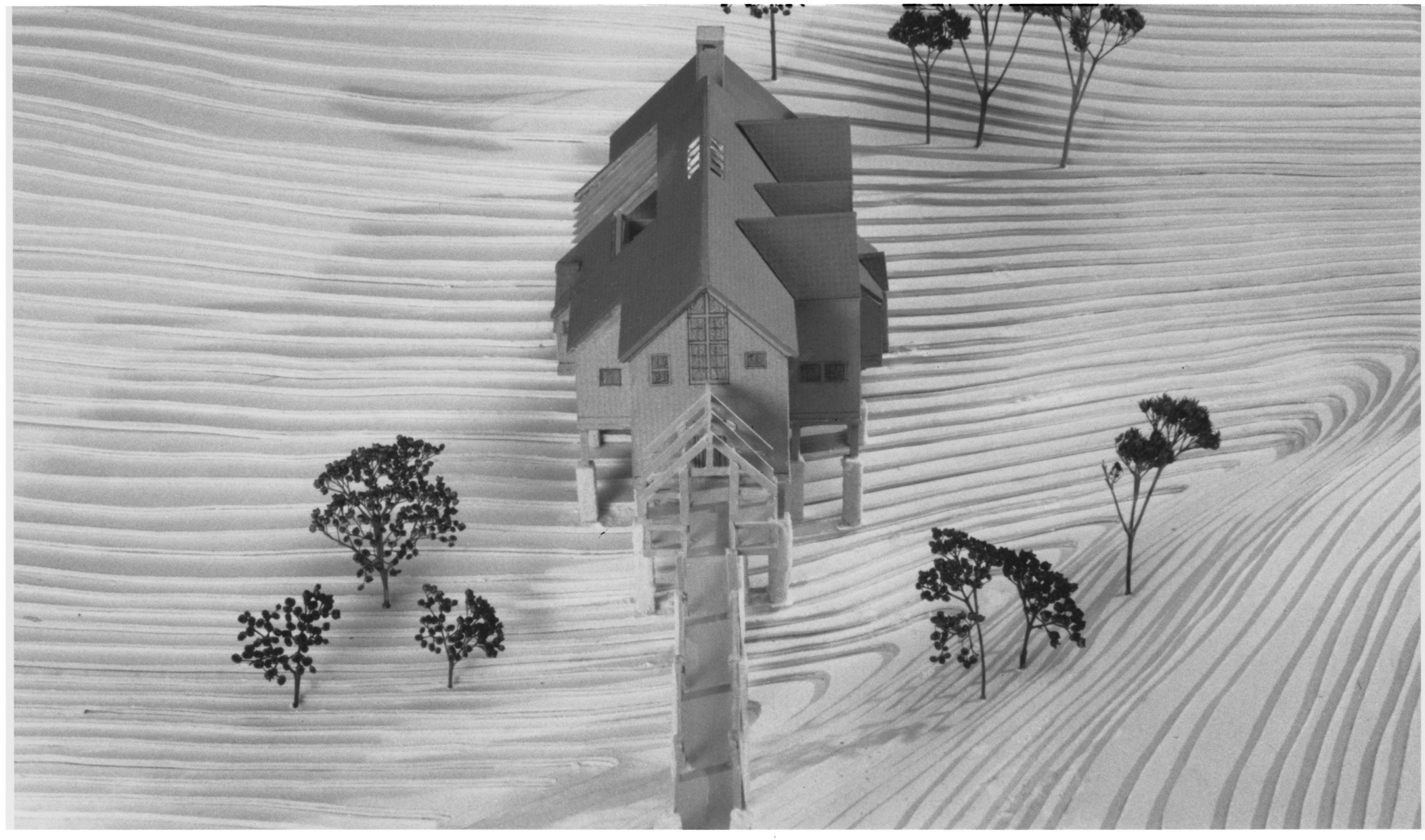
Final Design Solutions

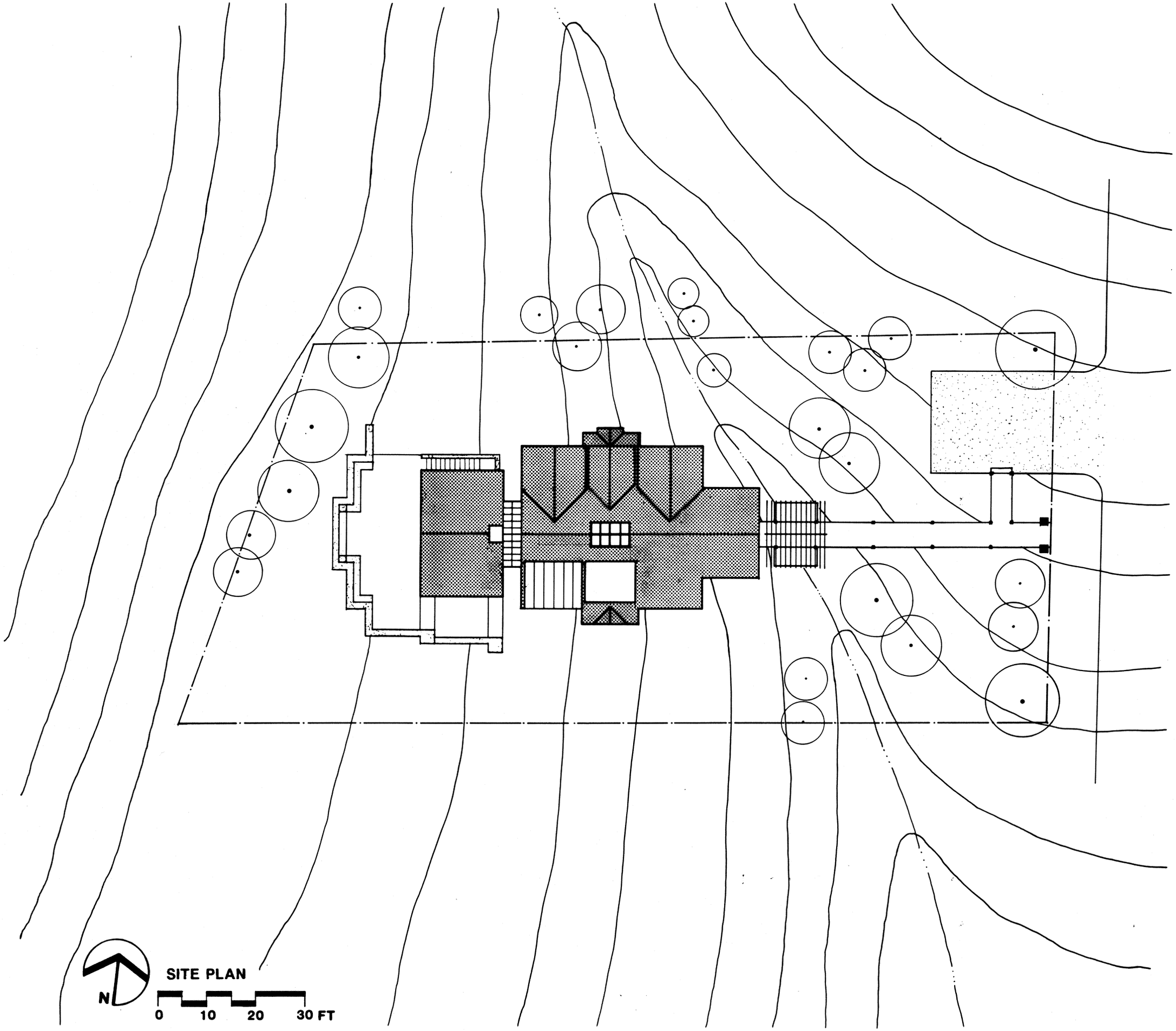
A primary consideration throughout the project was the location of the fireplace. Though valid arguments were made for its location on an exterior wall, the final decision was to make it part of the axis and a kind of symbolic entrance to the living room. The fireplace, made of the same local field stone as the piers and the walls, is open from front to back so that one can see through the firebox into the living room while walking down the long hallway or could view a fire from either side. The step down into the living room occurs on either side of the seven foot wide fireplace. At this place of entry, a person is literally surrounded by stone.

The transition space between the post and beam structure and the stone and frame one is achieved by a narrow gabled glass connector that links the spaces physically but visually makes a distinct break between the two. It is also a way to glimpse the outside environment on either side of the house when entering through the stone wall to the living room.

The other transition space is an outdoor one. Nearing the end of the outdoor walkway, the passsage widens to form a type of open porch with a roof structure of the same post and beam detail used inside the house. This was designed to provide a gathering spot for the outdoor portion of the axis and a place for viewing the site and surrounding mountains.

It was my intent to find the elements which gave this building significance and meaning and a clear relationship to the site. To paraphrase a quote from one of my readings: Without order and a strong anchor to suppport your design, the good ideas will have nothing to hold on to and will seemingly float away.

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SITE PLAN
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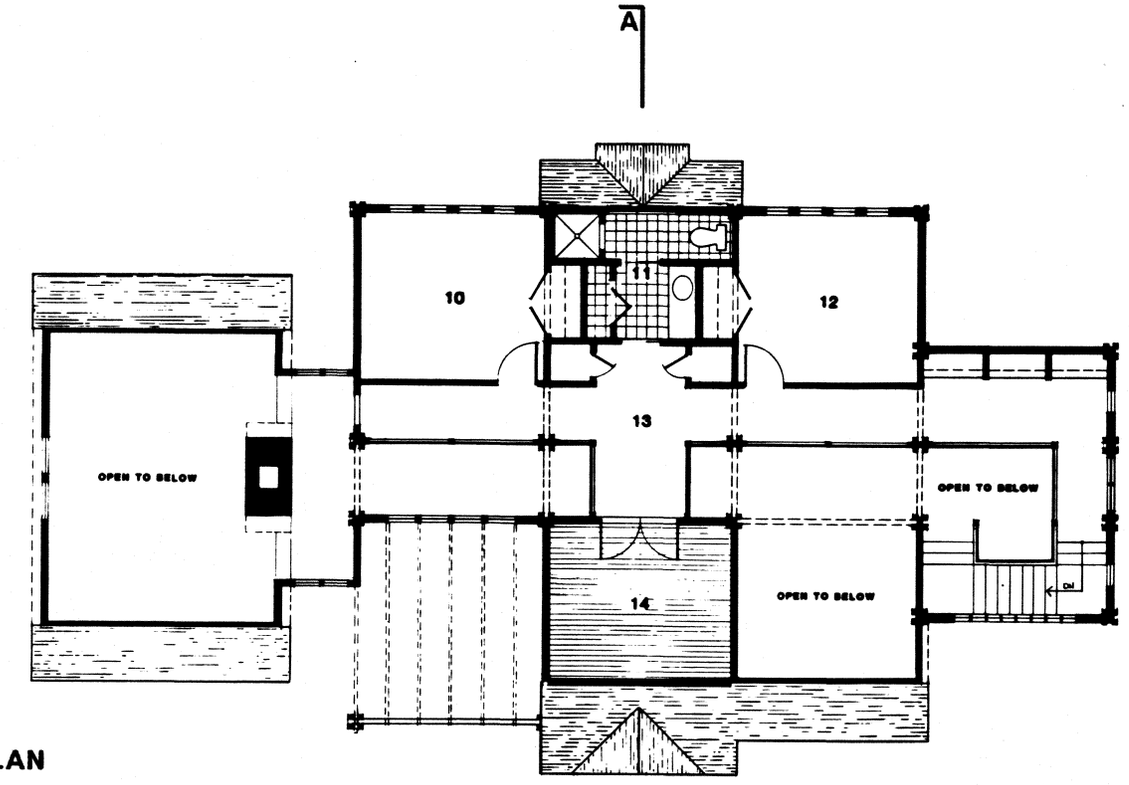
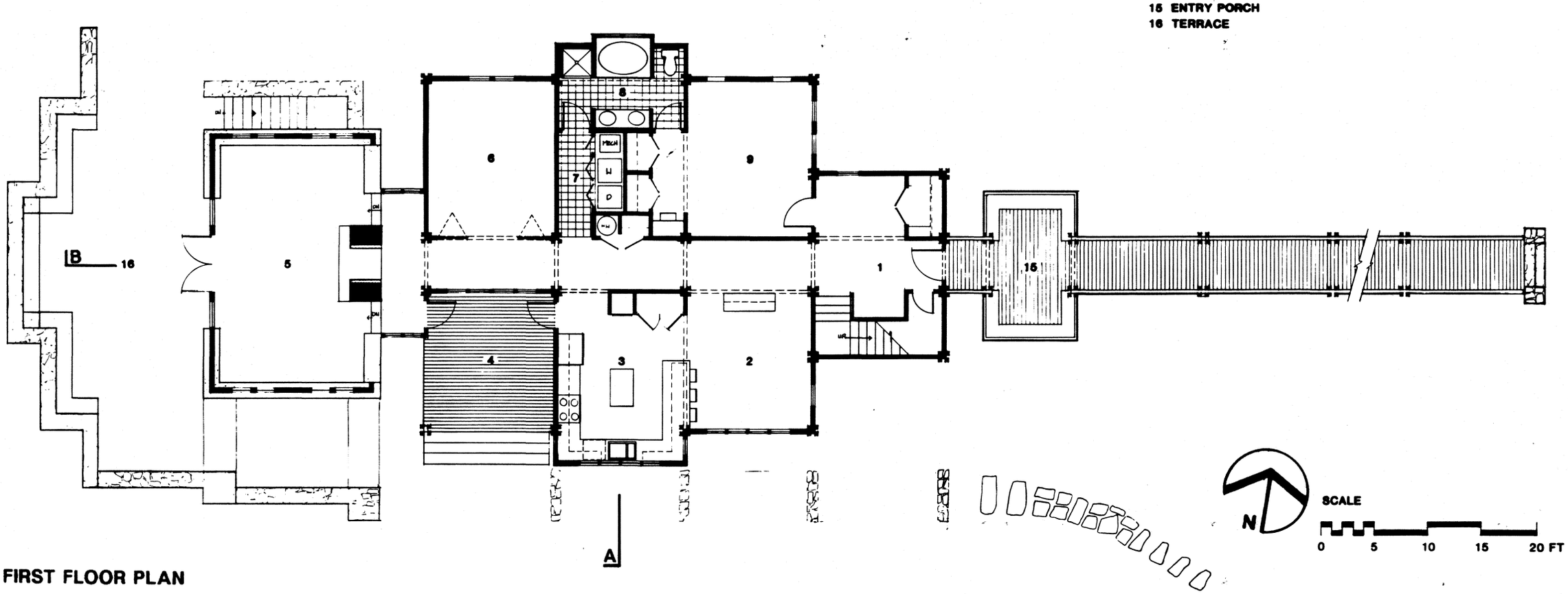


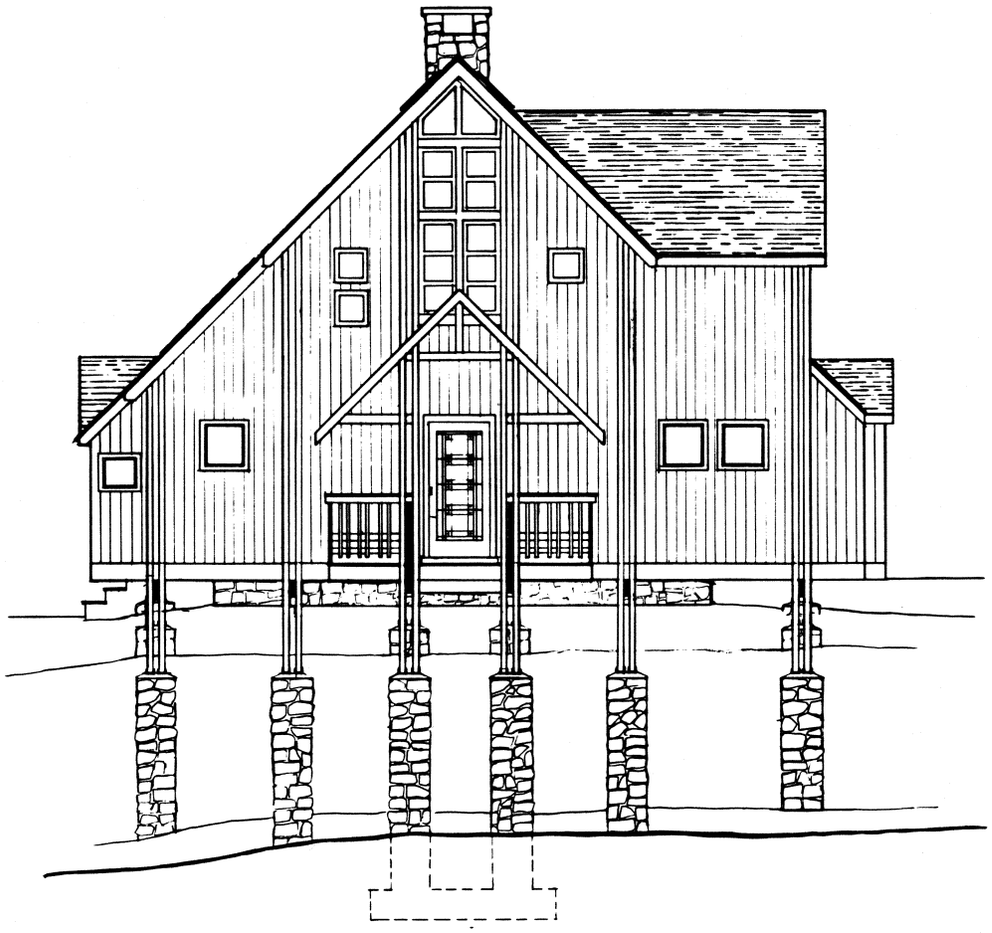
SECOND FLOOR PLAN



FIRST FLOOR PLAN

KEY

1 VESTIBULE
2 DINING ROOM
3 KITCHEN
4 DECK
5 LIVING ROOM
6 STUDY/GUEST ROOM
7 LAUNDRY
8 MASTER BATH
9 MASTER BEDROOM
10 BEDROOM
11 BATH
12 BEDROOM
13 WALKWAY
14 ROOF DECK
15 ENTRY PORCH
16 TERRACE



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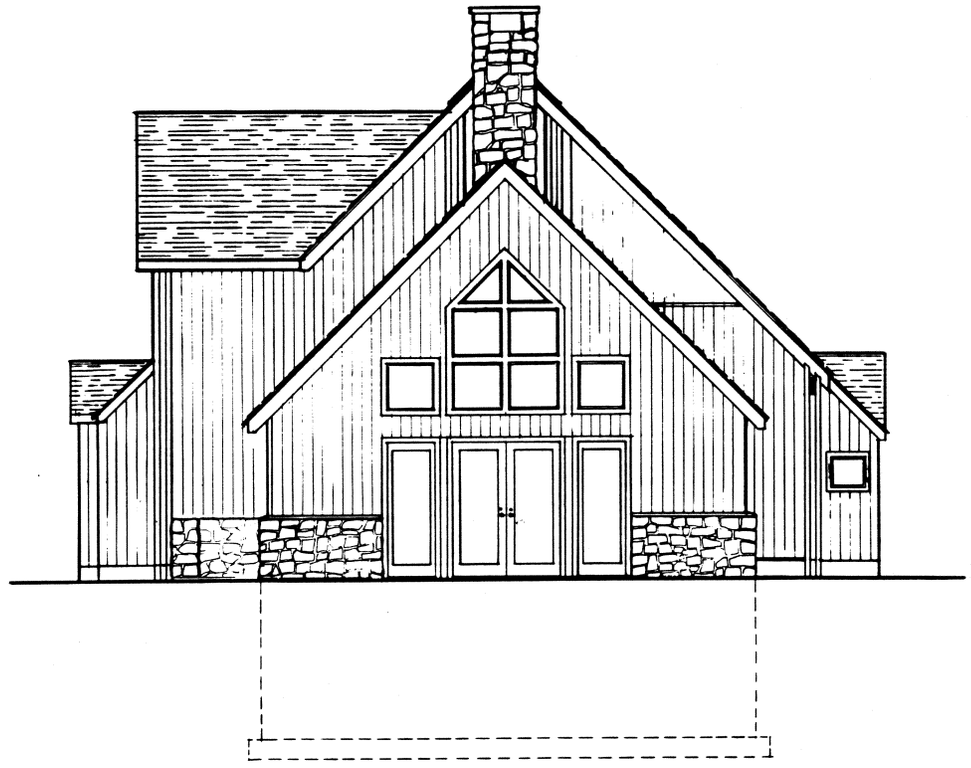
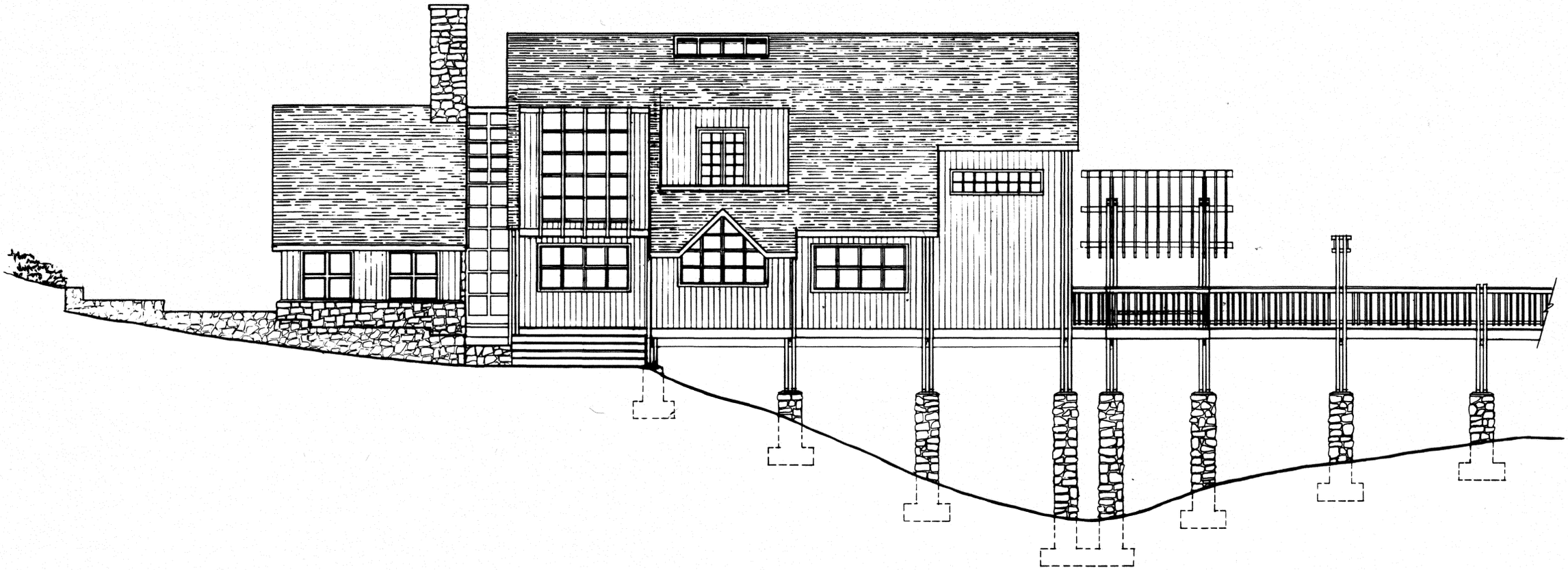
EAST ELEVATION



WEST ELEVATION



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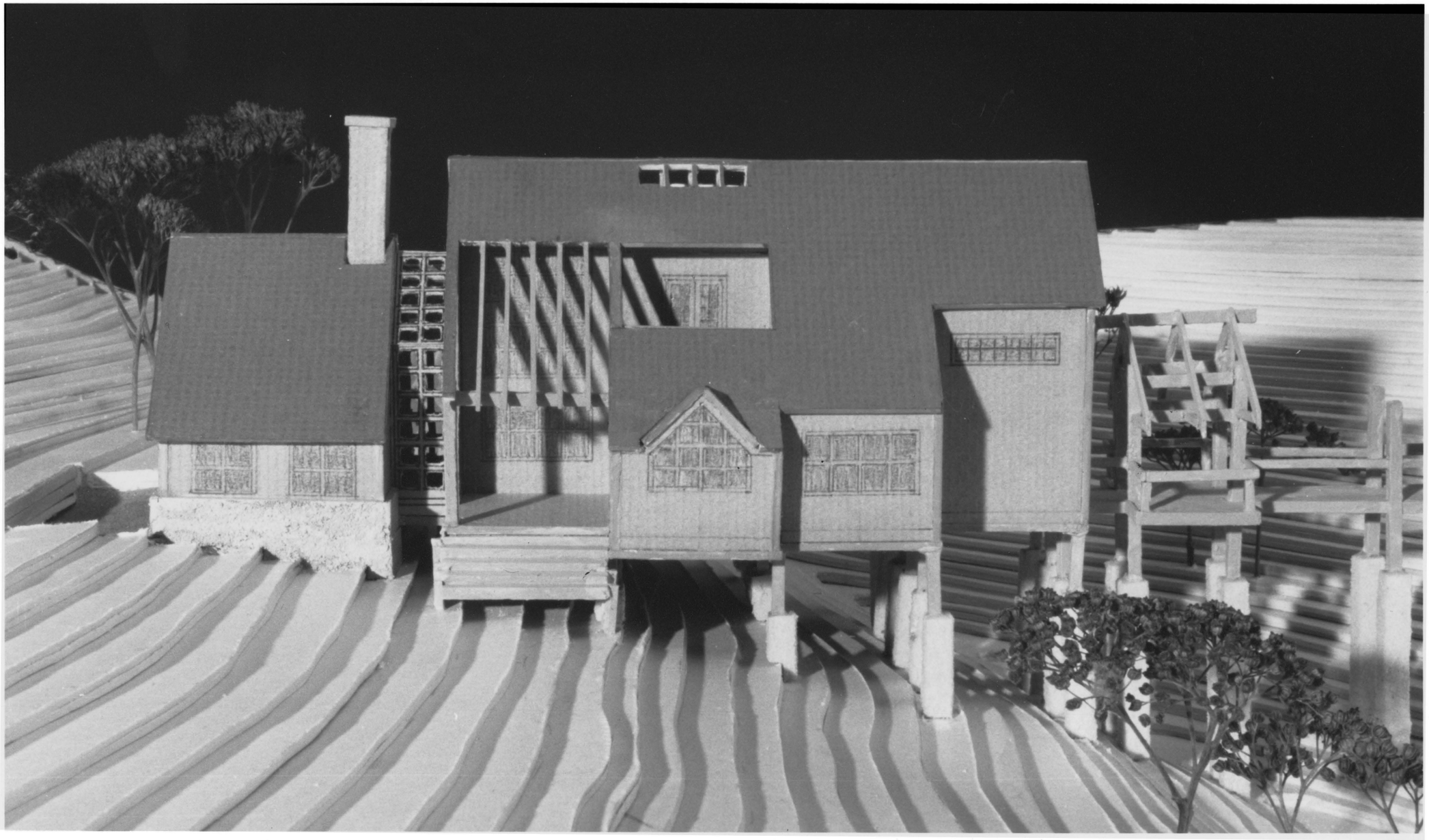
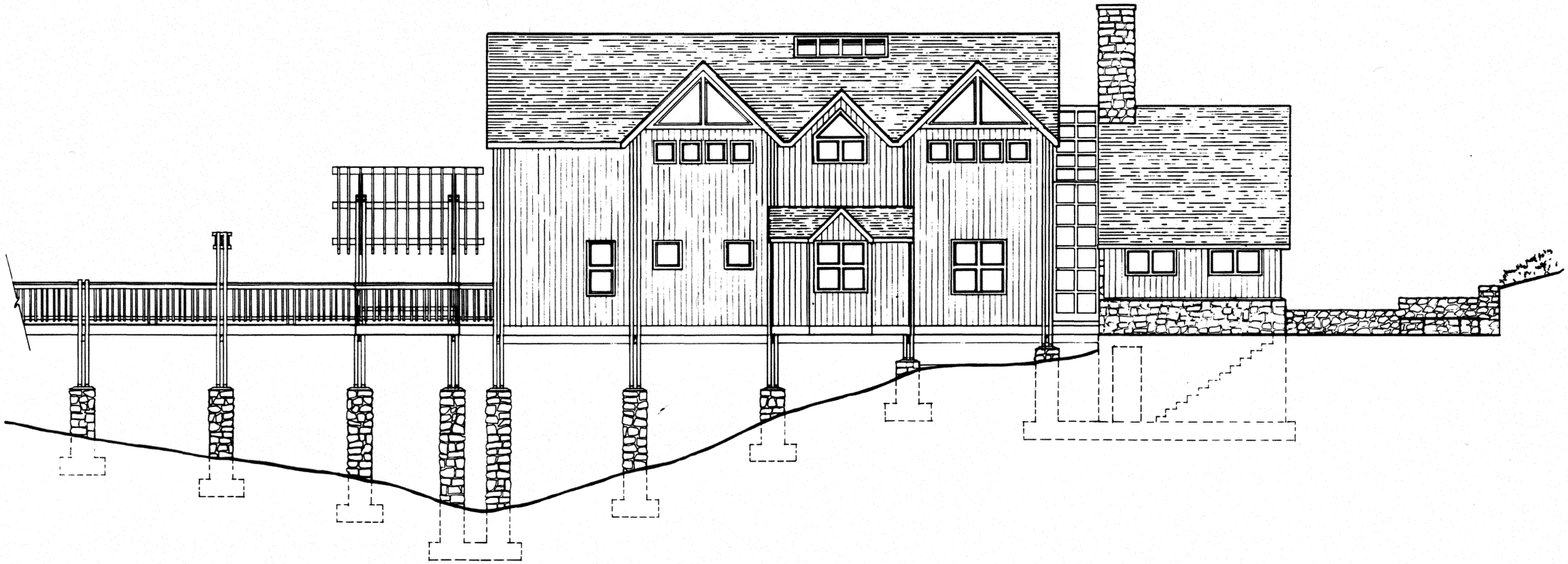
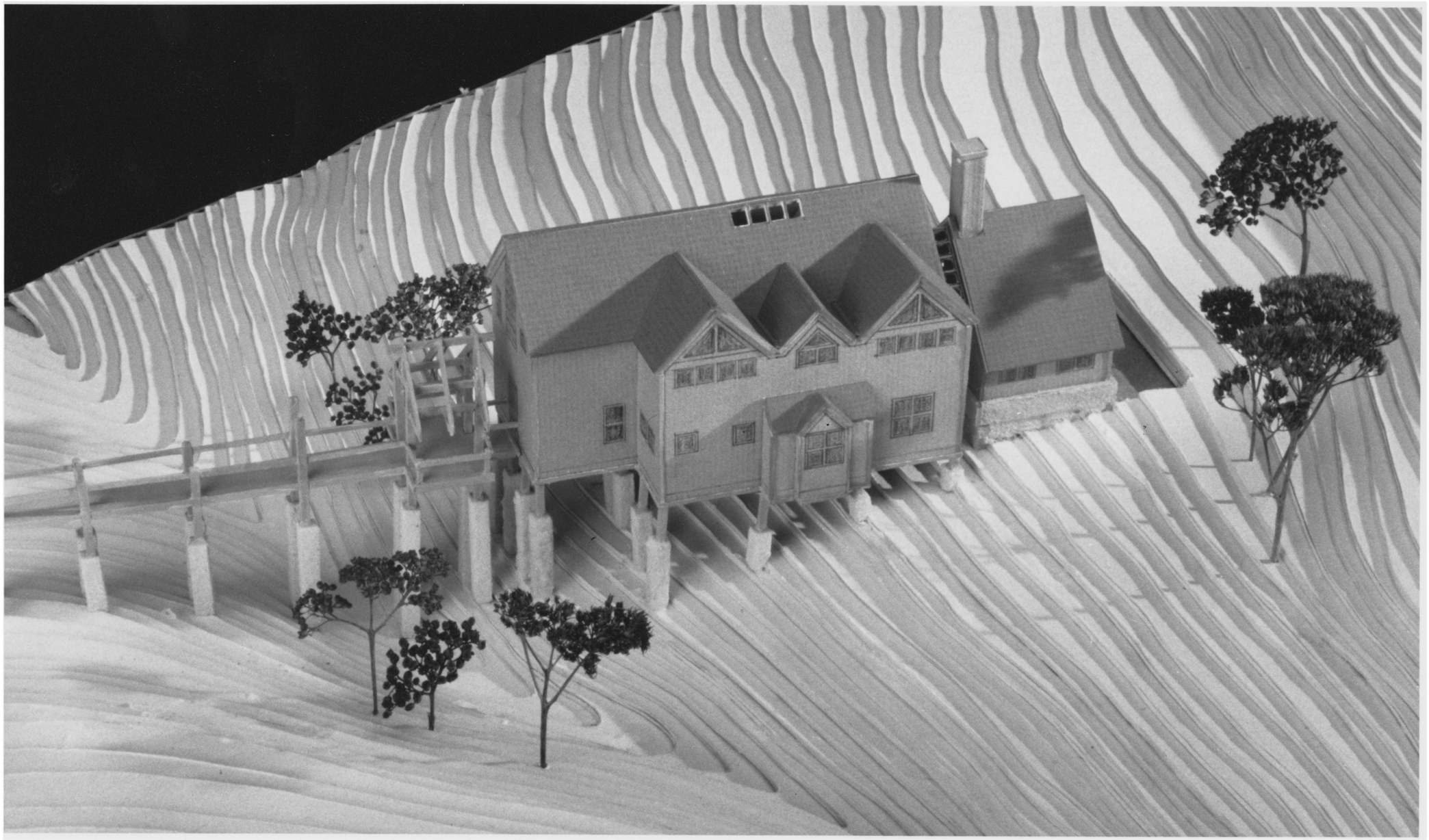
SOUTH ELEVATION

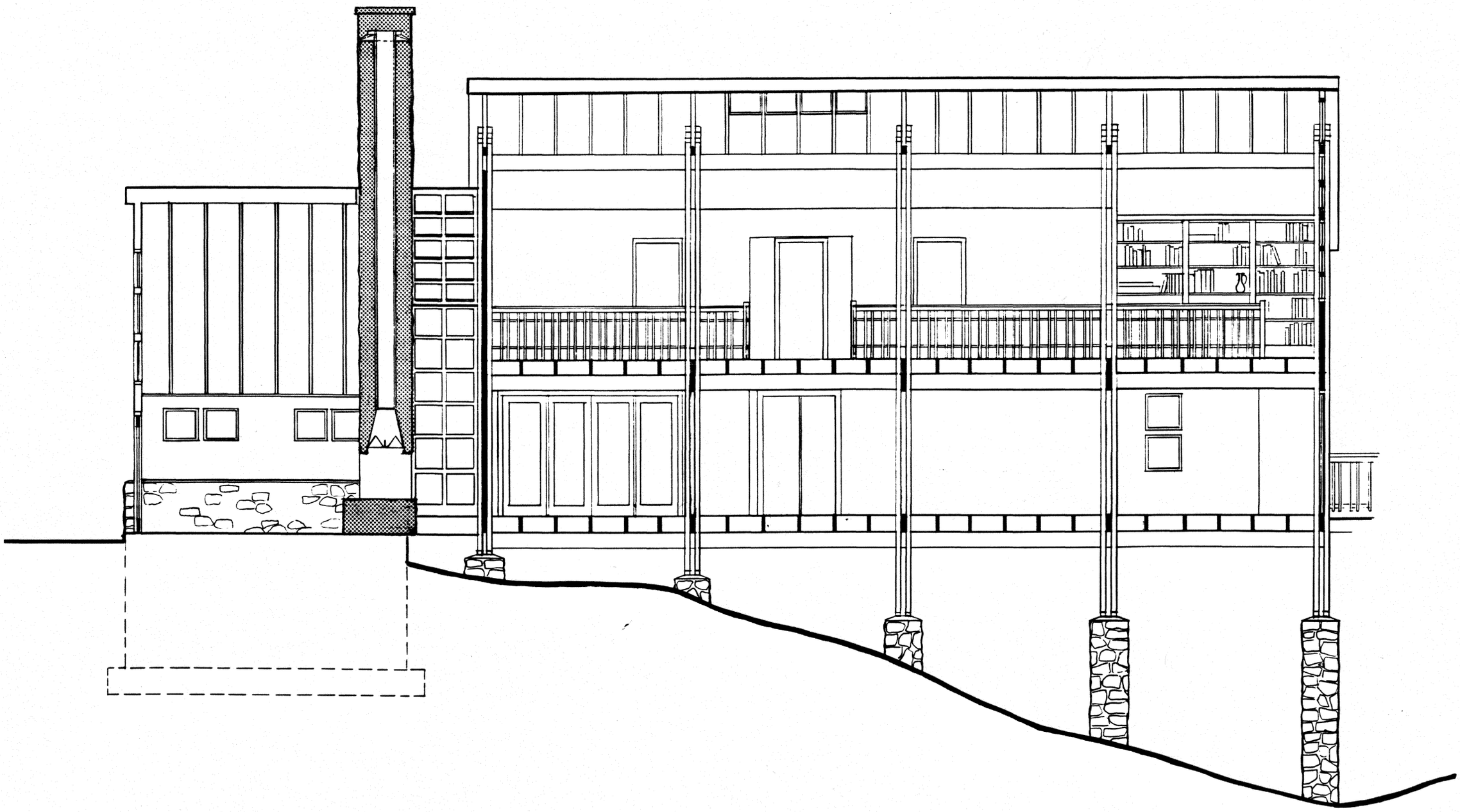




NORTH ELEVATION



SECTION A



SECTION B

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