

A SCHOOL FOR
BEHAVIOR MODIFICATION
BY
TERRY GREENE

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A SCHOOL FOR BEHAVIOR MODIFICATION

UNDERGRADUATE THESIS IN ARCHITECTURAL DESIGN

by

TERRY GREENE

Submitted to the School of Architecture as
partial fulfillment of the requirements
for the degree of Bachelor of Architecture

at

MONTANA STATE UNIVERSITY

Bozeman, Montana

June, 1977

THE DEVELOPMENT OF A PROTOTYPICAL DESIGN PROCESS
TO DETERMINE HOW THE ART FORM CAN ACCOMMODATE
THE INTER-RELATIONSHIPS OF CHILDREN AND ADULTS

by

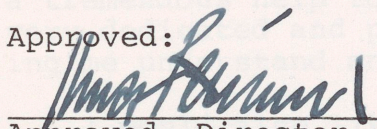
TERRY W. GREENE

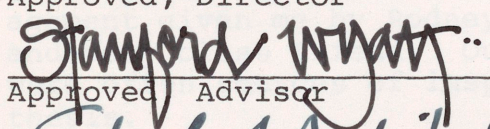
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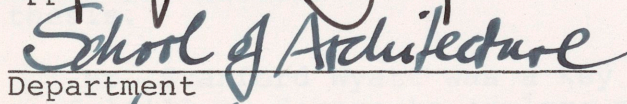
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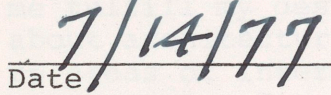
BACHELOR OF ARCHITECTURE

Approved:


Approved, Director


Approved, Advisor


Department


Date

MONTANA STATE UNIVERSITY
Bozeman, Montana

June, 1977

ACKNOWLEDGEMENT

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This thesis investigation, while not a scientific investigation, really was a personal investigation into subjective and preconceived attitudes. These subjective and preconceived attitudes could not have been explored to their fullest, however, without the aid of the members of the Childrens Day Treatment Program in Billings, Montana. Ken Collier and his wife Maggie Collier, along with Jani McCall and Sandra Loftsgaard all made it possible for me to see and experience their program for children with behavior problems. I had several opportunities to observe the changes in the children; in one case over a period of a year. Being with the children, seeing them in their "time out" box and watching closely the relationships between the adults and children was a tremendous help to me. I am indebted to these very dedicated and professional people for helping me understand another part of myself.

I would also like to acknowledge the encouragement given me by Rodney Axtman, a fellow student and very close friend. Our in-depth discussions were often sources of inspiration throughout this thesis.

Mr. Stanford Wyatt was a key figure in helping me fulfill my desire to explore my personal ideas about architecture. Our several meetings opened up areas of interest for me that I will pursue for many years. His professional guidance was invaluable.

Of course, a special thanks to my wife, Wendy, for her many long hours of help and understanding

In addition to working toward her own degree in Interior Design, she provided many moments of tranquility and comfort as a very close, personal friend. Without her, this degree would seem meaningless.

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CHAPTER 1

1

INTRODUCTION

Should architecture be exclusively for children, for adults or just people? I hope to determine if the art form can accommodate the interrelationships of children and adults by developing a prototypical design process. This process will allow me to explore my subjective and preconceived attitudes about the ideas of entrance, threshold, wall, opening, floor and ceiling as they relate to human posture. Once I have explored and have understood these attitudes, a specific structure will be proposed by applying particular site criteria, climatic conditions and regional characteristics.

The program is concerned with the requirements of a school for children between the years of one and six with behavior problems and will ultimately be located in Billings.

This subject area became a unique concern for me during Spring Quarter of fourth year. A school for children with behavior problems was a real issue with real clients in a real city, Billings. The solution that I produced then, although it represented some of my ideas and was functional, was somewhat empty. I subsequently felt a desire to explore the possibilities of not just this narrow need, for of the more general attitudes of designing for children and/or adults.

PERSONAL FEELINGS

Children and their well being as they grow has been of special interest to me for several years. Studying architecture has also made an understanding of children imparative. But children cannot be thought of without considering adults when one talks about architecture. So, how does one look at children and their inter-relationships with adults as relates to architecture? Does one satisfy all of the anthropometric considerations only or is there more? These general concerns of mine began to develop more completely as I began to question the ideas of wall, opening, threshold, entrance, ceiling and floor. I wanted to know if the inter-relationships of children and adults had any effects on the specific ideas of wall, opening, threshold, ceiling and floor. I wanted to investigate my own subjective and preconceived attitudes about these specific elements as they related to my general concerns. Once my feelings were clarified and once I began to understand some of the complexities of my own questions, I realized that my previous method of investigation through a design methodology was not adequate. Instead, I needed a means of investigation that would allow me to reject and accept at will. The project that I chose to use as a vehicle to investigate these concerns was a school for children between two and six years of age with behavior problems. The program called for a one to one ratio of adults to children which created an ideal opportunity for many inter-relationships. In the early stages of developing a way to investigate my ideas, I found myself wondering what the ideal situation might be. From that point, the idea of a prototype was important.

INVESTIGATION

As I developed the idea of a prototype into a design process for investigation, I discovered that I could reject elements which were insignificant, and could deal with those elements I felt were more important. One example of rejecting elements occurred as I began to work with my subject in attitudes about ceiling. The idea of ceiling was important to me but the physical manifestation of the roof was not. In the prototype, I was able to eliminate thinking about the roof because I felt the ceiling condition on the inside was more important and, possibly, the roof could respond to that in a specific proposal.

Using the prototype as a design and investigative tool also helped in that it encouraged me to start drawing and building models early. The other major source of research was from direct contact with adults and children in this type of facility. These early drawings and contact with the resource people helped me develop a strong concept which I then used to generate the prototype.

My concept, like my feelings about children, was very strong and very personal. Many of my own experiences as well as the experiences of others came together to help make it a rich and meaningful idea. The concept is developed around growth and change, something each child is very much aware of and something each adult should be aware of. If one can assume that life moves forward in a somewhat linear manner, being directed on either side by imaginary boundaries, not unlike a wide river within two banks, then the idea that certain points or places exist along the way at

which one can stop or rest to reorganize one's thoughts can be accepted. These points or places, I believe, are different for each person, but present none-the-less. I also believe that one will engage in certain activities that will help him return to the central pathway to resume his growth and change. The school for children with behavior problems is one of these points or places where stopping and resting is essential to continued growth and change. If the child has a behavior problem, it is considered an abnormal condition. The child has crossed one of the imaginary boundaries as established by our society so therefore must be corrected. I did not, at any point, question the validity of how the behavior problem is determined nor the program of behavior modification. I was only interested in the inter-relationships of the children and the adults under these circumstances and the environment within which these inter-relationships happened.

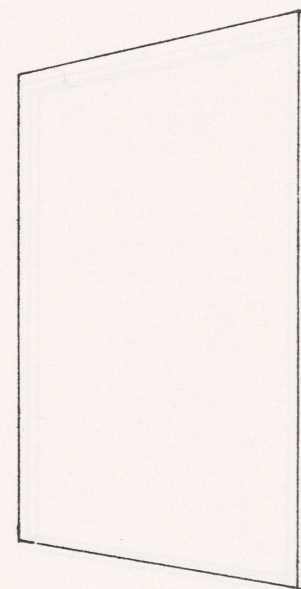
The element through the circle represents the path of growth and change. The circle itself represents the point at which one may temporarily stop or rest to enable further growth and change. Finally, the rectangular element represents the environment in which the resting or stopping actually happens.

When I use words rest or stop, I do not really mean stopping in the literal sense. Growth and change continue for these children with behavior problems but the growth is not positive. Hopefully, the change that is introduced to them will reverse the negative growth their misbehavior indicates and enable them to continue in life as normal productive people.

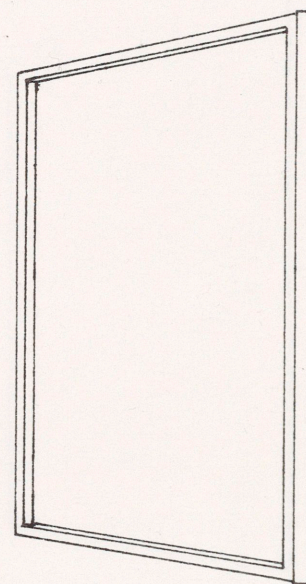
The concept's clarity and aptness was important to me not only as an idea but also graphically. The geometric relationships of the elements had many possibilities in terms of generating points, lines, planes and volumes to help my investigation of the ideas of walls, openings, threshold, entrance, ceiling and floor.

One further point which was important to my investigation was my subjective attitudes about focal points for children and adults. Visual perception is different for each person, but I believe that these are stimulants in focal length for children. It was my belief from personal experience and research that as children grow, their focal length or (conscious) realization increases. For example, a child of three years seated at a table might easily focus on a yellow pencil two feet away but would probably not focus on a mountain top ten miles away. He might, in fact, have a very narrow cone of vision and a short focal distance. An adult, on the other hand, generally has a very large visual vocabulary and can easily focus on close and distant objects. If one accepts these general differences, then I believe it is apparent how these differences might effect the way in which one thinks about designing a wall, an opening, an entrance, a ceiling or a floor. In addition, the time frame for (conscious) perception to take place and the resultant positive, neutral, or negative response is dependent on the shape, texture, light and color of the element.

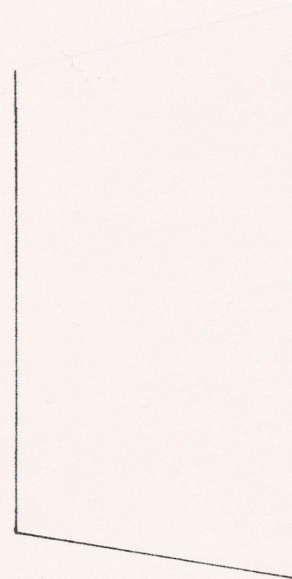
Wall: A physical boundary, a visual boundary, and an audio boundary. The major element of containment. Restrictive to movement. It can be harsh and unmoving or it can be open and flexible. I felt the wall should be more than one thing on both the conscious and subconscious level as well as capable of doing work.



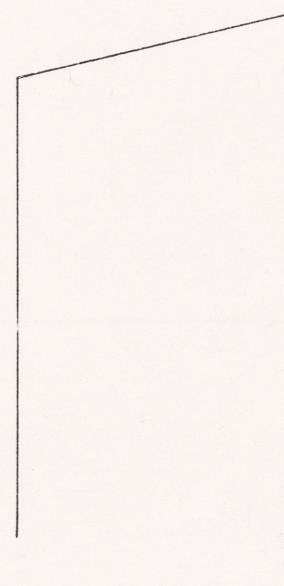
Opening: is associated with the wall but at what point does the opening become the wall? Cone of vision and focal point are important here, as are shape, color and light.



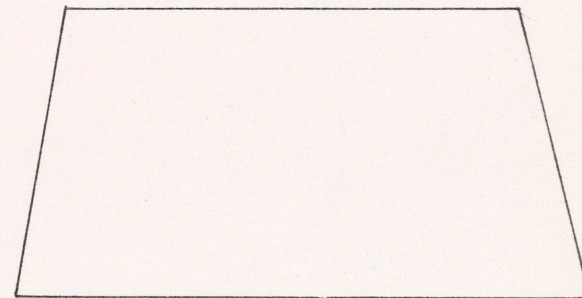
Threshold: A point of change. A crossing
over or from in to out but not really under.
Associated with entrance but also with boundary.
A change in terms of positive growth.



Entrance: The point of becoming part of.
Being accepted. Being allowed to possess. A
passage between two environments.



Floor: A plane bounded by walls, entered by crossing a threshold. Horizontal and smooth. Psychologically infinite. An element of balance.



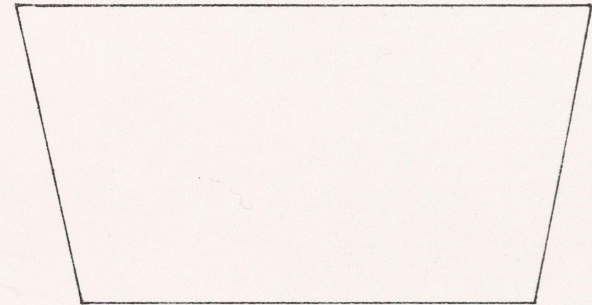
DISCOVERY

The completion of the prototype provided an opportunity for analysis. The process of doing the prototype, however, provided opportunities for discovery. I began to discover new ways to think about the idea of a wall as I investigated different ways to work a means of observation into the prototype. The resultant observation tube became a wall with special large openings for viewing underneath it and small openings for observing. One could walk under it in certain places, so it became an entrance from one area to another. The structure of the observation tube also marked the

Ceiling: A protective cover. Flexible and light in weight. Connection to or disassociation with a wall; very important and volumetric determinant. The ceiling could be part of the roof but it should be clear that the ceiling is not the roof.

This wall emerged from the idea of a child needing an environment in which to be able to see and be seen in a different area. Another child is to build a space that can cause a child to extend his focal distance. It was my idea that the child would be consciously aware of the presence of another person his size and subconsciously aware of why he is there; he too has a behavior problem.

The prototype also helped in discovering things about threshold. I found that I believed there were many and that they were different for adults than for children. Initial entrance to the school by an adult probably involved several thresholds. Since I had separated the administration from the



DISCOVERY

The completion of the prototype provided an opportunity for analysis. The process of doing the prototype, however, provided many opportunities for discovery. I began to discover new ways to think about the idea of a wall as I investigated different ways to work a means of observation into the prototype. The resultant observation tube became a wall with special large openings for viewing underneath it and small openings for observing. One could walk under it in certain places, so it became an entrance from one area to another. The structure of the observation tube also marked the transition point for structural change. The load bearing walls of the classrooms merged into light, open steel structural elements in the social space.

Another wall that became a physical boundary but not a visual one developed in the classroom. This wall emerged from the idea of a child needing to see other children in a similar circumstance as his own but in a different area. Another child is one of the few elements that can cause a child to extend his focal distance. It was my idea that the child would be unconsciously aware of the presence of another person his size and subconsciously aware of why he is there; he too has a behavior problem.

The prototype also helped in discovering things about threshold. I found that I believed there were many and that often they were different for adults than for children. Initial entrance to the school by an adult probably involved several thresholds. Since I had separated the administration from the

school, it involved at least two. The major threshold for the adult was the administration; the major one for the child was the school or even the separate residence. As these separate elements had some significance to each other in their proximity, many different kinds of thresholds were possible.

The same kind of variety existed in the ideas of ceiling and floor. As I said earlier, however, the idea of floor was investigated least. The only major investigation into the idea of floor was done in regards to the administration and how it acted as a sign for the school.

The program changes resulted in the merger of administration and school. The residential unit became the old house already on the site. Strong ideas of approach and viewing the school in perspective were weakened somewhat by the strong arrangement of the interior elements as they stepped down the site. The strong entrance and threshold caused the administration to be somewhat exaggerated. The classroom interior and exterior spaces developed nicely and seemed to respond to both the internal and external demands.

Other ideas developed from orientation too, such as the vanes which were on an eight-foot section and could be opened or closed to allow the children and adults to make the structure do something for them. The children could become involved in making up the building each morning and the vanes could also help control the efficiency of the structure.

SPECIFIC PROPOSAL

The specific proposal was made based on the ideas I explored in the prototype and certain site conditions, climatic considerations, regional characteristics and some program changes. The real lesson was finding out how difficult it really is to translate a somewhat pure idea into a real situation and still retain the essence of the idea. As the specific proposal developed, it became clear that at certain points, the site would have to bend and at others, the building would have to bend. The program changes resulted in the merger of administration and school. The residential unit became the old house already on the site. Strong ideas of approach and viewing the school in perspective were weakened somewhat by the strong arrangement of the interior elements as they stepped down the site. The strong entrance and threshold caused the administration to be somewhat exaggerated. The classroom interior and exterior spaces developed nicely and seemed to respond to both the internal and external demands.

Other ideas developed from orientation too, such as the sun vanes which were on an eight-foot section and could be opened or closed to allow the children and adults to make the structure do something for them. The children could become involved in waking up the building each morning and the vanes could also help control the efficiency of the structure.

CHAPTER 6

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SUMMARY

I developed a strong concept based on feelings, my own feelings about life, about architecture and about people. I found that I could investigate certain parts of those feelings through a prototype and I discovered ways to carry that prototype into a specific proposal. I could not help but discover the negative aspects of that approach in the process either. I also discovered that architecture should be for people. One does not need be a psychologist to design for children or adults but only sensitive and willing to explore and imagine.

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PROPOSED RESIDENTIAL TREATMENT CENTER FOR CHILDREN

TARGET POPULATION:

- 1) Children with emotional and behavioral disorders
- 2) Ages 0-6 years for diagnosis and evaluation
- 3) Ages 2-6 years for day treatment

AREA TO BE SERVED:

- 1) Region III of the state of Montana (South Central Montana Regional Mental Health Center-Billings, Sweet Grass County, Stillwater County, Big Horn County, Carbon County, Musselshell County, Wheatland County, Fergus County, Judith Basin County, Petroleum County.)
- 2) Proposed building site Billings, Montana

SERVICES TO BE PROVIDED:

- 1) Day Treatment
- 2) Residential Treatment
- 3) Diagnosis and Evaluation
- 4) Parent training
- 5) Training resource for staff

MAXIMUM NUMBER OF PATIENTS:

- 1) 50 in Day Treatment
- 2) 8 in Residential Treatment

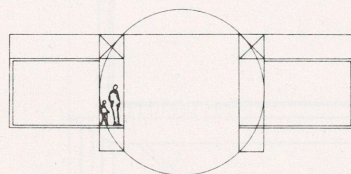
STAFF:

- | | | |
|----|----|---|
| 1) | 2½ | sets of house parents for Residential Treatment |
| 2) | 6 | Resource teachers for Day Treatment |
| 3) | 2 | Supervisors |
| 4) | 2½ | Clerical |
| 5) | 1 | full time equivalent Administrative |
| 6) | 1 | " " " Diagnosis and Evaluation |
| 7) | ½ | " " " Program Evaluation |
| 8) | 1 | " " " Parent Training and Student/Volunteer coordinat |
| 9) | 1 | Maintenance Engineer |

FACILITIES TO BE INCLUDED IN PHYSICAL PLANT:

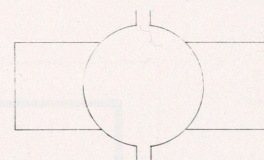
- 1) 3 classrooms (accom. 10 children, 4 adults)
- 2) Gym (accom. 30 children, 10 adults)
- 3) Observation rooms for all classrooms, evaluation rooms, and parent training areas. (one way mirrors)
- 4) Evaluation rooms
- 5) Audio Video Studio
- 6) 2 Parent Training and Group Therapy Rooms
- 7) TimeOut enclosures
- 8) 3 private offices
- 9) 2 large office (one with 3 desks, one with 6 desks)
- 10) 2 separate living quarters for residential staff
- 11) 2 bedrooms for visiting parents
- 12) living quarters for 8 children
- 13) kitchen to serve 50
- 14) Bathrooms
- 15) Outdoor play area
- 16) Library
- 17) Waiting room
- 18) Staff lounge
- 19) Supply room & equipment room
- 20) Dining Area

architecture is for people. the art form can
accommodate the interrelationships of
children and adults.



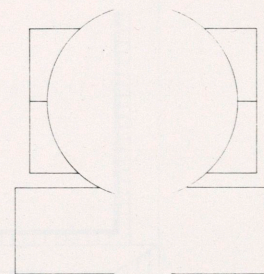
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opening
ceiling
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concept



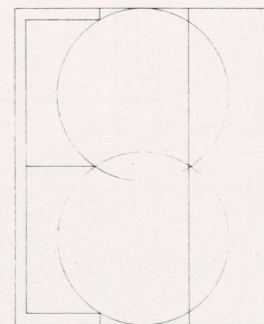
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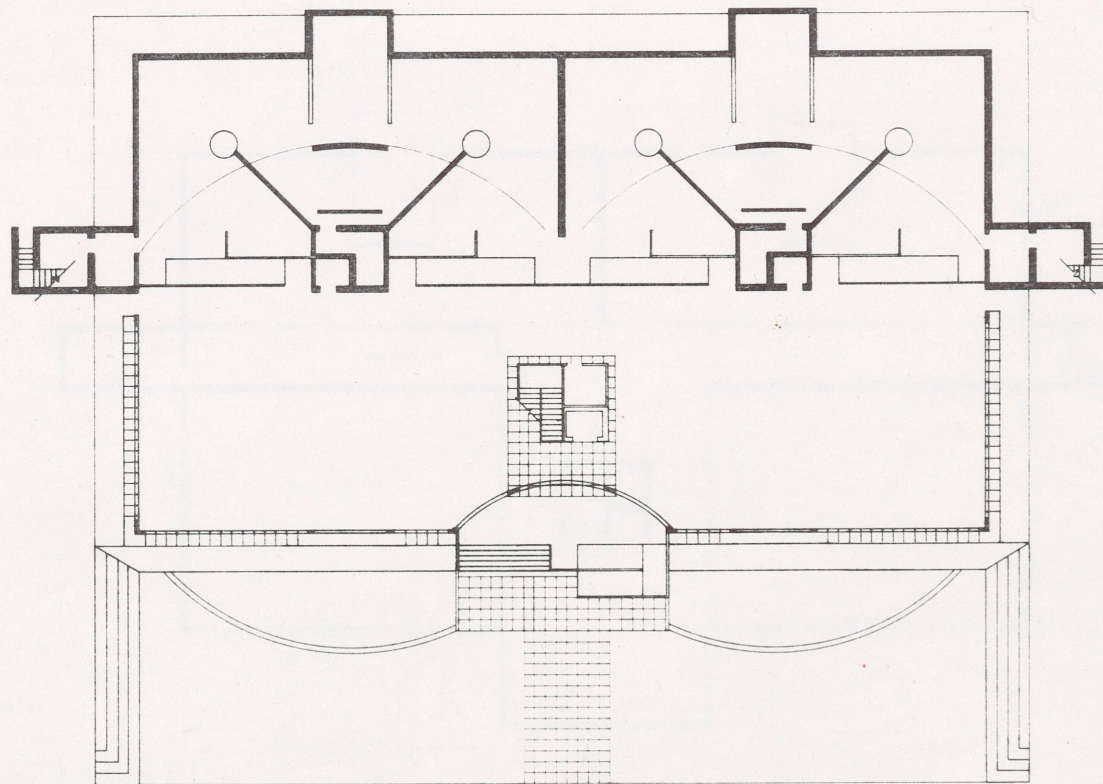
idea



discovery

tree house



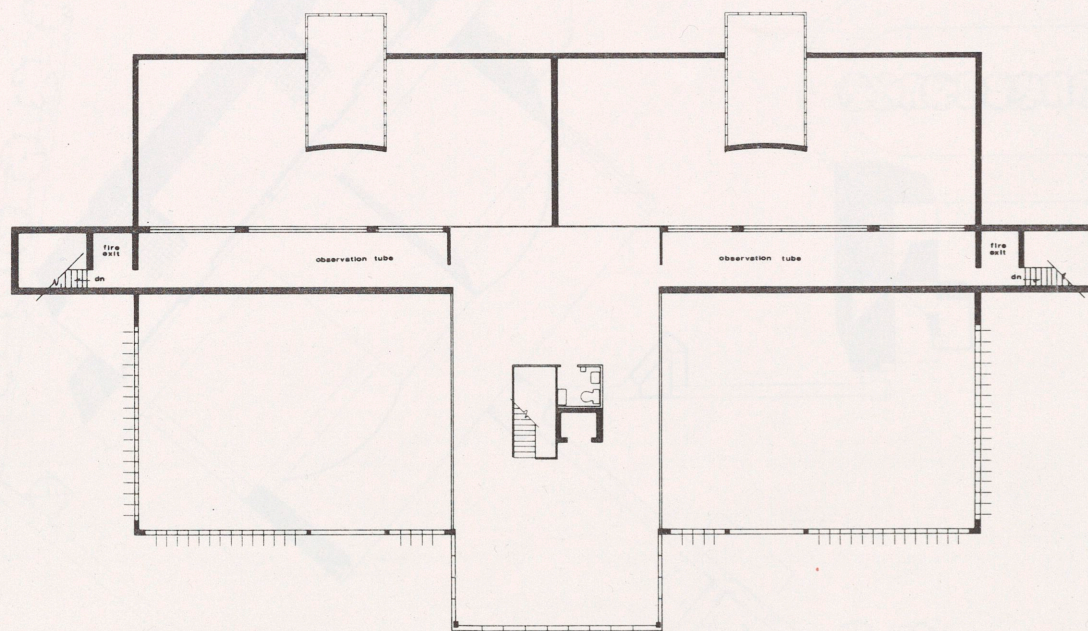


plan

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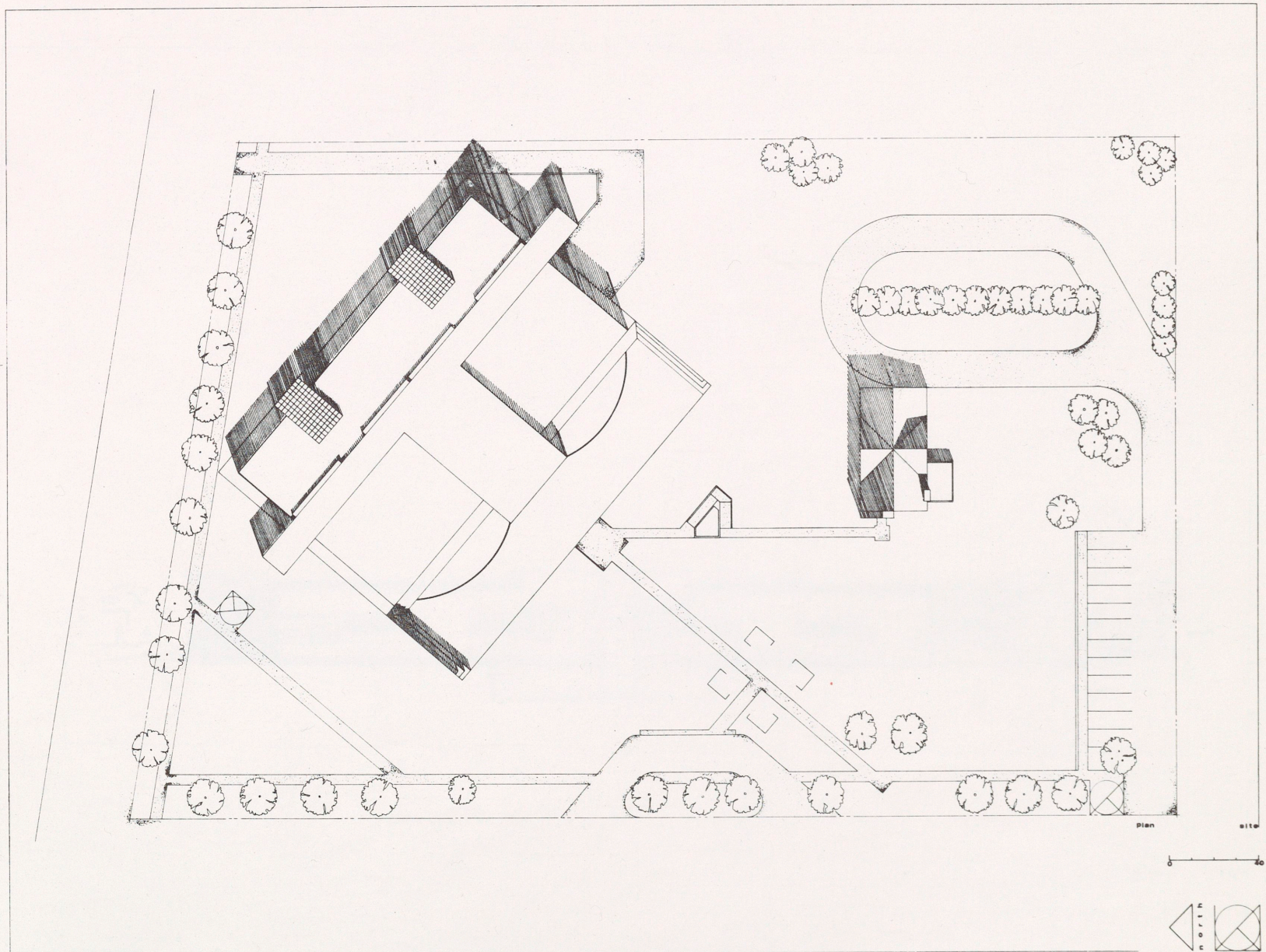


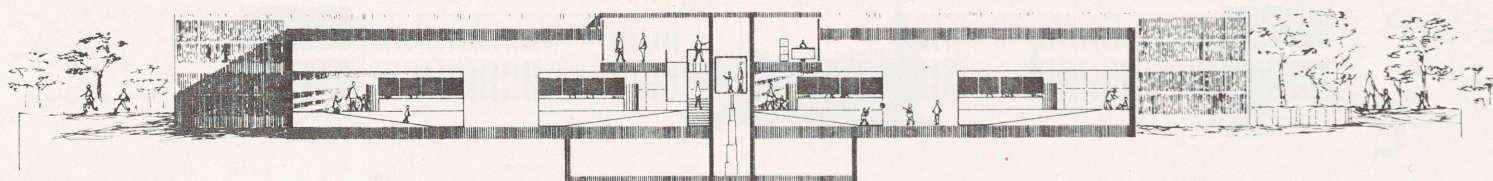


plan second

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north

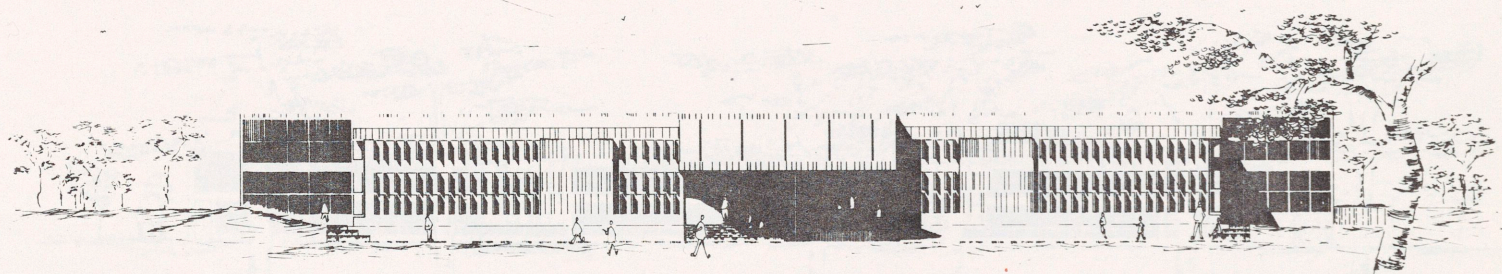




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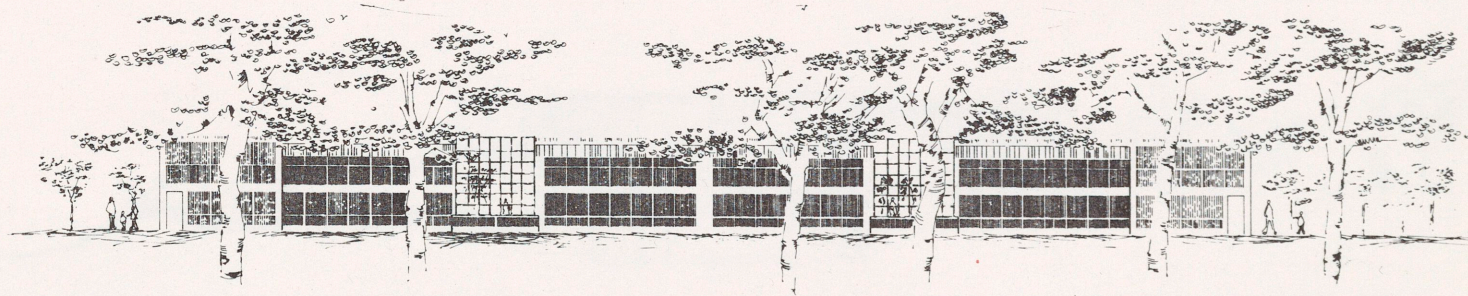




elevation south

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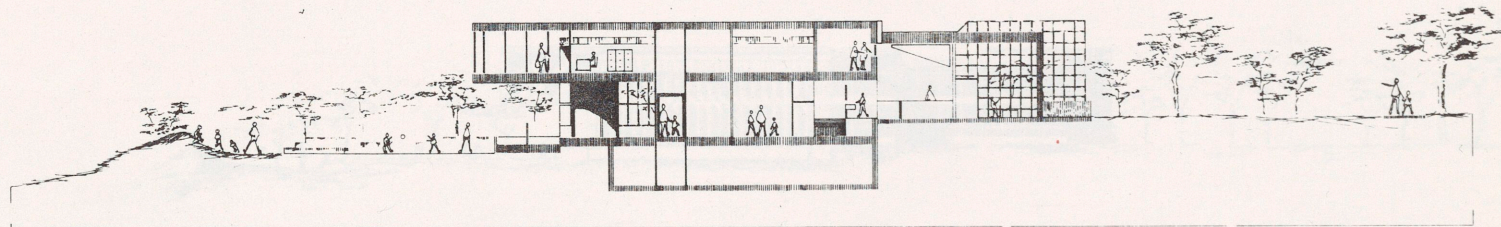




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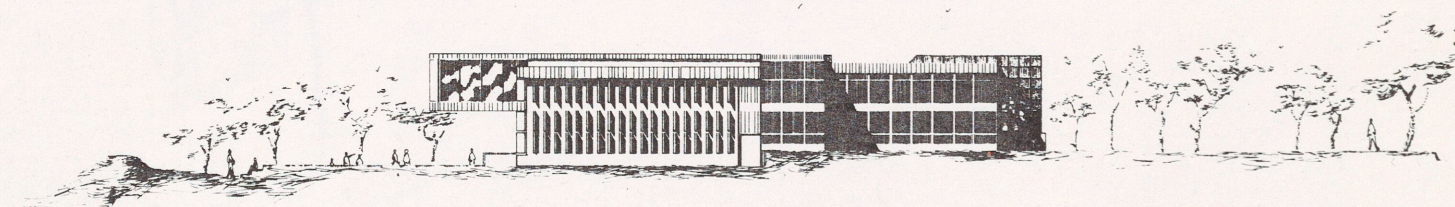




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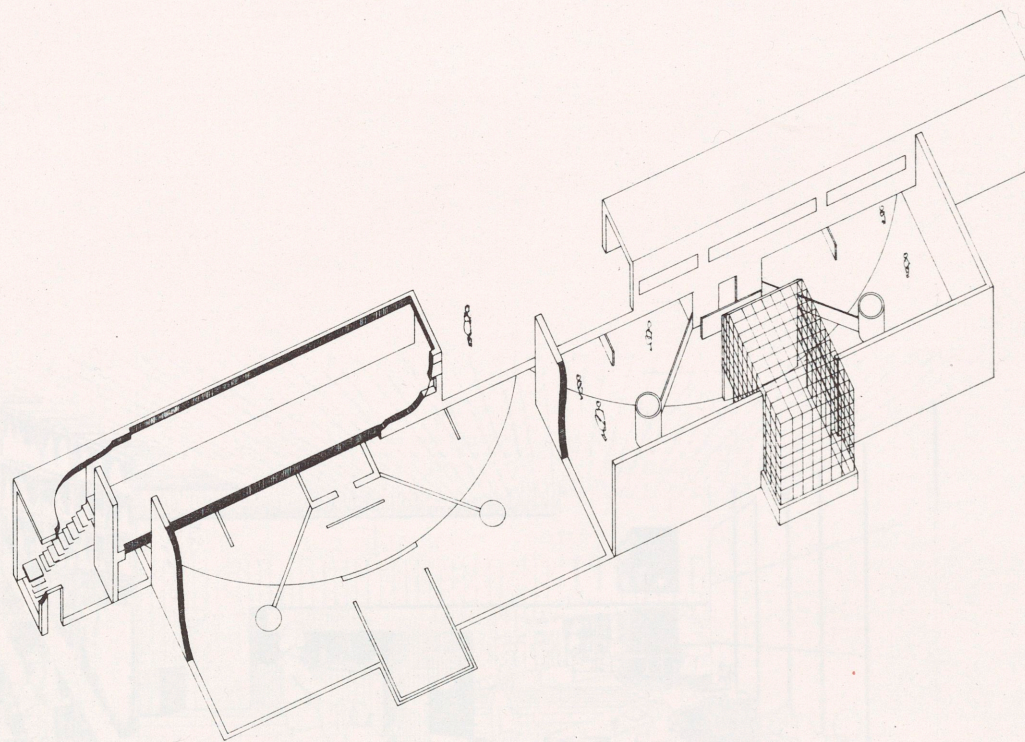




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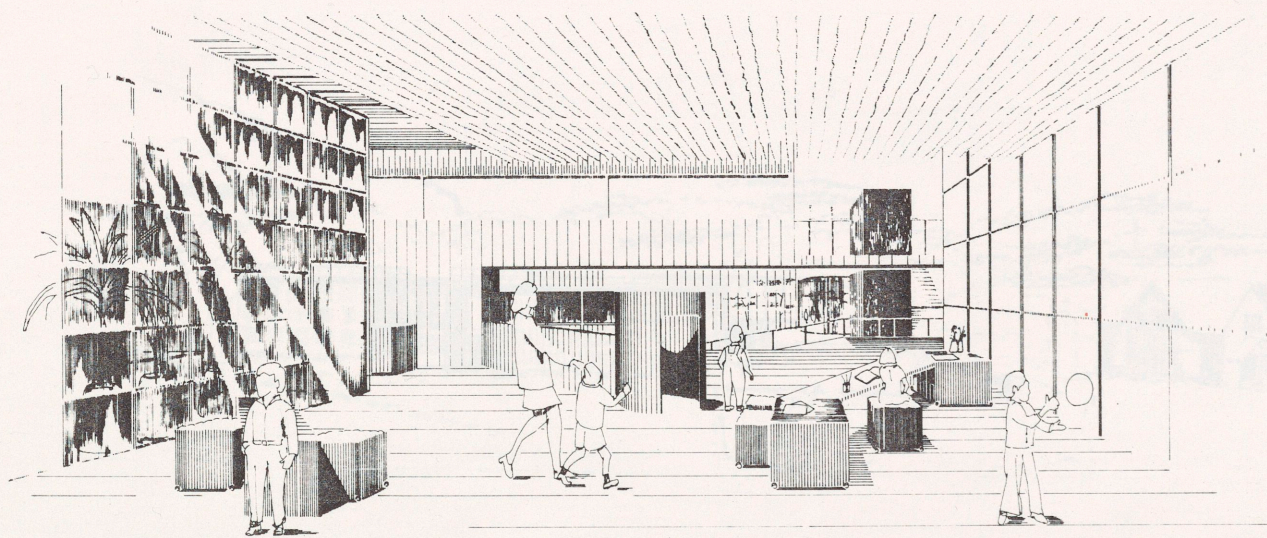




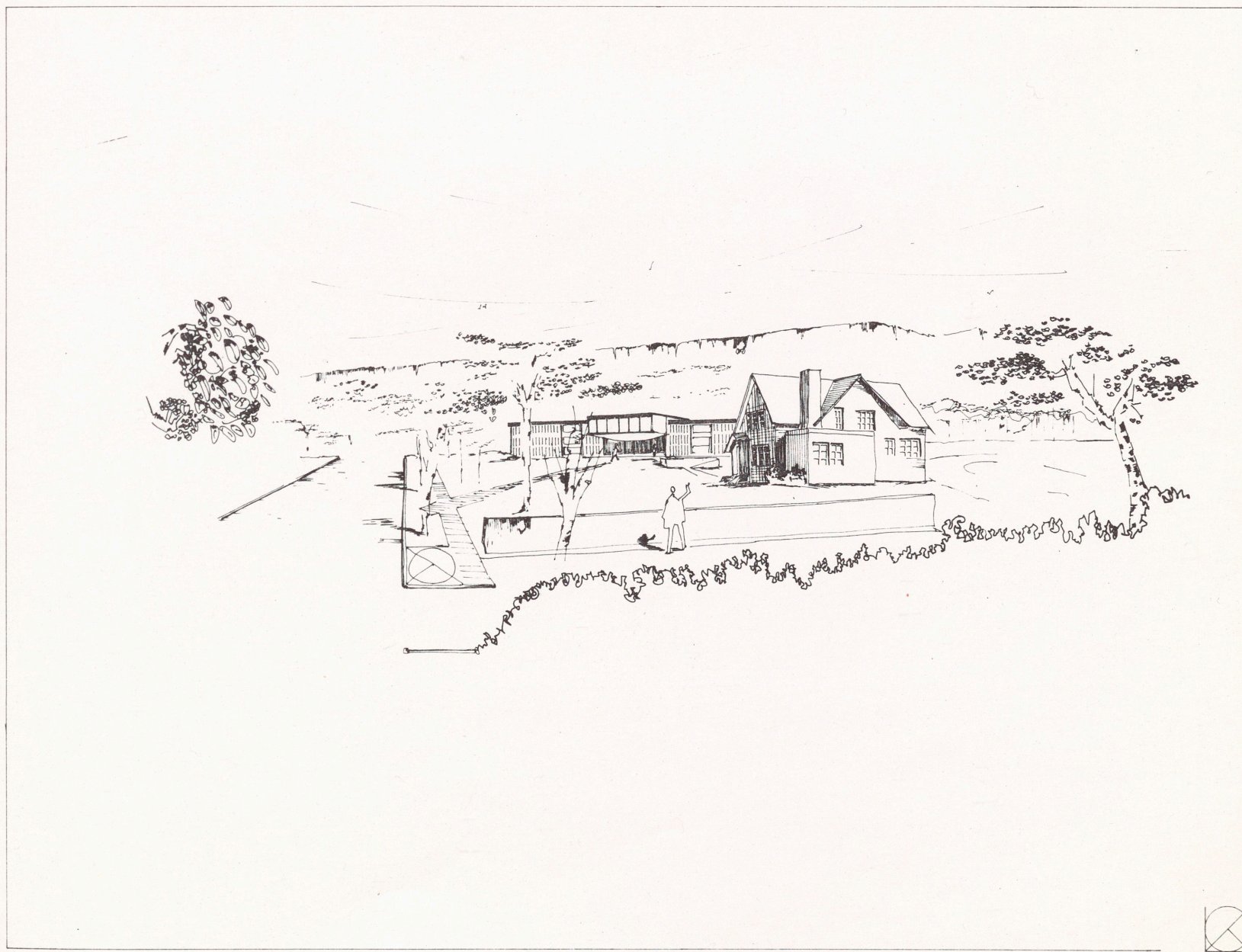
isometric cavalier

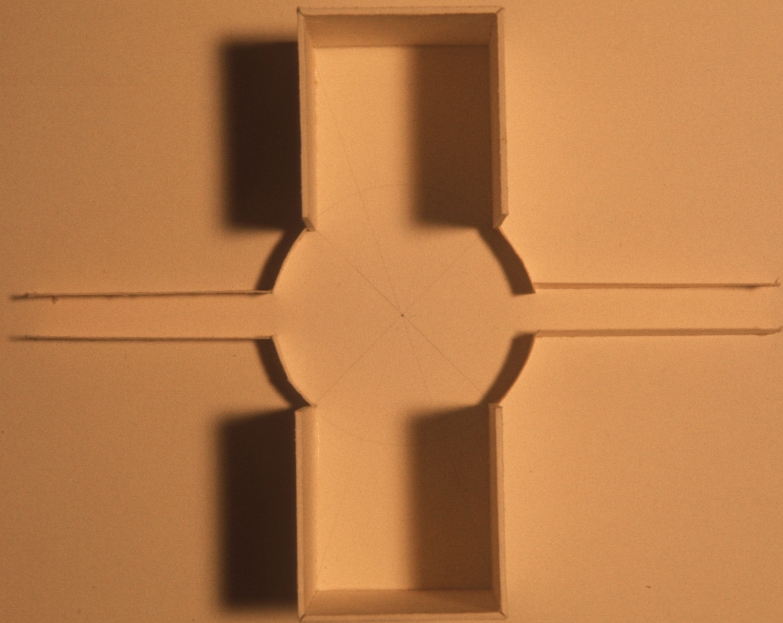
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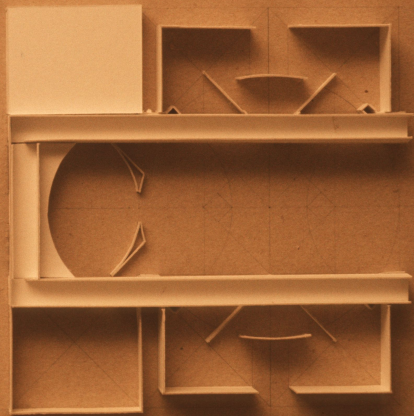
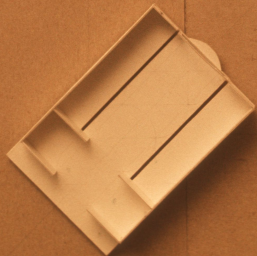
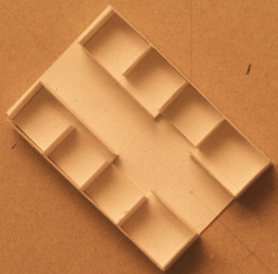


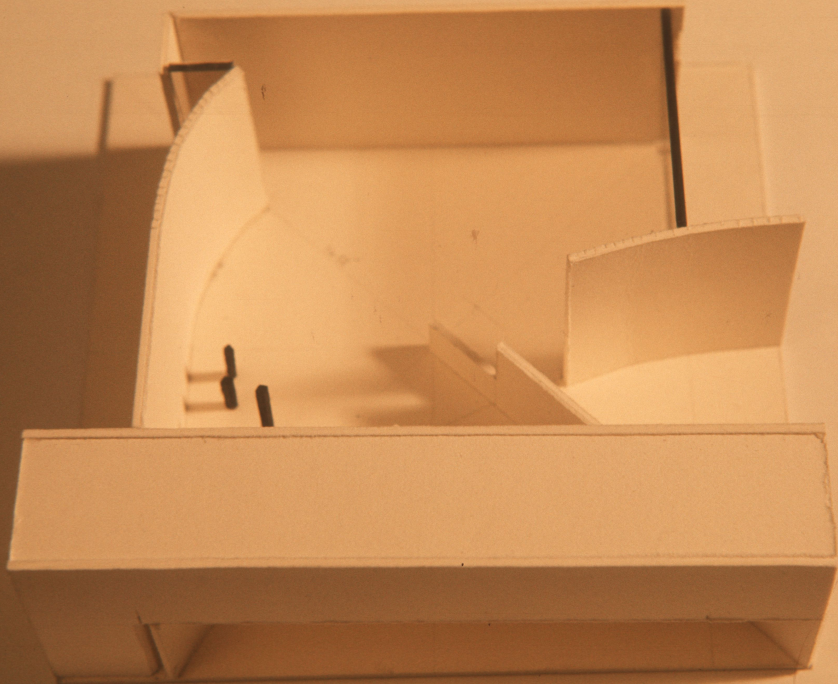


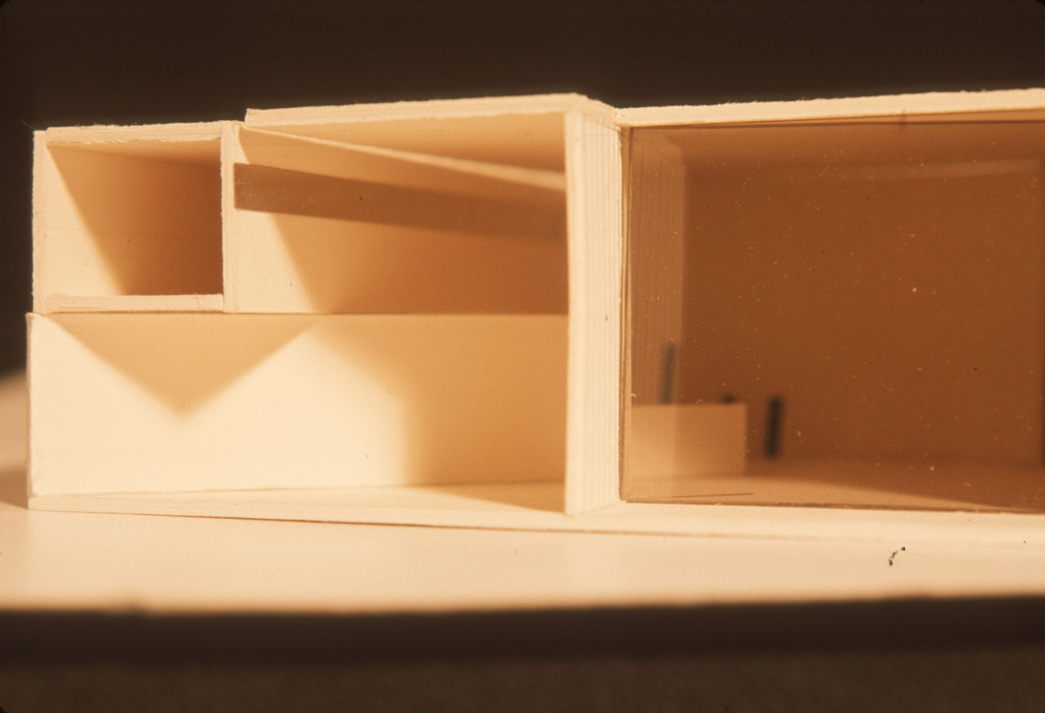


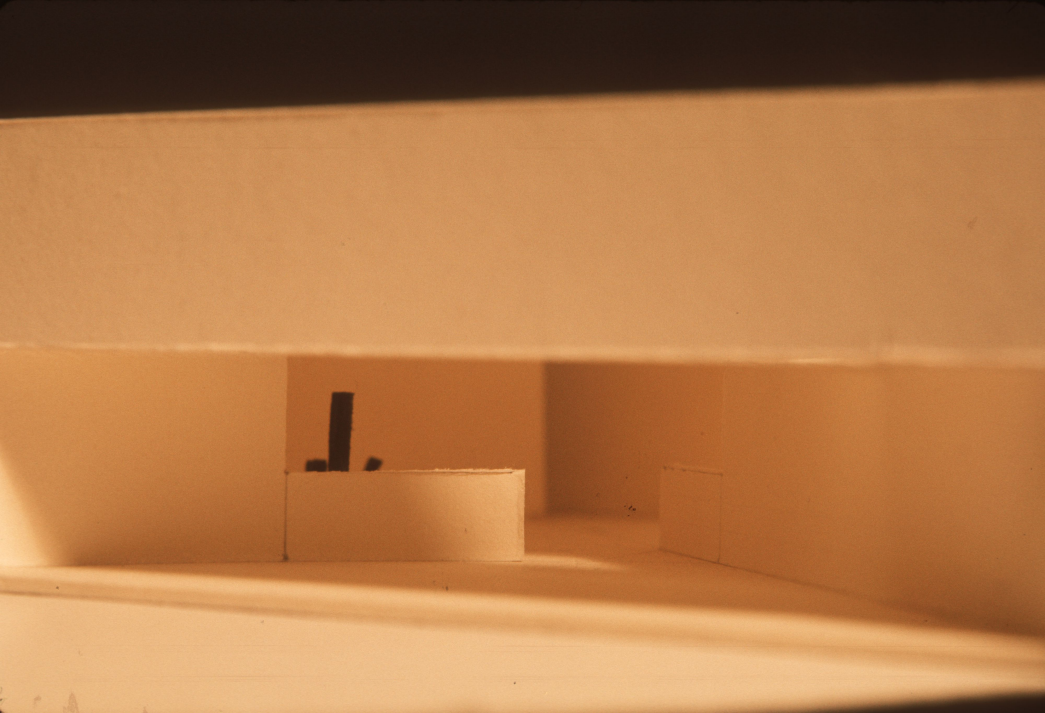






















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