

ON THE PRAIRIE LINES **■the earth shelter■**

by

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Virginia Polytechnic Institute and State
University in partial fulfilment of the
requirements for the degree of :

■MASTER OF ARCHITECTURE■

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approved by:

Donna Dunay, Professor

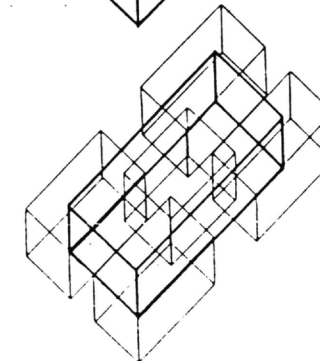
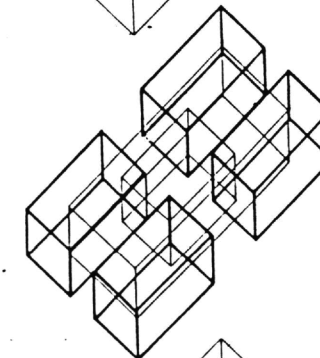
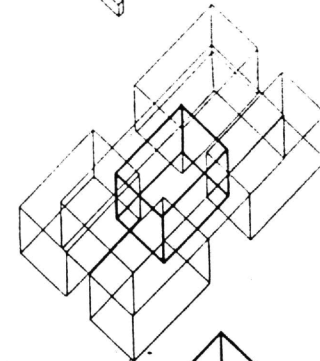
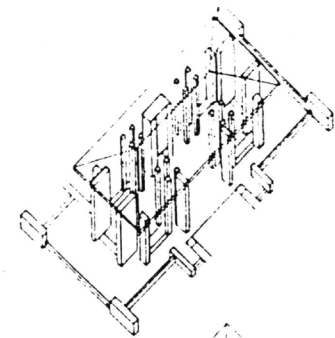
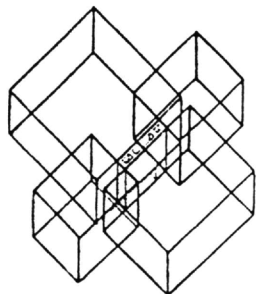
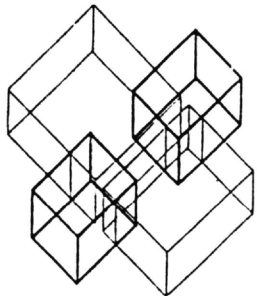
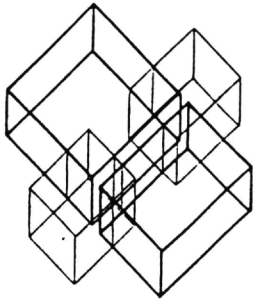
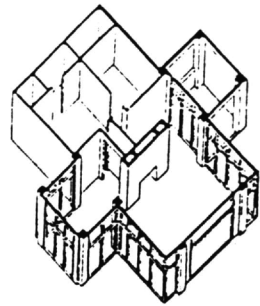
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ABSTRACT

THE THESIS OF THIS PROJECT FOCUSES ON SOME POSSIBILITIES FOR PRESENT DAY INTERPRETATION OF THE PRAIRIE STYLE AS IT RELATES TO THE THIRD DIMENSION I.E. TRYING TO USE FRANK LLOYD WRIGHT AS A DEPARTURE POINT FOR MY PERSONAL DESIGN EXPLORATIONS.

I CONSIDER THIS THESIS PROJECT TO BE AN IMPORTANT STEP IN THE ONGOING PROCESS OF MY PERSONAL DEVELOPMENT AS AN ARCHITECT LOOKING FOR SOME NEW IDEAS IN THE REALM OF THE THIRD DIMENSION.



ACKNOWLEDGEMENTS

**I WOULD LIKE TO THANK MY GRADUATE
COMMITTEE MEMBERS FOR THEIR
GUIDANCE
IN THE DEVELOPMENT OF THIS PROJECT.
I DO APPRECIATE THEIR TOLERANCE,
KINDNESS AND MORAL SUPPORT.**

**ALSO I WOULD LIKE TO THANK
WHO MADE MY VISIT
IN THIS COUNTRY POSSIBLE.**

DEDICATION

**TO MY SON
WHO I BELIEVE WILL BECOME AN
ARCHITECT
ONE DAY AND WILL ACCOMPLISH
WHAT FRANK LLOYD WRIGHT ONCE
STARTED
AND WHAT HIS FATHER TRIED TO
DEVELOP FURTHER ON.**

CONTENTS :

I. SIX LESSONS OF A LIFETIME:

***** PRAIRIE STYLE**

***** FRANK LLOYD WRIGHT**

***** JAPANESE**

TRADITIONAL

ARCHITECTURE

***** TADAO ANDO**

***** GREEN**

ARCHITECTURE

***** MARIO BOTTA**

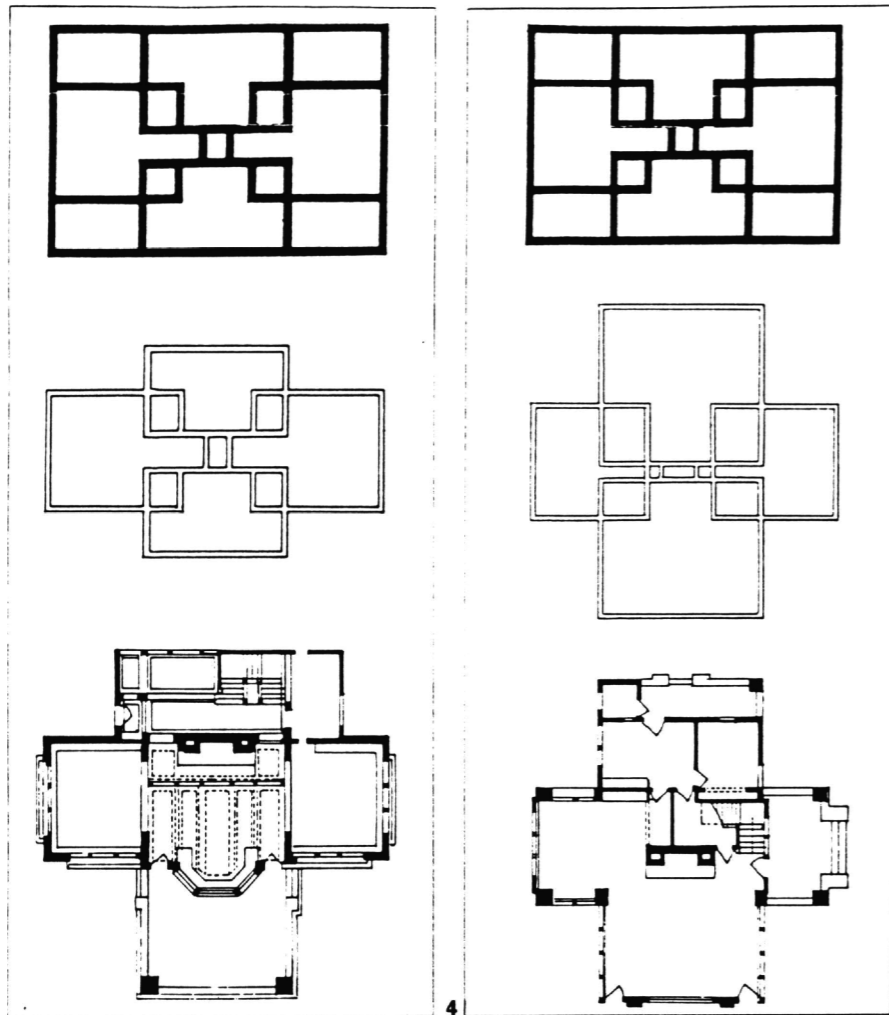
II. THE MODEL.

III. THE PROJECT.

IV. BIBLIOGRAPHY.

V. CURRICULUM VITAE OF THE ARCHITECT.

The interlocking line-idea A (top) derives Wright's Home for a Prairie Town project of 1900. Line-idea A also informs the interlocking plan of the Charles Ross House of 1902. The vestiges of line-idea A are discernible in the first-floor plan of the Ross House, whose walk-in closets project into the central space while serving the end rooms.



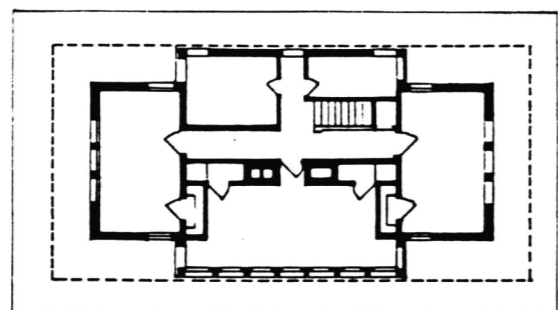
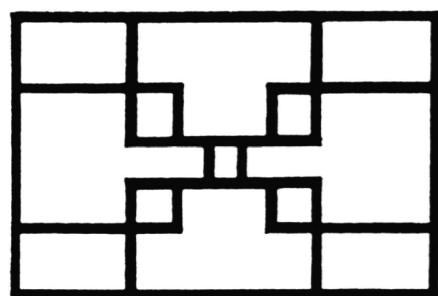
Lesson 1

PRAIRIE STYLE

FRANK LLOYD WRIGHT ANNOUNCED HIS **PRAIRIE STYLE** IN A 1901 LADIES' HOME JOURNAL ARTICLE, CALLING IT A 'CITY MAN'S COUNTRY HOUSE ON THE PRAIRIE'.

THE PRAIRIE HOUSE QUICKLY IDENTIFIED ITSELF BY ITS:

- *** GROUND-HUGGING HORIZONTAL LINES
- *** WIDELY PROJECTING EAVES, EMBRACING SPACE BEYOND THE WALLS AND THUS MAKING THE OUTSIDE A PART OF THE HOUSE TERRITORY.
- *** CASEMENT WINDOWS WITH STAINED GLASS. WRIGHT NEVER CONSIDERED THE WINDOW ONLY AS A SOURCE OF LIGHT - FOR HIM THIS HAS ALWAYS BEEN AN OPPORTUNITY TO MAKE A STATEMENT.
- *** WRIGHT'S DECORATIVE MOTIVES FOR HIS "ORGANICALLY" INSPIRED PRAIRIE HOUSES WERE DRAWN FROM FLOWERS AND OTHER BOTANICAL FORMS WHICH HE MODIFIED BY THE APPLICATION OF GEOMETRIC PRINCIPLES.



"...Spacial concepts can influence

lifestyles..."

Kazunari Sakamoto

' Space as an Environment '

Lesson 2

FRANK LLOYD WRIGHT



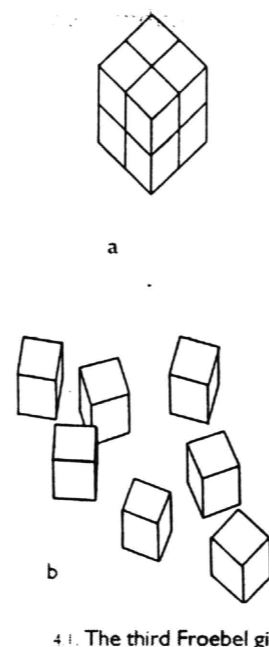
I. The Froebel lessons:

The Kindergarten Guide: *The child is first taught to take the cube out of the box, undivided, in order to inculcate alike the order and the idea of completeness.*

Wright: *Any buildings should be complete, including all within itself. Instead of many things, one thing.*

The Kindergarten Guide: *In life we find no isolation. One part of the cube, therefore, must never be left apart from or without relation to the whole. The child will thus become accustomed to treat all things in life as bearing a certain relation to one another.*

Wright: *Perfect correlation, integration is life. It is the first principle of any growth that the thing grown be no mere aggregation...and integration means that no part of any thing is of any great value except as it be integrated part of the harmonious whole.*



II. THE LESSON OF WALT WHITMAN :

"...Going where I list, my own master, total absolute, listening to others, considering well what they say, pausing, searching, receiving, contemplating, gently, but with undeniable will, divesting myself of the holds that would hold me. I inhale great draughts of space. The east and the west are mine and the north and the south are mine... Beware of the moral ripening of Nature. Beware what precedes the decay of the ruggedness of states and Man. Beware of civilization."
"Leaves of Grass"

"...Space. The continual becoming: invisible fountain from which all rhythms flow and to which they must pass. Beyond time or infinity..."

Frank Lloyd Wright

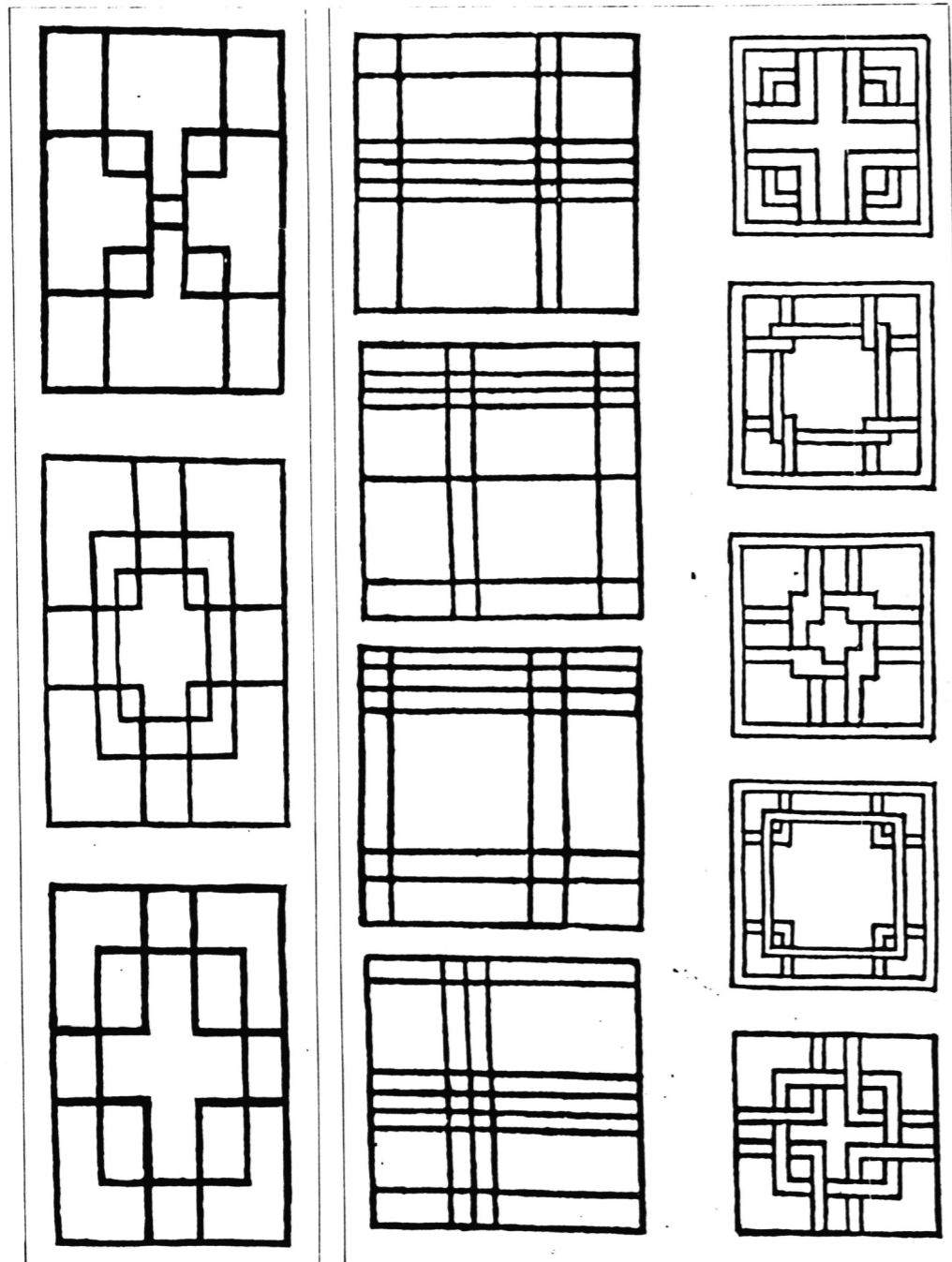
III. THE LESSON OF FRANK LLOYD WRIGHT:

"...There is more beauty in a fine ground plan in almost any of its ultimate consequences...In itself it will have rhythms, masses and proportions of a good decoration if it is the organic plan for an organic building with individual style."

Frank Lloyd Wright

"In the cause of Architecture"

Lesson 3 : JAPANESE TRADITIONAL ARCHITECTURE



*** THE OUTDOOR ARCHITECTURE FOLLOWS NATURE

*** ATTUNEMENT TO NATURE

*** WATER IS USUALLY USED FOR ALLOWING MORE LIGHT TO PENETRATE INTO THE BUILDING

*** IN JAPAN TO BE EMPTY MEANS TO BE FULL OF POTENTIAL FOR SOMETHING NEW - THE JAPANESE HOUSE IS LIKE A STAGE IN A THEATER: YOU BRING FURNITURE TO CREATE A SCENE.

VOID = HOLLOW = EMPTY SPACES

*** PAUSES ARE IMPORTANT = THE POWER OF SUGGESTION

MA = SPACE & TIME

"... PERCEIVE NOT THE OBJECTS BUT THE DISTANCE BETWEEN THEM,
PERCEIVE NOT THE SOUNDS BUT THE BLANKETS IN BETWEEN,
THEY MARK THE BOUNDARIES OF THE SPACE..."

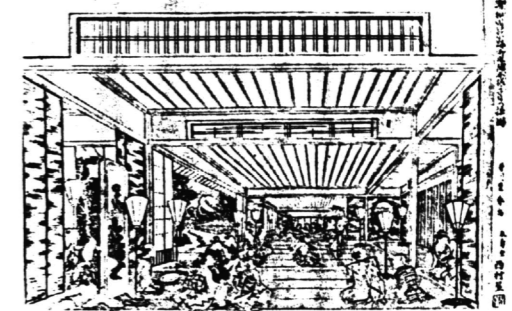
*** COMPLEMENTARY OPPOSITES :

DARK - LIGHT

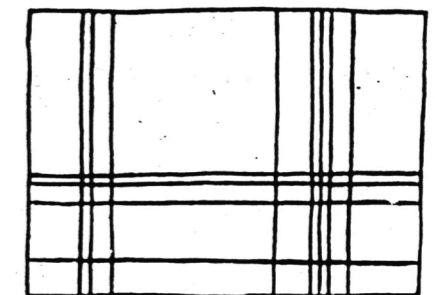
MOTION - STILLNESS

SOUND - SILENCE

*** ANYTHING ONE TOUCHES IN A HOUSE COULD BE MADE OUT OF NATURAL MATERIALS - THIS CONTRIBUTES TO THE HUMAN FEEL OF THE HOUSE.



9-48. Plate from *The Japanese Print: An interpretation.*



Lesson 4 : TADAO ANDO

***"...MAKING ARCHITECTURE IS LIKE MAKING A WAR - THERE IS NO SATISFACTION ..."

***TRY TO CONSIDER ALL POSSIBILITIES BEFORE STARTING A PROJECT .

*** THERE ARE ALWAYS UPS AND DOWNS IN ARCHITECTURE !

***"...MAKING ARCHITECTURE IS LIKE RIDING A BICYCLE - IF YOU STOP PEDDLING YOU STOP MAKING A PROGRESS..."

***"...FRANK LLOYD WRIGHT LEARNED FROM JAPANESE ARCHITECTURE HOW TO CREATE A SPACE..."

***TO ACCEPT NATURE AND LIVE IN HARMONY WITH IT.

***VARIATIONS CREATED BY SEQUENCES OF DARK AND LIGHT SPACES - NATURE WAS BROUGHT INTO HIS PROJECTS IN THE FORM OF LIGHT.

*** TO TRY TO CREATE SPACES FOR PHYSICAL COMFORT AND SPIRITUAL ENRICHMENT.

*** MEANINGFUL USE OF SPACE

*** TRY TO CONVEY THE MOVEMENT OF NATURE THROUGH ARCHITECTURE.

*** DIFFERENT ROOMS - DIFFERENT VIEWS.

*** TO CREATE FREEDOM THROUGH CONFINEMENT.

Lesson 5 : GREEN ARCHITECTURE

**THE GREAT CHALLENGE THAT
FACES ALL OF US WHO ARE
CONCERNED WITH GREEN
ISSUES IN ARCHITECTURE IS
TO CREATE BUILDINGS AND
SPACES THAT ARE AS
EMOTIONALLY SATISFYING AS
THE PLACES THAT WE ALL
RESPECT AND LOVE WHICH
HAVE BEEN GIVEN TO US BY
OUR FOREFATHERS, WHO
KNEW BY INSTINCT, UNTIL THE
NINETEENTH CENTURY, HOW
TO MAKE PLACES FOR THE
HOMECOMING OF MANKIND.
THE CHALLENGE TO THE
ARCHITECTURAL
IMAGINATION NOW IS TO
CREATE PLACES AS FINE AND
AS HUMANLY REWARDING
AS THOSE WHICH HAVE BEEN
LEFT TO US FROM THE PAST.**

LESSON 6

MARIO BOTTA

LET'S TALK ABOUT ARCHITECTURE

(an imaginary conversation between graduate student
and famous architect)

Usually when two architects get together the topic is "ARCHITECTURE". And it is always an interesting conversation but if one of them happens to be Mario Botta it becomes exiting experience.

Y.G.: I think that one of the most important issues in architecture has always been the relationship between the building and the site. Maybe it is so because each site is so unique and each project becomes a challenge to create a space which no one has experienced before.

M.B.: "I would call that "building the site" with respect to the human scale and I also believe that making architecture signifies above all the search for a new equilibrium between man and his surroundings."

Y.G.: That is a very good point, because it is my belief that in each and every project the architect have to consider three quite important factors: NATURE, HISTORY, FUNCTION.

M.B.: "In my opinion it is necessary that architecture reflect to some degree the history of its own time. There is a very beautiful definition which I enjoy recalling every now and then, namely that architecture is the formal expression of history..."

Y.G.: But sometimes is so hard to define the historic background, to discover the traditional values and try to reconcile past and present in a single project.

M.B.: "We inherited a certain tradition, but today we also have different needs and new aspirations. By means of architecture, we can and must, as is our duty, search for these new modalities of organizing the space of everyday life so that we can be in harmony with our life and time."

Y.G.: And this is the architect's great responsibility because merely satisfying functional requirements does not guarantee a comfortable home. Also I think that architecture provides possibilities for changing the world we live in, isn't that exiting ?

M.B.: "The making of architecture signifies transforming reality. I am attempting to transform this reality, which is always unique. Every single house is a 'unicum' which communicates with a particular landscape, which in turn has its own history, its own culture and possesses, its own stratification to be consolidated and transformed."

Y.G.: That is exactly what makes me believe that there is only one design that would offer the most suitable architectural solution to a particular site, time and client. And the objectives of the architect should be, in my opinion, to find it. This is his great responsibility, too.
Mr. Botta, in the beginning of our conversation we spoke about the significant link between the environment and the building being in harmony with it. But it seems to me that this in no way means familiarity between the two. Please comment on this.

M.B.: "Architecture must be by definition other than nature. Architecture is an artificial act. The only manner of paying our respects to nature is precisely by opposing it, confronting it, by conversing with it while fully aware that architecture is but an artificial element created by man."

Y.G.: And maybe the most powerful tool for 'opposing' to nature are the various kinds of materials...

M.B.: "Today we live in an epoch where there are materials which by themselves are not noble. It is our duty, our work as architects, to make these materials speak, to make them become the highest expression possible of our time."

Y.G.: Maybe one very good example is Frank Lloyd Wright who seems to me had a greater sensibility than others for the structure of the materials - for the peculiar expressions of the different materials. And he proved what you are saying that the good architect can build something special even out of cheap materials.

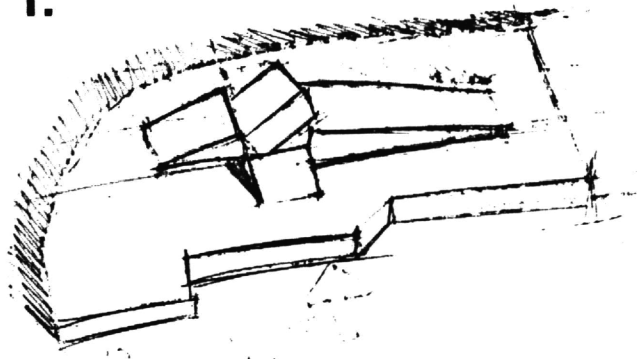
M.B.: "I do believe that any material, if handled properly, can assume the dignity equal to that of marble or gold... A material in itself is an instrument. It all depends on how one uses it. Even with common materials one can make good architecture. In fact, good architecture is always made with such materials. The use of rich materials is an exception to the rule. They ought to be used only on special occasions, in order to be meaningful as conveyors of symbolic or religious values."

Y.G.: At the end I would like you to answer a question, which some of the professors asked me when I started working towards my master degree:
"What sense does it make to do just another project?"

M.B.: "To me, it seems that it would be impossible to think that Picasso could do only twenty paintings during his life. Picasso made twenty thousand paintings and he is Picasso for this reason."

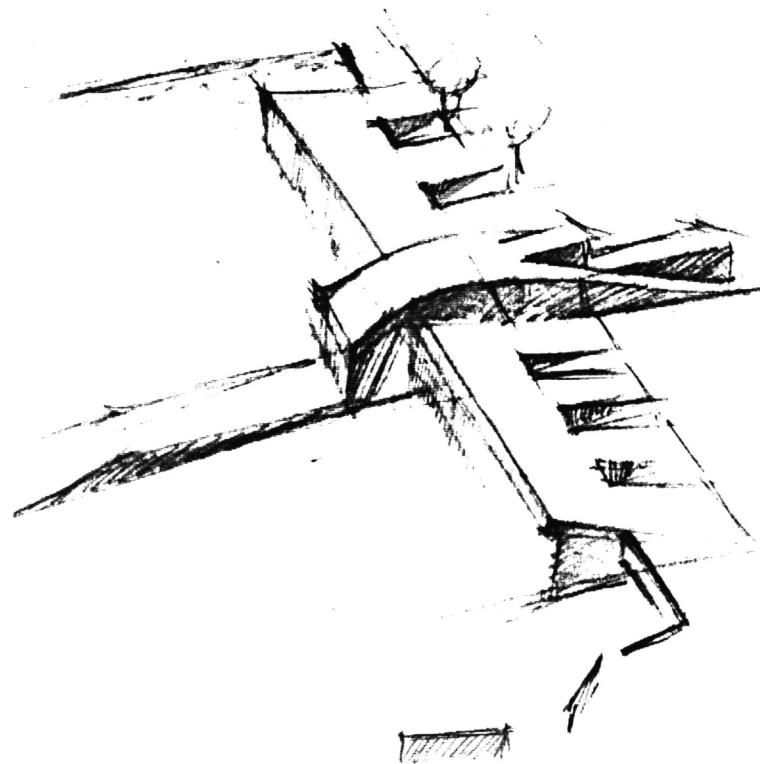
Y.G.: Thanks.

I.

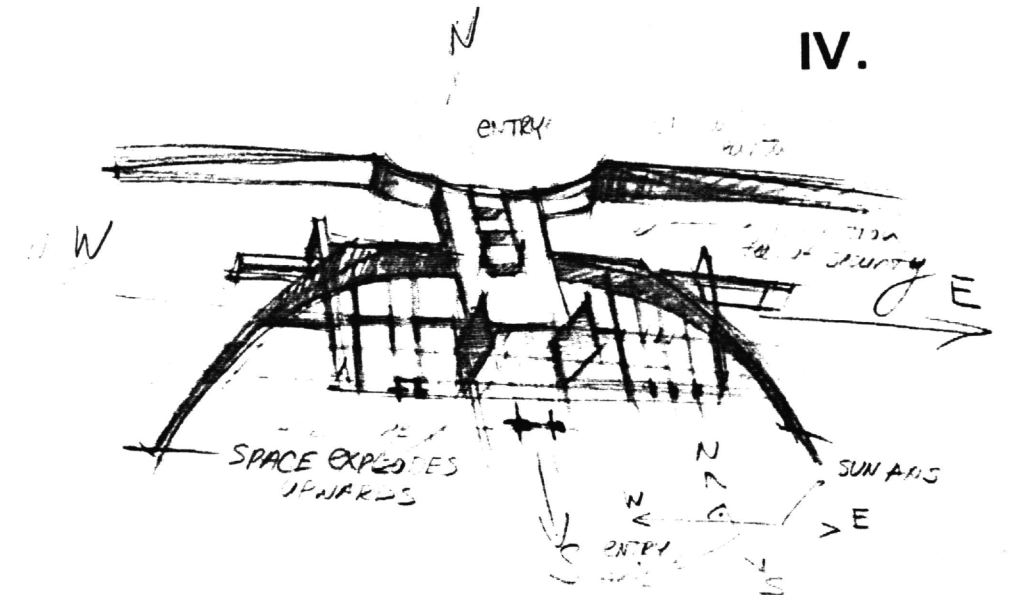


II. THE MODEL IN PROGRESS

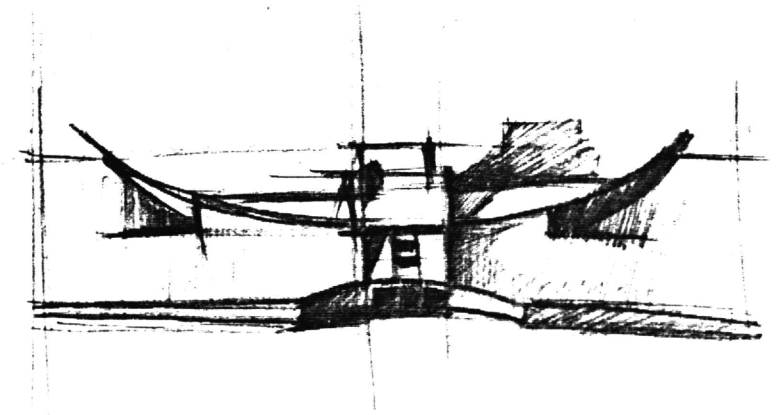
III.



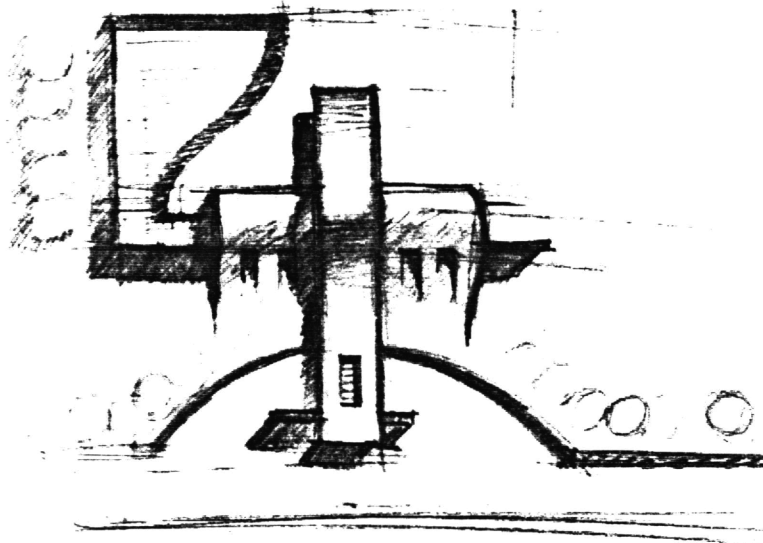
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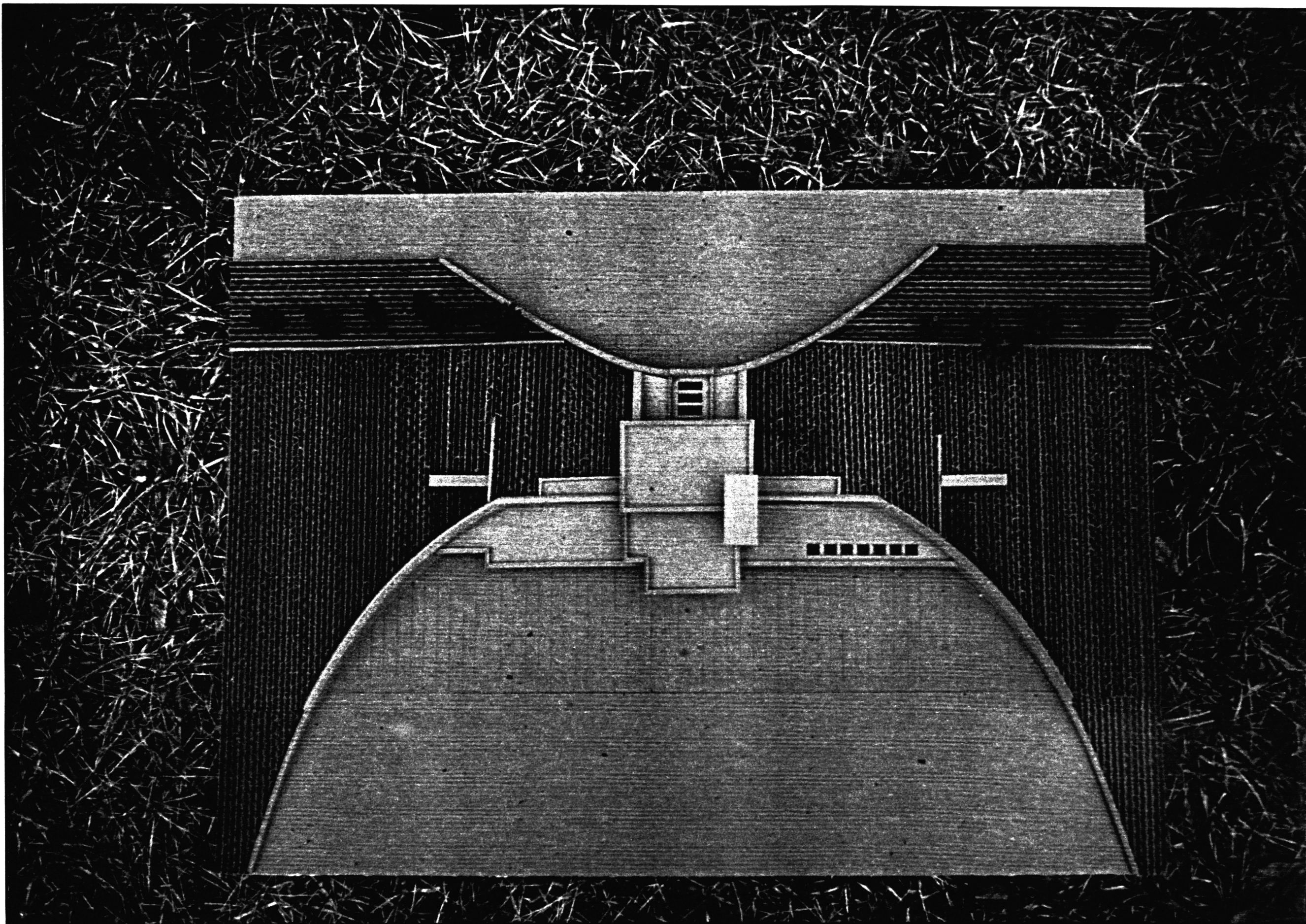


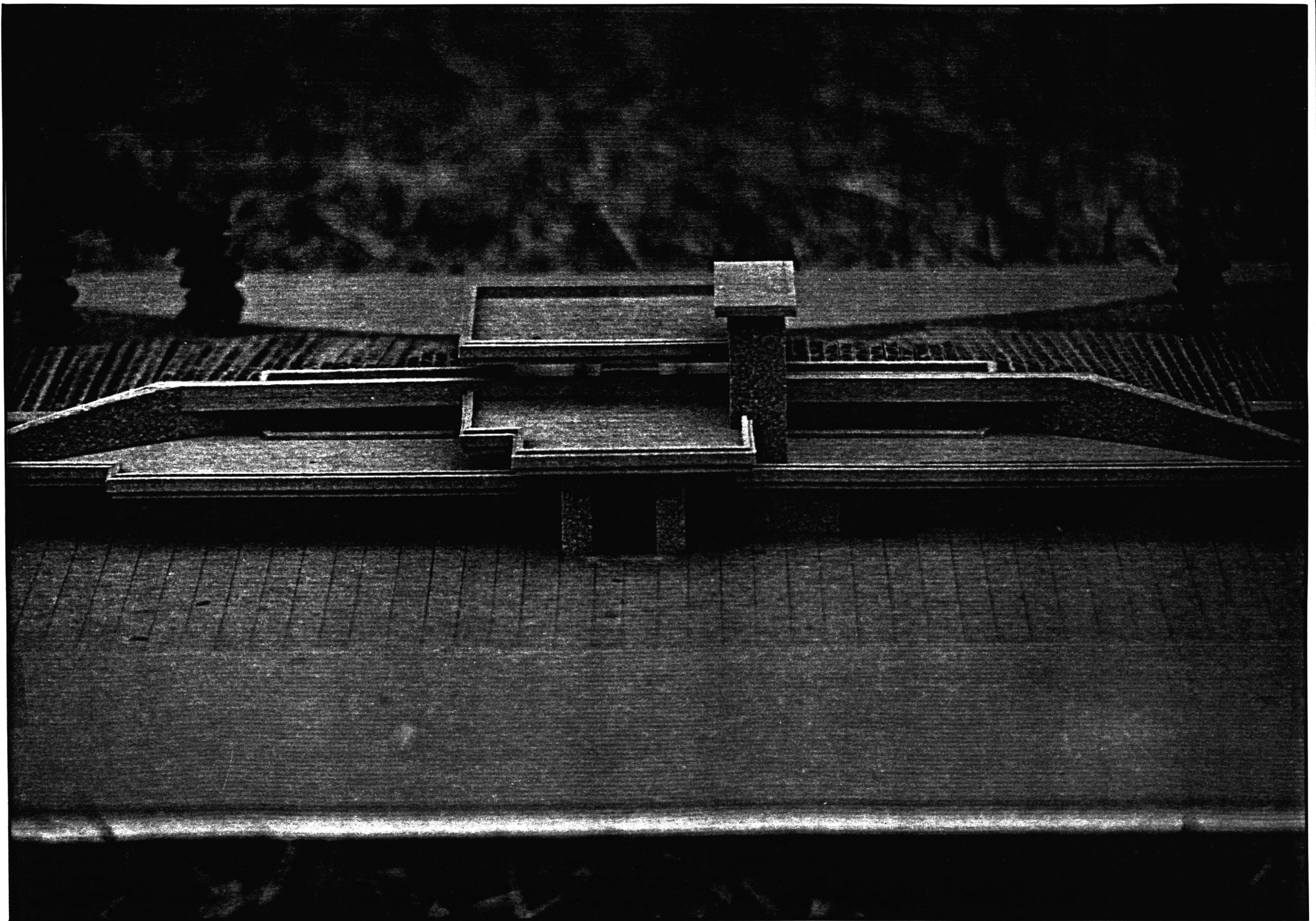
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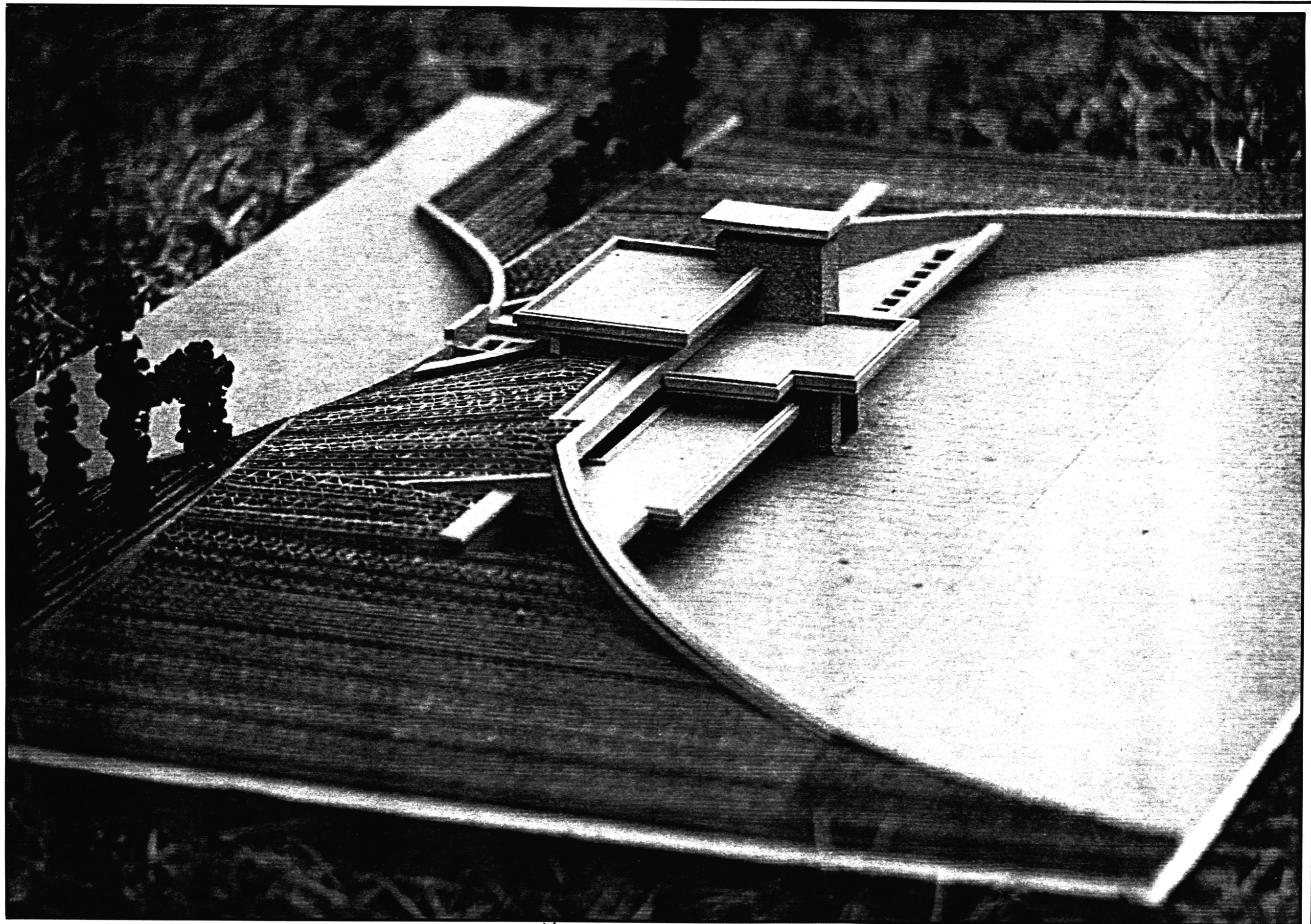


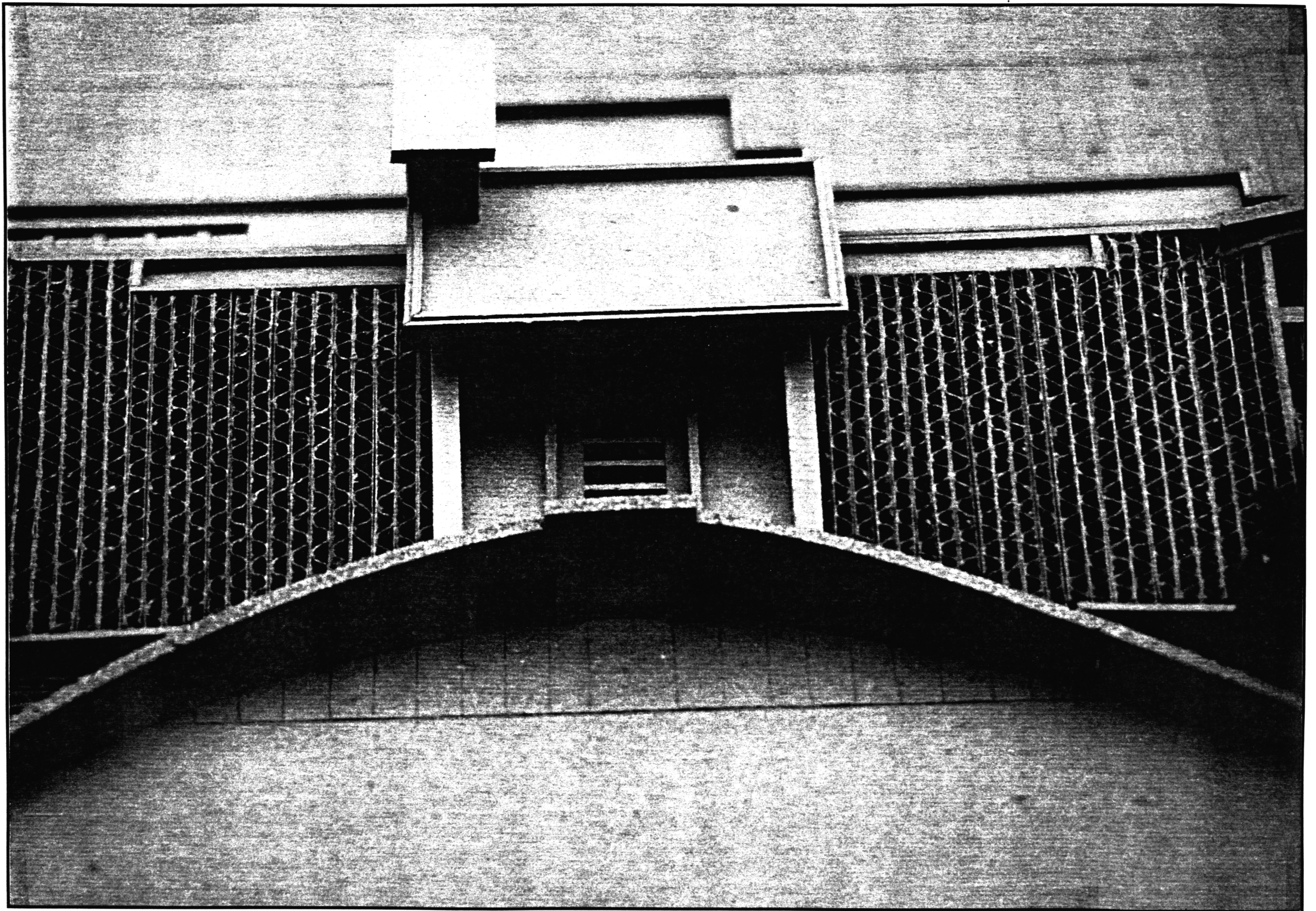
II.











III. THE PROJECT.

***** THE DESIGN PROCESS - AN EVER LASTING PROCESS OF REFINEMENT**

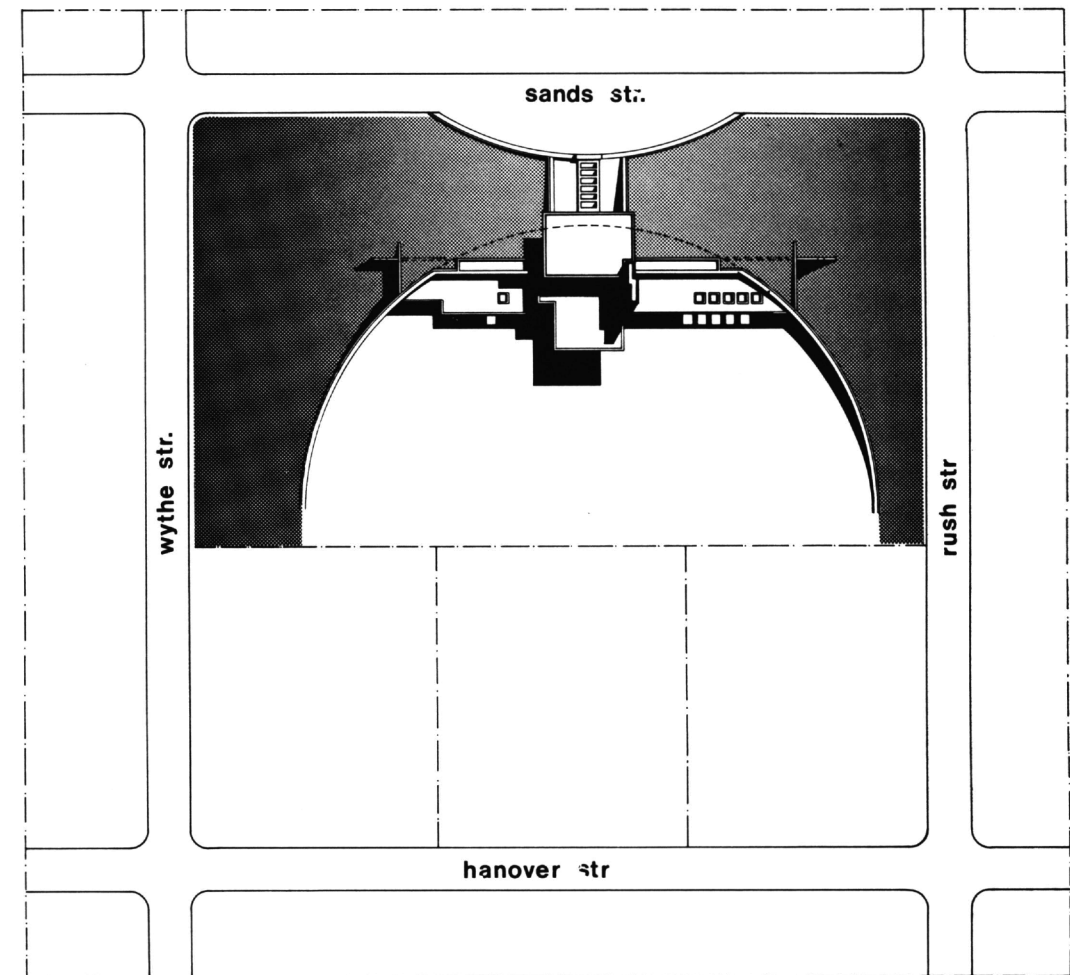
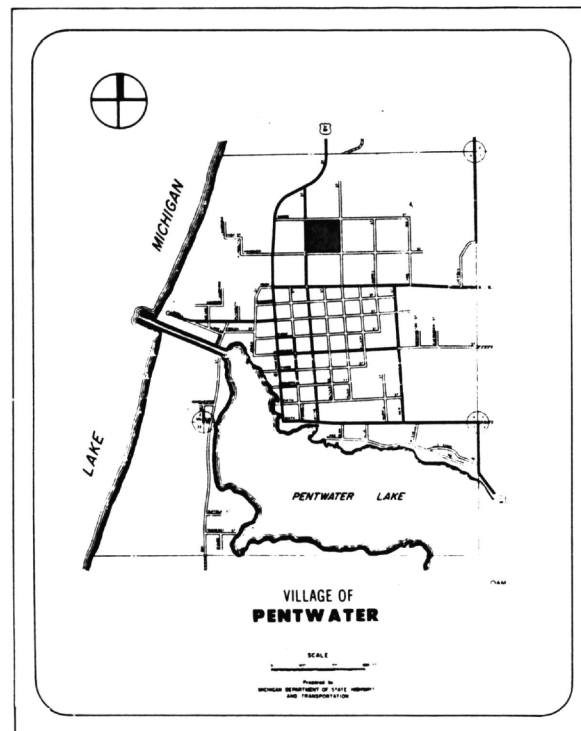
For Frank Lloyd Wright as well as for me, achieving the best possible design for a building is a continual process. Years later, he even would alter drawings and photographs for publication in order demonstrate his most current thinking. Even after construction Wright continued to improve the design in his mind and on at several occasions was able to try his new idea.

***** THEME VARIATIONS AND EXPLORATIONS.**

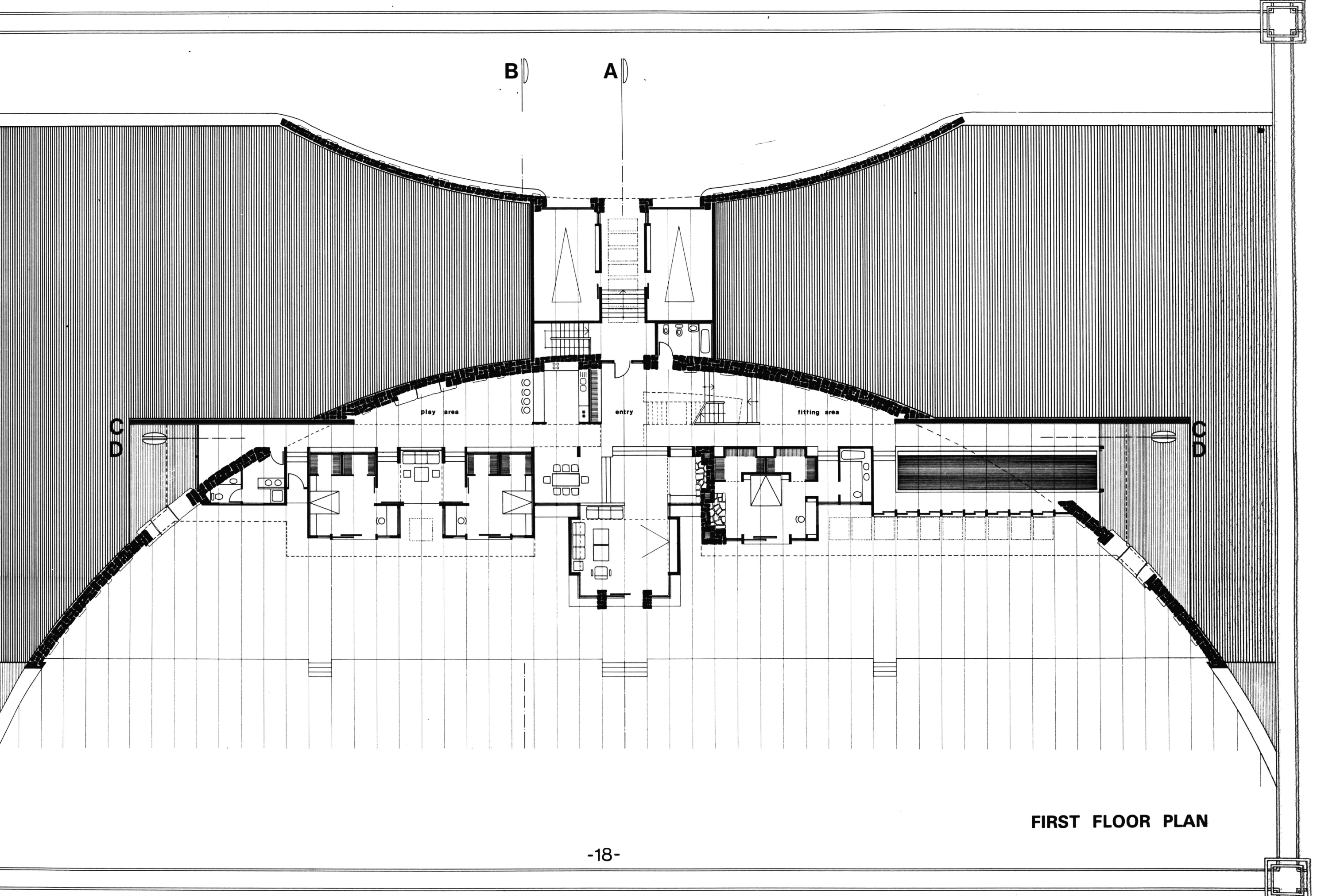
Since the opportunities of making alterations to a given building were few, Frank Lloyd Wright often modified and reworked a design in another commission. For him these commissions with similar programs were opportunities to use an earlier solution and explore its other possibilities or make improvements upon it, based on Wright's ever - growing, ever - developing sense of what Architecture should be.

This is the most exiting aspect of the design process for me as an architect and I am really looking forward to build this thesis project. It is my believe that in the process of construction I would be able to improve the design and reveal its potential especially in the third dimension.

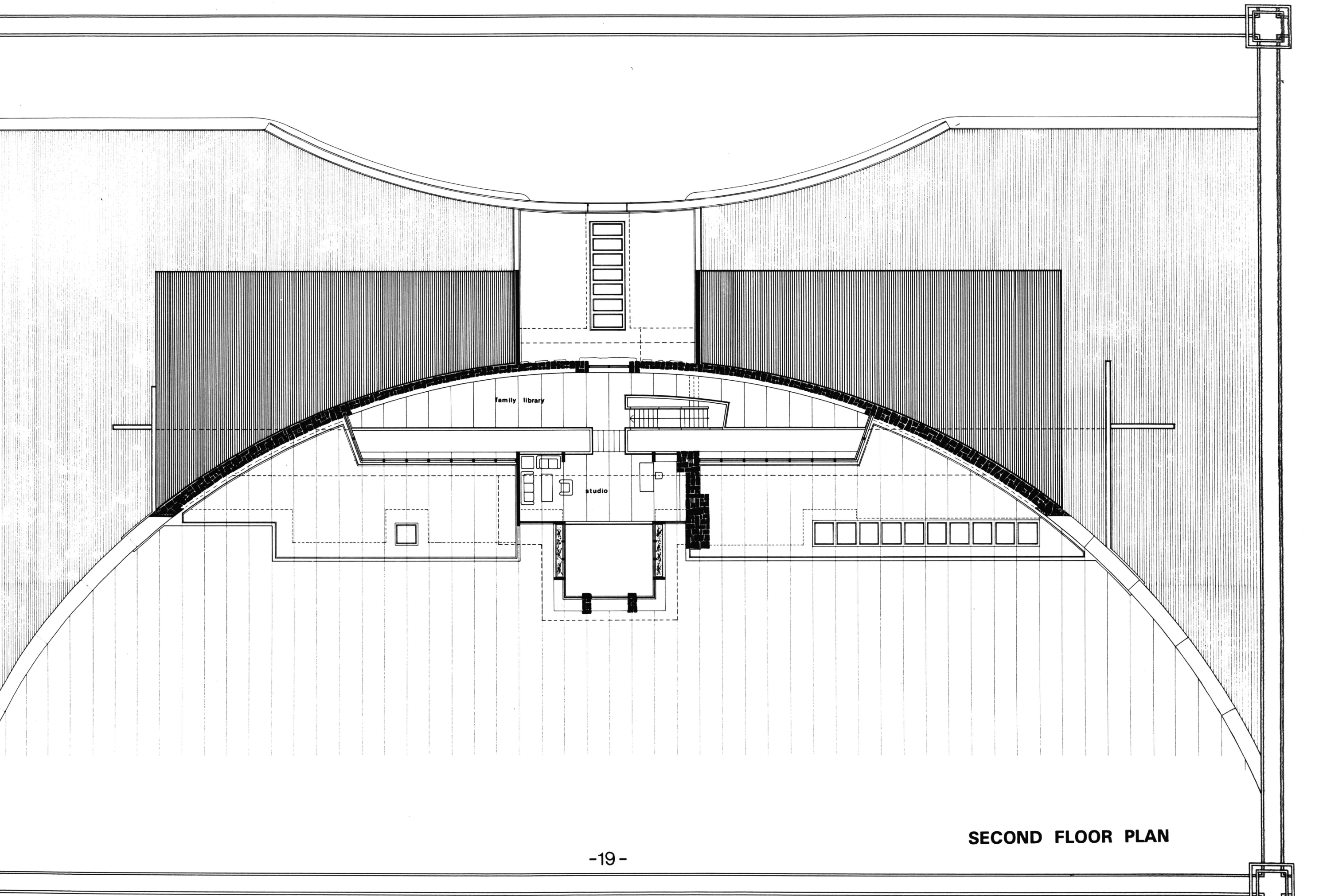
PENTWATER RESIDENCE " THE EARTH SHELTER "



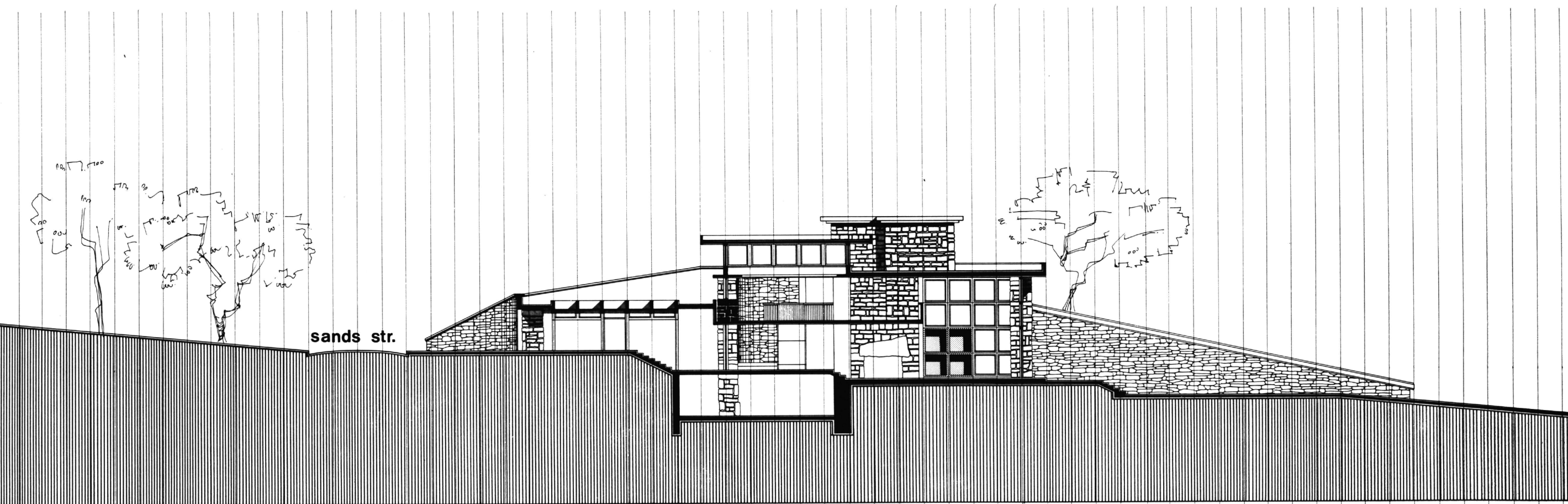
SITE PLAN



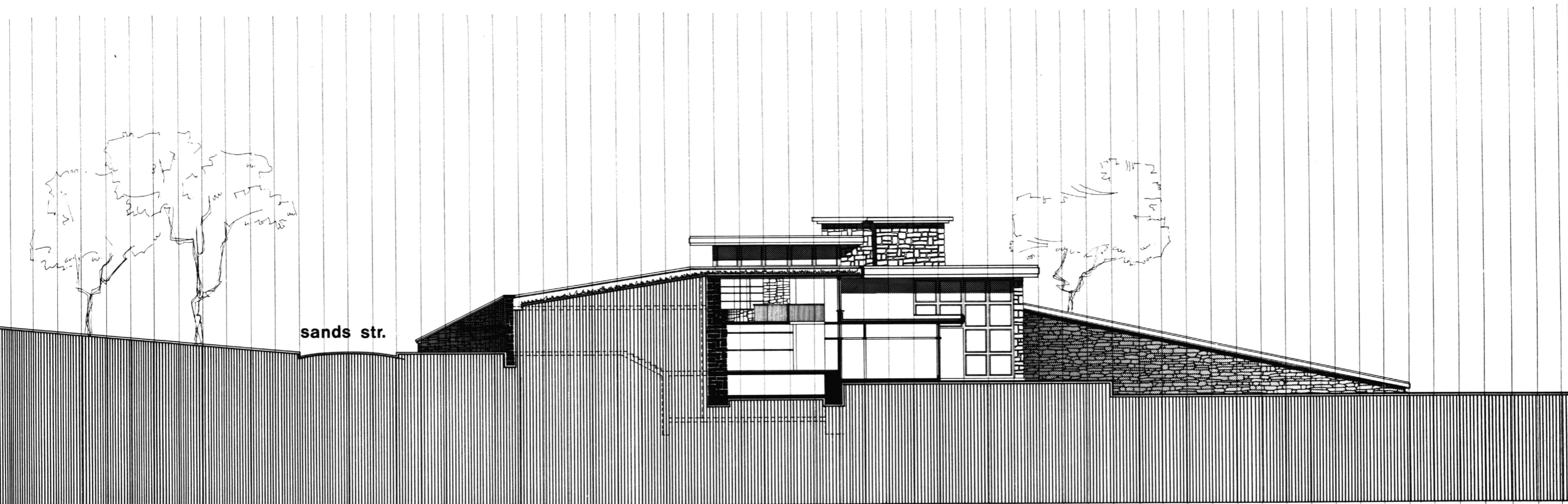
FIRST FLOOR PLAN



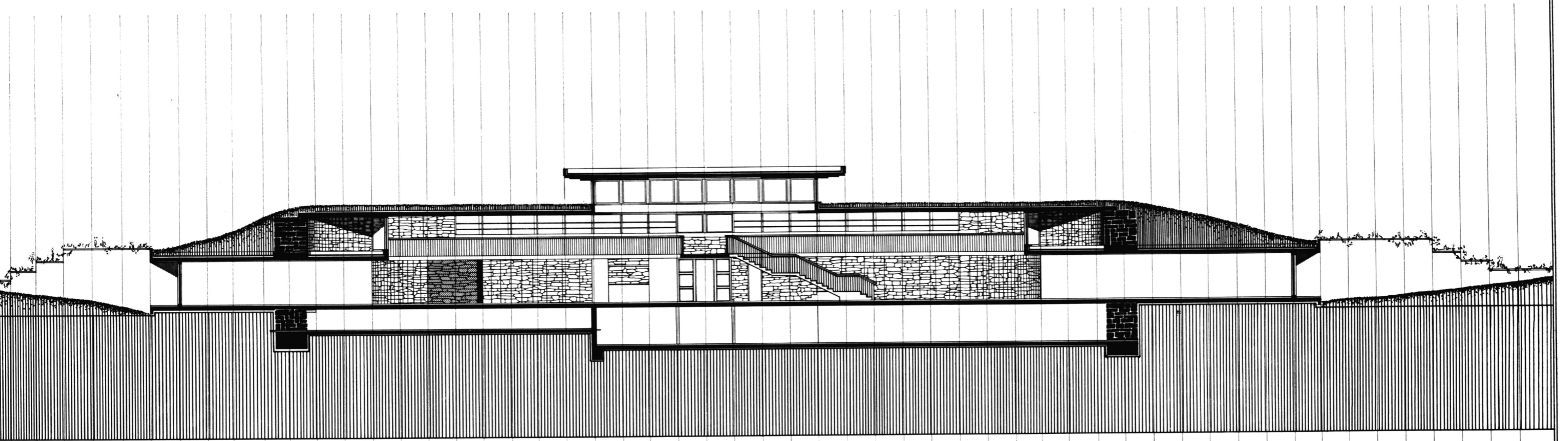
SECOND FLOOR PLAN



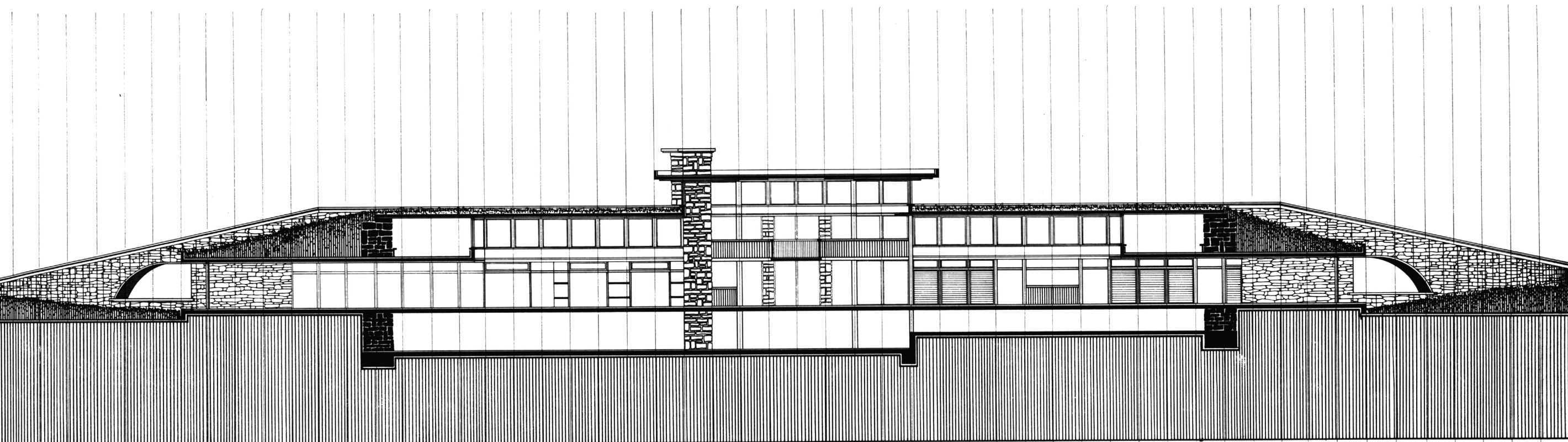
CROSS SECTION A - A



CROSS SECTION B - B



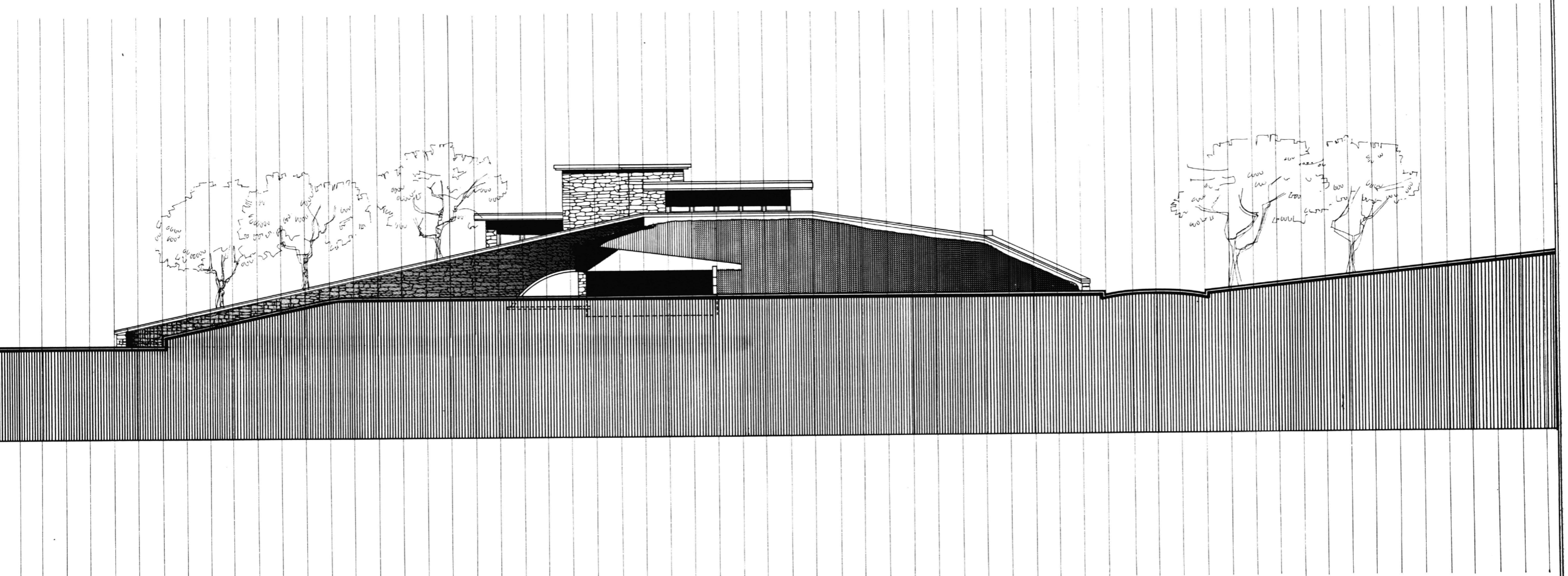
CROSS SECTION C - C



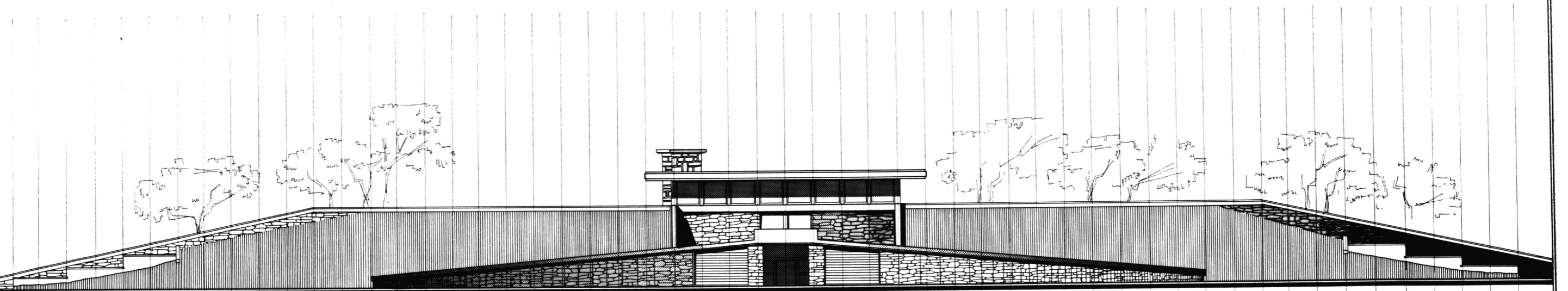
CROSS SECTION D - D



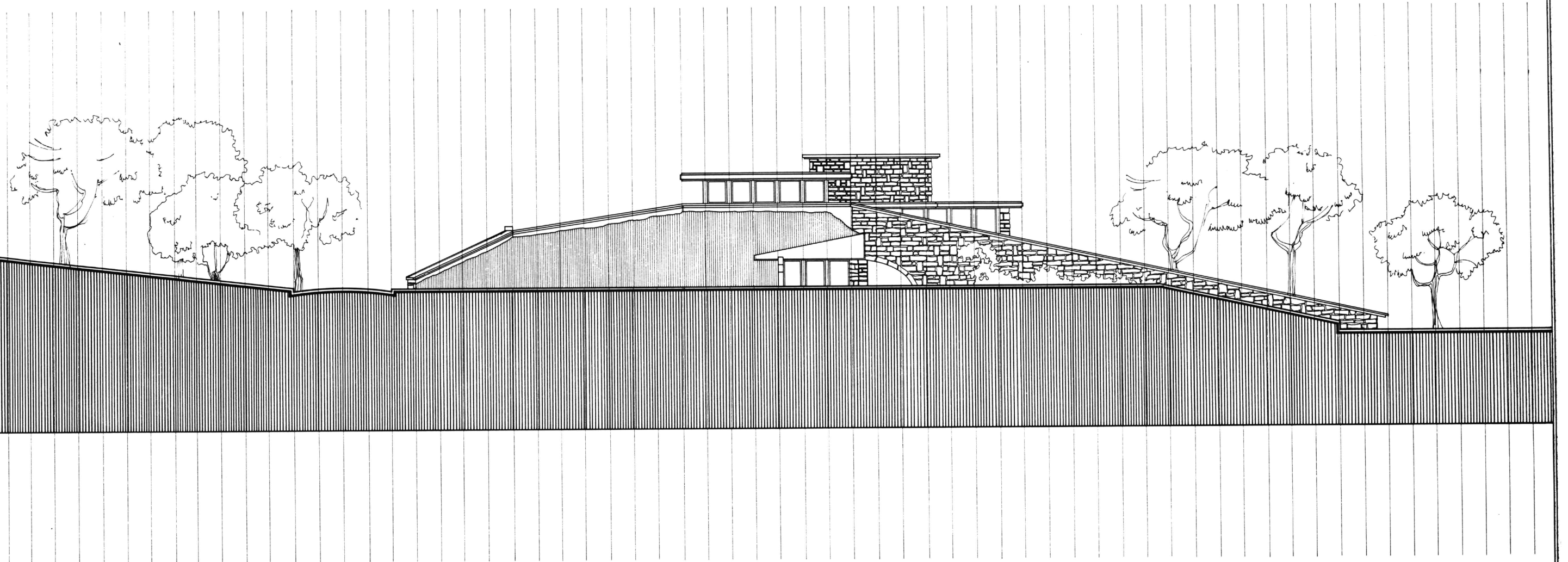
SOUTH ELEVATION



EAST ELEVATION



NORTH ELEVATION



WEST ELEVATION

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