

a country

h o u s e

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Thesis submitted to the School of Architecture and Urban Studies
of the Virginia Polytechnic Institute and State University in partial fulfillment of the requirements
for the degree of

Master
of Architecture

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July 31st. of 2006
Blacksburg, Virginia

Keywords:
house
country
grounding
architecture

a country house

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Abstract

A house is a shelter that brings protection and intimacy. These functions might be considered to be more than physical. Ancient Greek houses often had the lintel scripted "Know Thyself". Those houses had elements intended to bring man closer to an inner life necessary to know thyself. Such elements were related in their social, political and religious aspects. Roman houses changed the internal ritual, but kept primordial elements related to individual physical and spiritual development. In these traditions there are principles that are adaptable to contemporary living. The country house is in part a proposition to understand these principles and brings them into a new architectural language.

This thesis is a borrowing of traditions while 'grounding' them to a particular place. This house stands on a site in Blacksburg. It is oriented according to the sun path and the views from this site that provide the grounding.

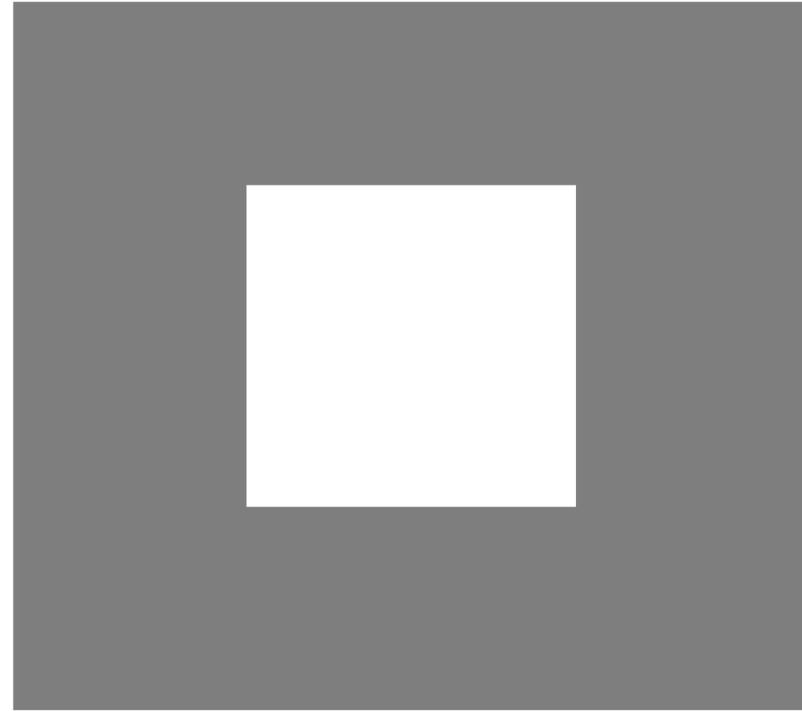
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Dedication

It is dedicated to God, my parents, family and friends.

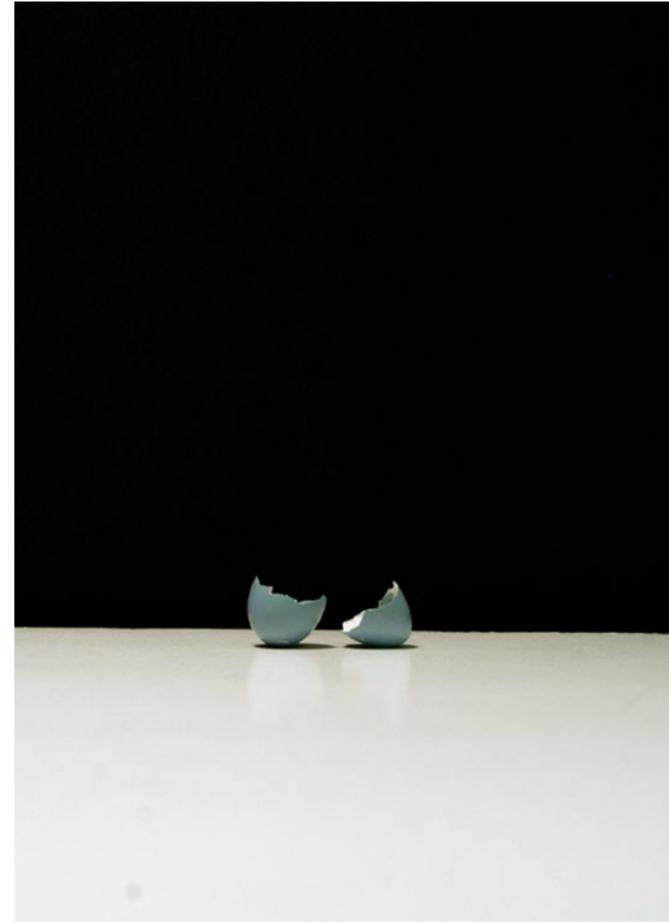
Thank you to my professors and committee members for your unconditional guidance.



A cube with an open center is the idea chosen as a conceptual generator of this house.

The idea is transformed when it is grounded in the site.

The idea



It can be argued that historically the idea of country house has been an evolving transformation in response to changes in the way people have lived.

My idea of house is a place that brings to life a building; it has a heart and a body. The heart is open to the sky and the body is erected firmly on the ground. The heart was an implivium, a circular chamber, a hall or a court yard and in the future it may be named something unimagined. My first proposition is that a house must include a heart.

The house invites its visitors and at the same moment it frames part of the exterior to penetrate and become part of the house. Therefore in addition to the heart, the site and orientation are important. In the exterior-interior relationship the house protects and brings people to the interior. There is a balance between the inward orientation to the heart and an outward orientation, grounding the house to its site.



The house should be
'grounded' to its site.

The ground provides the
foundation for the project.

Beyond the physical grounding
the site brings to life the house.

It gives direction and a
sense of belonging and to a
particular view.

Grounding

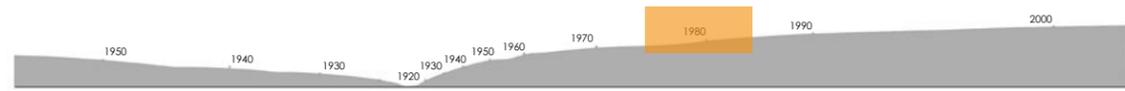


The town of Blacksburg is located in southwest Virginia and is surrounded by mountains and crossed by creeks. The beautiful landscape can be seen from almost any place in town.

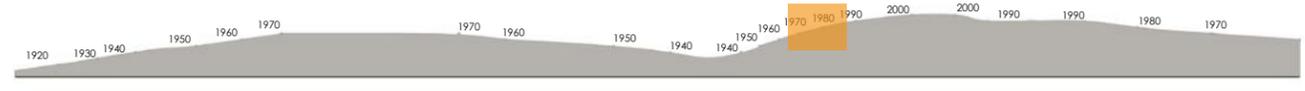
The original town layout was based on a sixteen square grid that is rotated almost forty five degrees from true North-South. This orientation allows each building to receive direct sun light during the day.

The site for the house is located on a hill in Heritage Park. This site is surrounded by Brush Mountain, Tom's Creek and fields formerly used as a farm. Each of these elements contributes to the distinctive character of Blacksburg. A town well known for being the home of Virginia Tech, but most important its residents know Blacksburg for its scenery.

To the site



Section A-A'



Section B-B'

Topographical sections
no scale



view of the site from
Glade Road

The house is located in elevation between the 1970 ft. and 1980 ft. ASL topographical levels of the hill. In an effort to vertically 'ground' the house to its site, topographically the house is divided in two areas; an upper and a lower.



south

west

Views of of this scenery were framed to further ground the house.

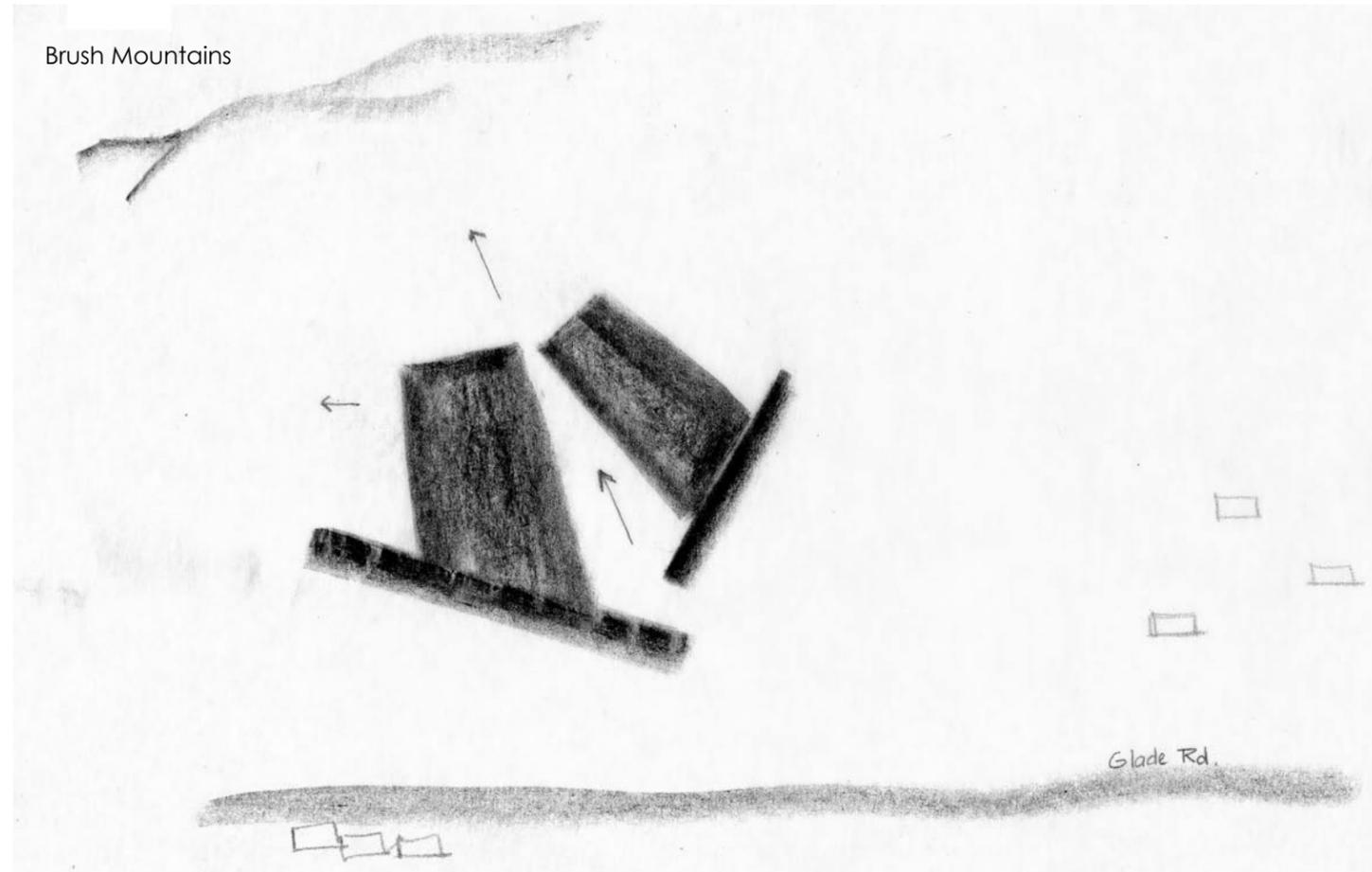
The most beautiful views are to the southwest and to the northeast of the site.

To the view



west

north



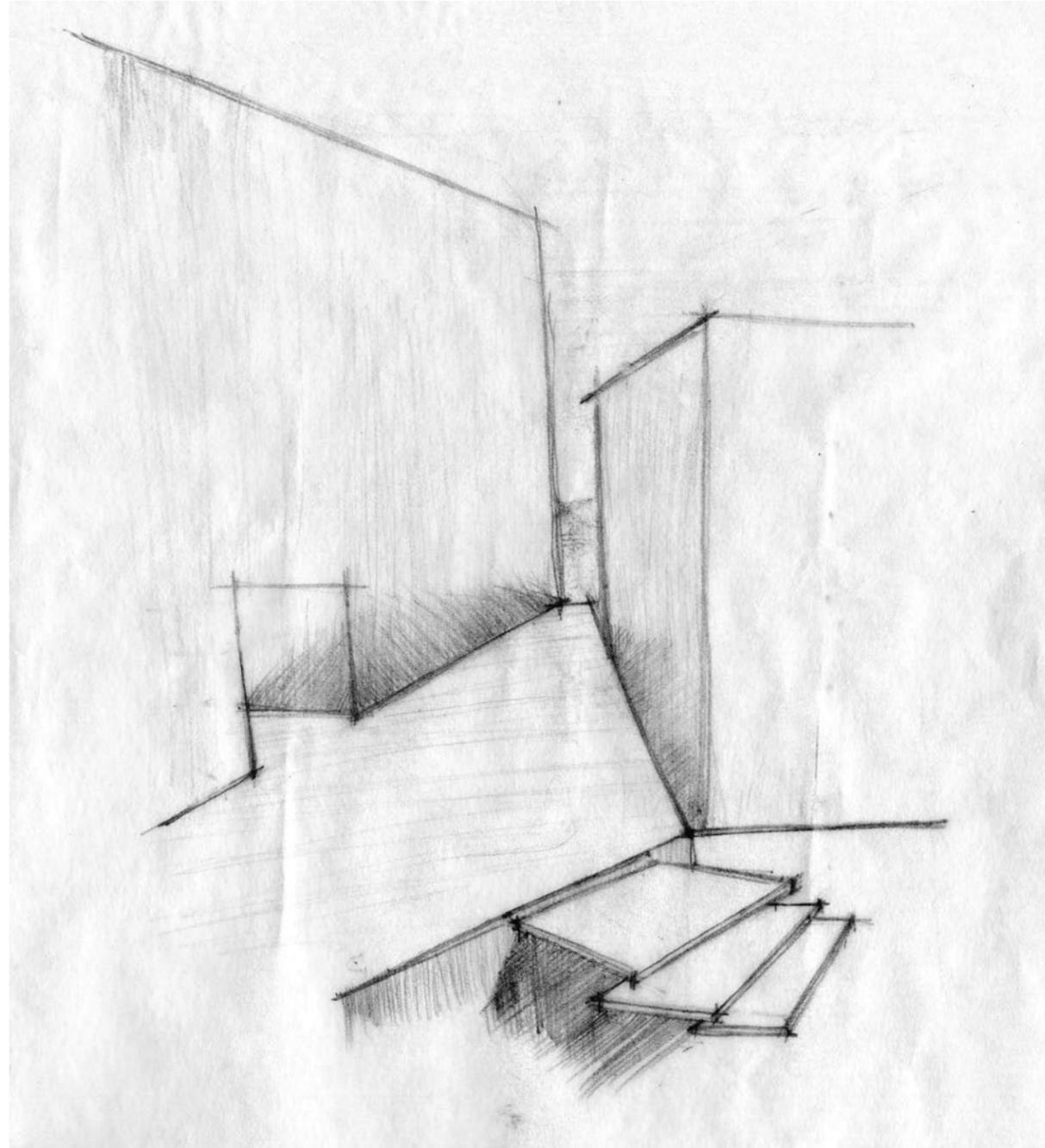
The design is based on a 'heart' grounded to its site. The rooms surround an open central core, the heart. This idea is then modified to ground the house by framing some views and to lay with the sloped terrain.

The rooms are grouped in two main areas, one is oriented to the east morning life and the other to the west evening life. Both are joined by a service area. The two main areas are rotated at different angles to create a triangular court yard that frames a view on one side and opens to the entrance on the other. The rotation is in direct response to the sun path and morning and evening light. The pivot point for the rotation of the house is located in a corner of the entryway.

In this conception the walls are important to define limits and relations to the site. For instance the south wall limits and closes the house to Glade Road. The smooth walls are broken to mark the entry. This is further marked by a change in material to stone for the entry court.

The east wall in the court yard bounds the other area of the house and becomes a balcony to the garden. This wall joins yet separates the two different areas of the house. It is the moment where differences built unity.

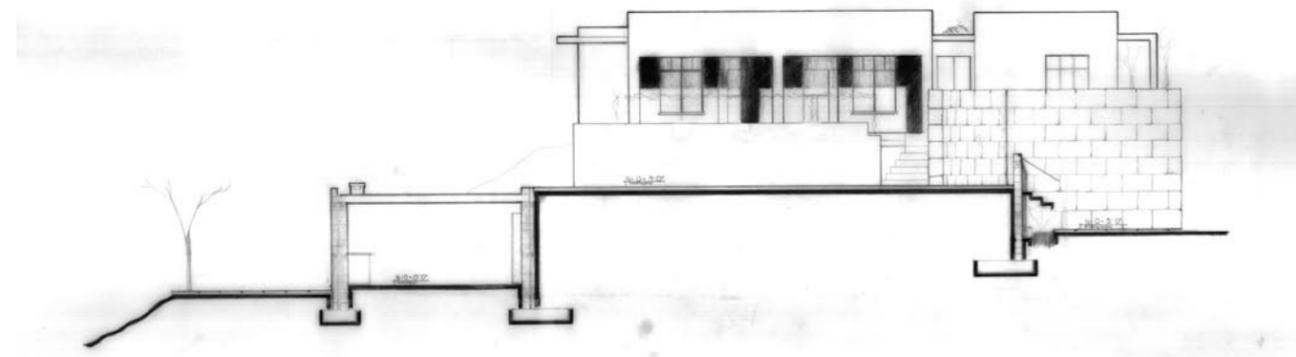
A country house in Blacksburg - A grounded Heart



Early sketch of limited spaces and framed views.



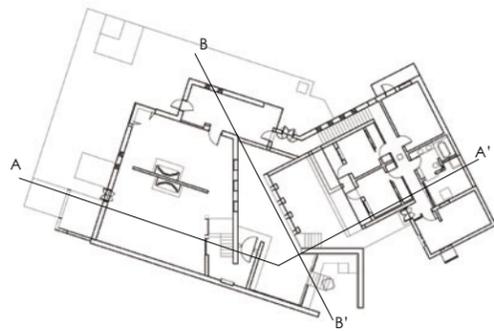
Section A-A'



Section B-B'

The house follows the terrain and takes advantage of the opportunities present in a sloped terrain.

The two living areas, morning and evening, are articulated through the change in elevation. The court serves as a transition between the two levels.



to the site

The orientation of each of the two main living areas were informed by the sun path. In this way the house has a morning element and an evening element.

The bedroom area is oriented to the east to receive the morning sun, and the social area is located in the west to 'extend' to the setting sun.

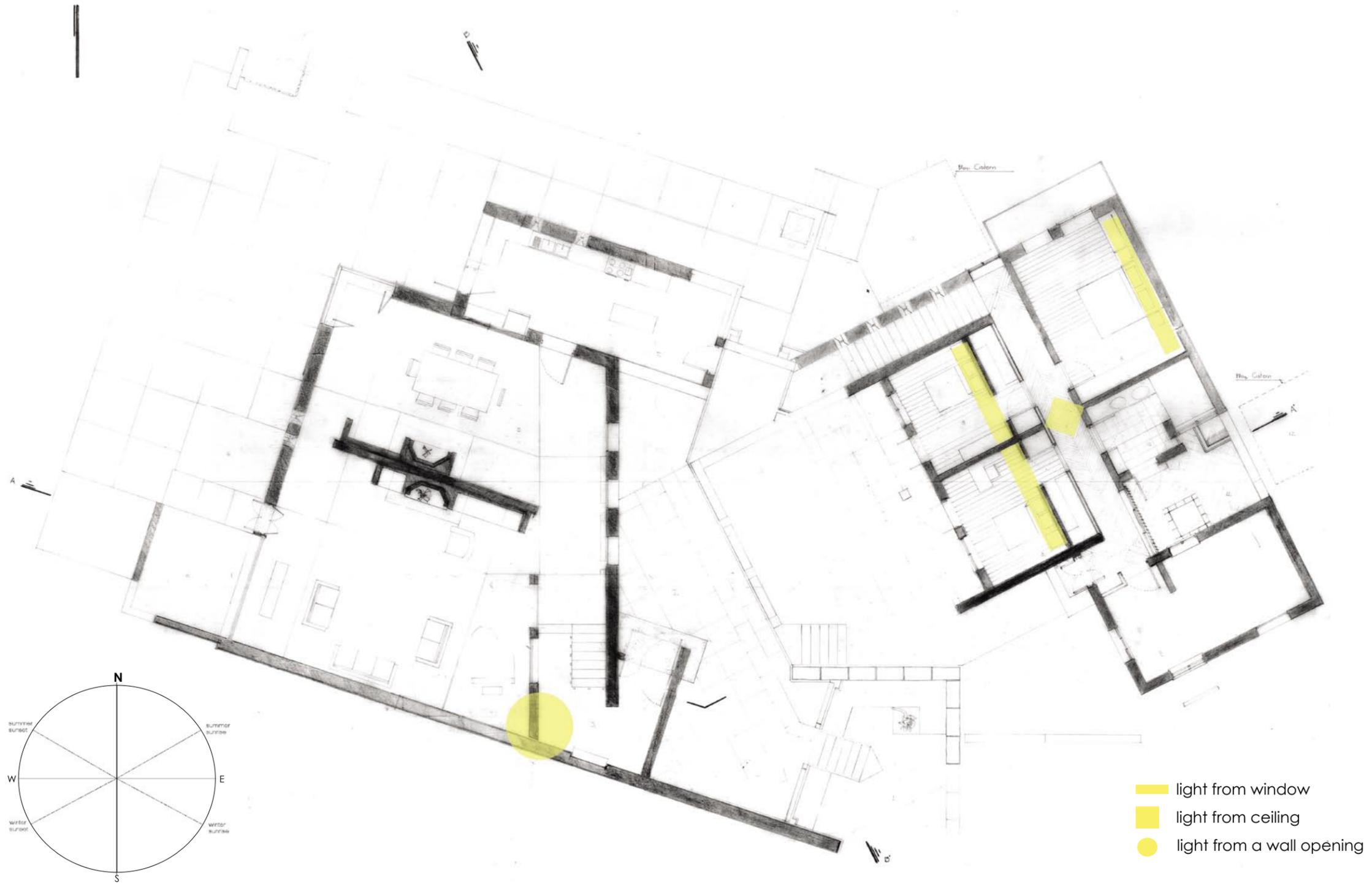
Windows and openings let direct and indirect light into the rooms. In selected areas the contrast between darkness and light is an intentional quality to the space.

In the morning area a long corridor is defined by the walls of each side. In this long and dark corridor, light coming from a skylight marks the point where the doors of the room are located. It is a point of connection between people and light with architecture.

In the morning the light enters the bedrooms announcing the day. The light penetrates into the rooms from a window in the top of the east wall. This area is oriented according to the sun path in Blacksburg.

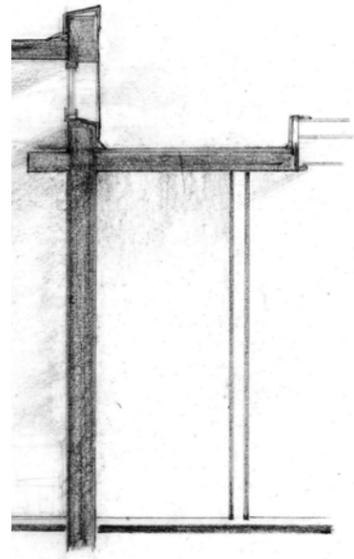
Not only light is captured by the windows but also the wind. All of the rooms allow for cross ventilation. The residents have the choice to control the indoor environment in different ways.

to the sun

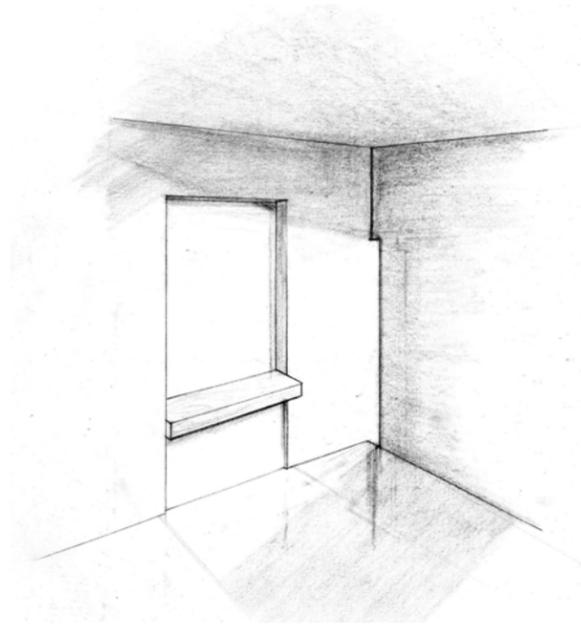


- light from window
- light from ceiling
- light from a wall opening

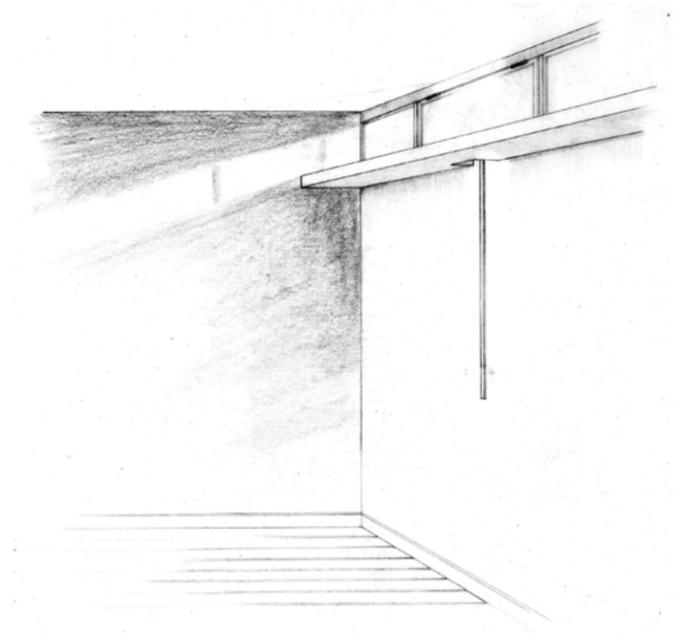
General Plan



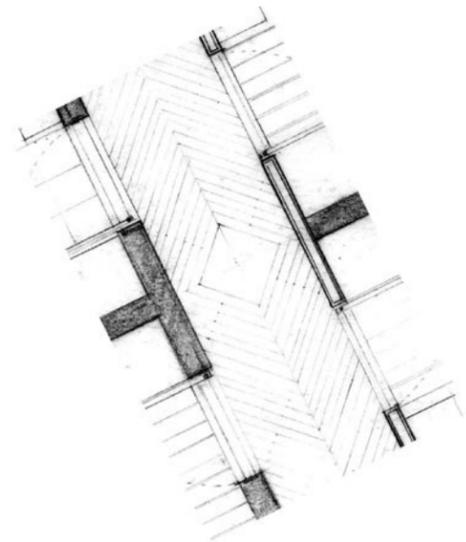
Section



Detail

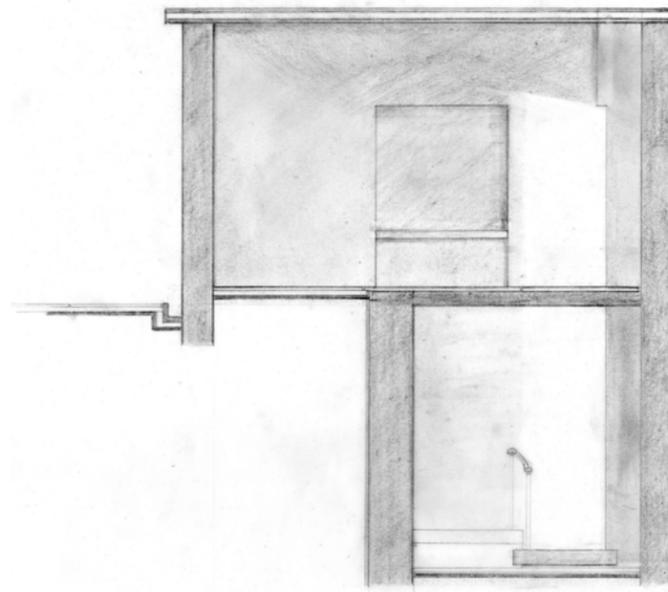


Detail



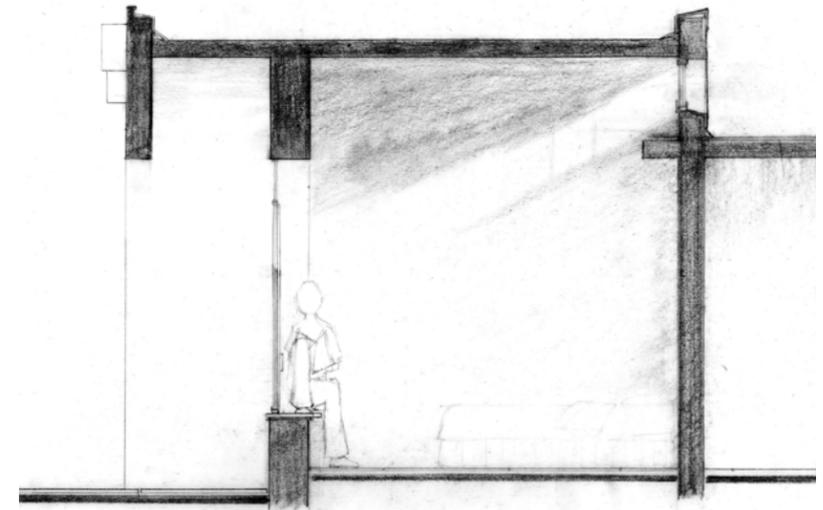
Plan

Corridor Bedroom area



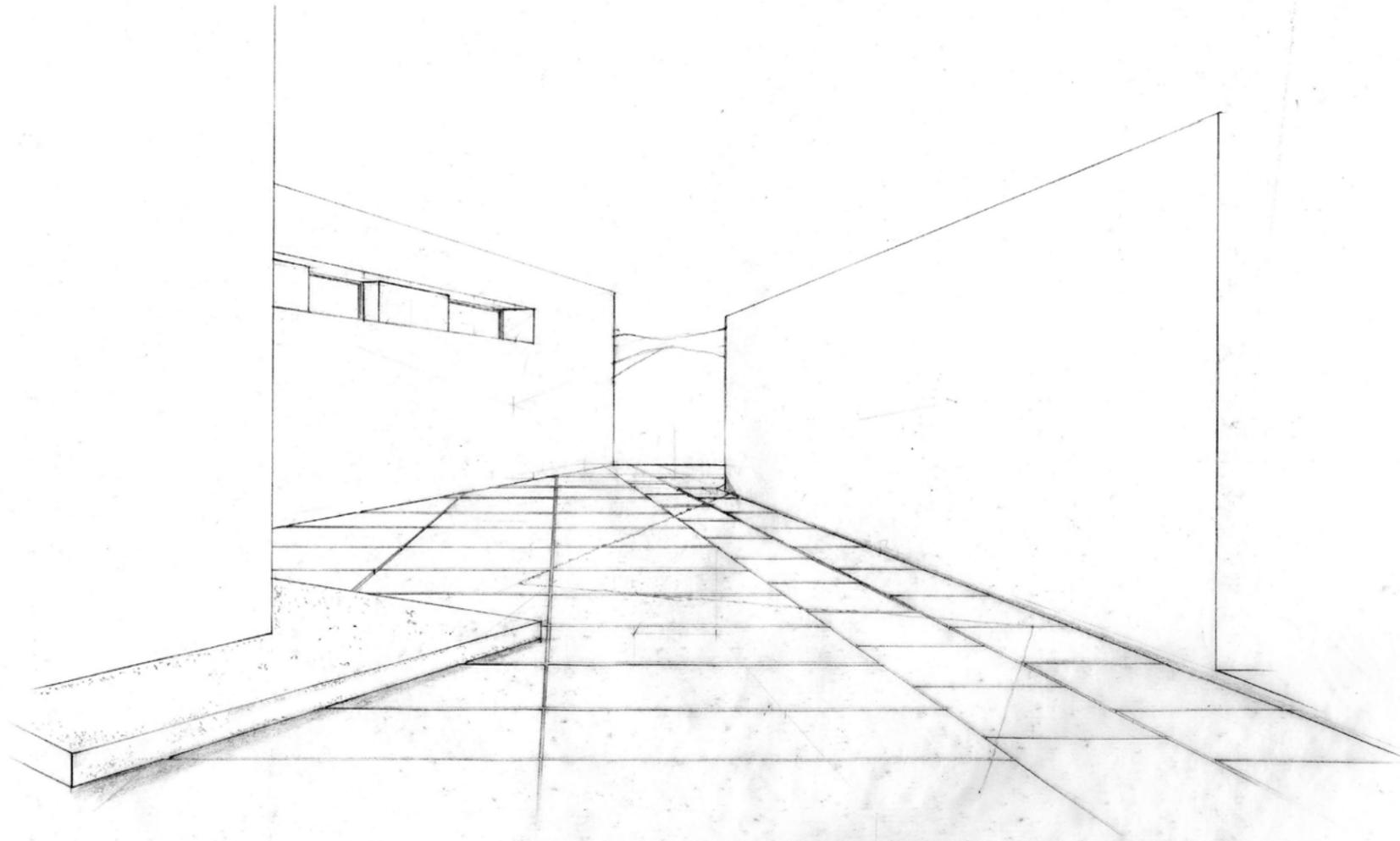
Section

Entrance



Section

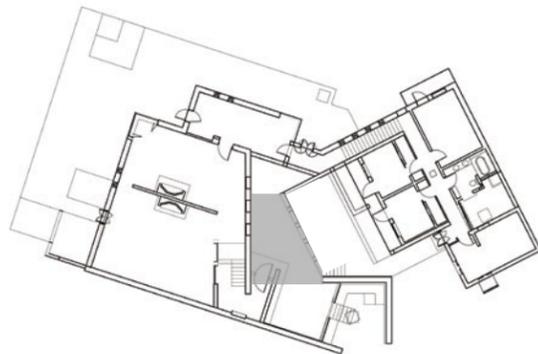
Bedroom



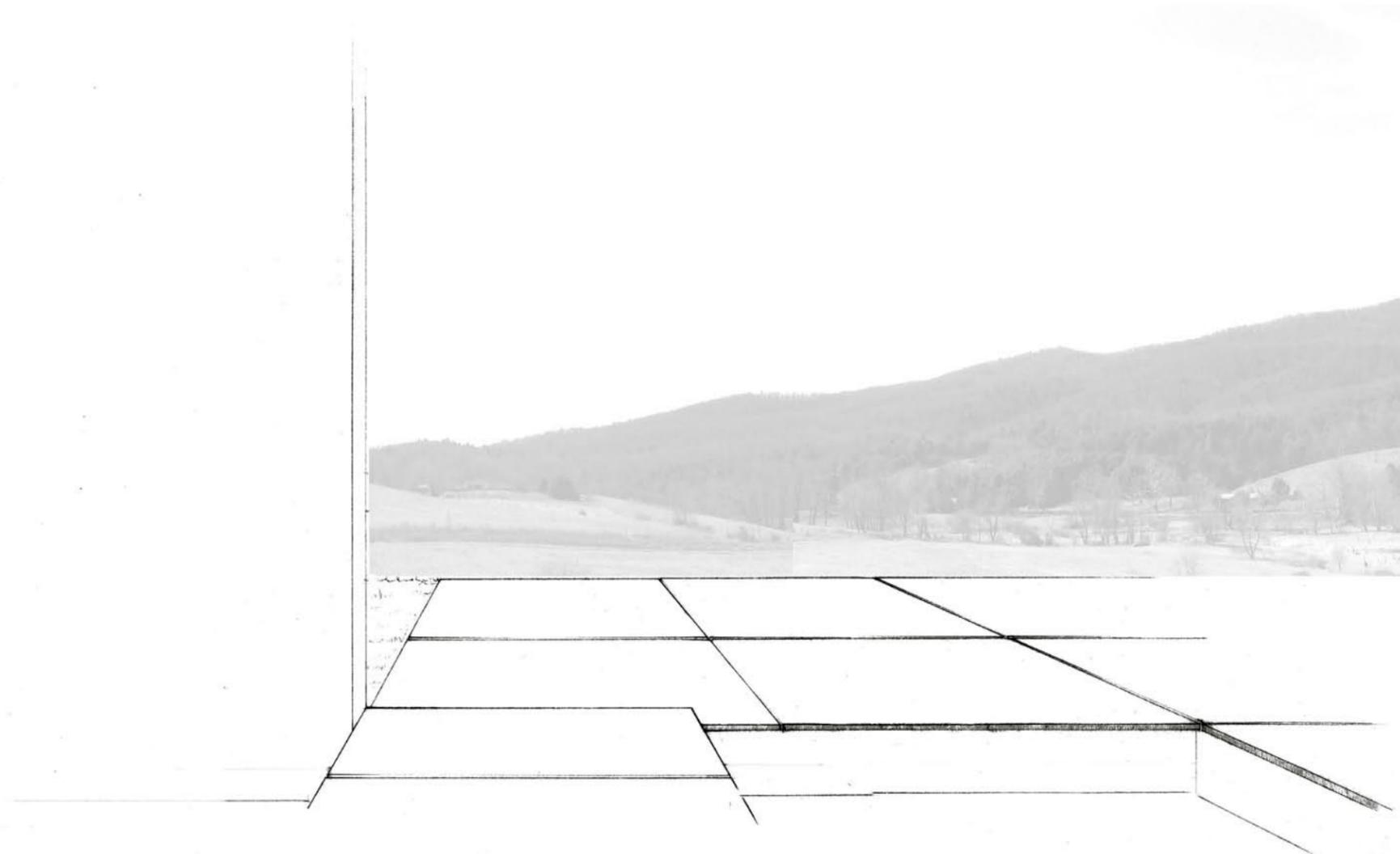
View from the entryway to the mountains

The views of the site are invited in and asked to be part of the house. The original idea of only an inward oriented space is now balanced through openings to frame the views. In this condition the design is looking for the balance of the two forces involved, the outward that opens to the exterior and the inward to the court yard.

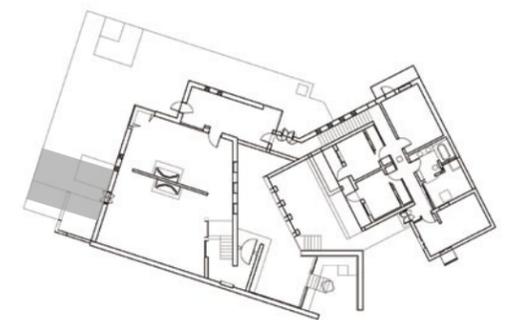
The views are framed by windows and walls. These openings provide visual contact with the exterior, and at the same time they give sense of direction. The views create important moments in the house. Sometime these are moments of surprise.

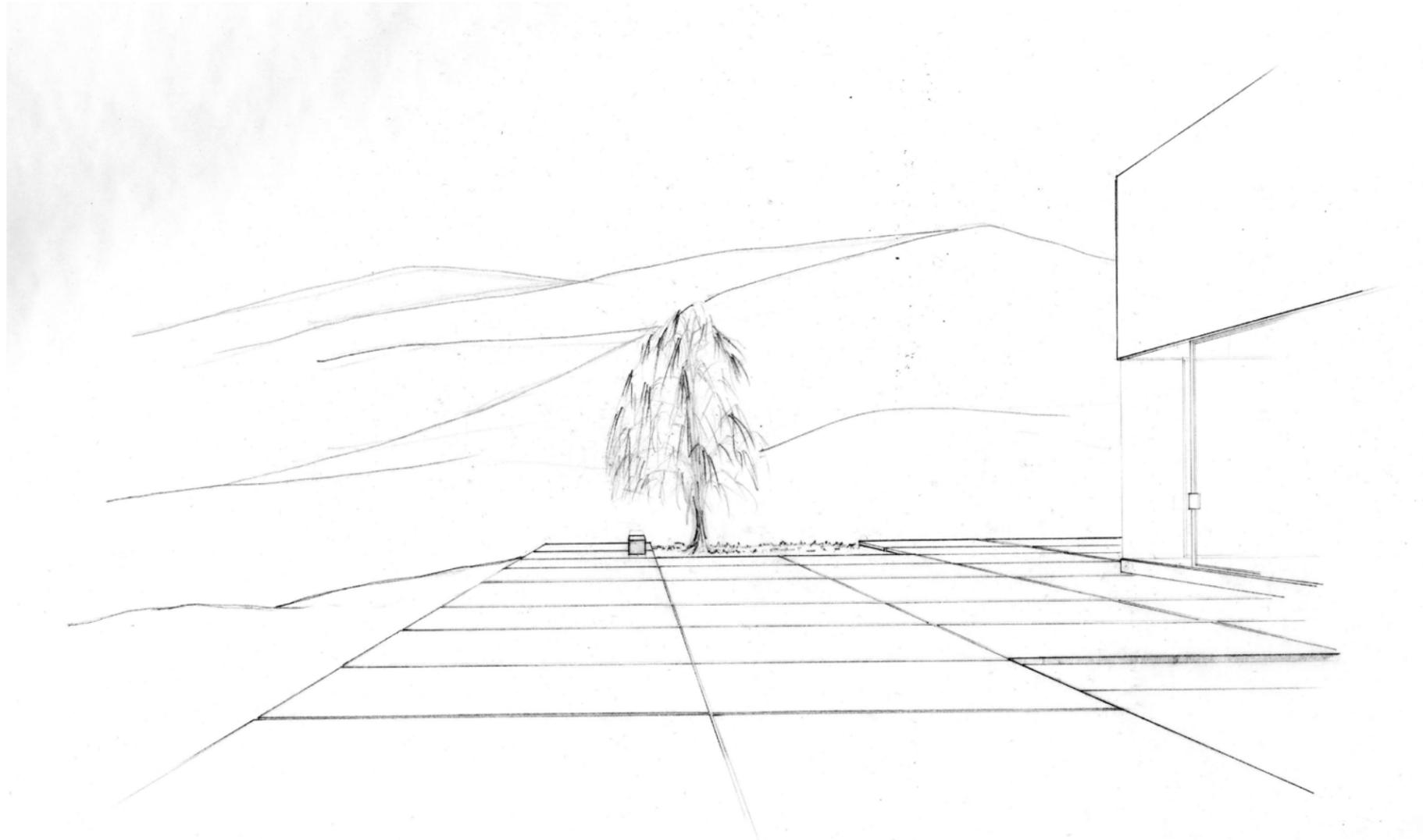


to the views

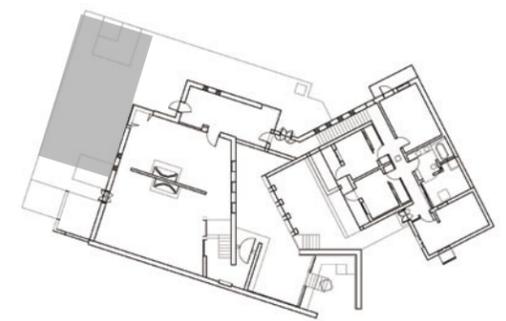


View from the living room door to the west





View from the terrace to the north



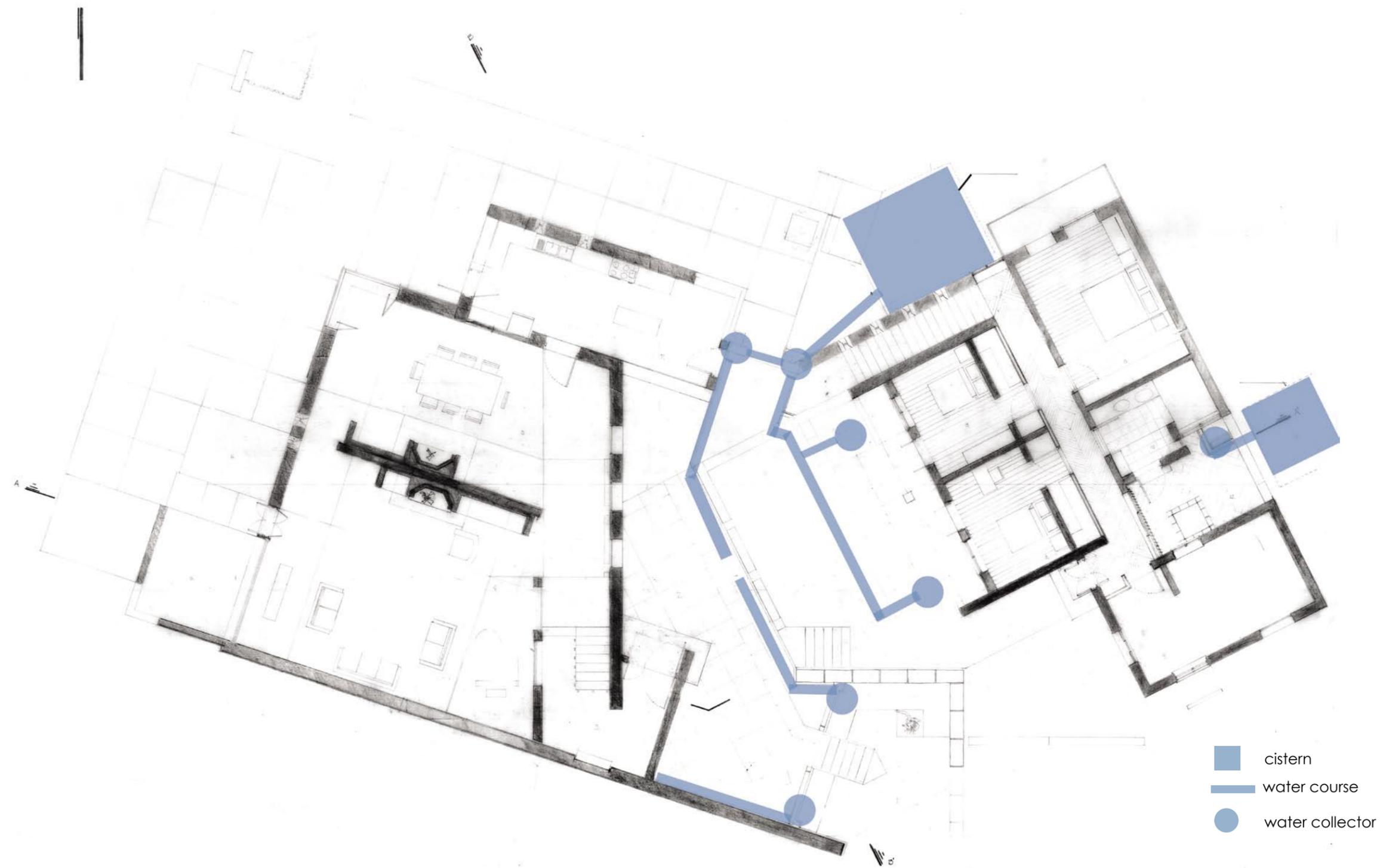
Water is considered as a symbol of life. For most ancient civilizations it is an essential element for the creation of the universe. Most settlements are close to a source of water. Water is a symbol of life and is part of us.

The house has an emotional and practical relationship with water. For instance its property of reflection is an important element of this relationship. Stationary and moving water are present in the house.

There are spaces to enjoy a rainy day and there is a system of conduits and cisterns to collect rainwater for utilitarian purposes. This system is another source of water: it brings independence to the house from the local utility.

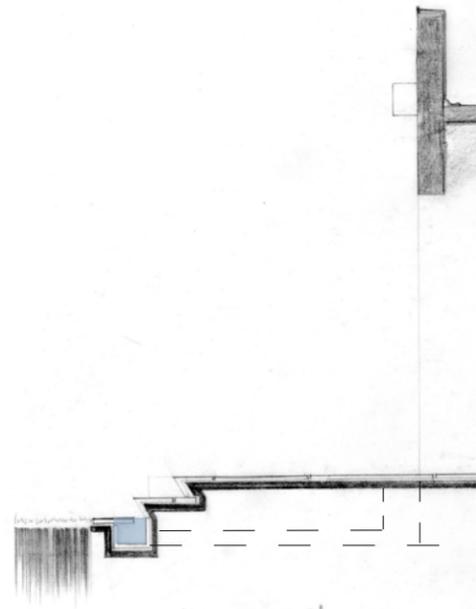
At the same time the conduits are architectural elements. The house changes when it is raining, the conduits become rivers and waterfalls. In contrast looking at the pool you can see the reflected sky blurring the meeting of the house with the site and sky.

to water

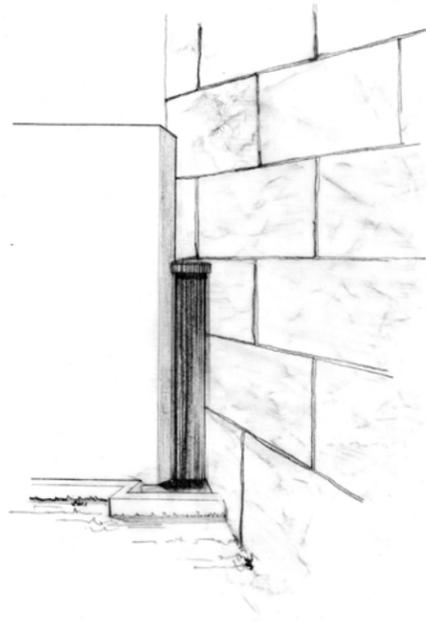


-  cistern
-  water course
-  water collector

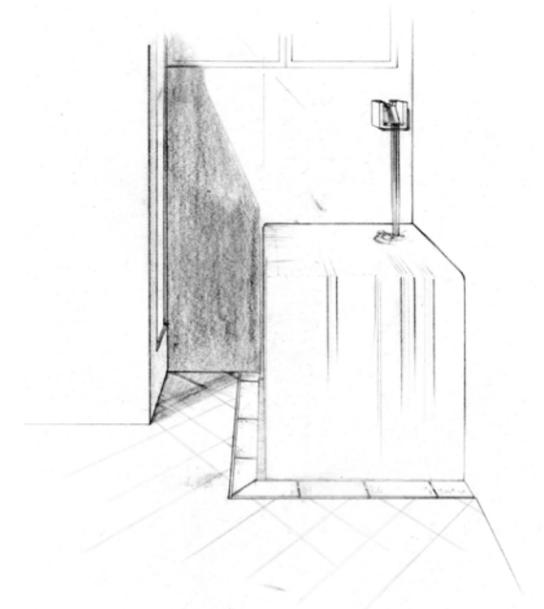
General Plan



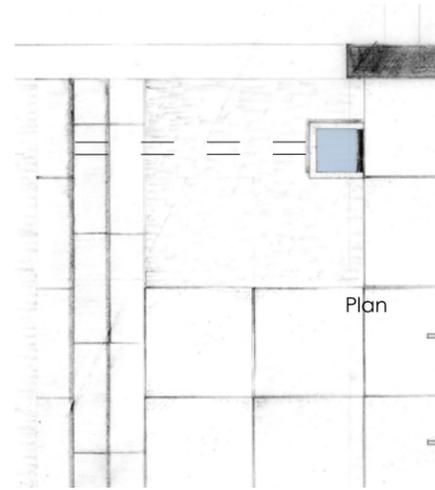
Section



Detail

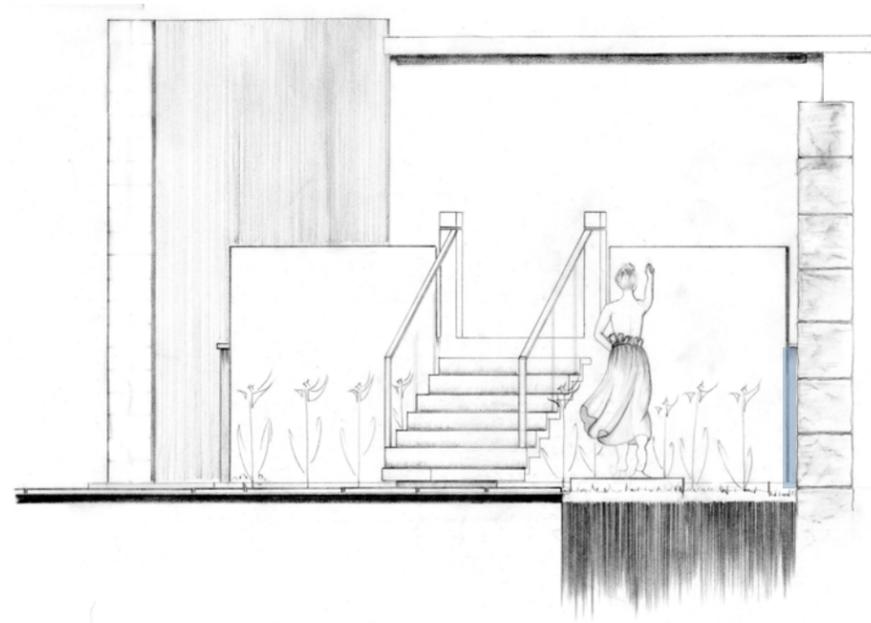


Detail

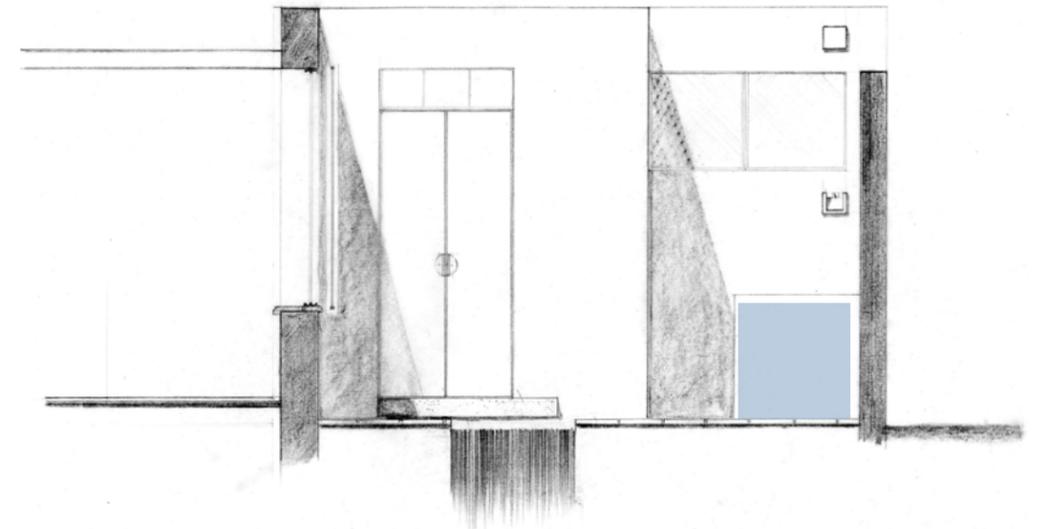


Plan

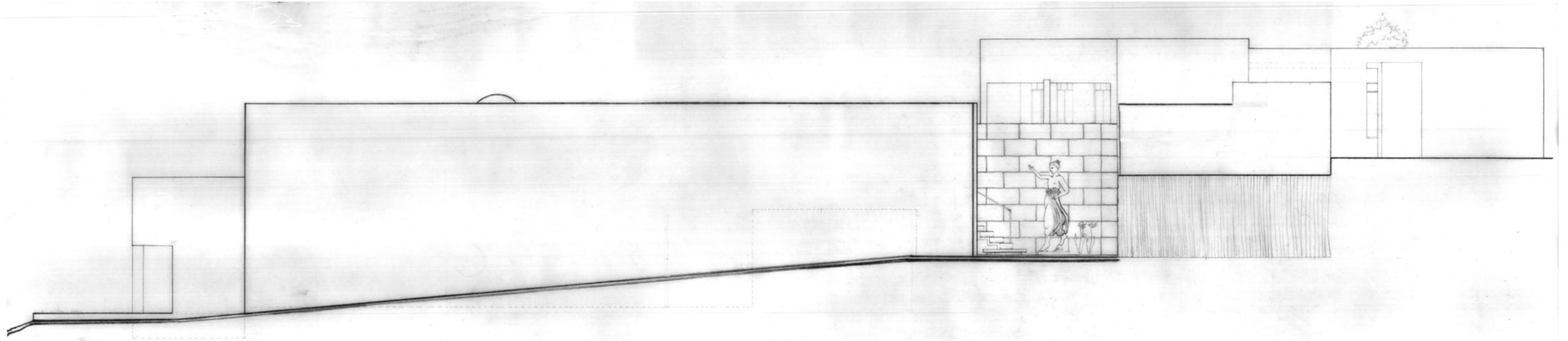
Bedroom-garden



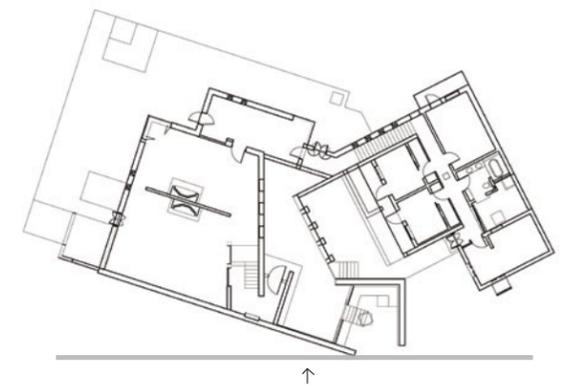
Section
Entryway

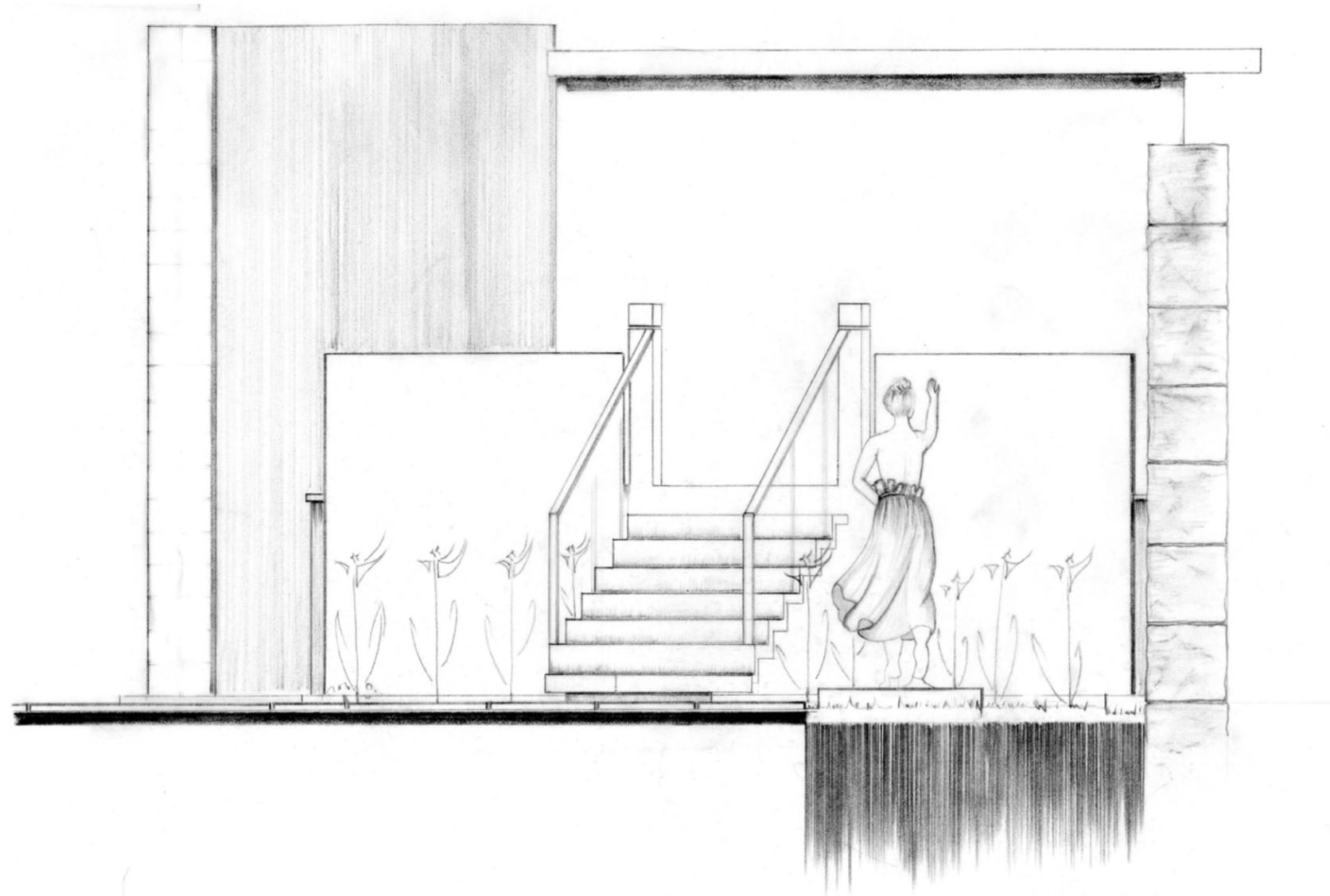


Section
Patio

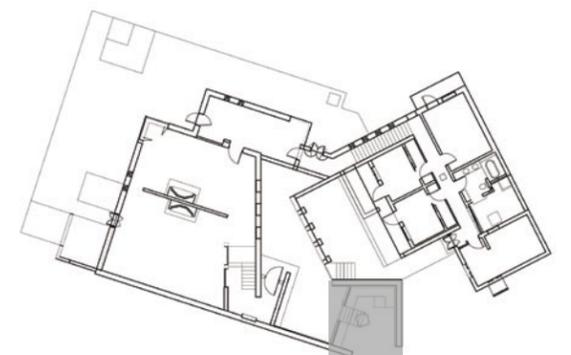


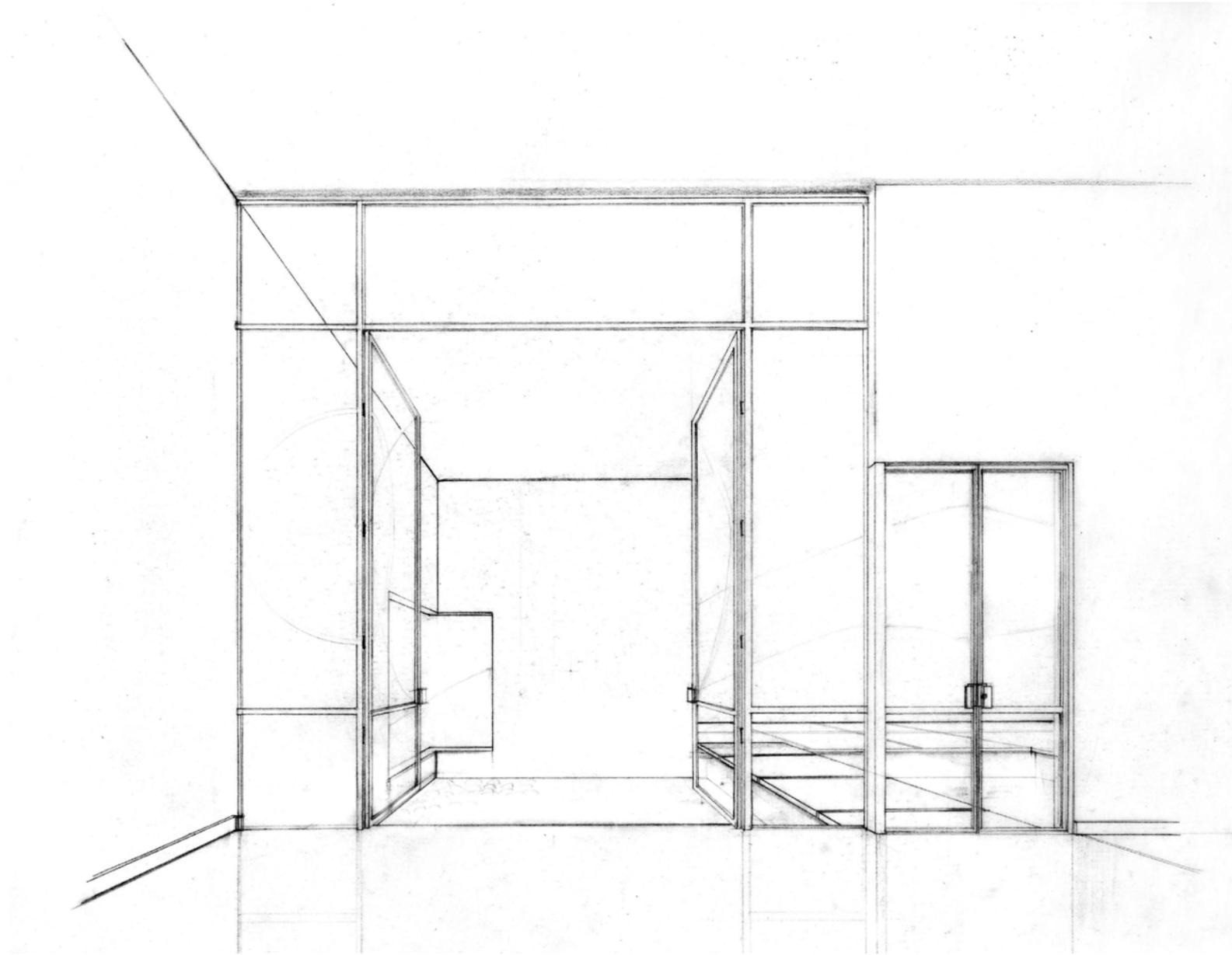
South facade
Entrance to the house



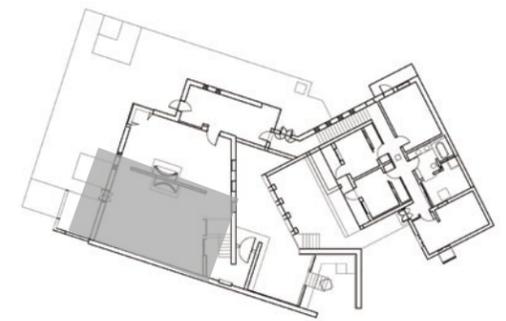


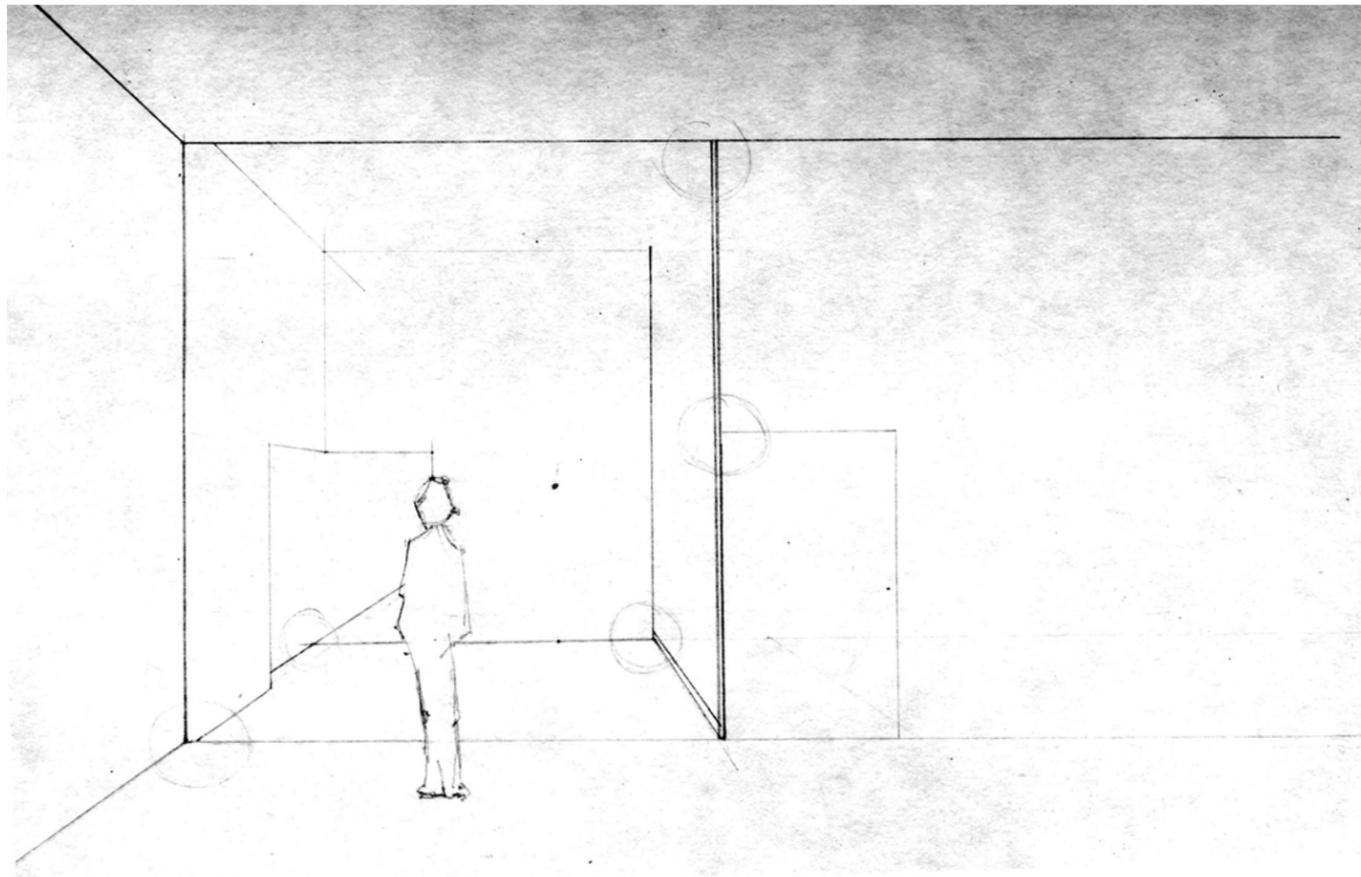
Elevation of the entry way to the court yard



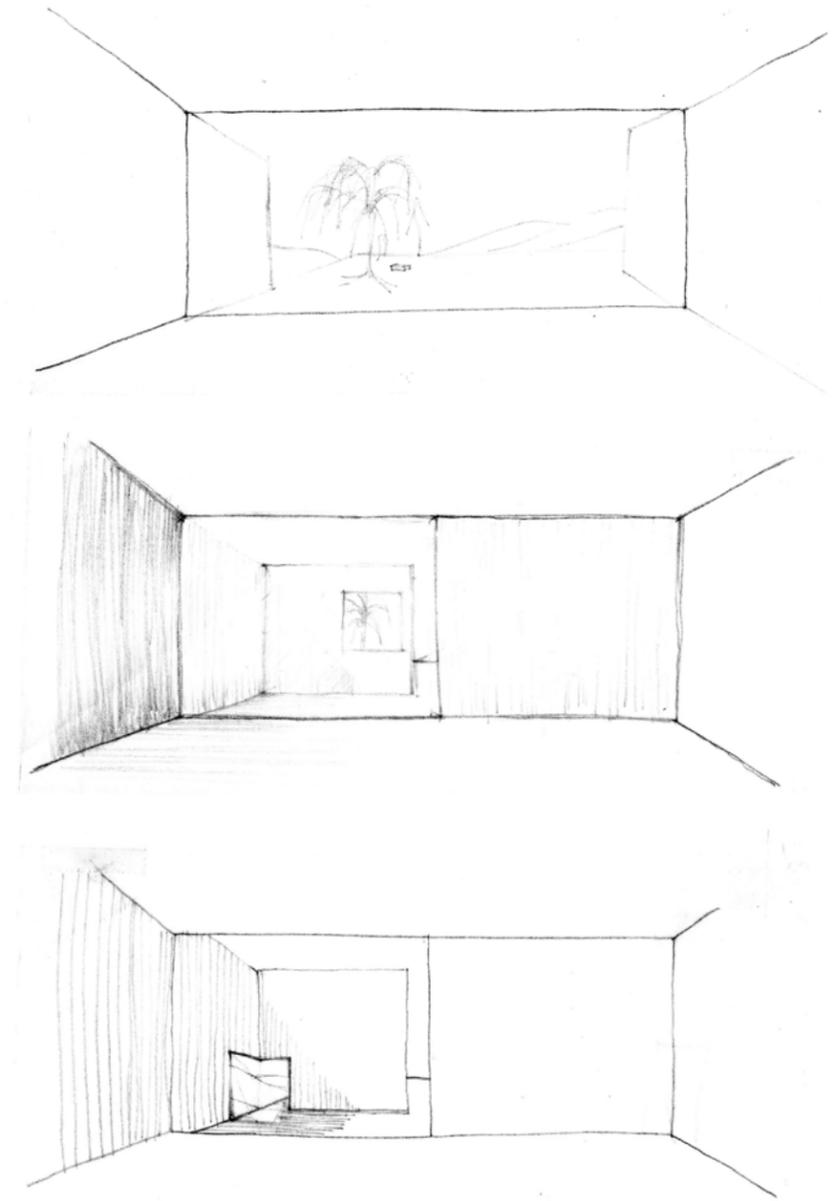


View from the living room to the terrace and pool

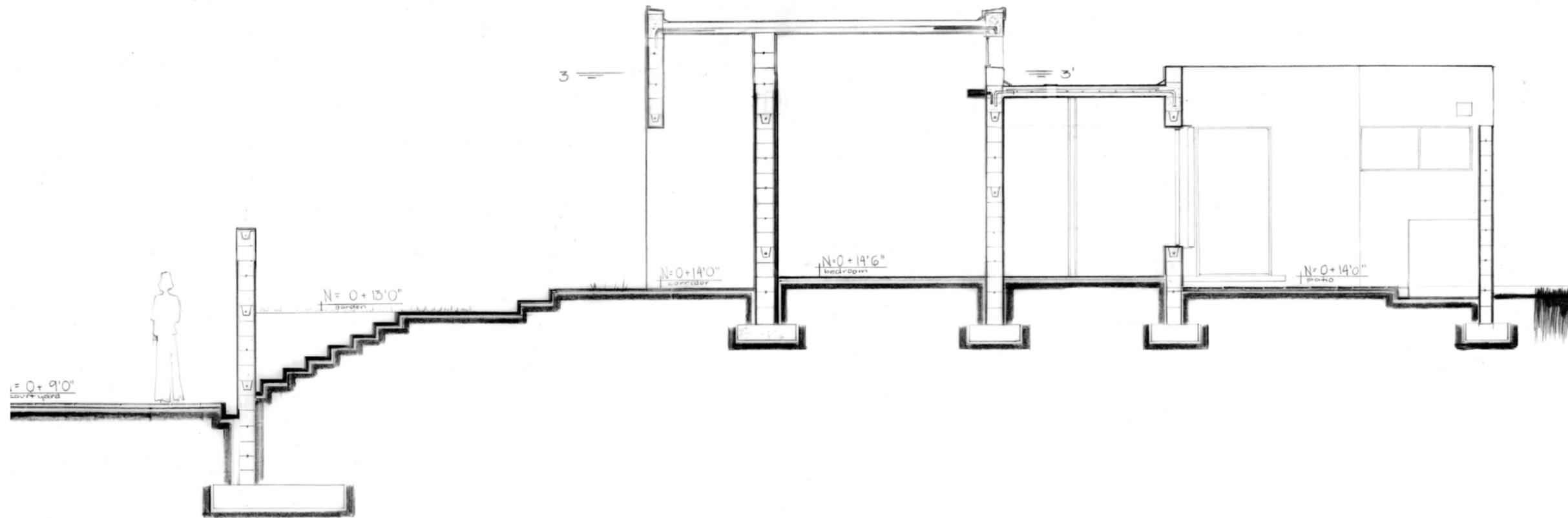




The living room is a double-high room that extends to the exterior through a window. The continuity is emphasized by the line of the wall that extends from the interior to the pool. At the same time that the wall closes the space, it brings the exterior to the interior. In this way the opening in the wall captures part of the scenery and brings it in to the room.

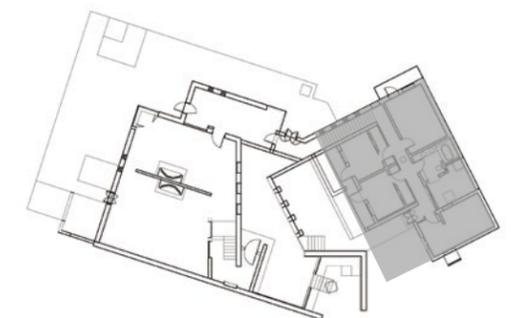


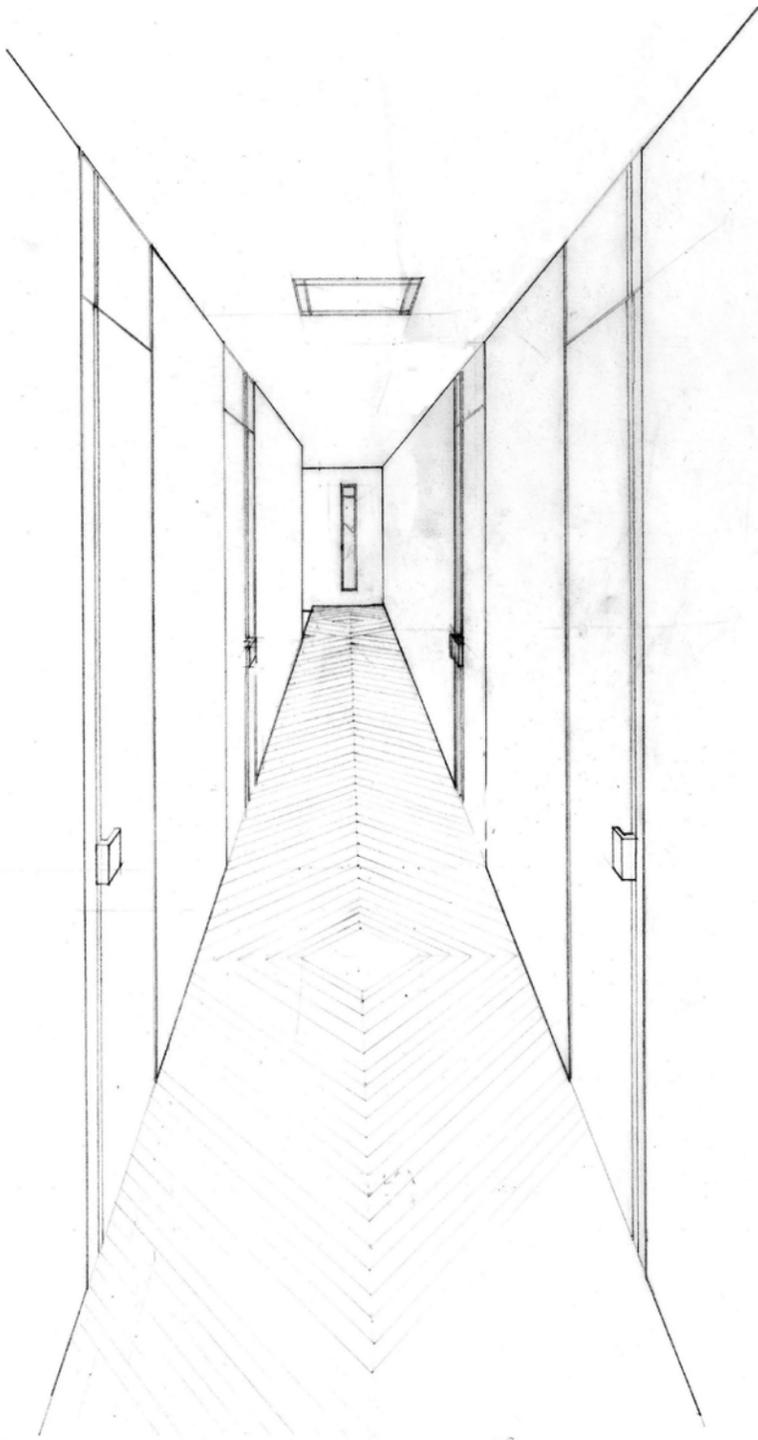
Study sketches.



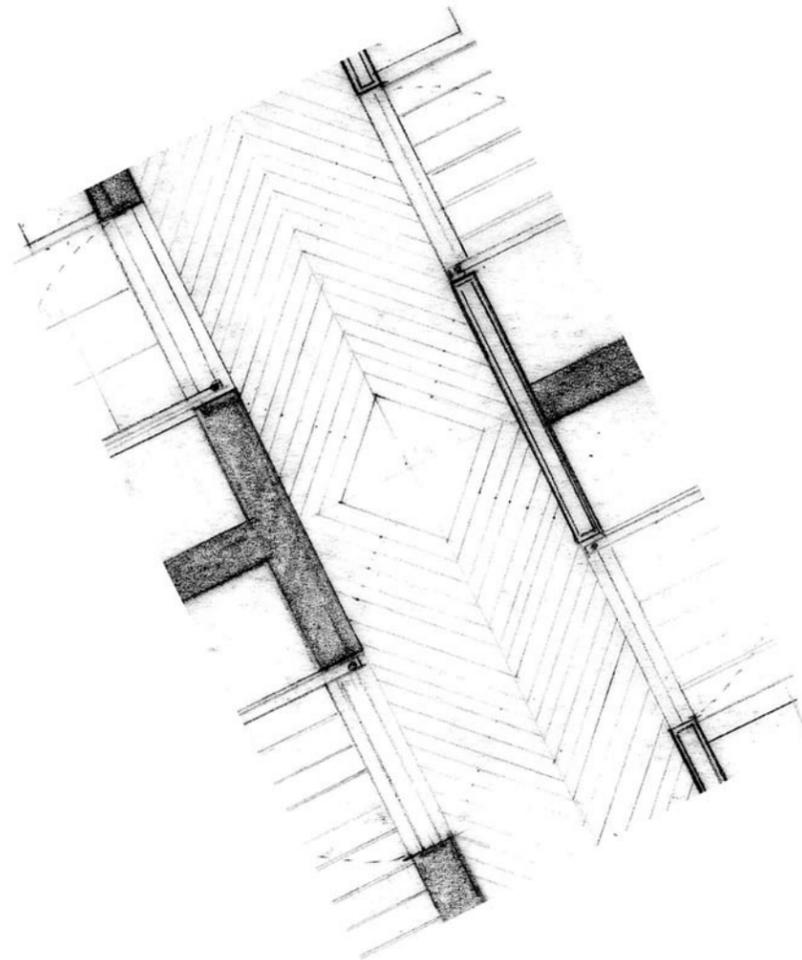
Section A-A' (partial)
Section from the court yard to the bedroom.

This garden is part of the open core of the house, but it has different arrangements than the court yard. It differentiates each one of the spaces. The scale of the morning area is small when compared with the west area of the house, although the proportions remain the same.

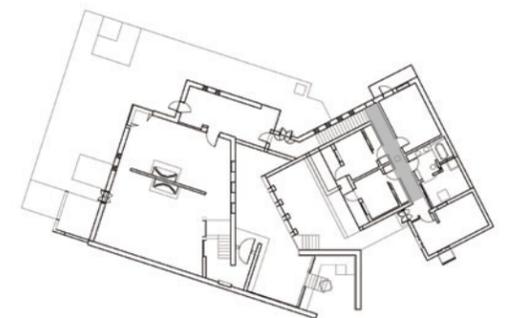


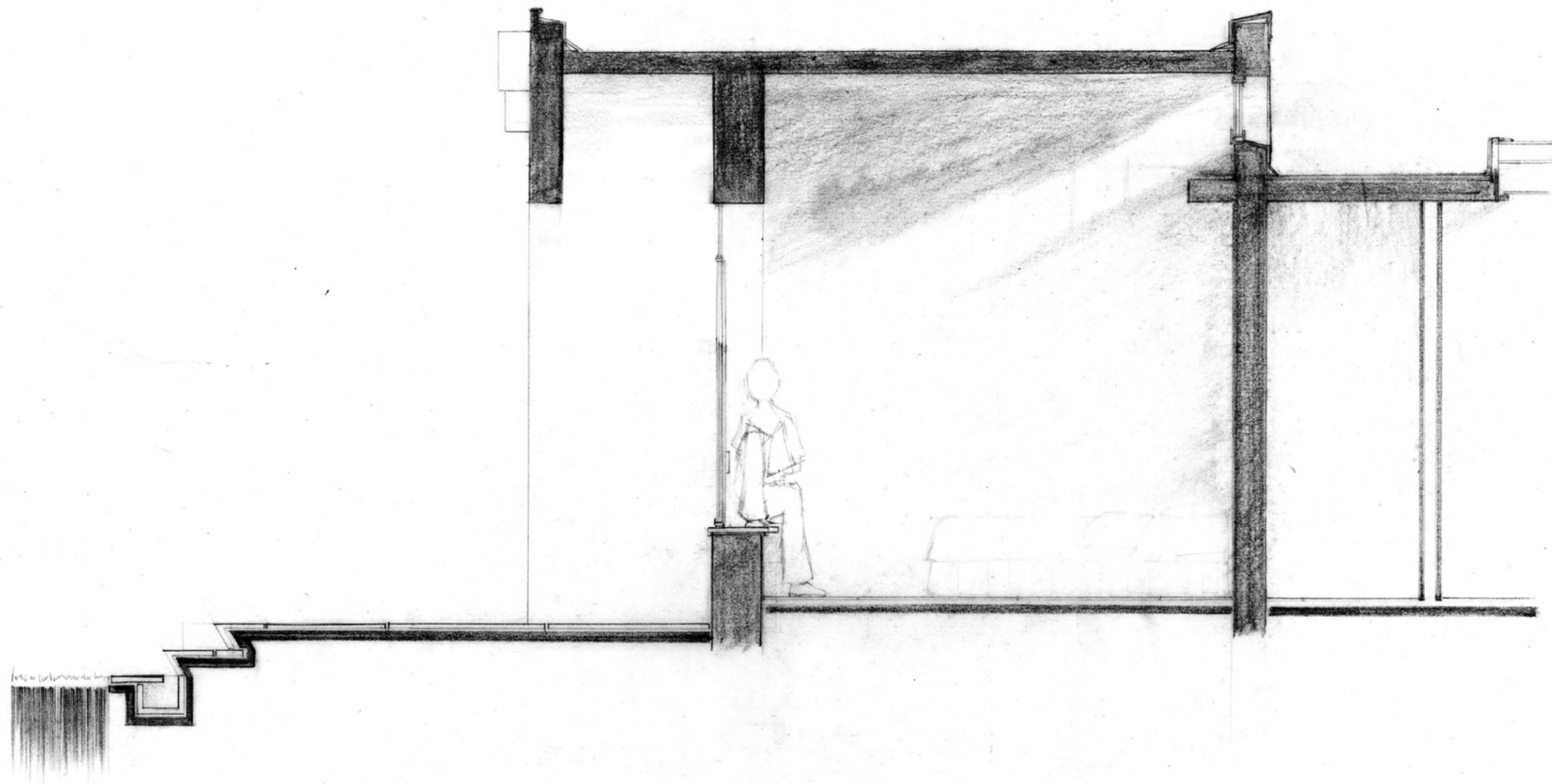


View of the bedroom corridor
from the court yard entrance to the south wall

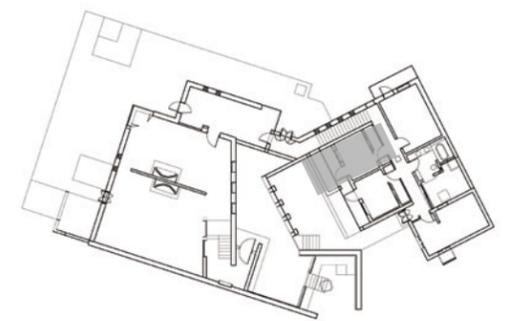


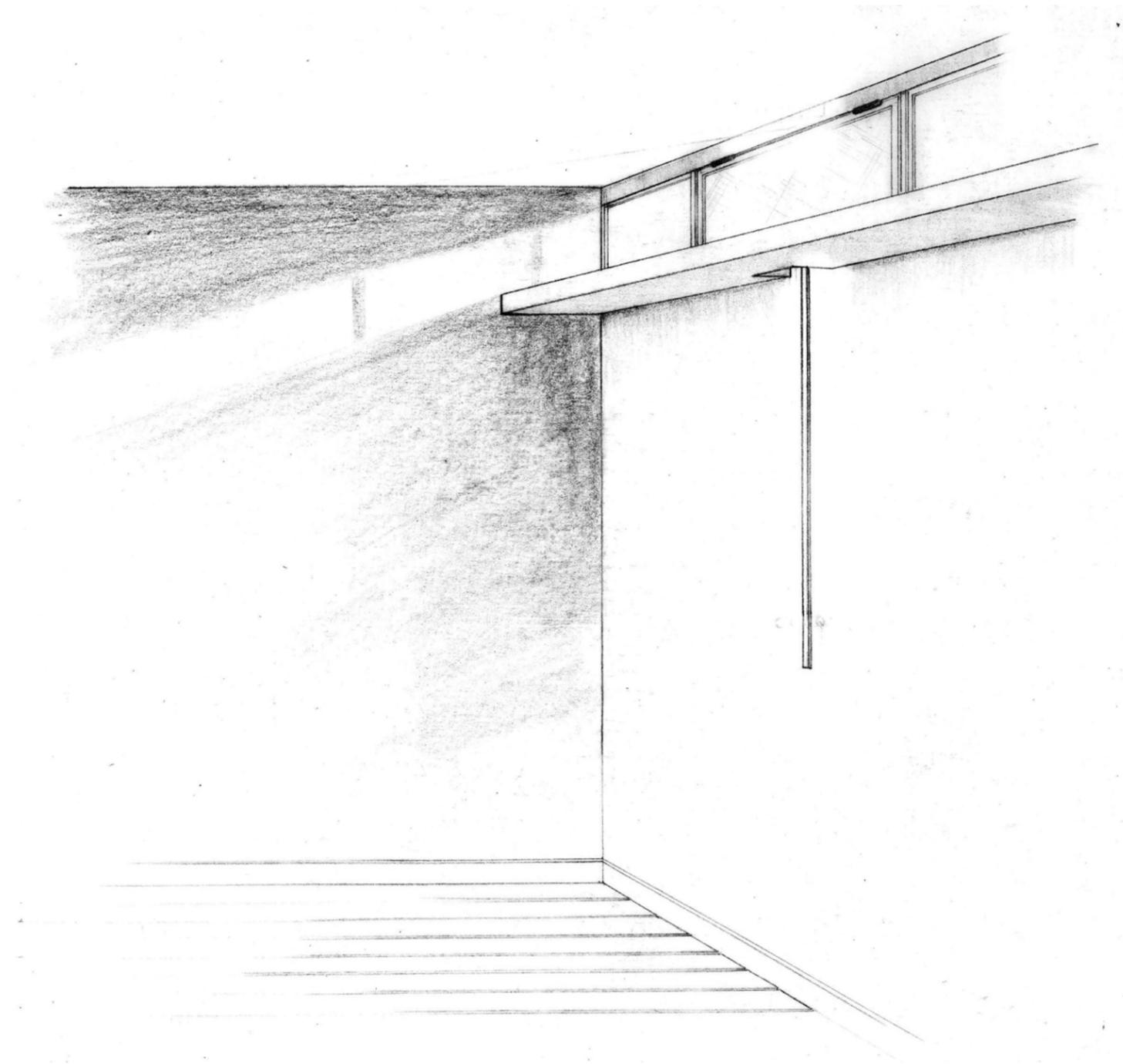
Plan of the bedroom corridor.
Detail of the wood floor pattern.
A rhomboid figure corresponds to the location of the skylight.



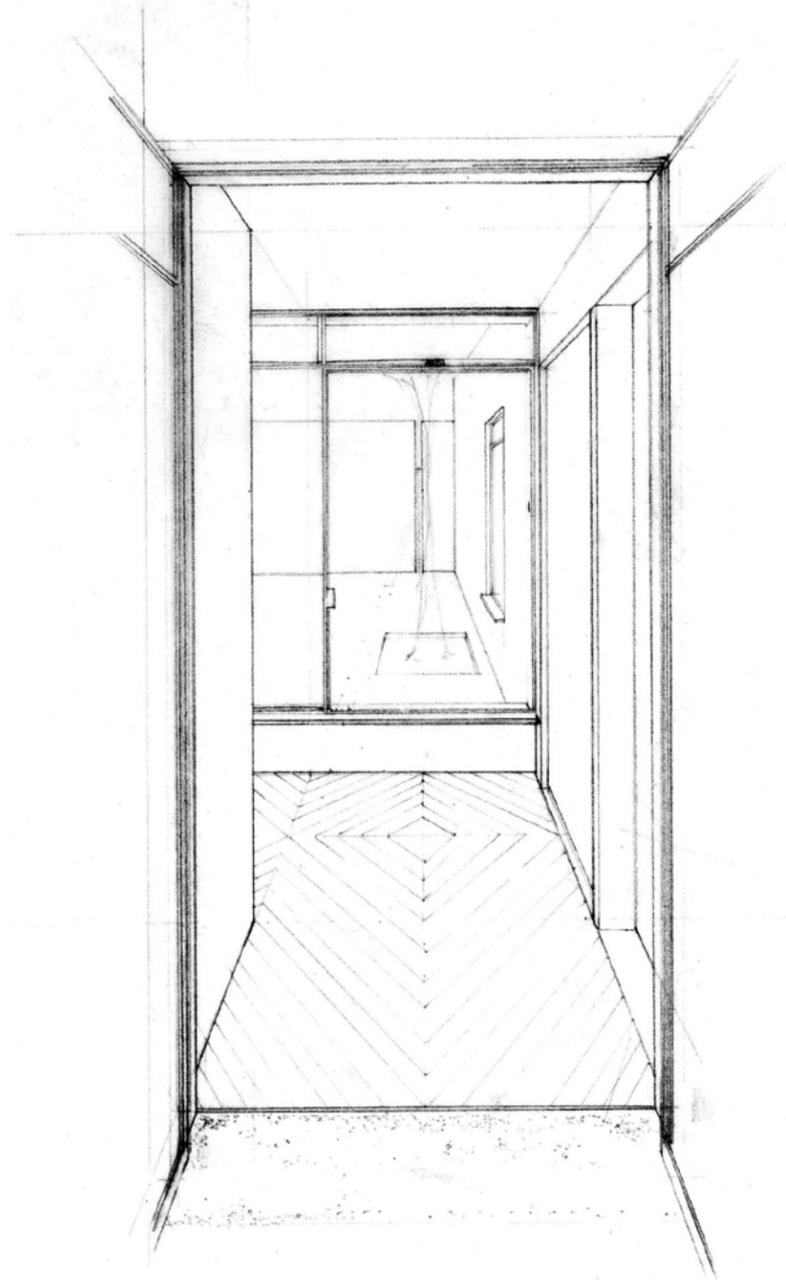


Section thru garden, exterior corridor and bedroom

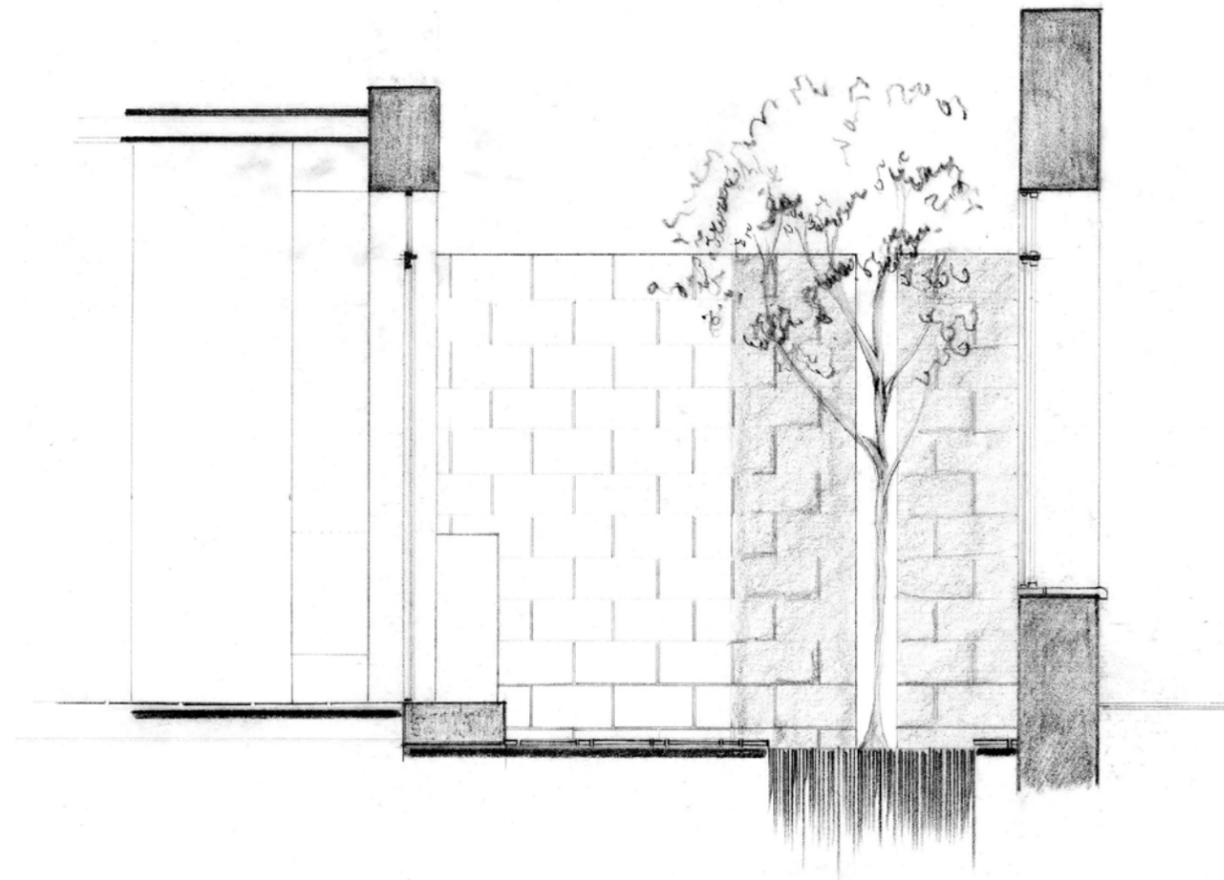




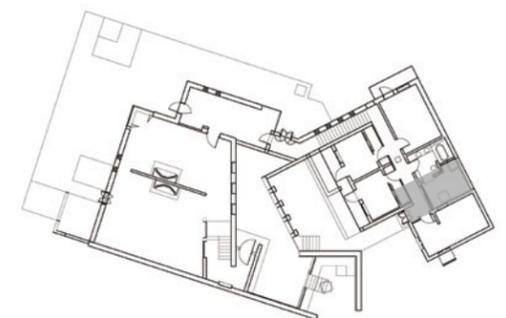
Interior view of the bedroom.

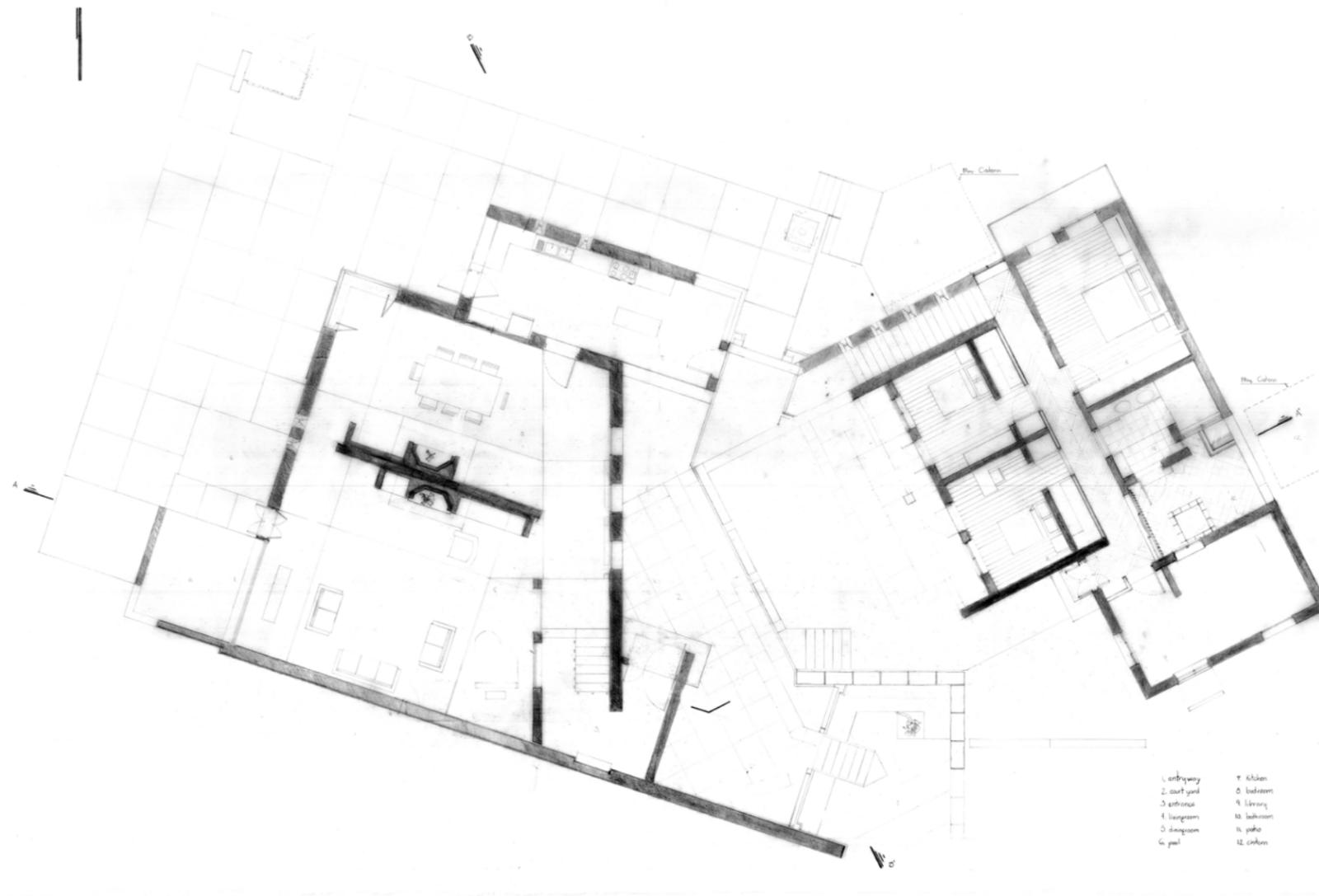


View from the court yard entrance to the patio
Detail of the wood floor where a rhomboid figure indicates the intersection of circulation.
The window has a screen operated from the outside if someone in the patio wants privacy



Section view of the patio in the bedroom area



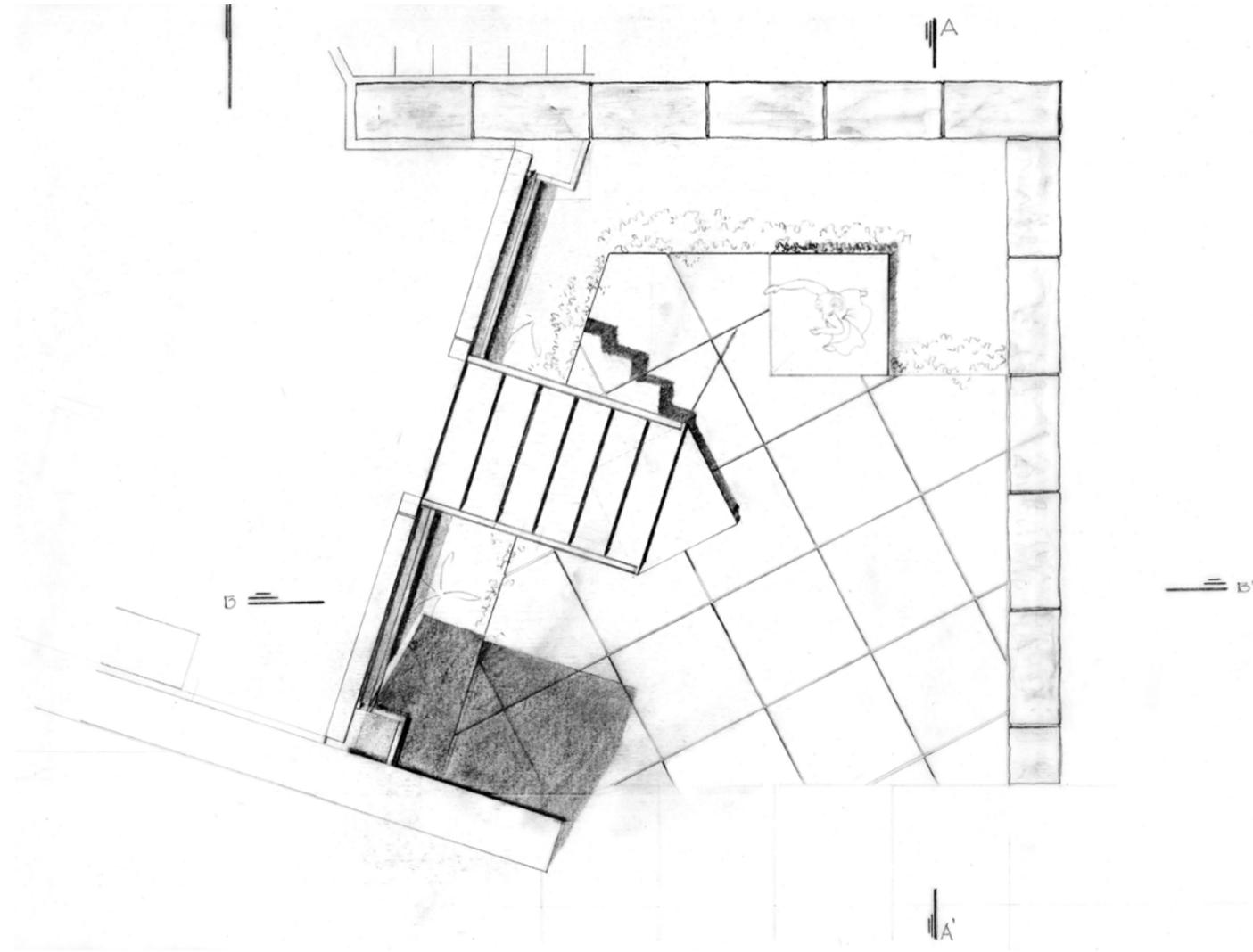


This house is a meeting of heart and ground. Where house meets ground and sky on a hill in Blacksburg. The sun gave the orientation and disposition of the two areas, and the site gave the levels and views.

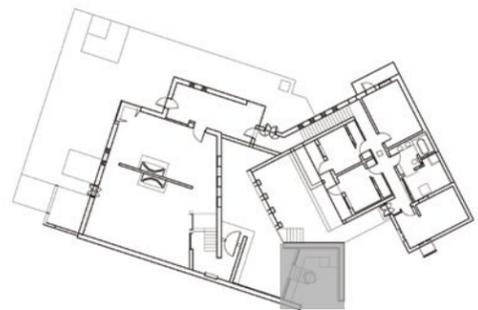
This is a dwelling for a family and an individual. There are rooms for communal and personal moments, for the external and internal dialogue. There are opportunities to enjoy the pleasures of being.



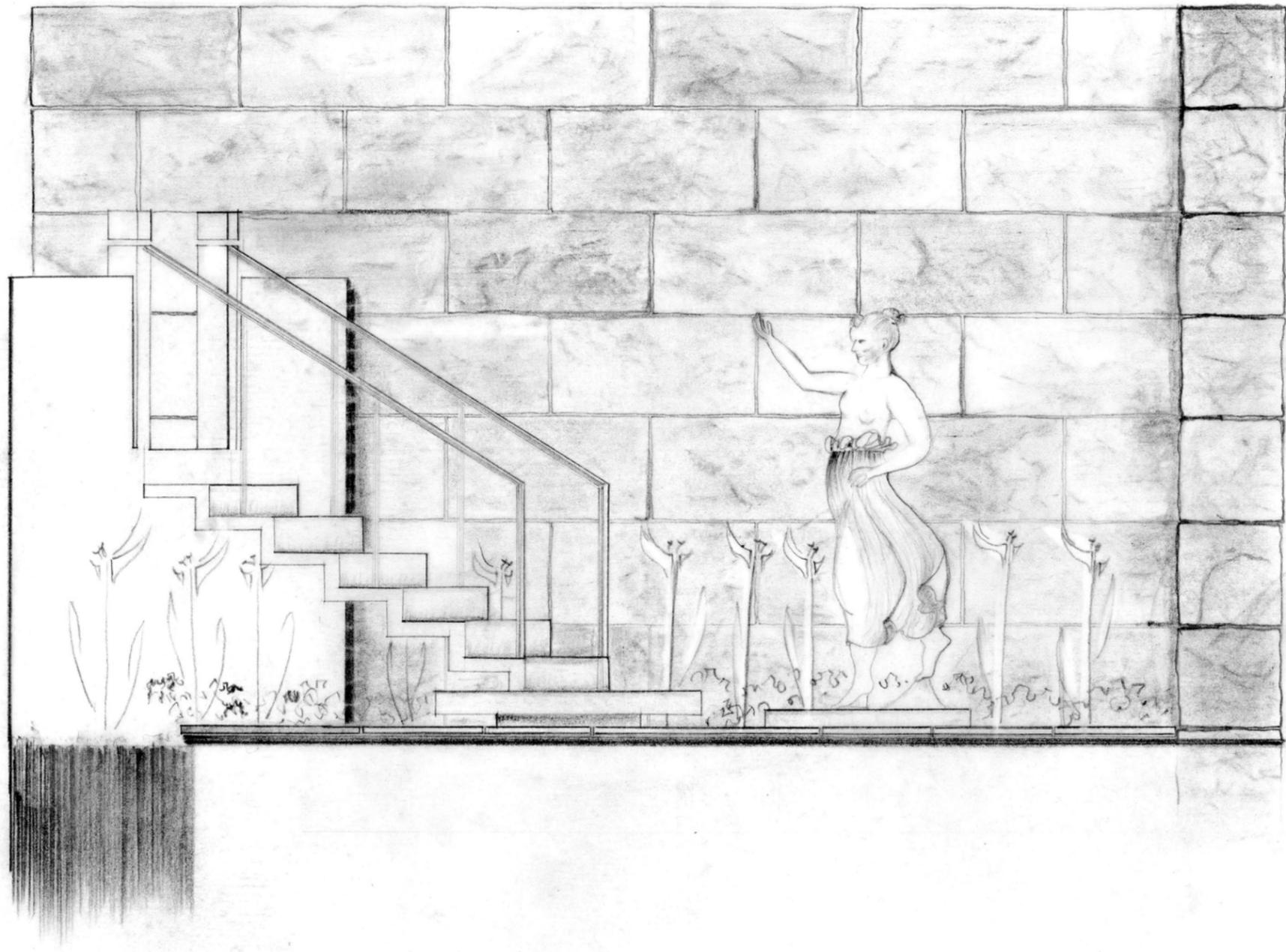
Complementary plans



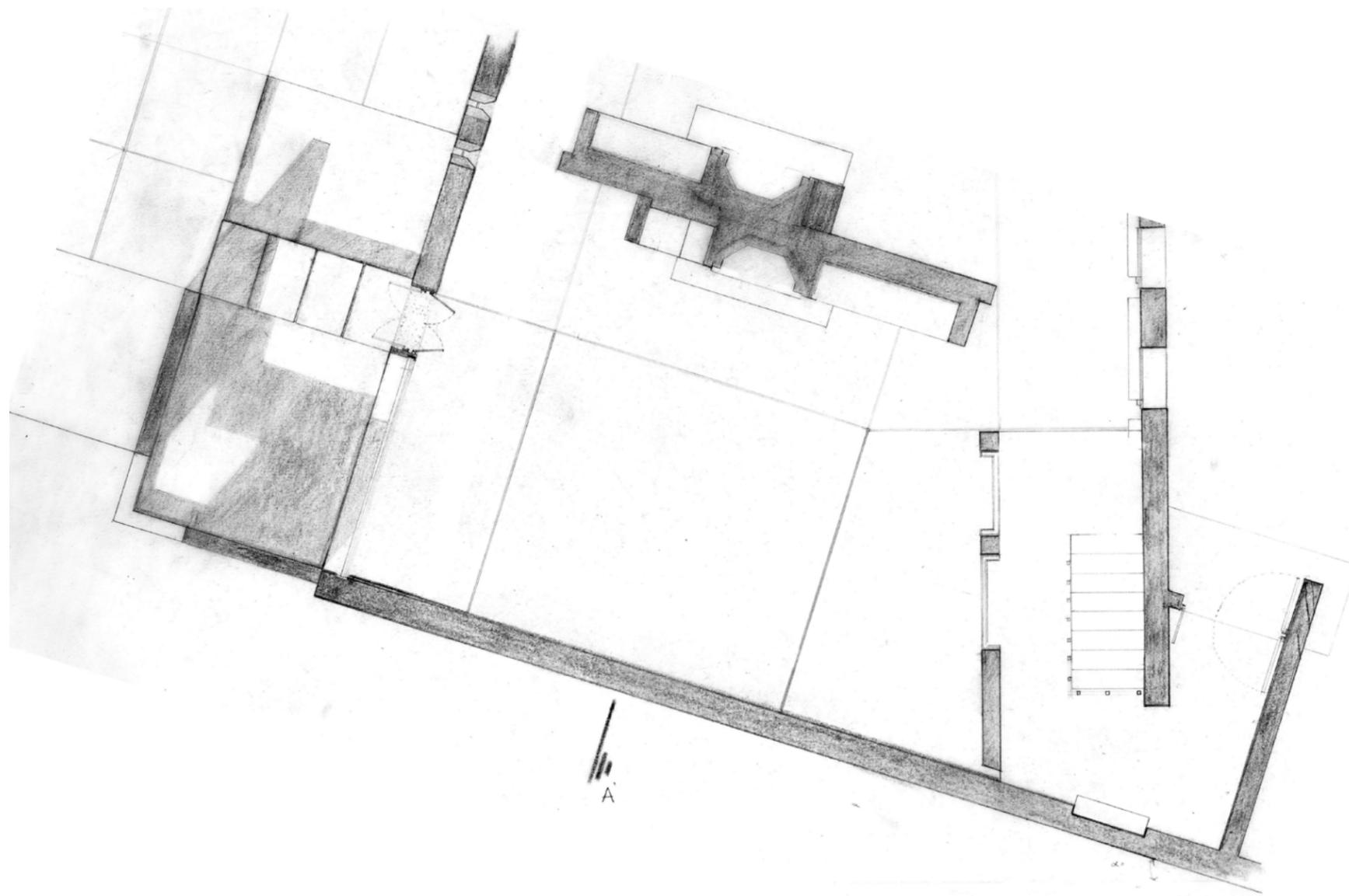
Plan
The concrete tiles show the change of direction due to the rotation from this room to the next, the courtyard to the garden



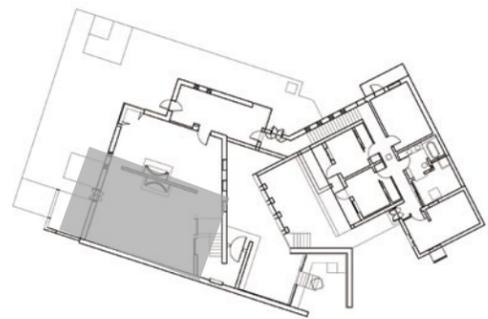
Entryway



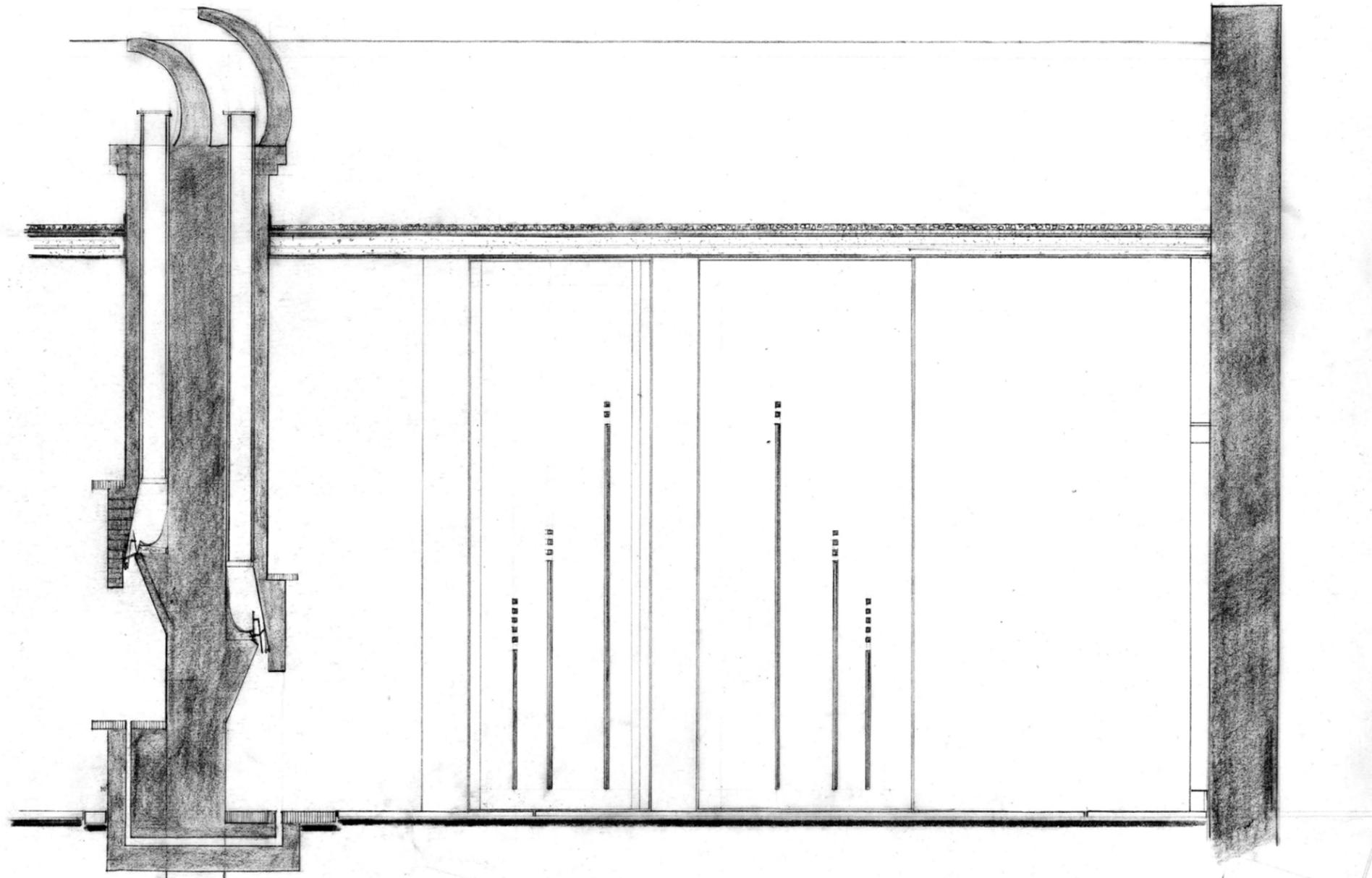
South Elevation



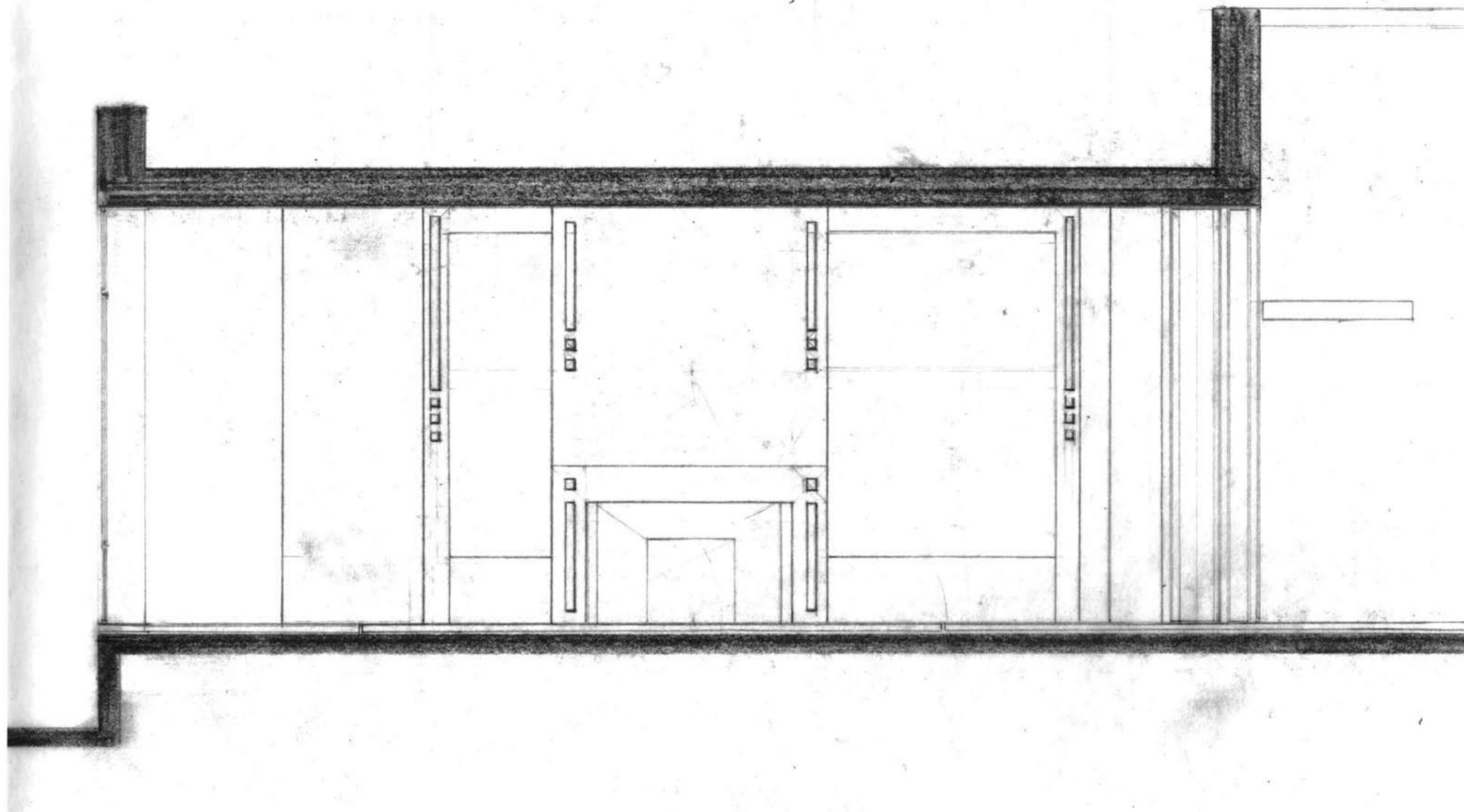
Plan



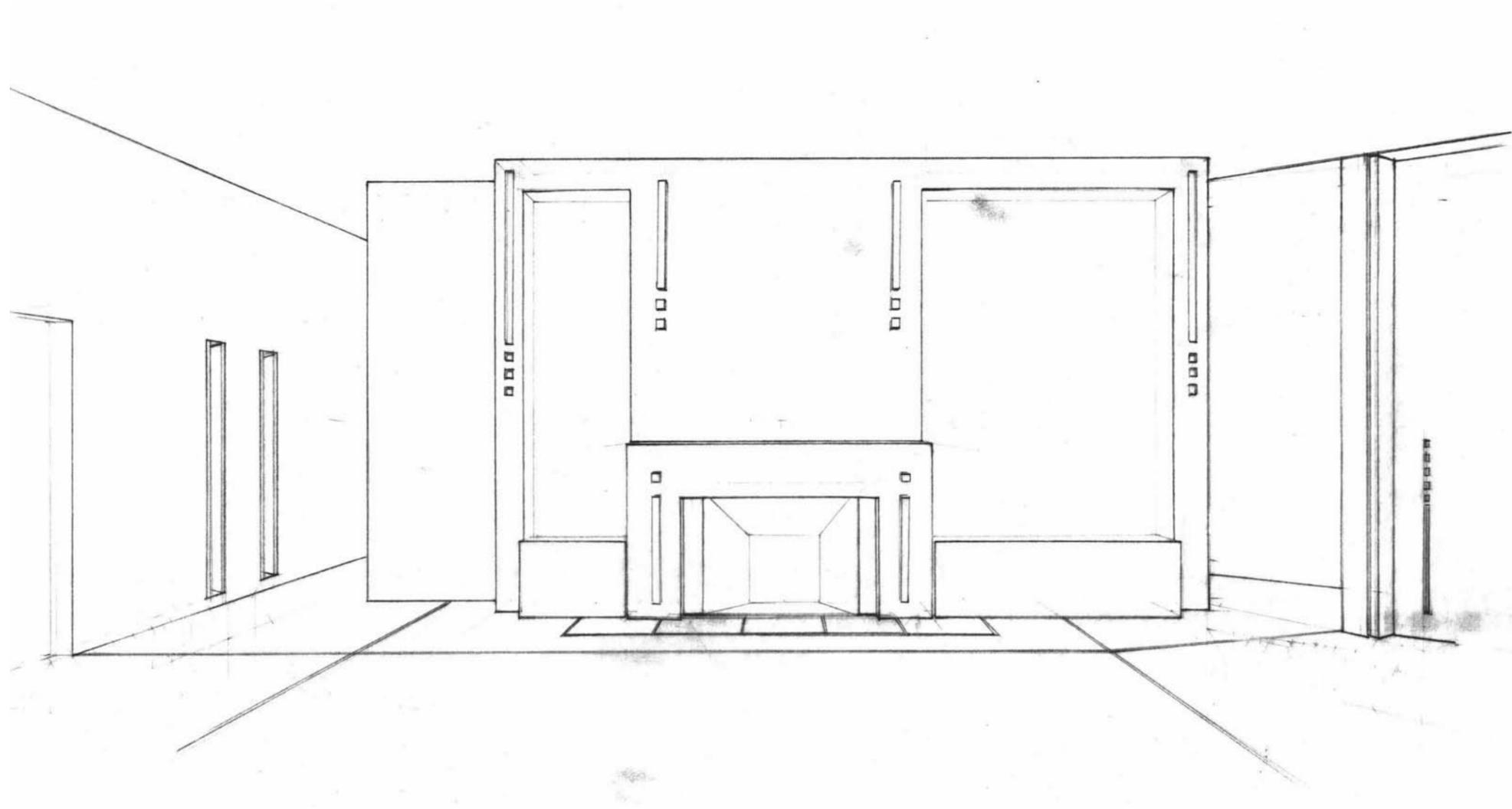
Living room



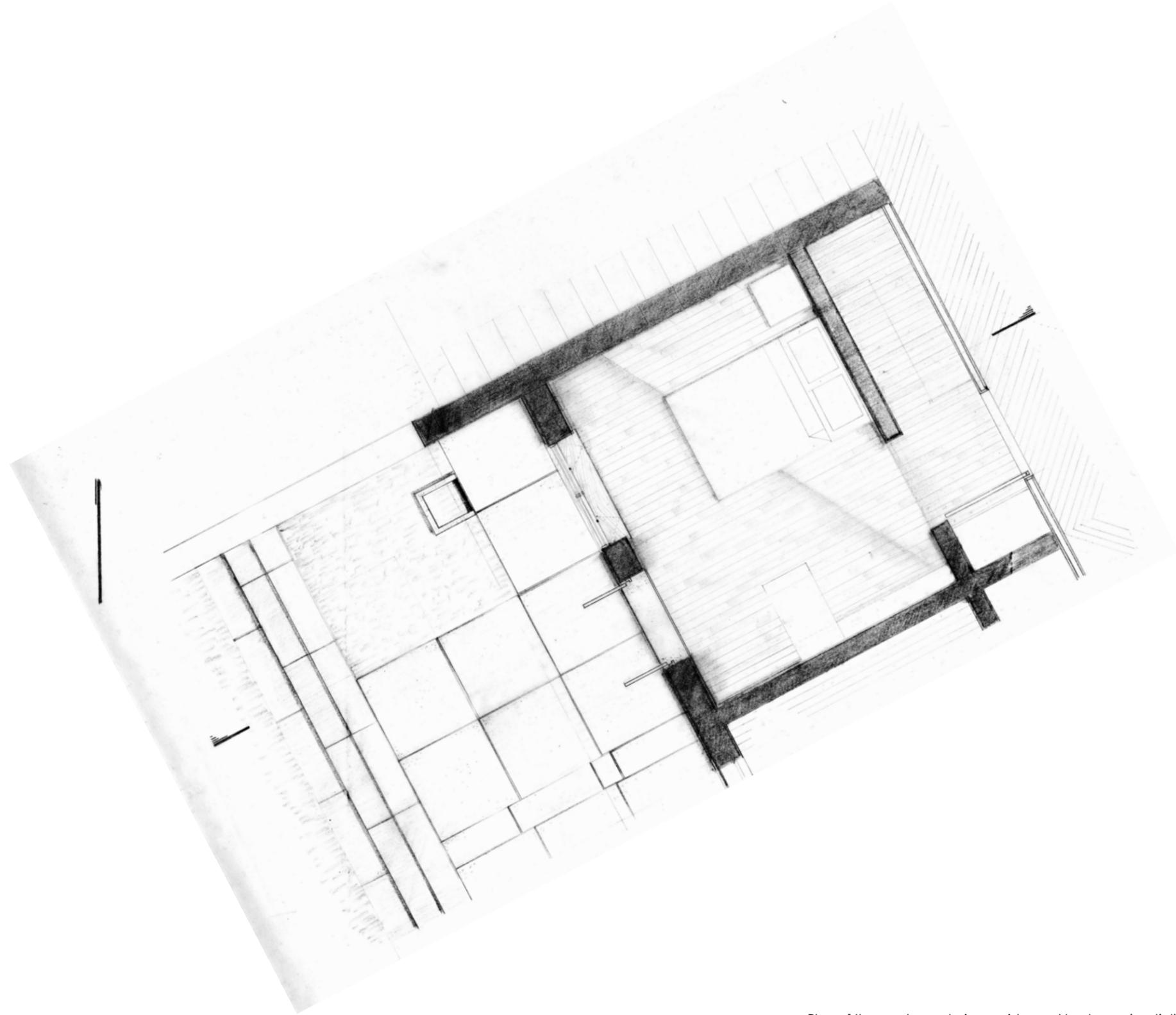
Section A-A thru the living room.
View of the perforated copper panels



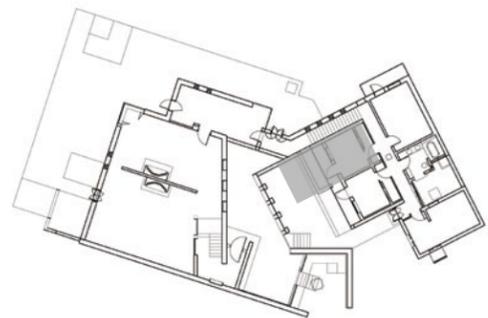
Section B-B through the living room



View from the living room to the fireplace



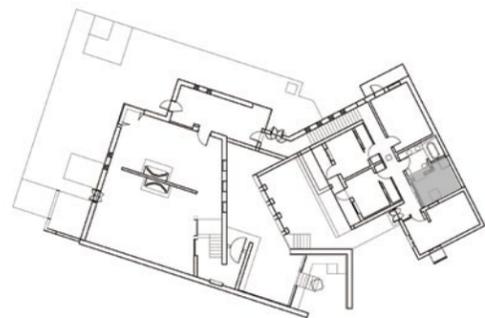
Plan of the garden, exterior corridor and bedroom (partial)



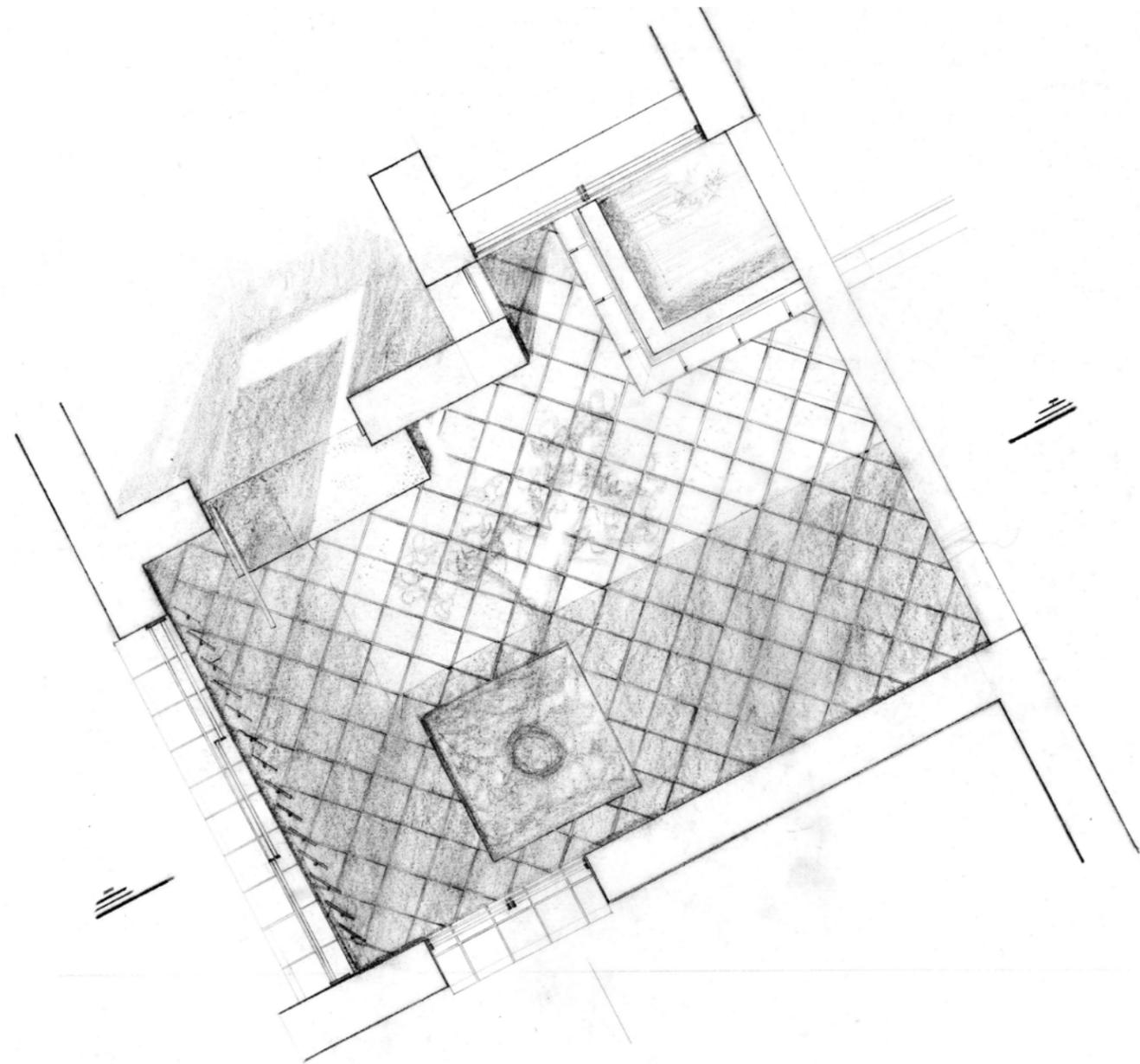
Bedroom



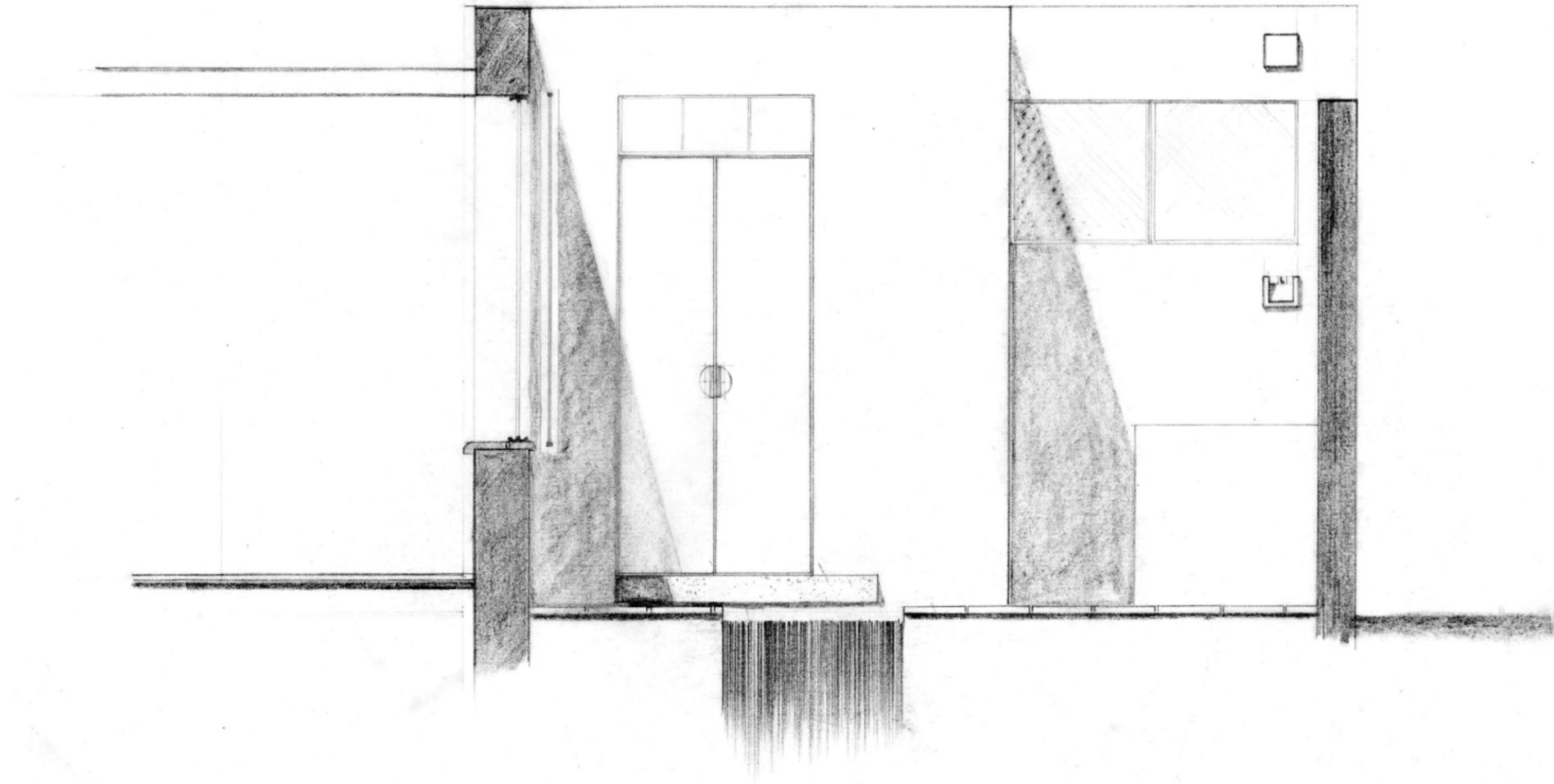
West Elevation



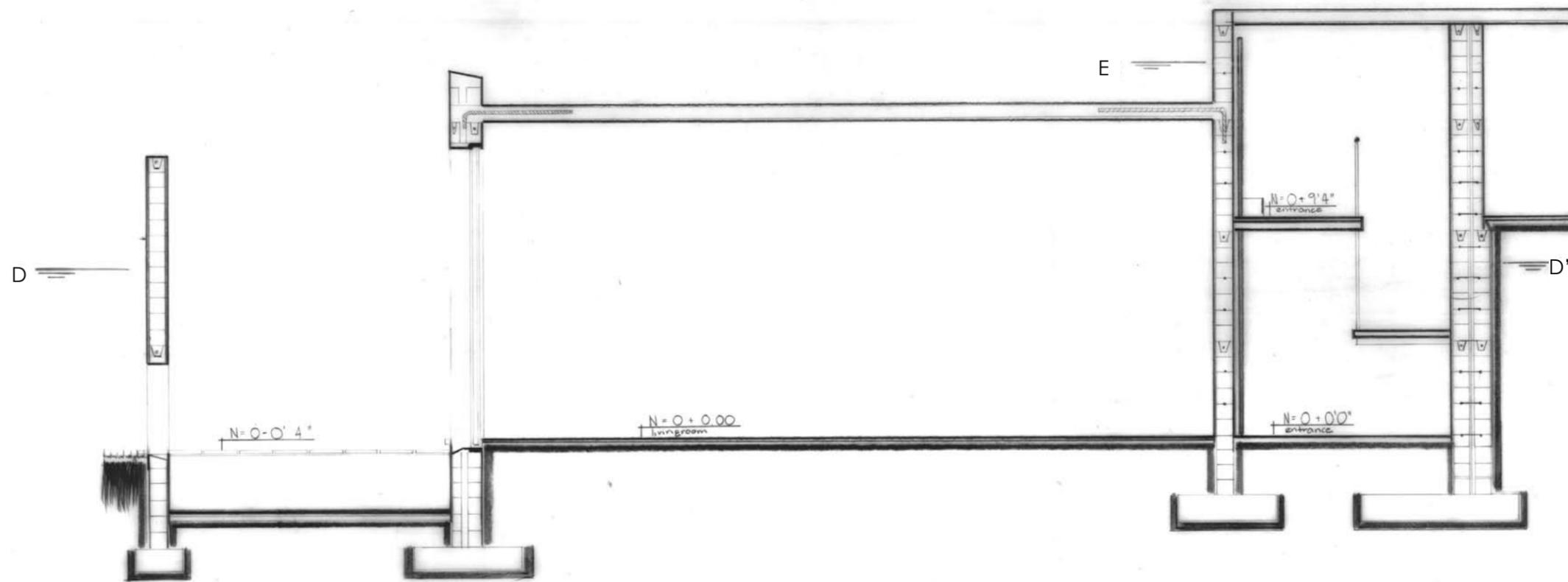
Patio



Plan of the patio
The screen of the window is operated from the patio

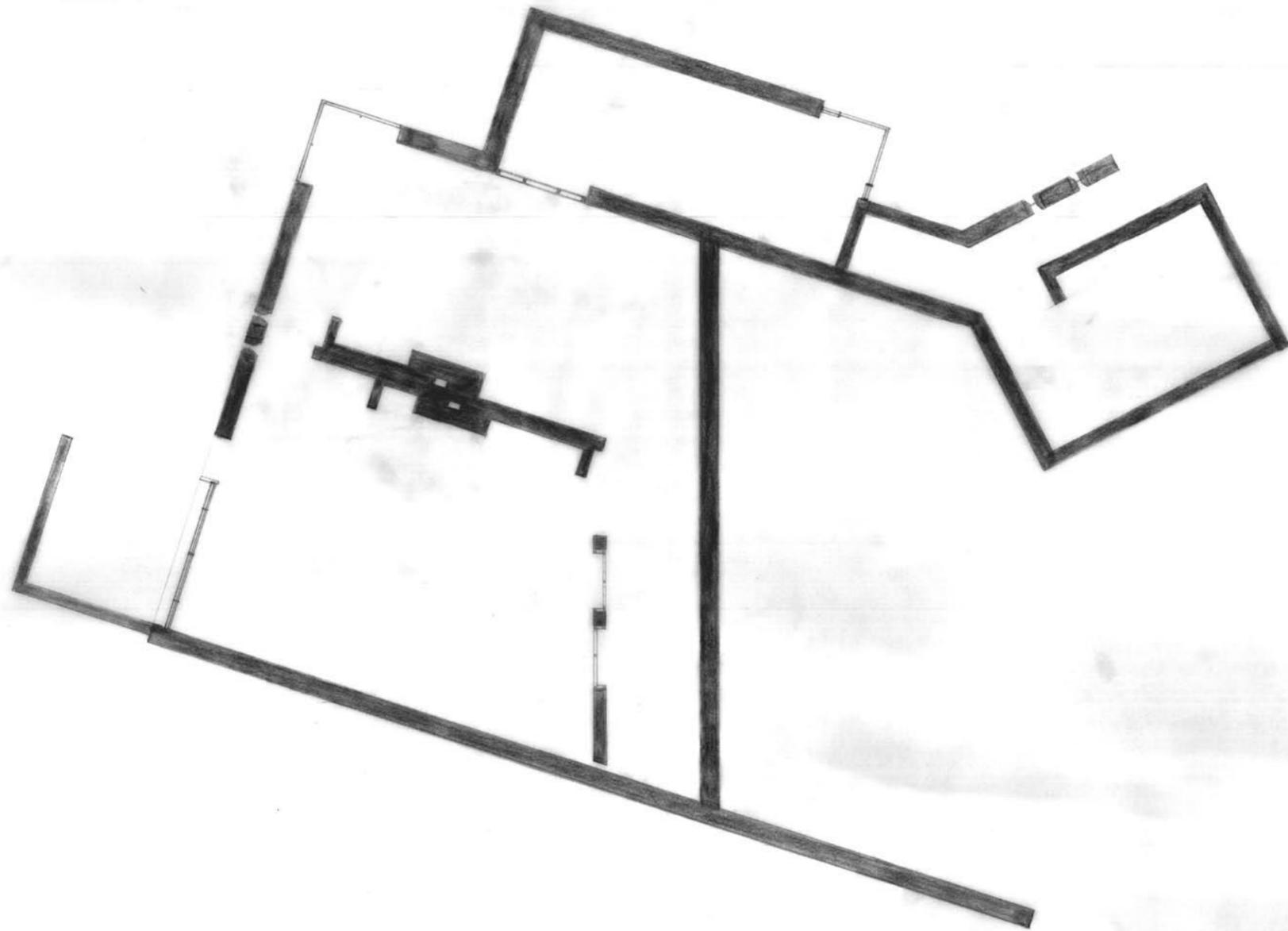


Section through the patio

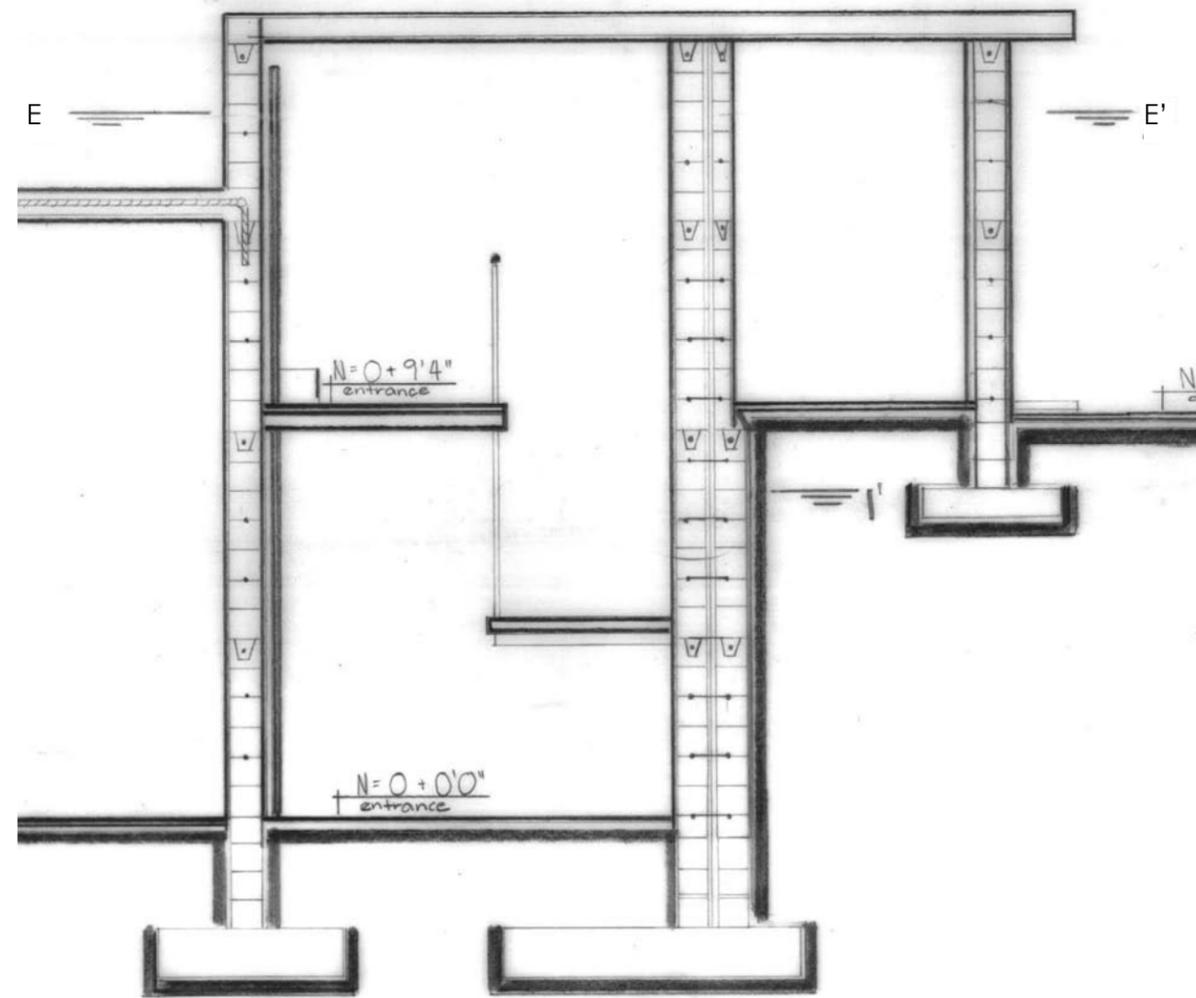


Section D-D'

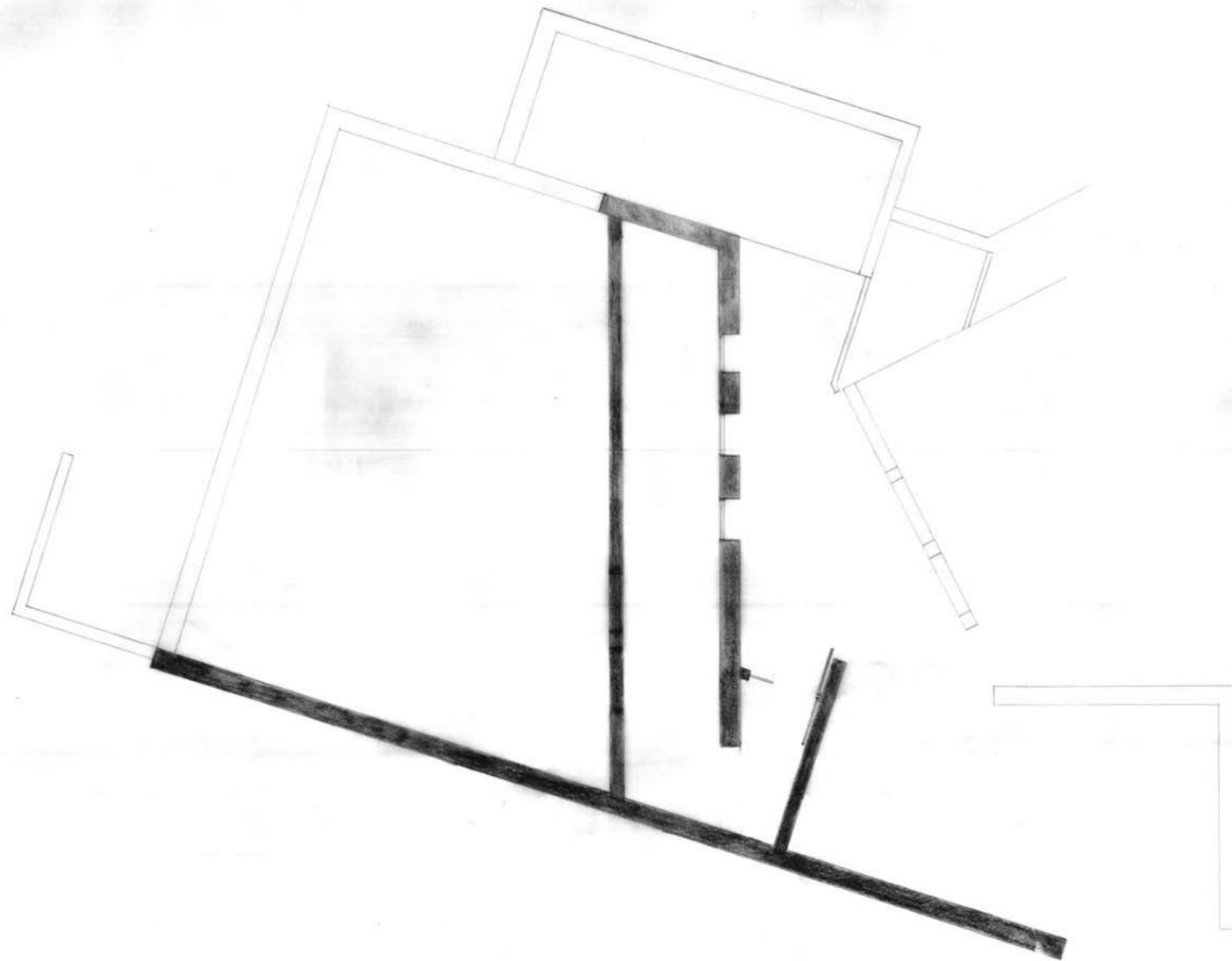
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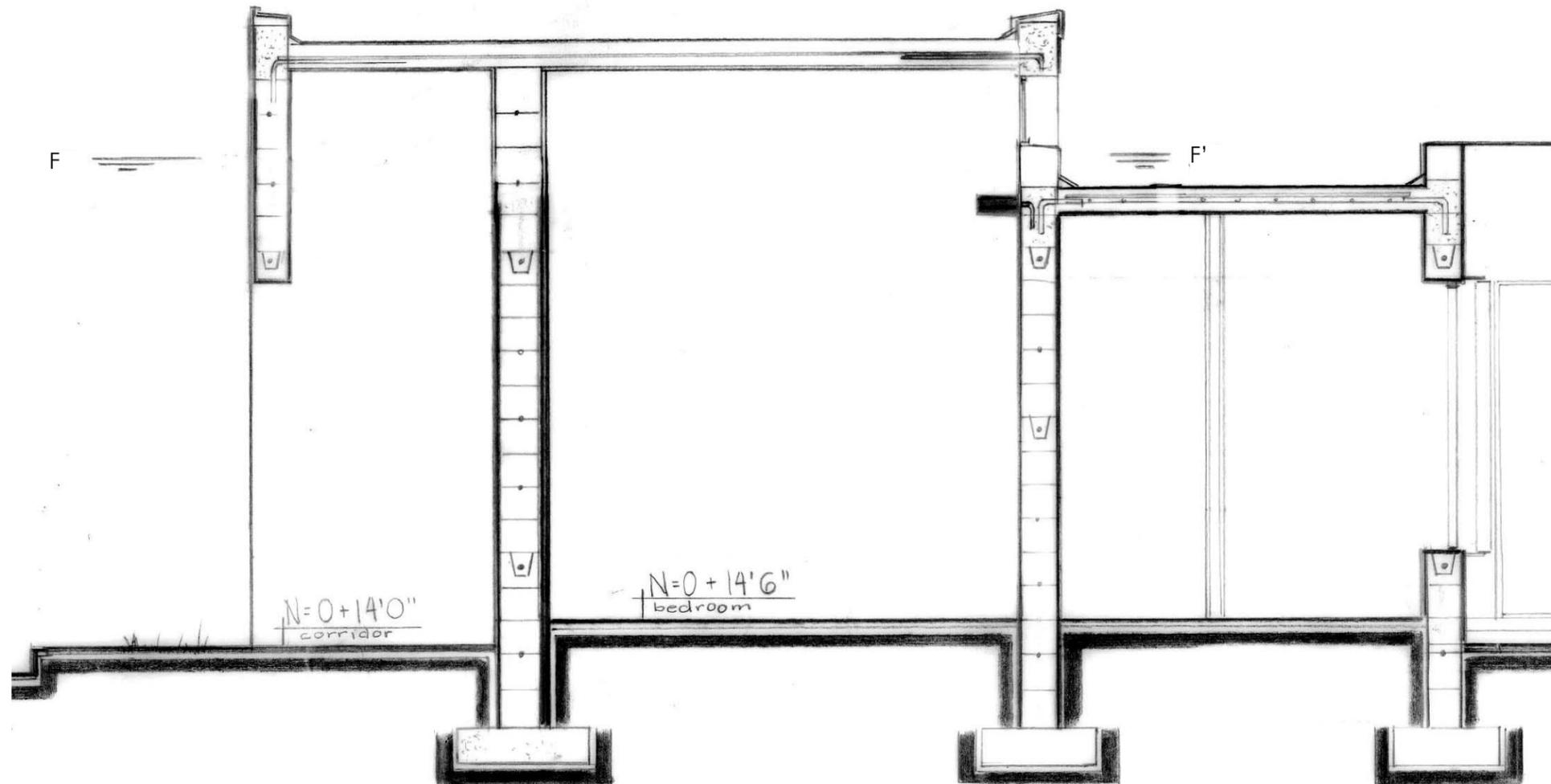
Plan Section D-D'



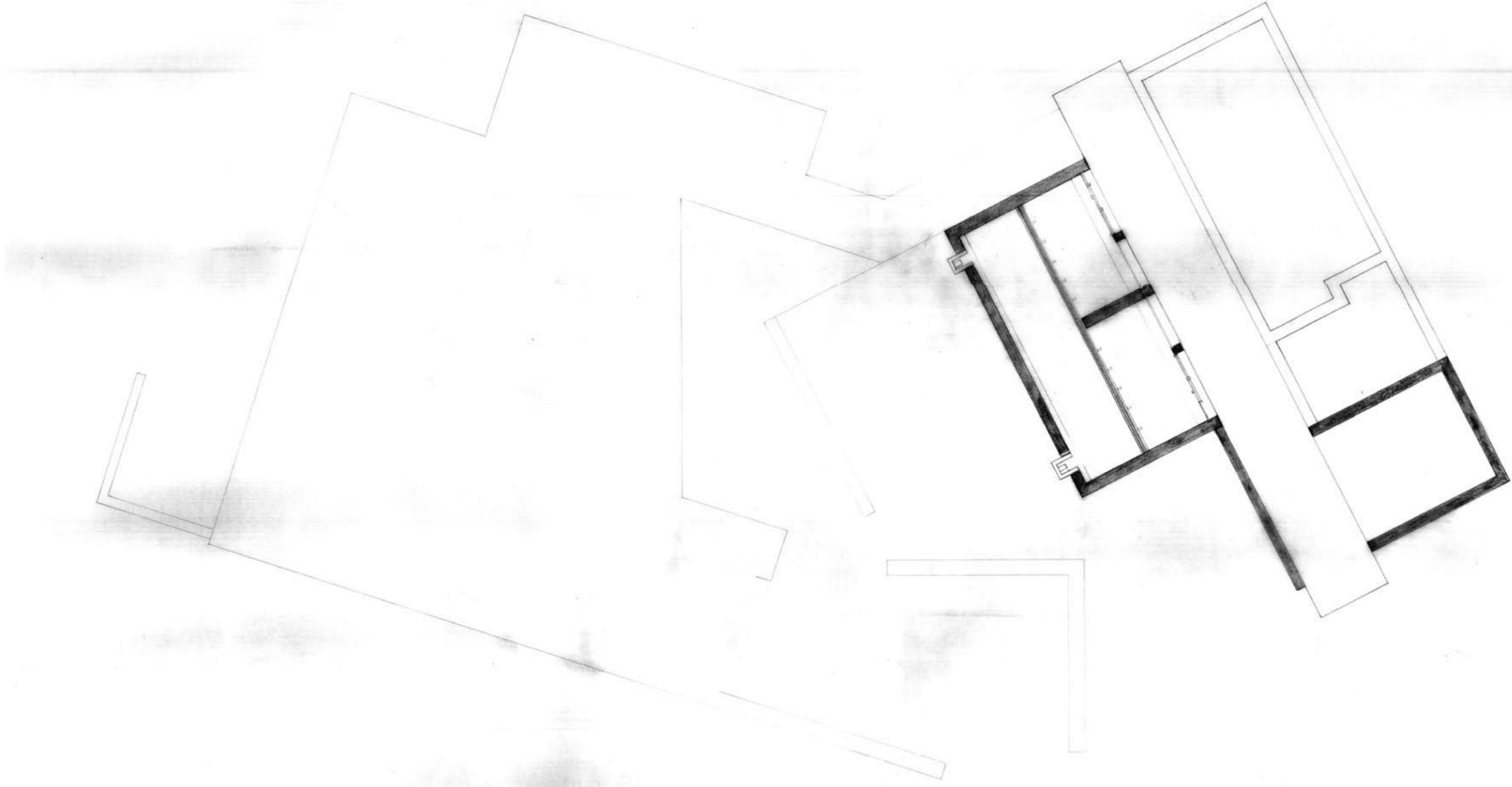
Section E-E'



Plan Section E-E'



Section F-F'



Plan Section F-F'

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