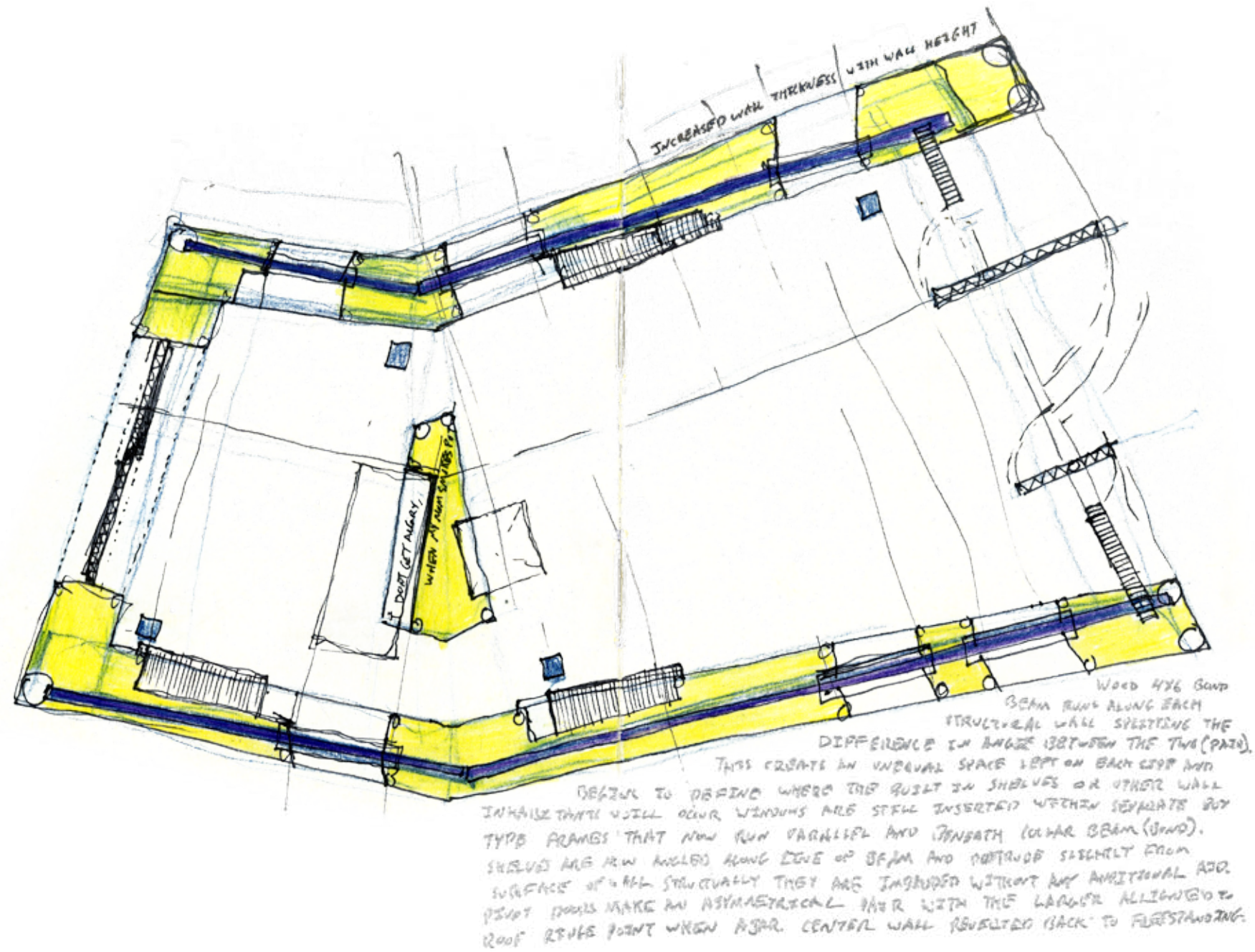


an Architecture Manufactum

BRYAN THOMAS MONTANIO

the human hand in modern design



an
Architecture Manufactum
the human hand in modern design

BRYAN THOMAS MONTANIO

thesis submitted to the faculty of Virginia Polytechnic and State University
in partial fulfillment of the requirements for the degree of
masters of architecture in architecture.

PAUL EMMONS, chair

MARCIA FEUERSTEIN

JAAN HOLT

July 01, 2011

4:44 pm

College of Architecture and Urban Studies
Washington Alexandria Architecture Center

variation · imperfection · idiosyncratic · handmade · earth · drawing · cob · character

for **richard c. rich**
who sparked this entire undertaking

the human hand,
in building as in art,
has left its impression on all
the earliest forms of architecture.
its mark has been one of imperfection,
variation, and uniqueness;
and with these traits the personification
of something innately human.
this character, instilled into any work,
immortalizes the idiosyncrasies descriptive of its creator.
rather than viewed as anachronism,
inculcating the human component into modern design
reacquaints us with our own capricious temperaments.
as powerful tools of the contemporary world
heighten our faculty for exactitude,
the prudence remains as to whether,
and when, such application
is deemed appropriate.

manufactum: 'made with hands'

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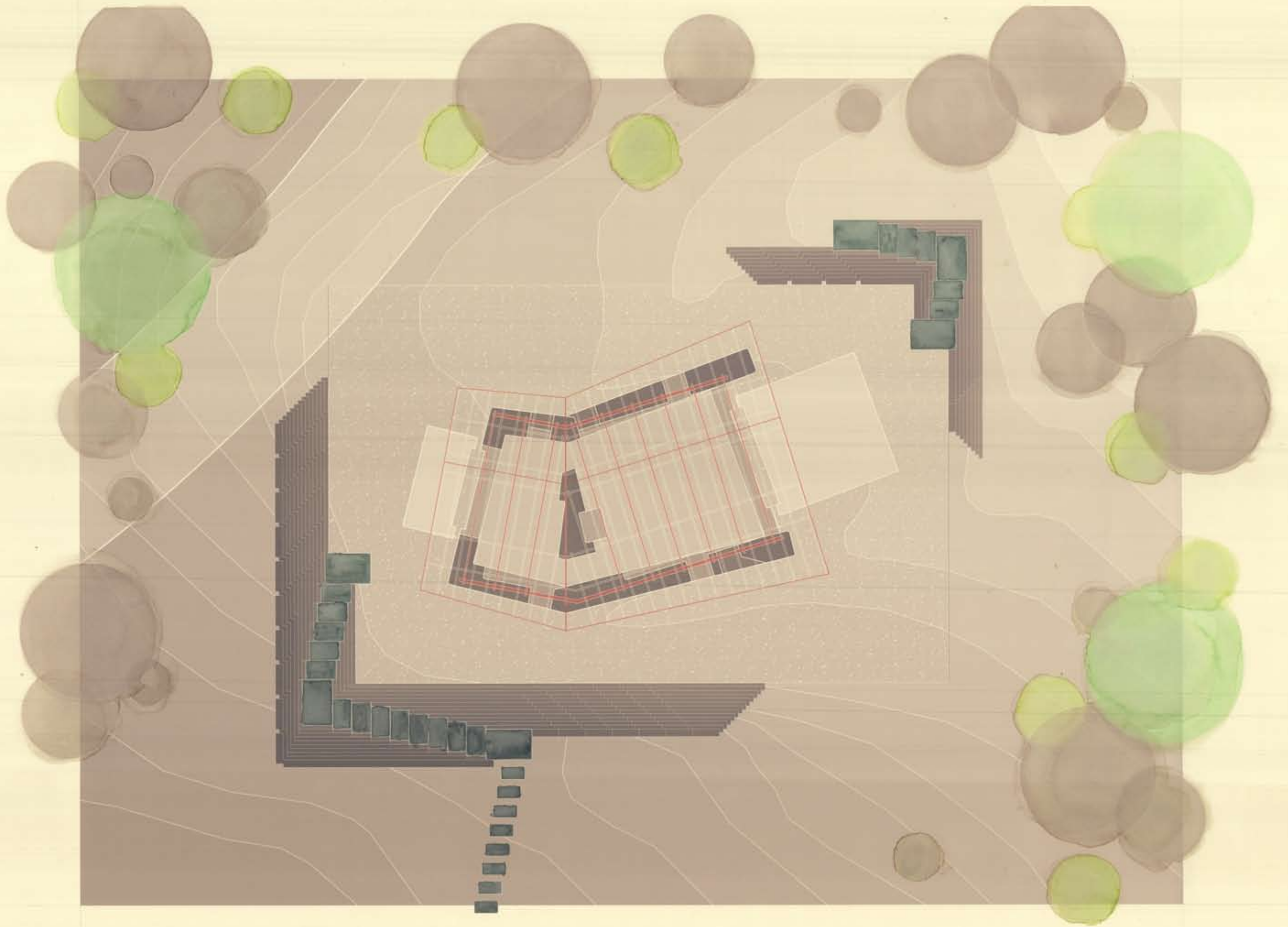
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in its physical manifestation,
the thesis was explored through
the design of a 'creative space'
situated into a north facing, pitch pine laden hillside
set a mile inland in truro massachusetts, cape cod.
this studio was designed to compliment
a new home occupying the lot
and provide the resident couple a cognitive getaway.
the primary wall composition and expressive medium
is an earth-based mixture of clay, sand, and straw
known by its english identifier, 'cob'.
hand-fashioned into buildings worldwide for centuries,
use of this system was adapted to fit
a contemporary program and ideology.
care was further taken to instill the undulating
and imprecise qualities of the built form
in the manner and style with which
the building has been depicted.

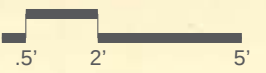
Design commenced from a north-south orientation steadily opening out over the northern hillside to capture ambient natural light. In plan, the space is divided into a main working/studio space and a smaller storage/support entry. Each end is capped with substantial glazing for their respective light qualities, leaving the two massive earthen walls to incorporate various programmatic elements including shelving and sculpted windows. A large earthen wall forms the focal point for a prominent bend masking the two glazed facades from view of the main house.

! a space for creativity !

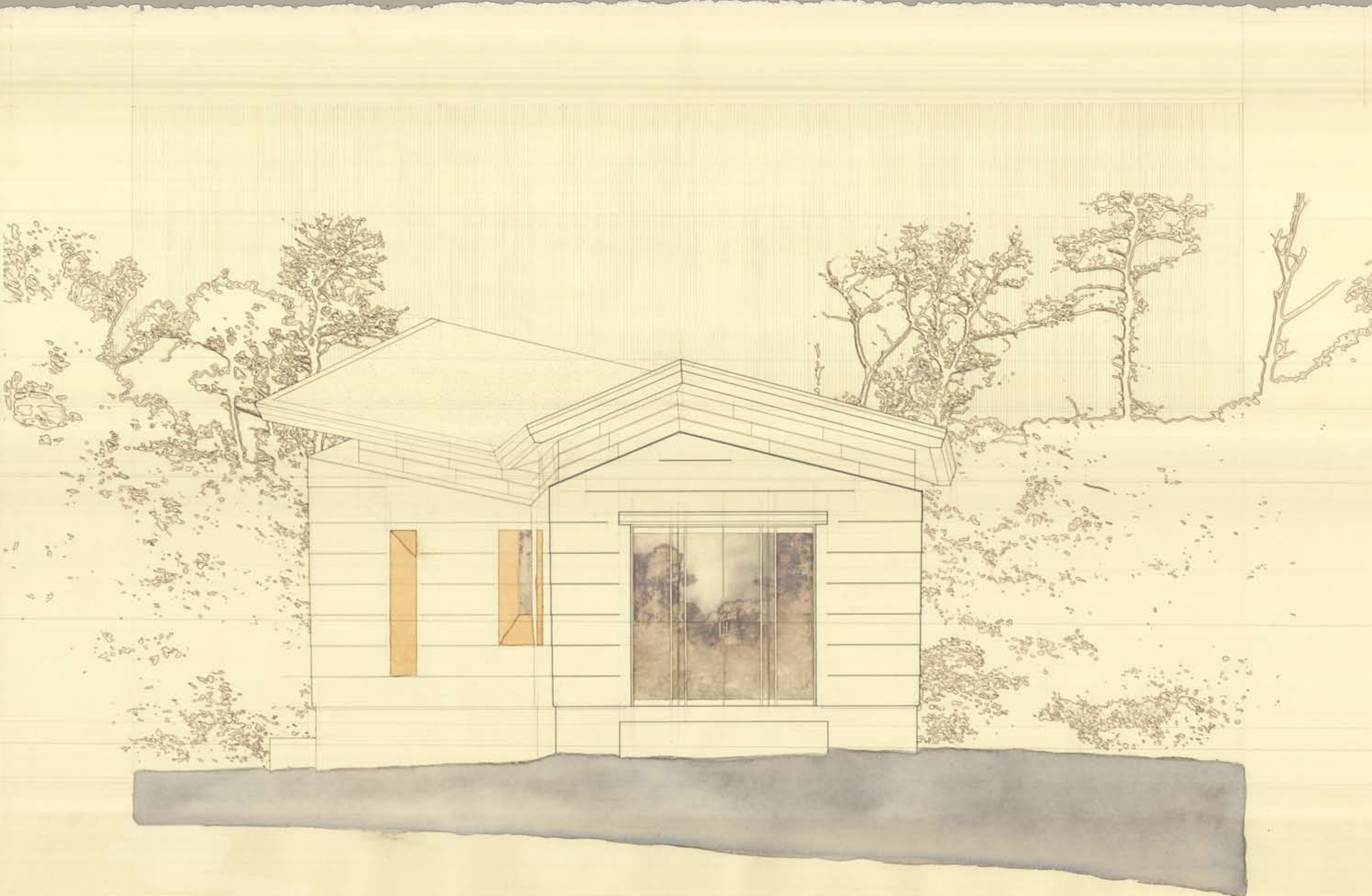
Inside, this mass partition shields the main studio from harsher southern rays while exploiting its thermal qualities. The section enhances this main gesture by growing out in either direction from the pivot point. The roofline is pulled off-center exposing a greater surface of the earthen roof to the house and thereby helping to integrate the studio into the sloping landscape. Enclosing two opposite corners of the structure are a pair of stepped retaining walls fashioned from the same stone as the stem wall of the building. A pathway from the house is seamlessly integrated into either corner and continuing on down the hill.



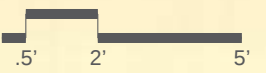
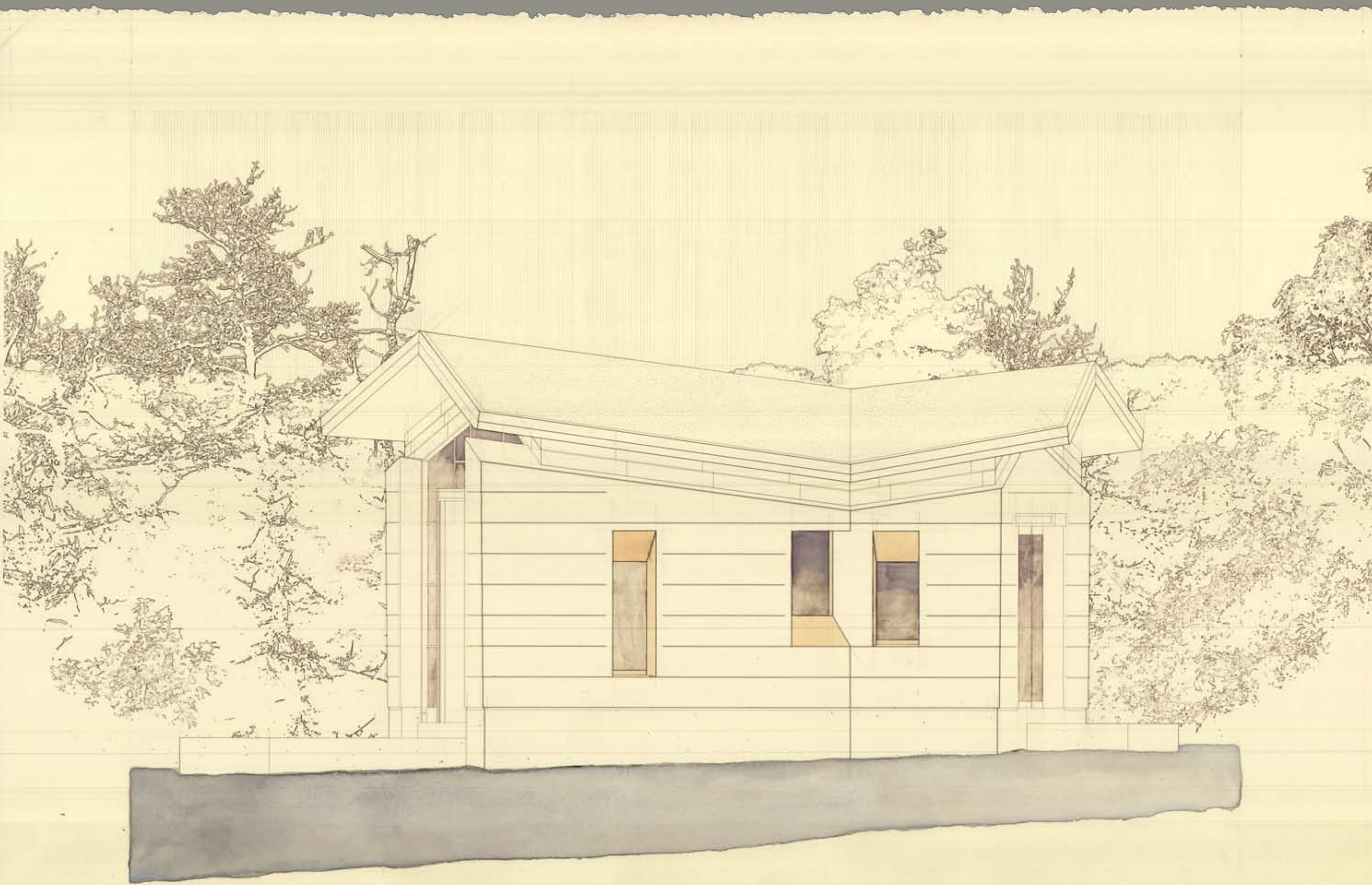


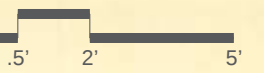
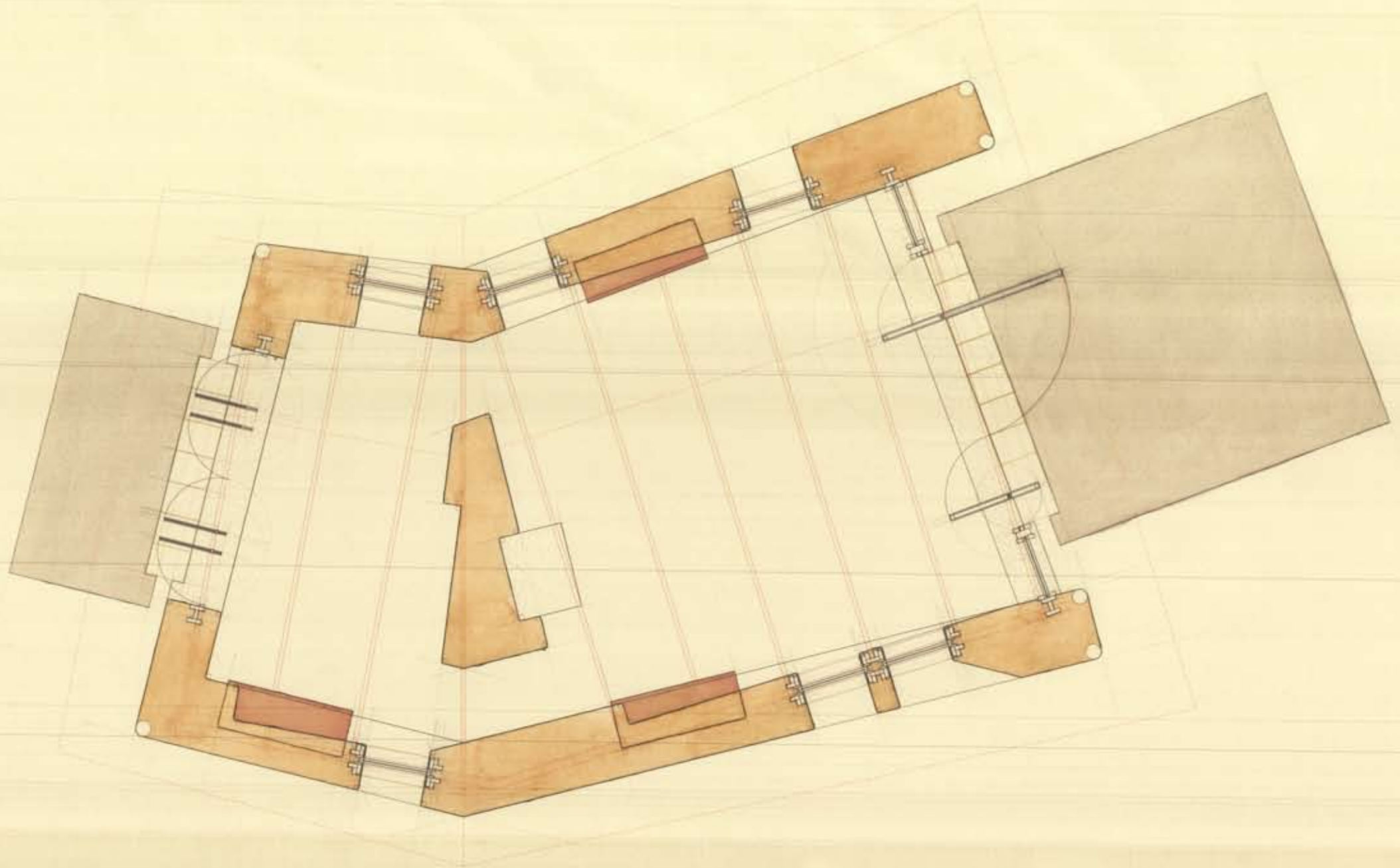


SOUTHERN ELEVATION

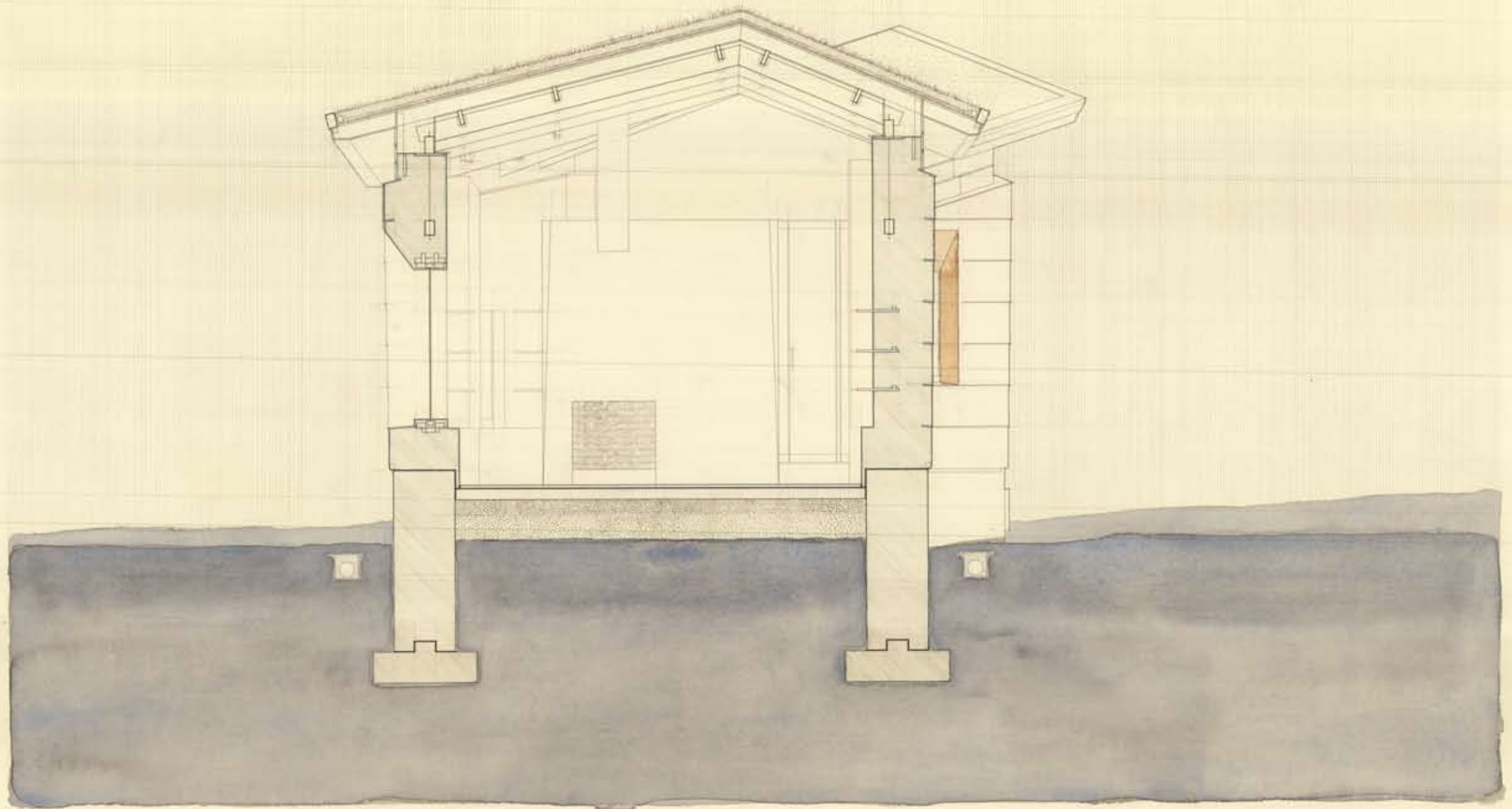


WESTERN ELEVATION

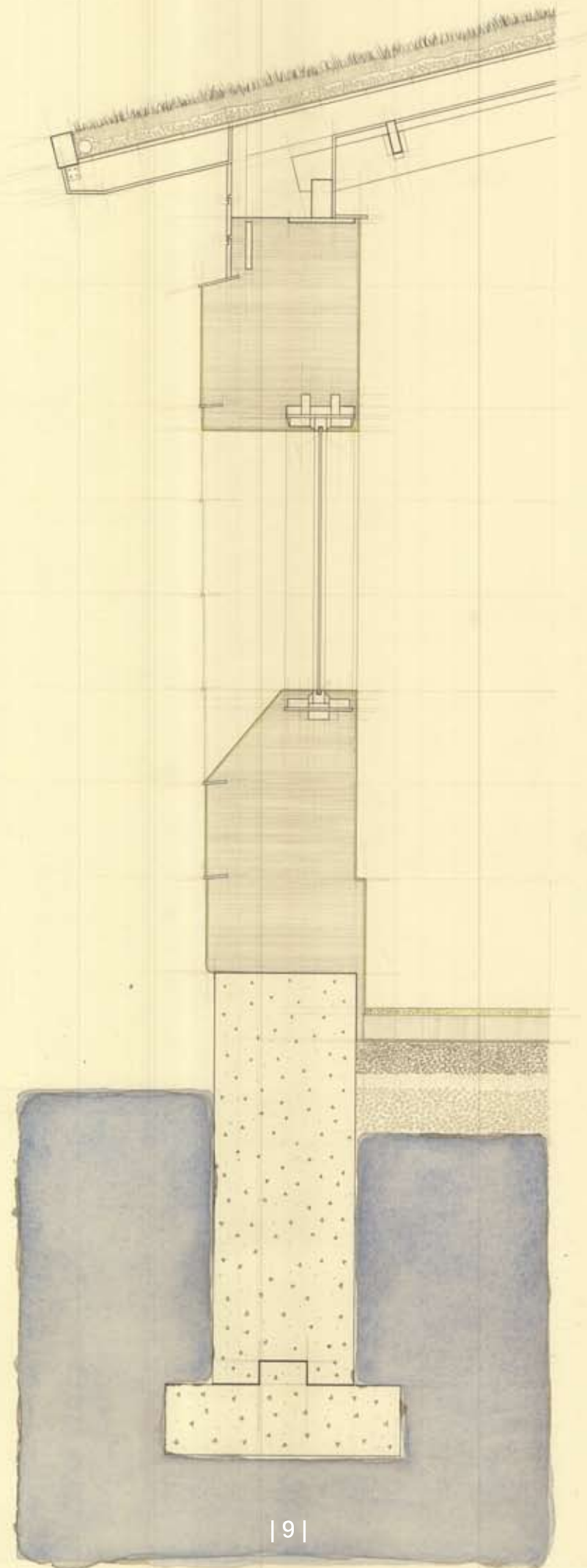




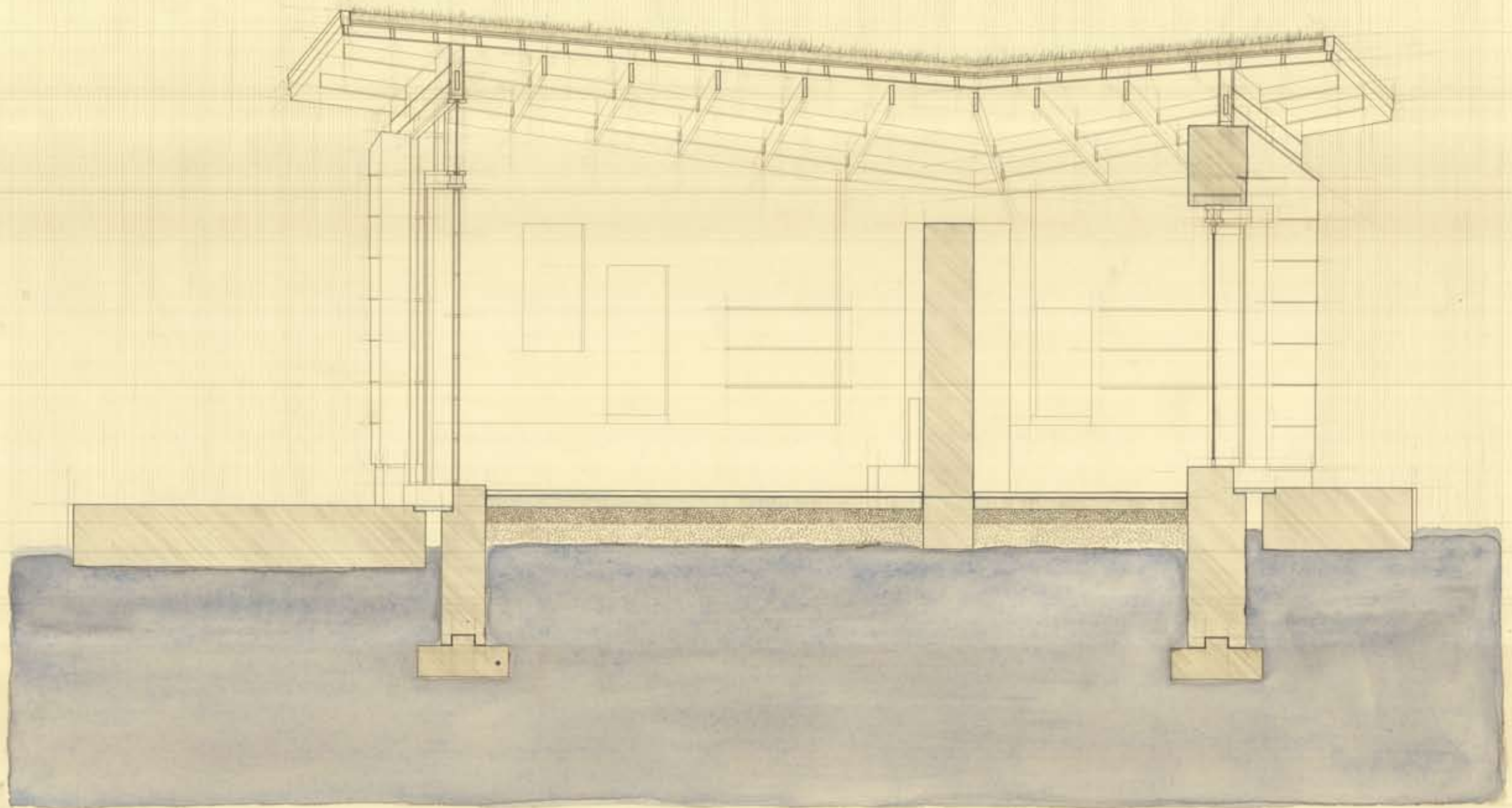
TRANSVERSE SECTION



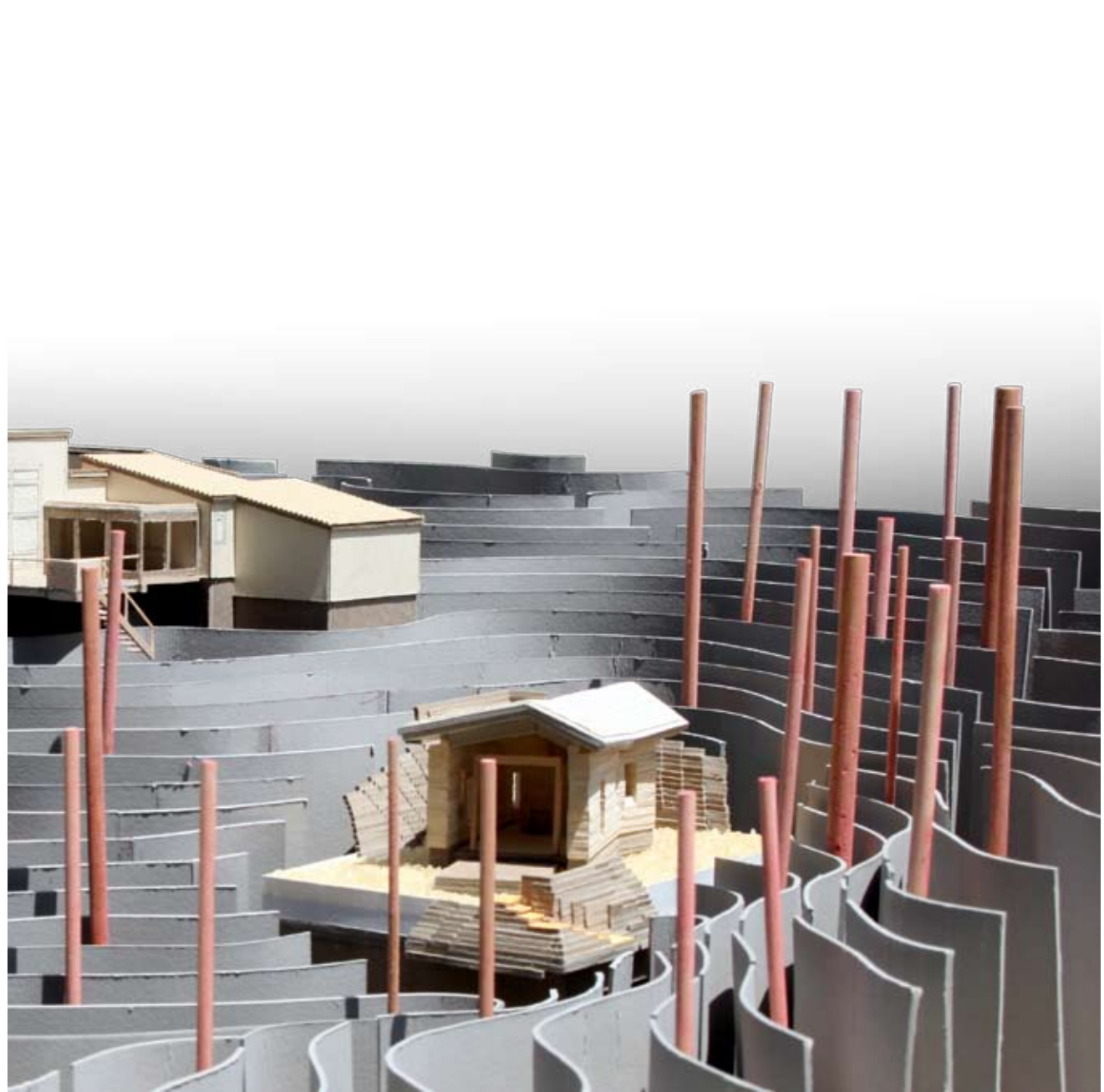
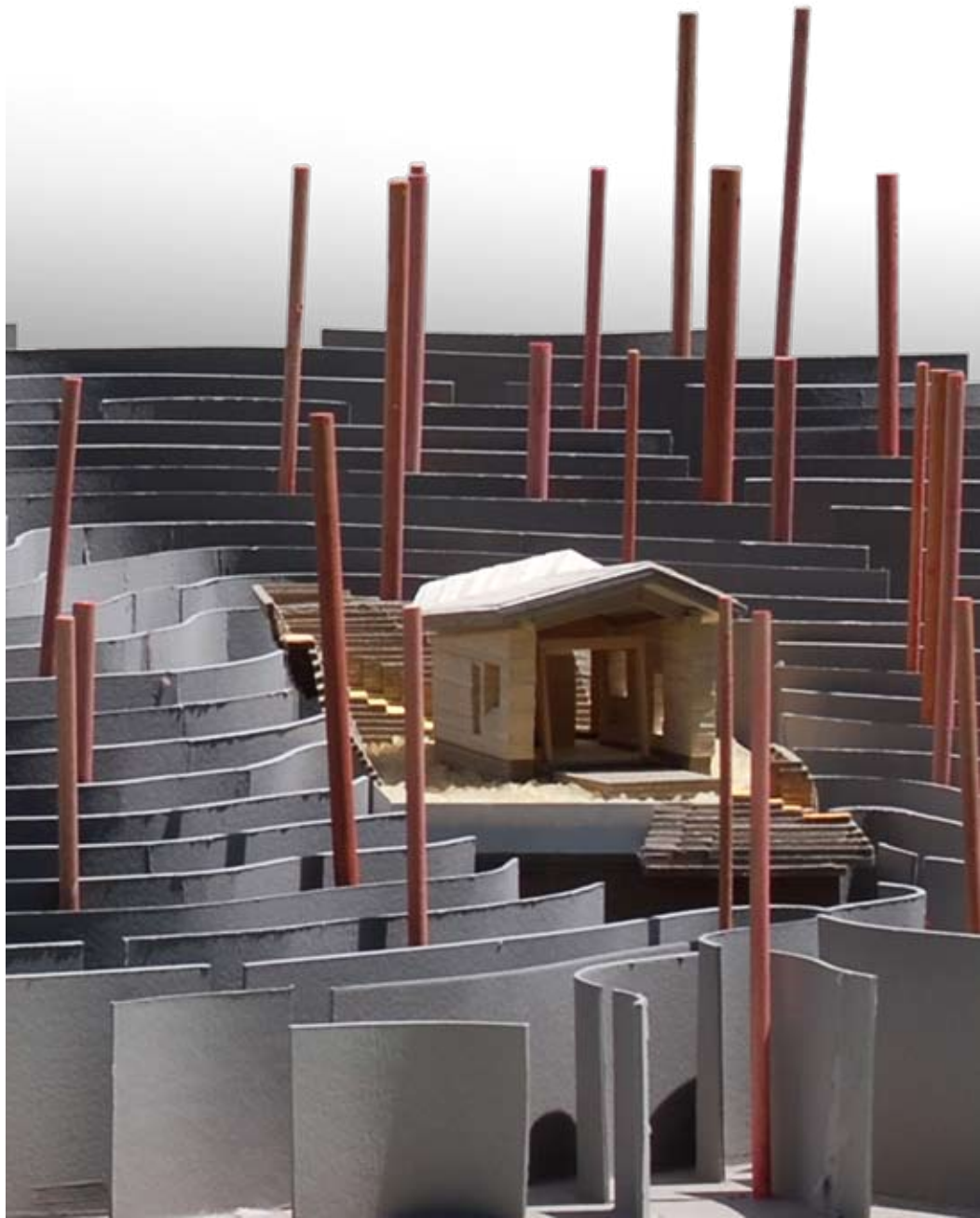
WALL SECTION

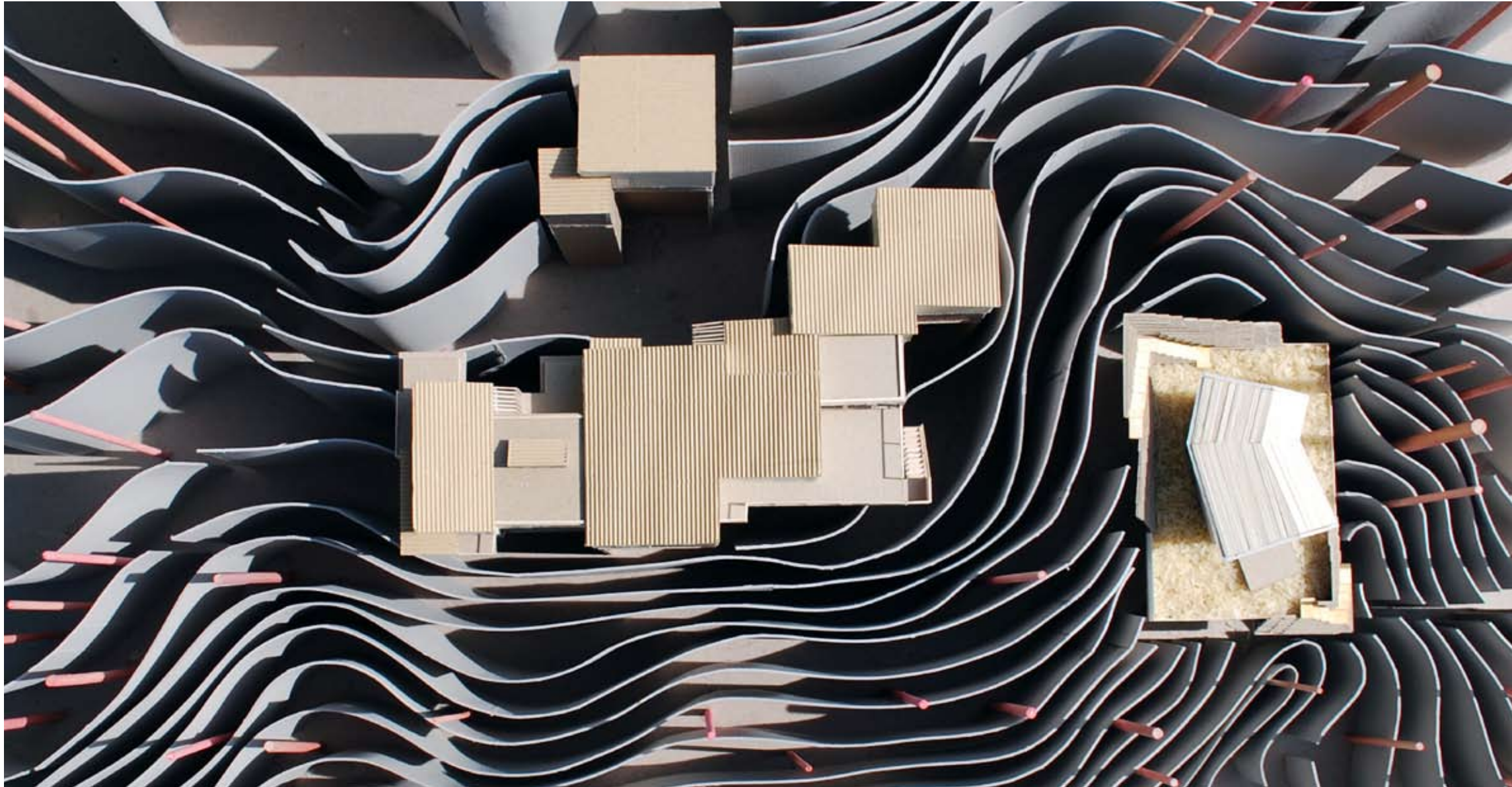


LONGITUDINAL SECTION

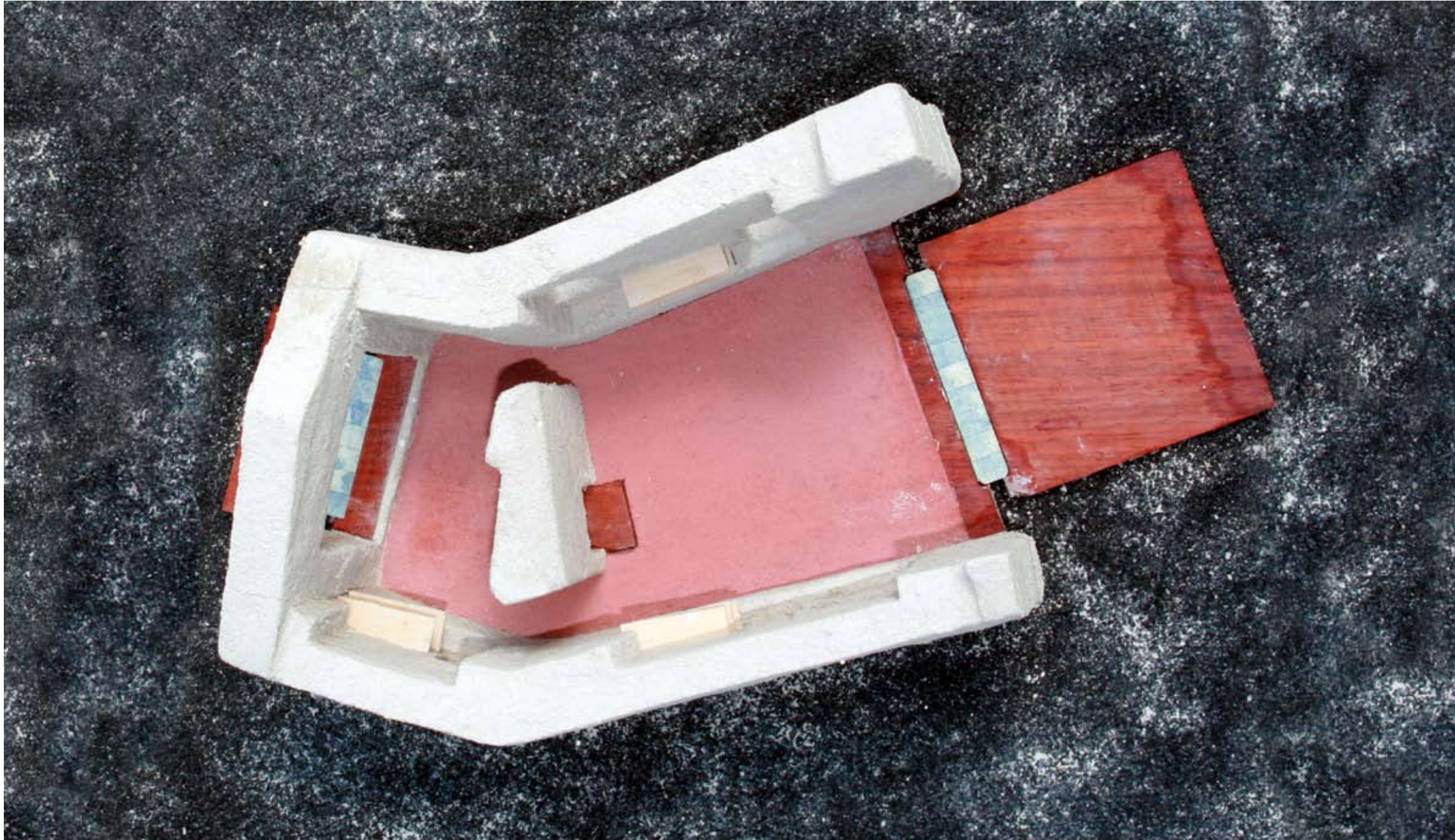








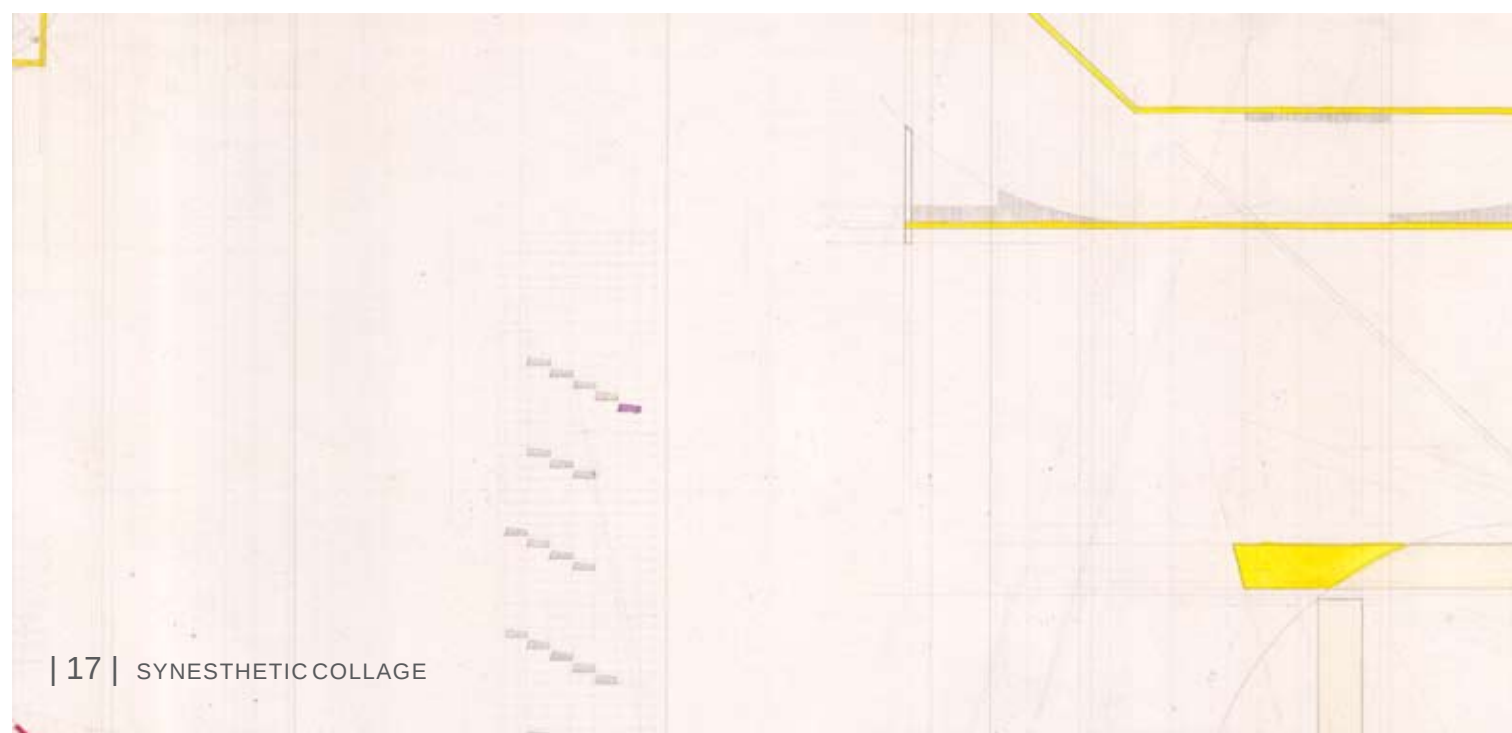
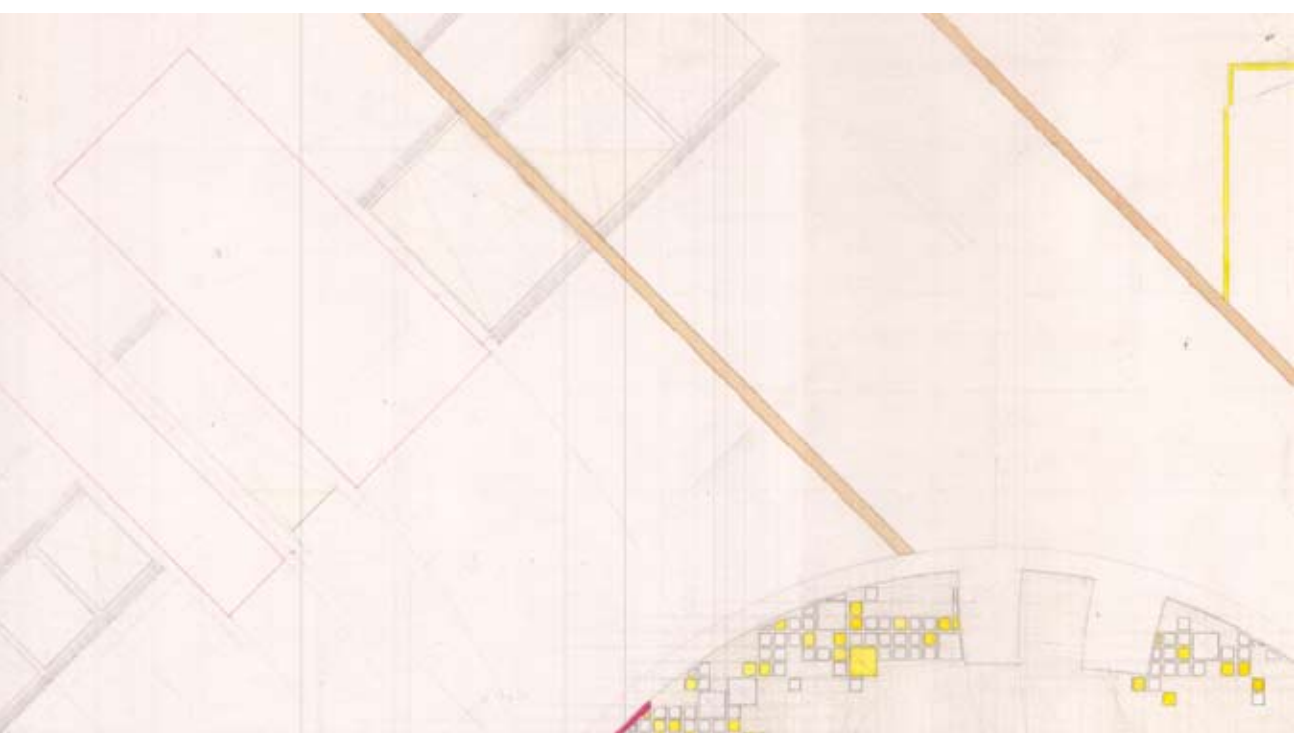
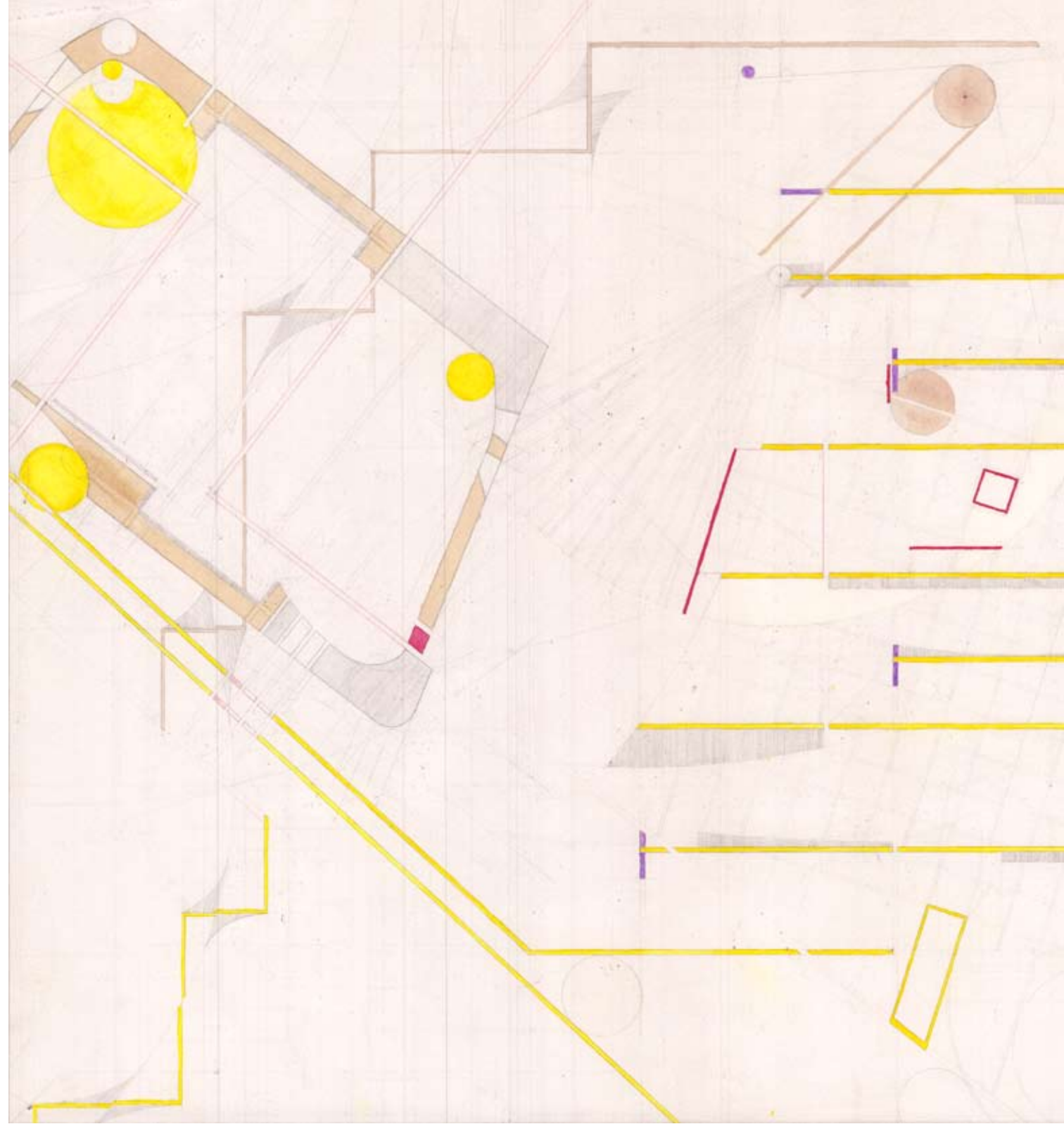
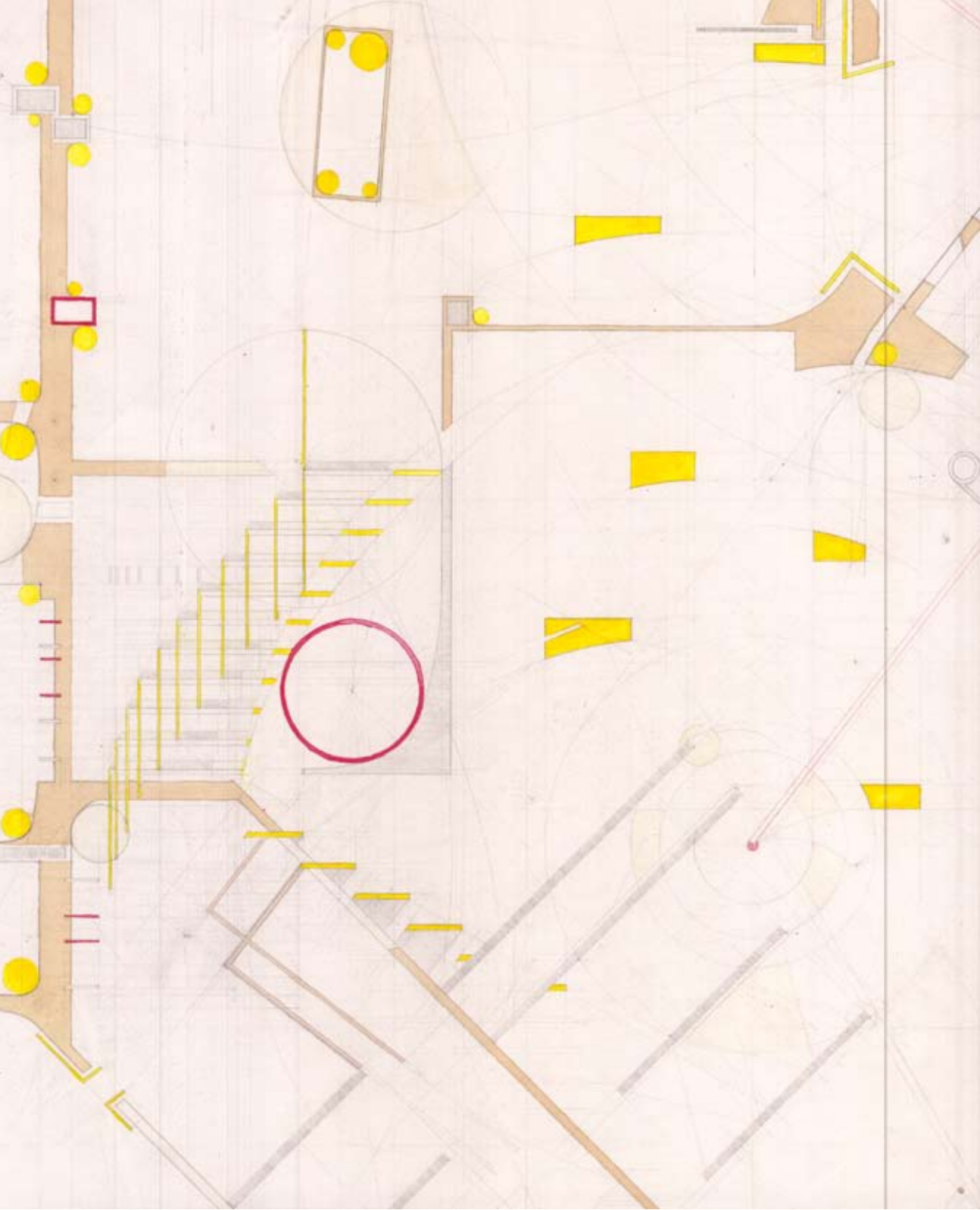


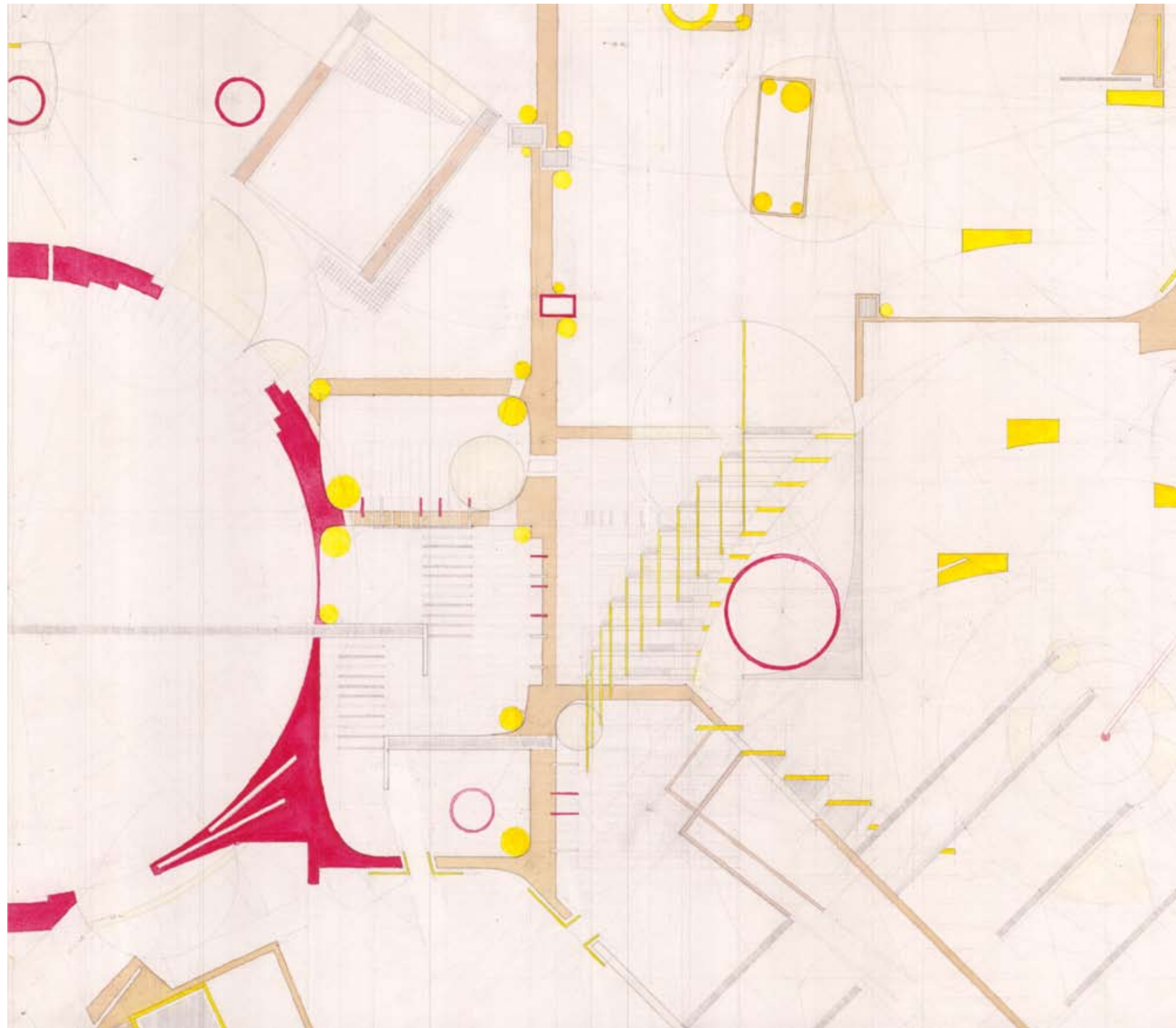
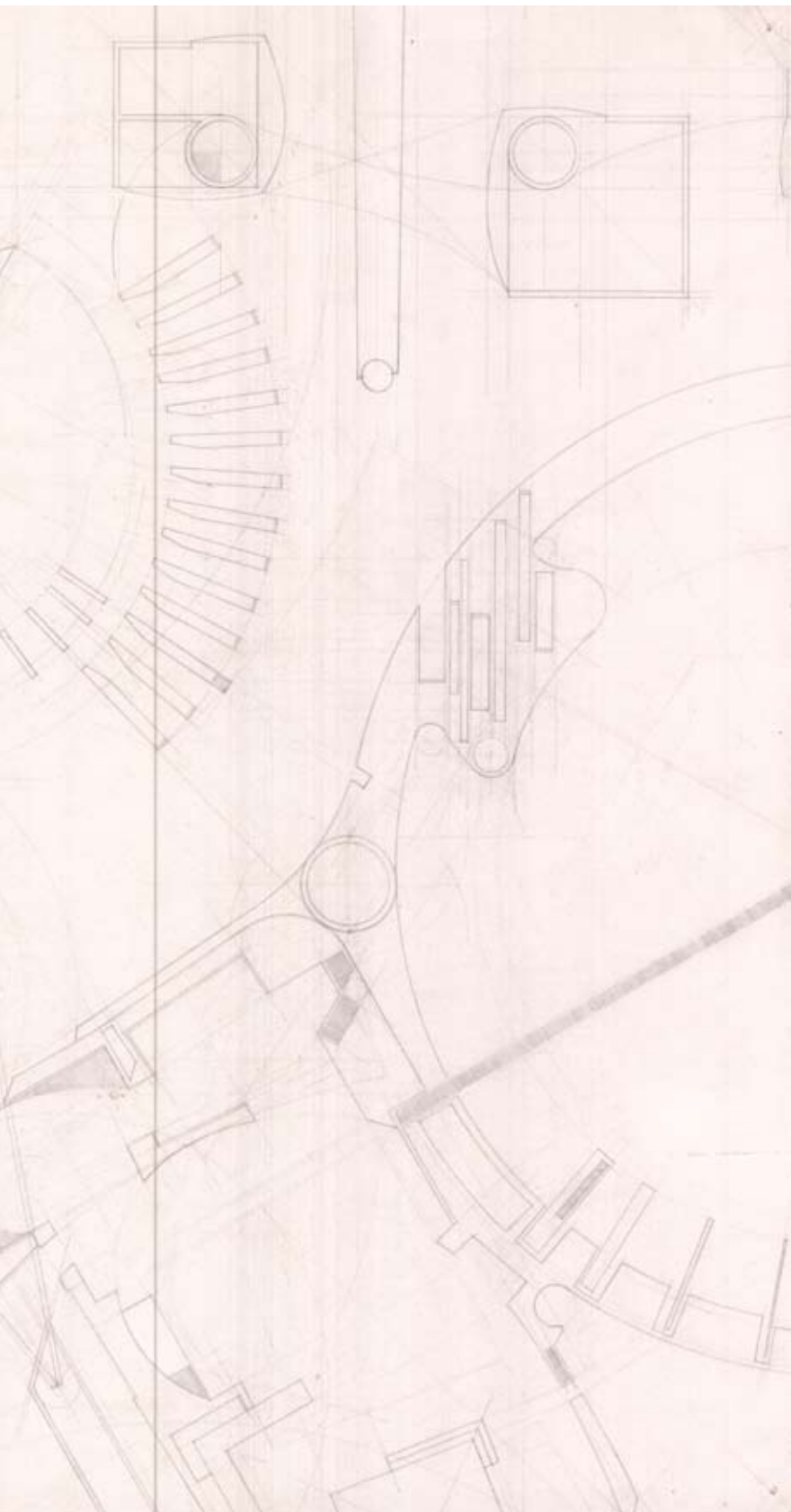
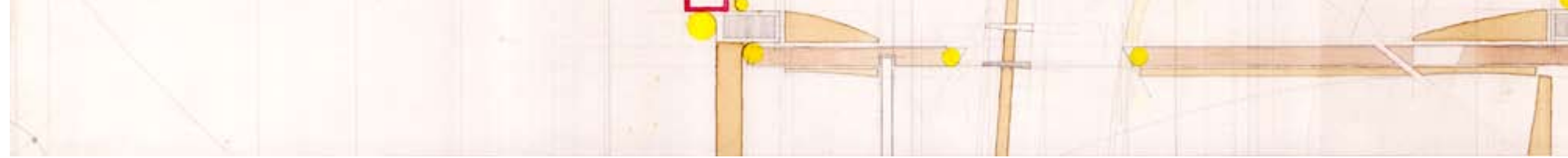


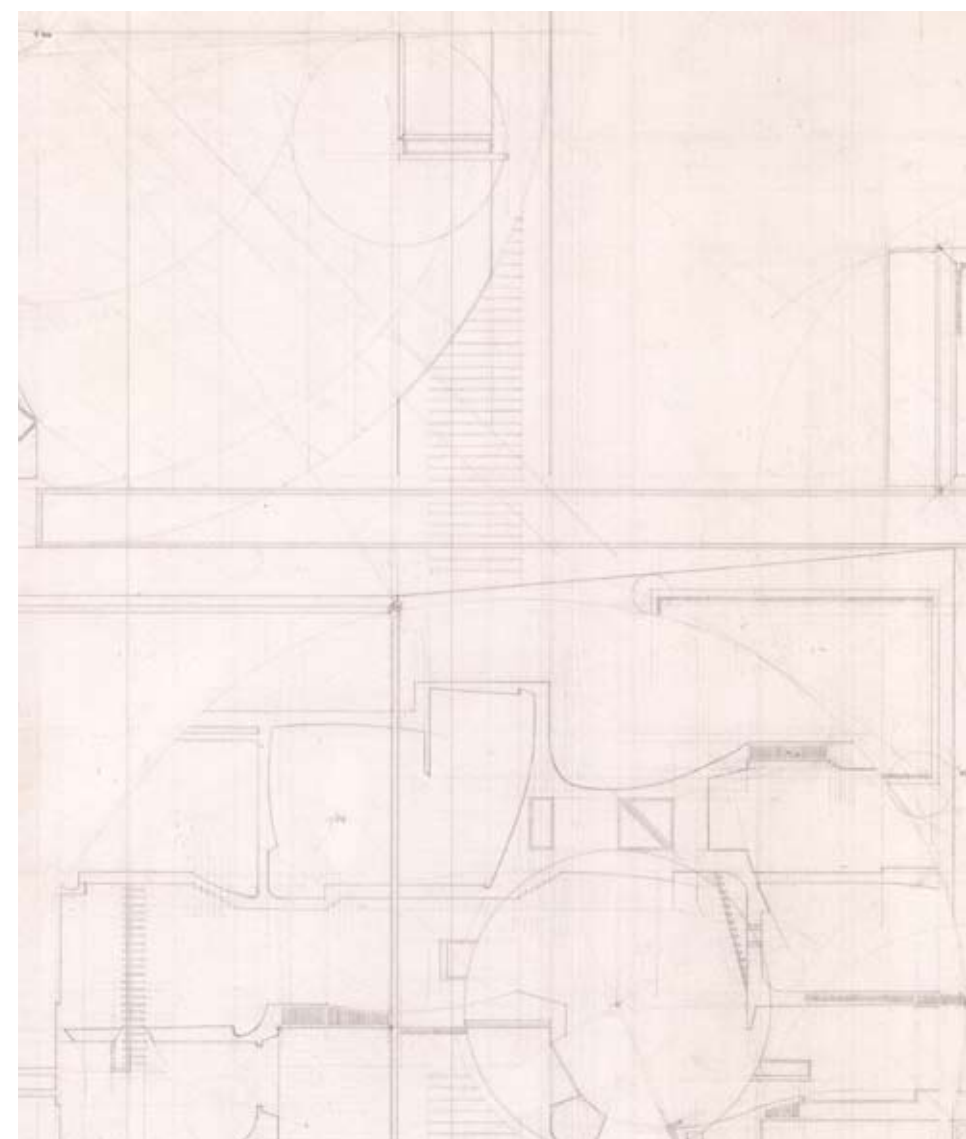
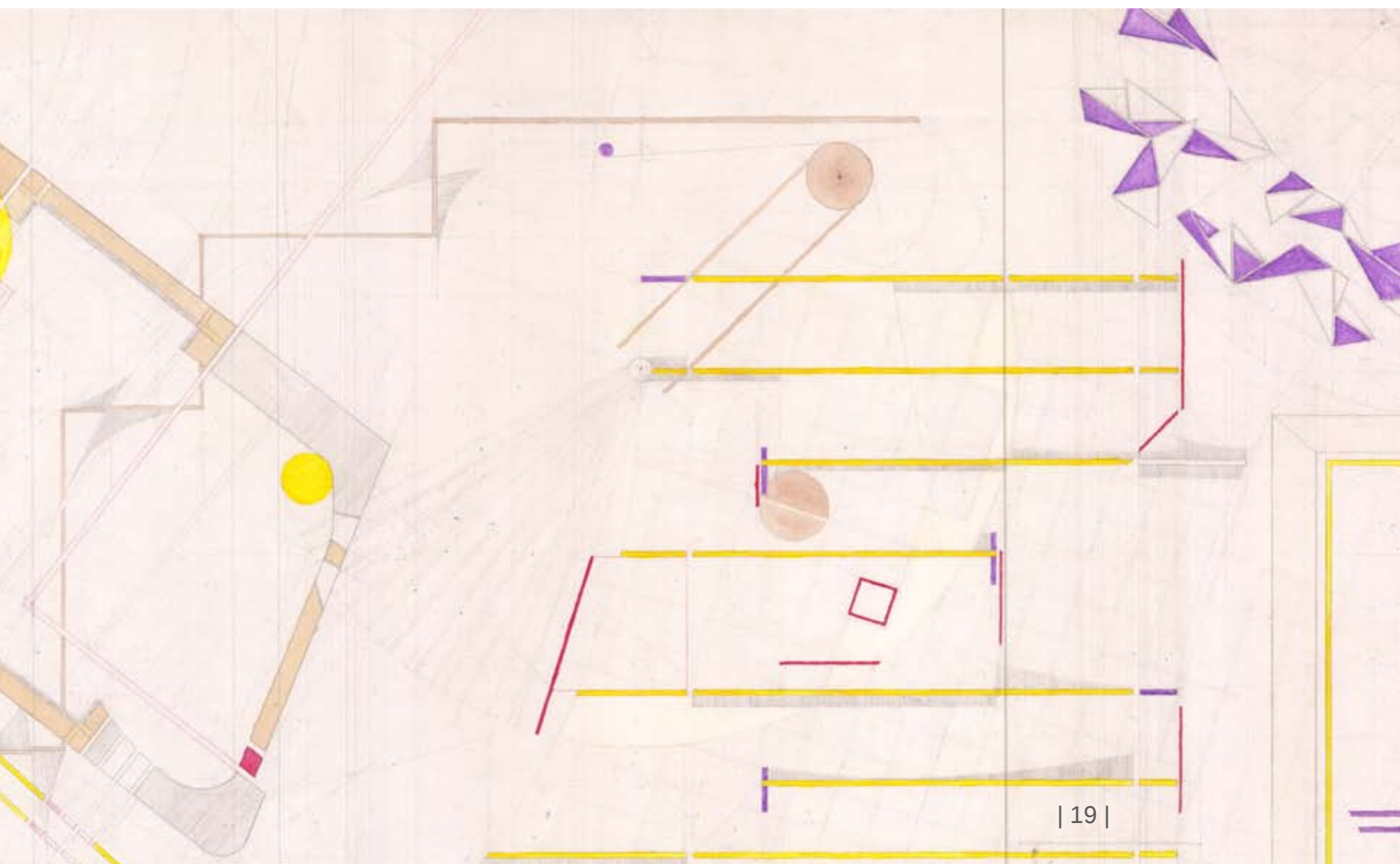
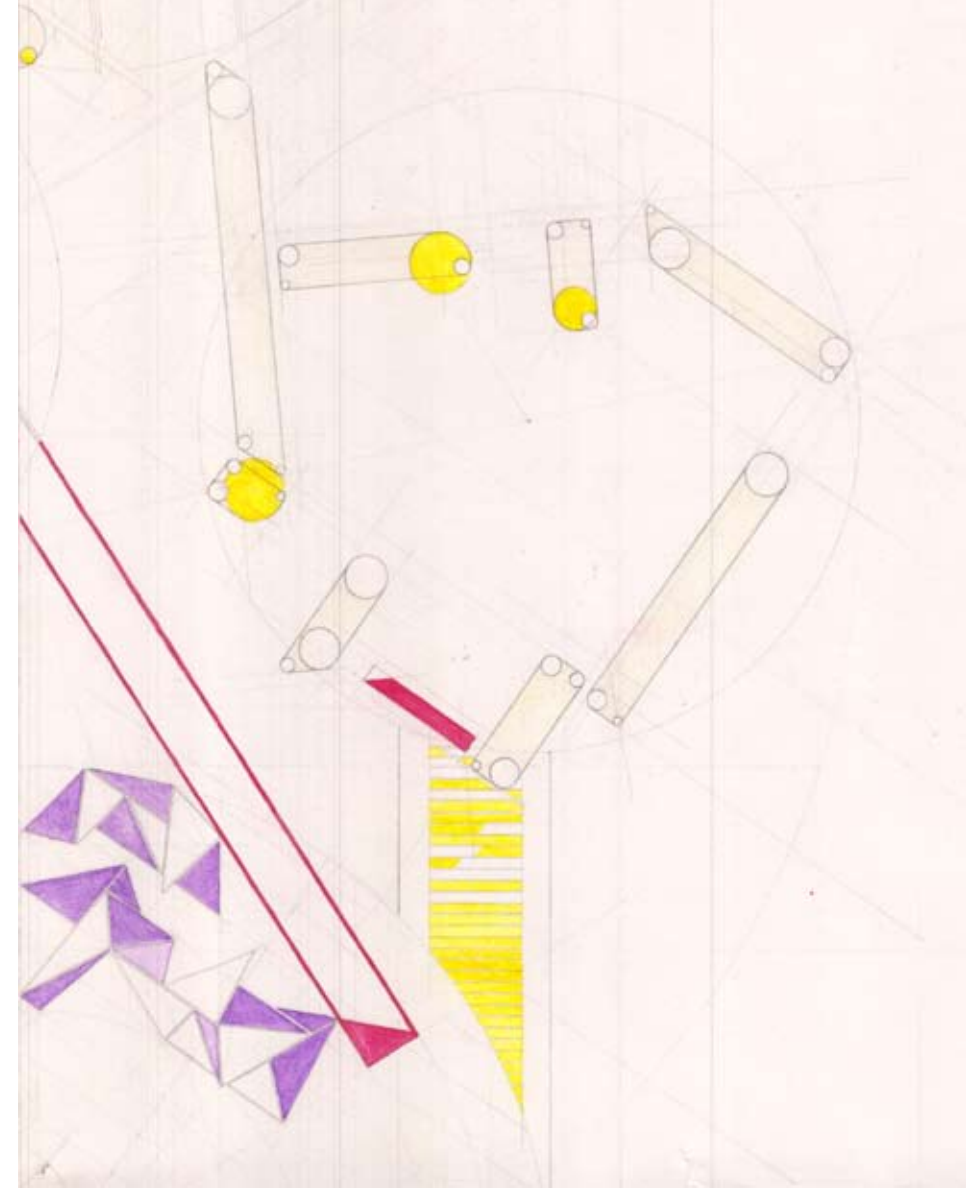
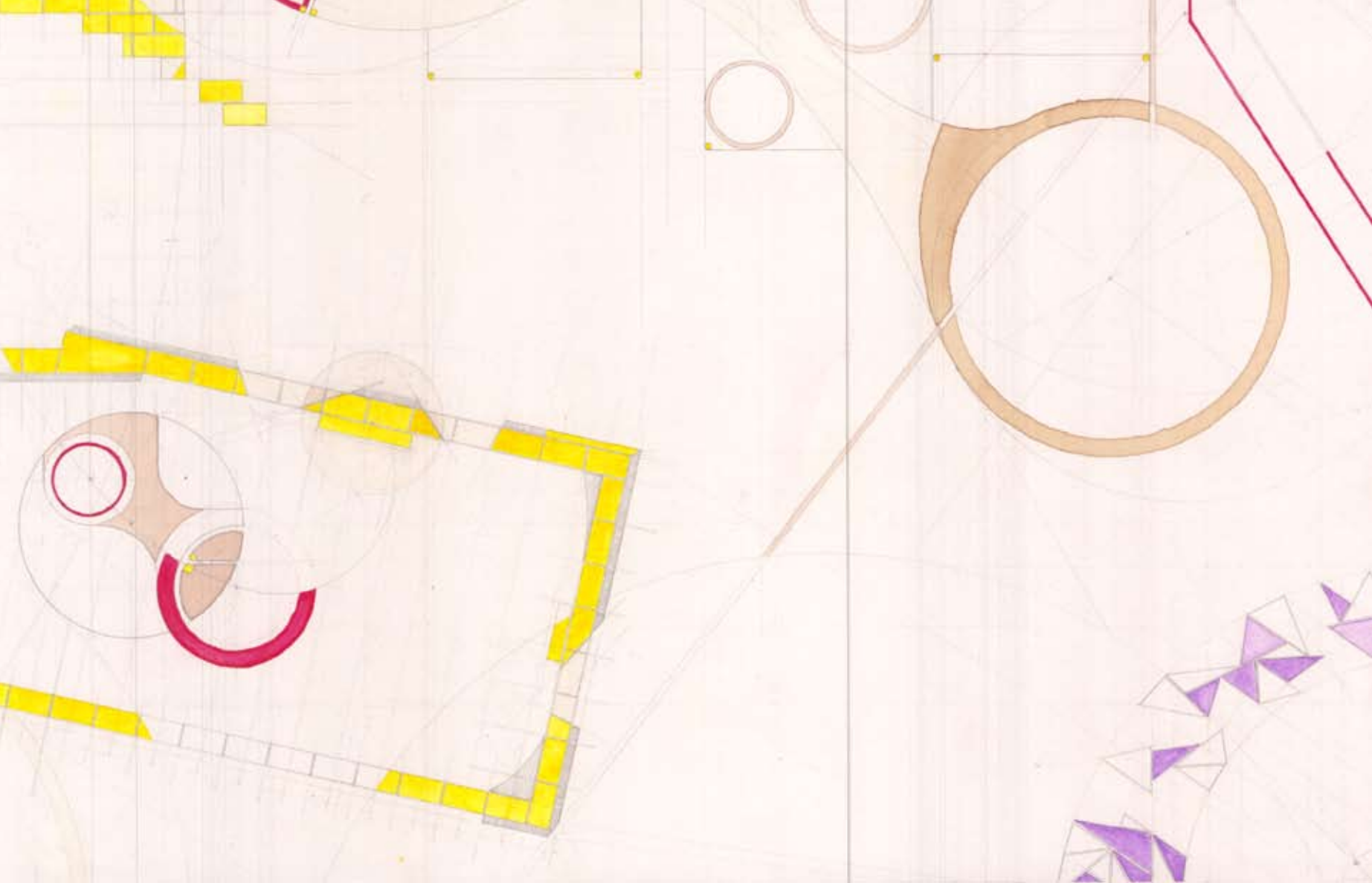
In accordance with the ideals of the thesis, the approach to conducting the investigation was paramount for effectively upholding a congruent message. Every attempt was made to view the different representational styles as embodied reflections of the full-scale building. This thinking mandated the amalgamation of sketching and technical drawing; an act revealing the thoughts of the designer just as the undulations in a handmade wall would disclose its maker's intentions. Similarly, this influence supported maintaining the fringed edges to the watercolor

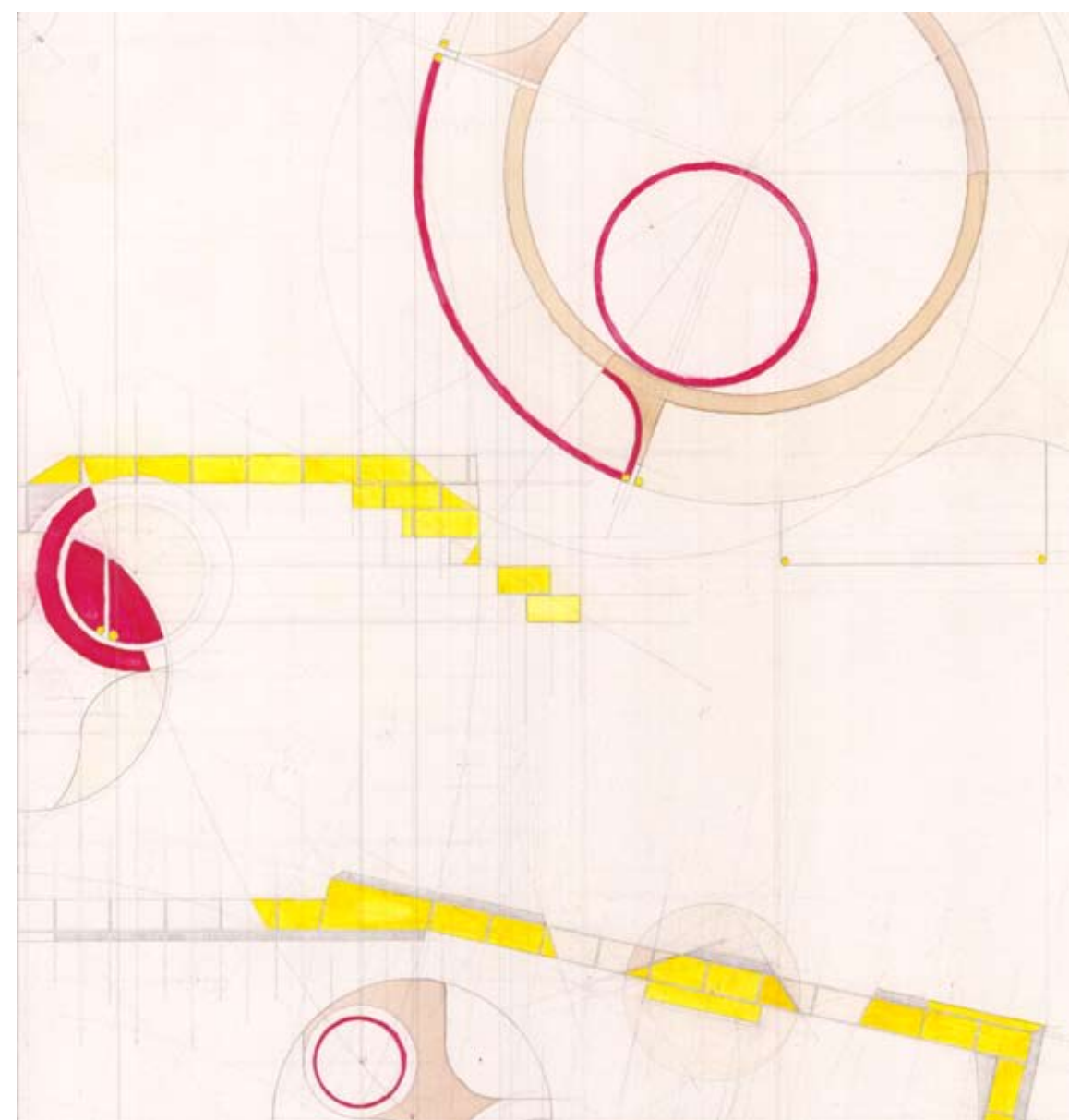
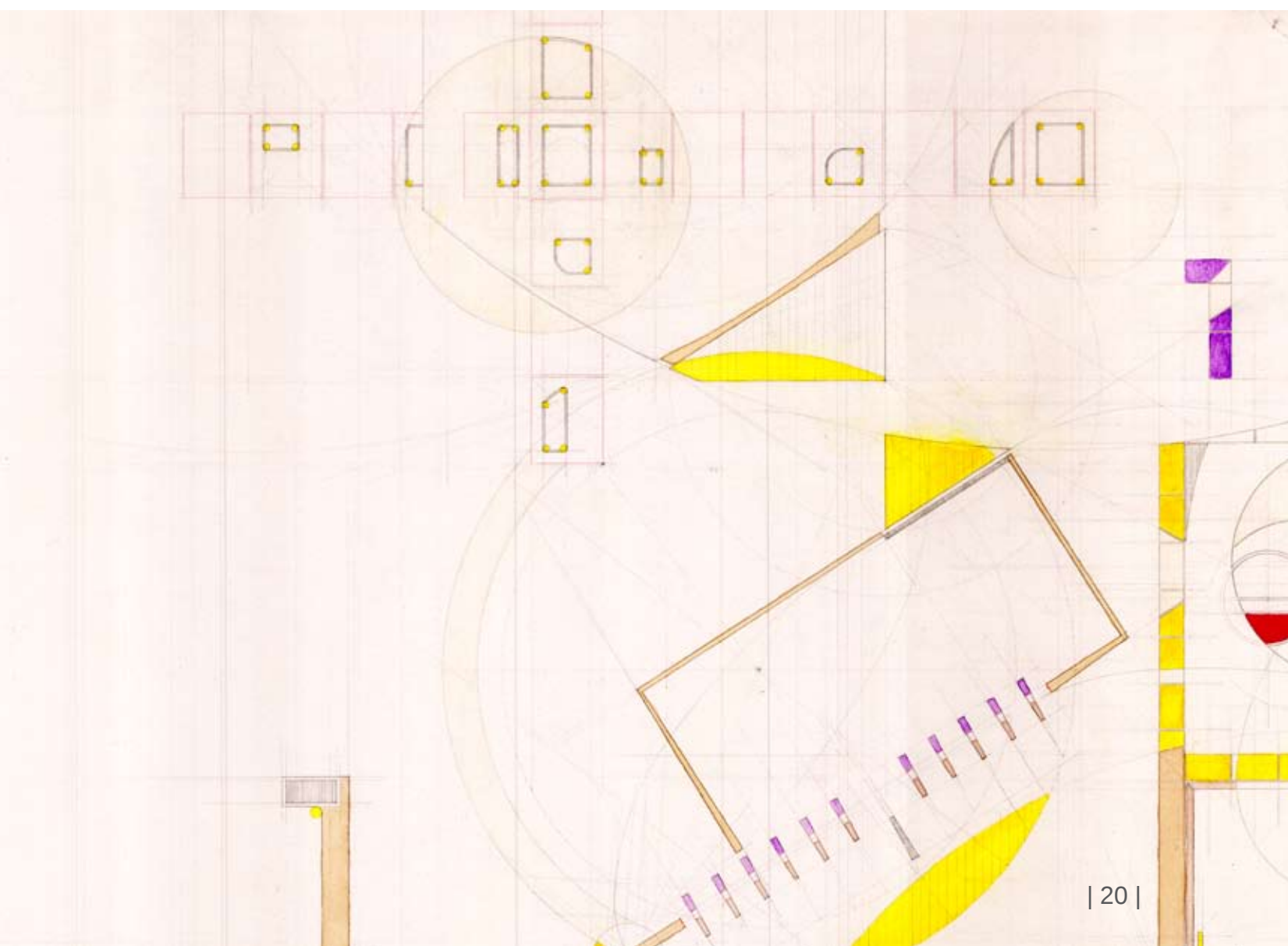
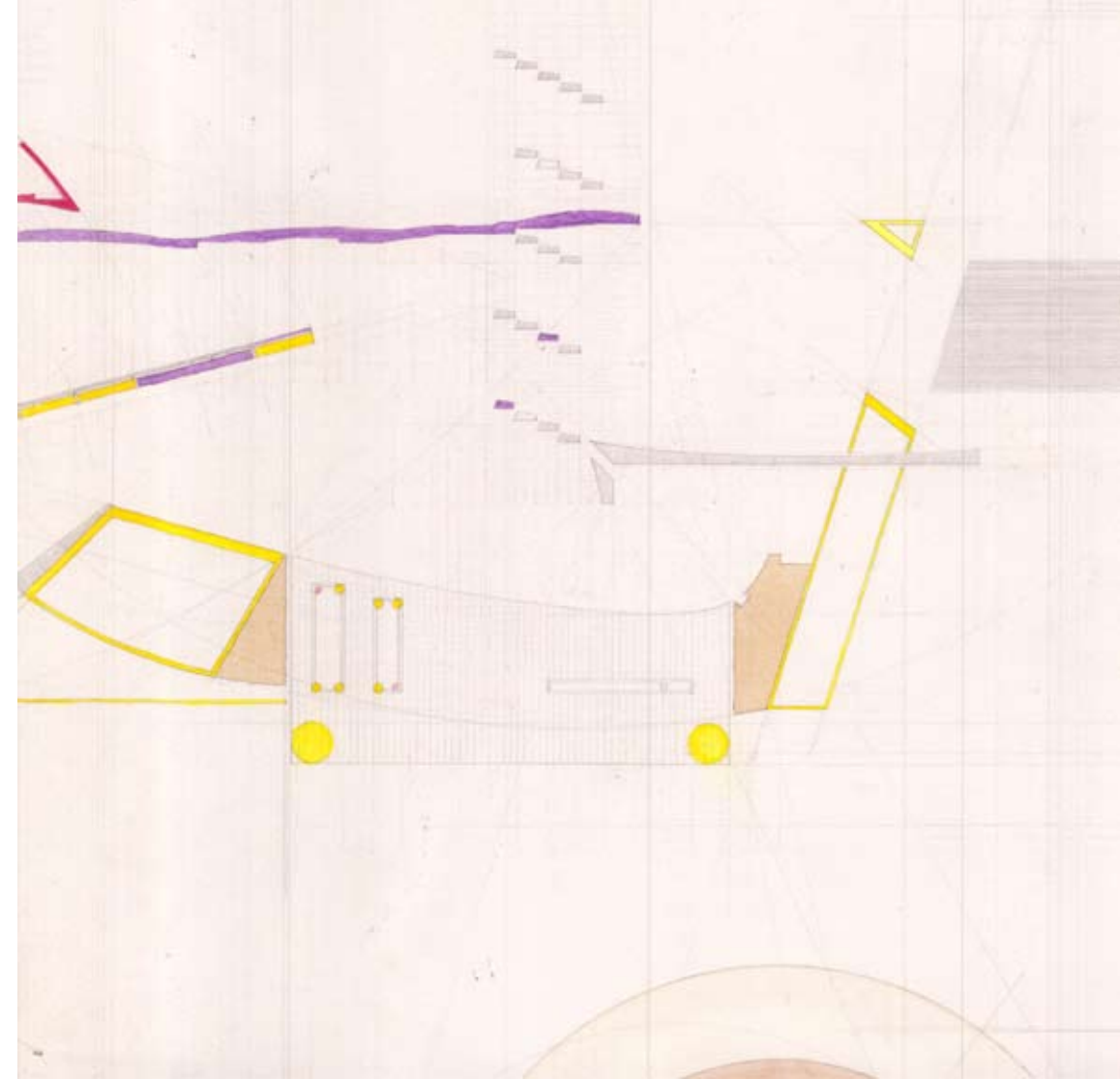
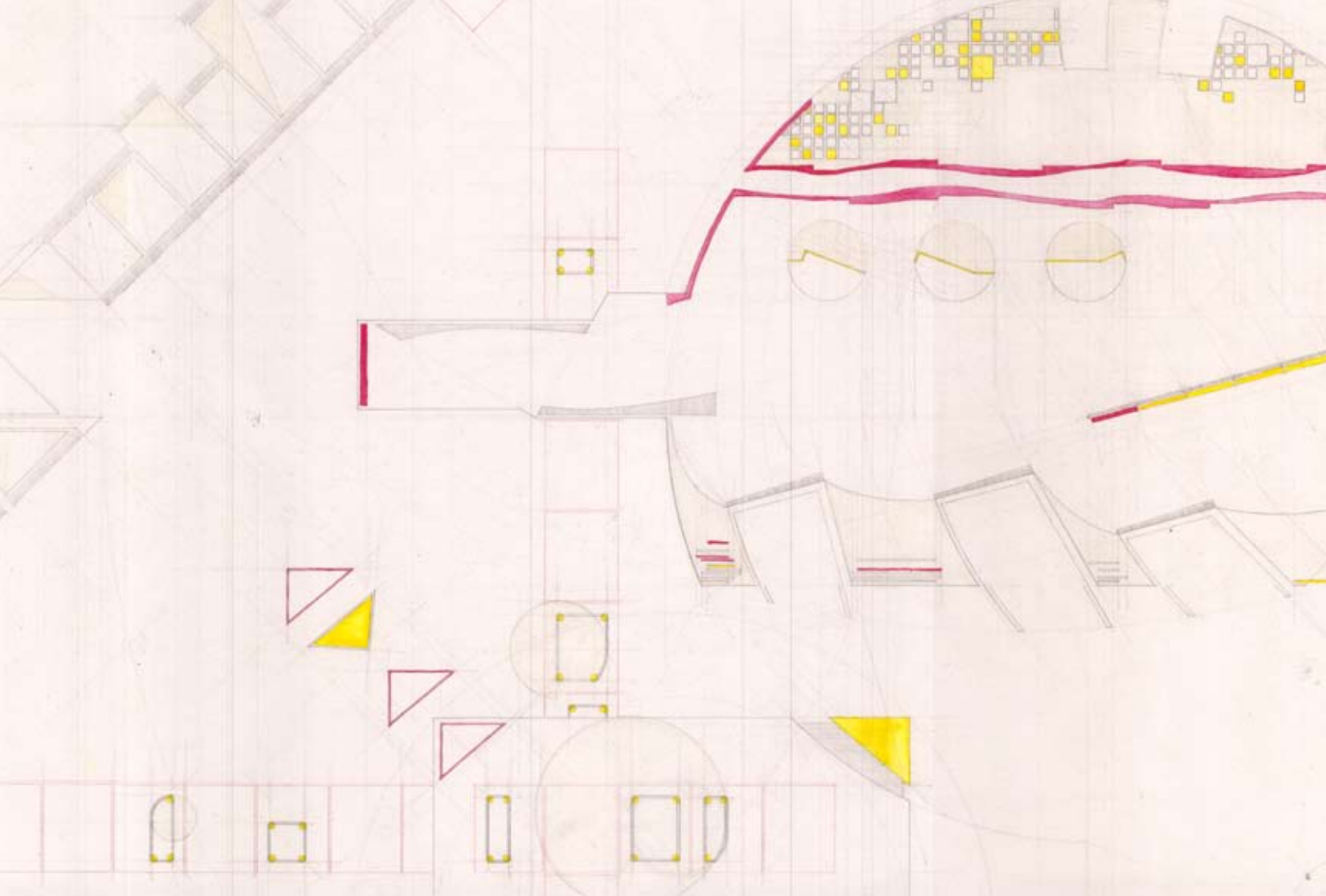
! a process in creation !

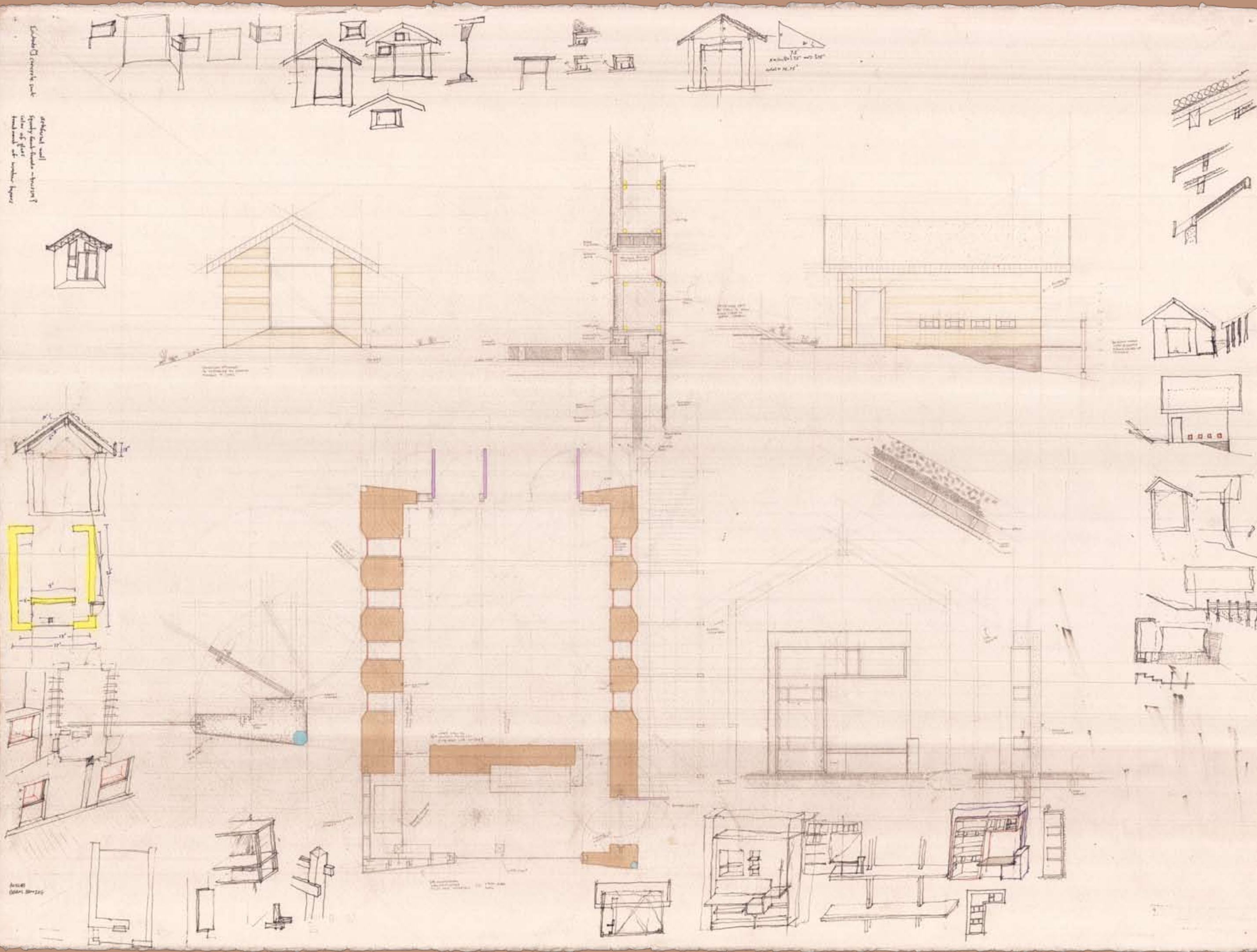
paper and freehand cut cardboard sketches. Each sheet's layout was done organically and evolved in conjunction with the drawing and ideas. For the models, walls were built from hand-cut layered pieces to portray the element of human inconsistency that would play so prominent a role in the realized version. The effect was further accentuated with the later introduction of modeling in actual clay. Means of expression through drawing, sketching, watercolor, and model were interchangeable; transitioning, as appropriate, between these various techniques mimicked the stages of the project development.



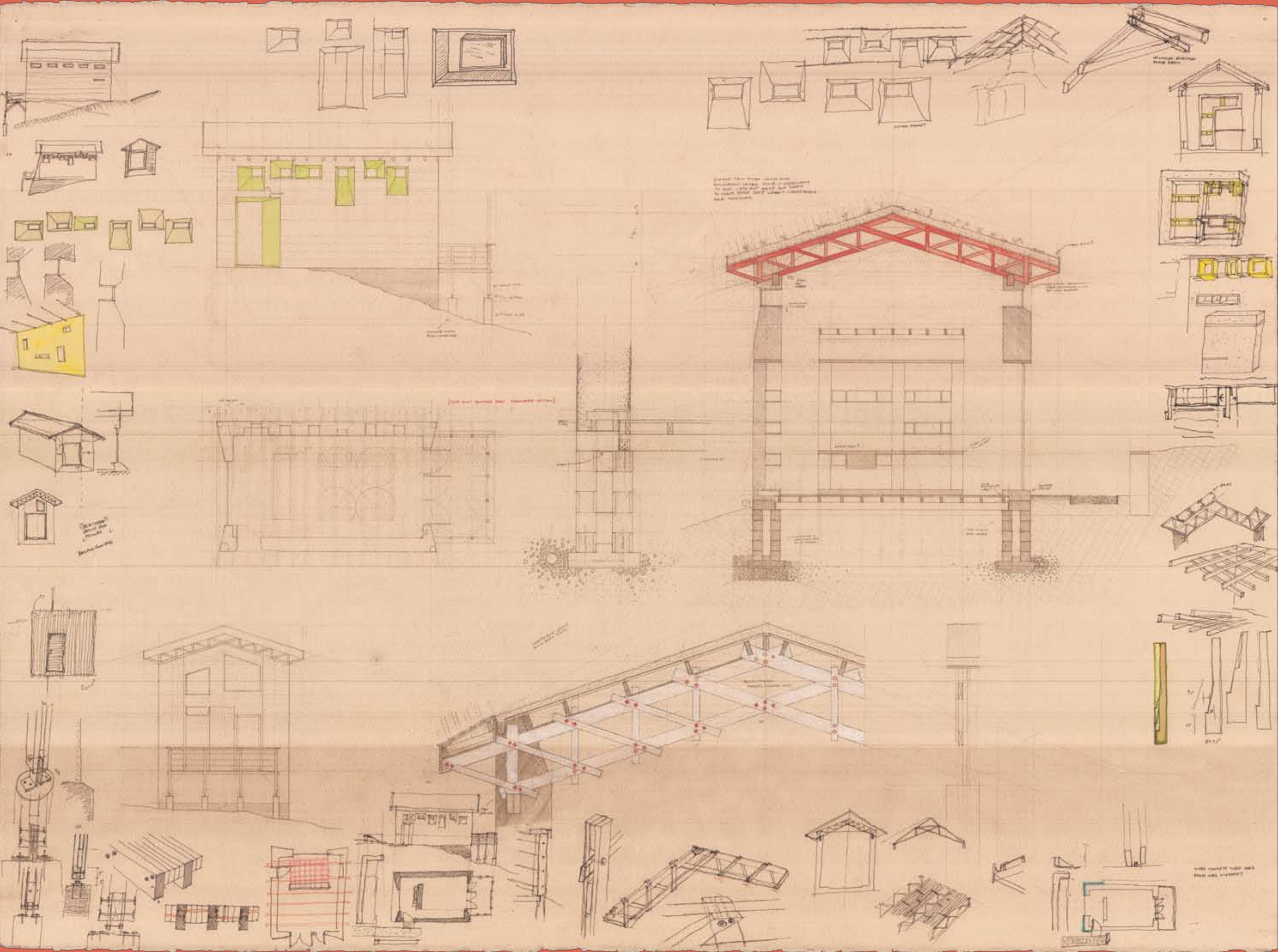




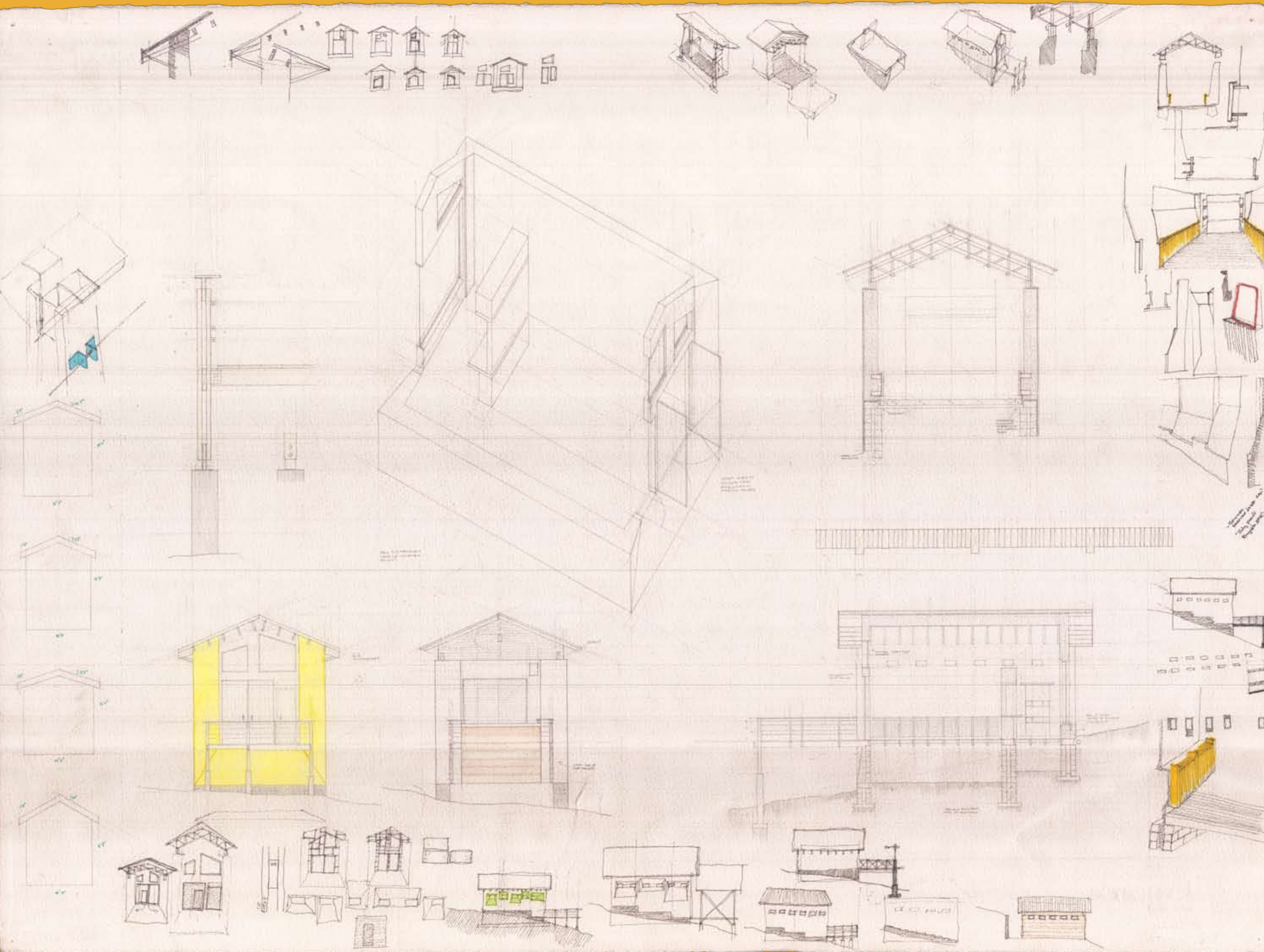


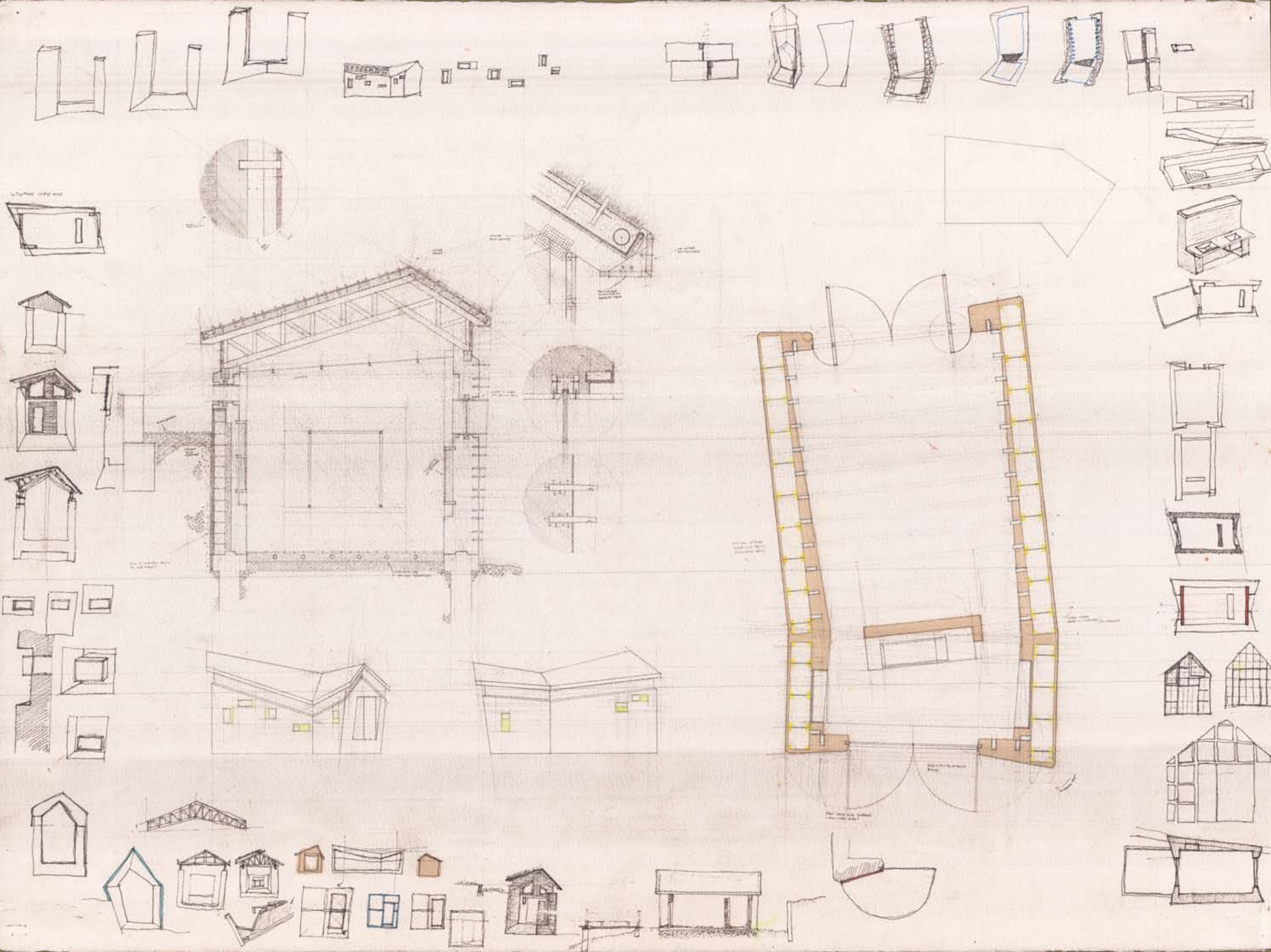




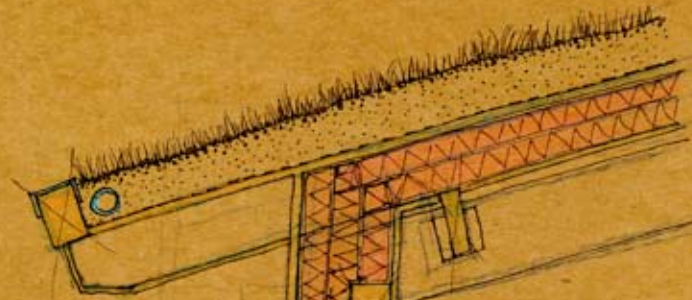






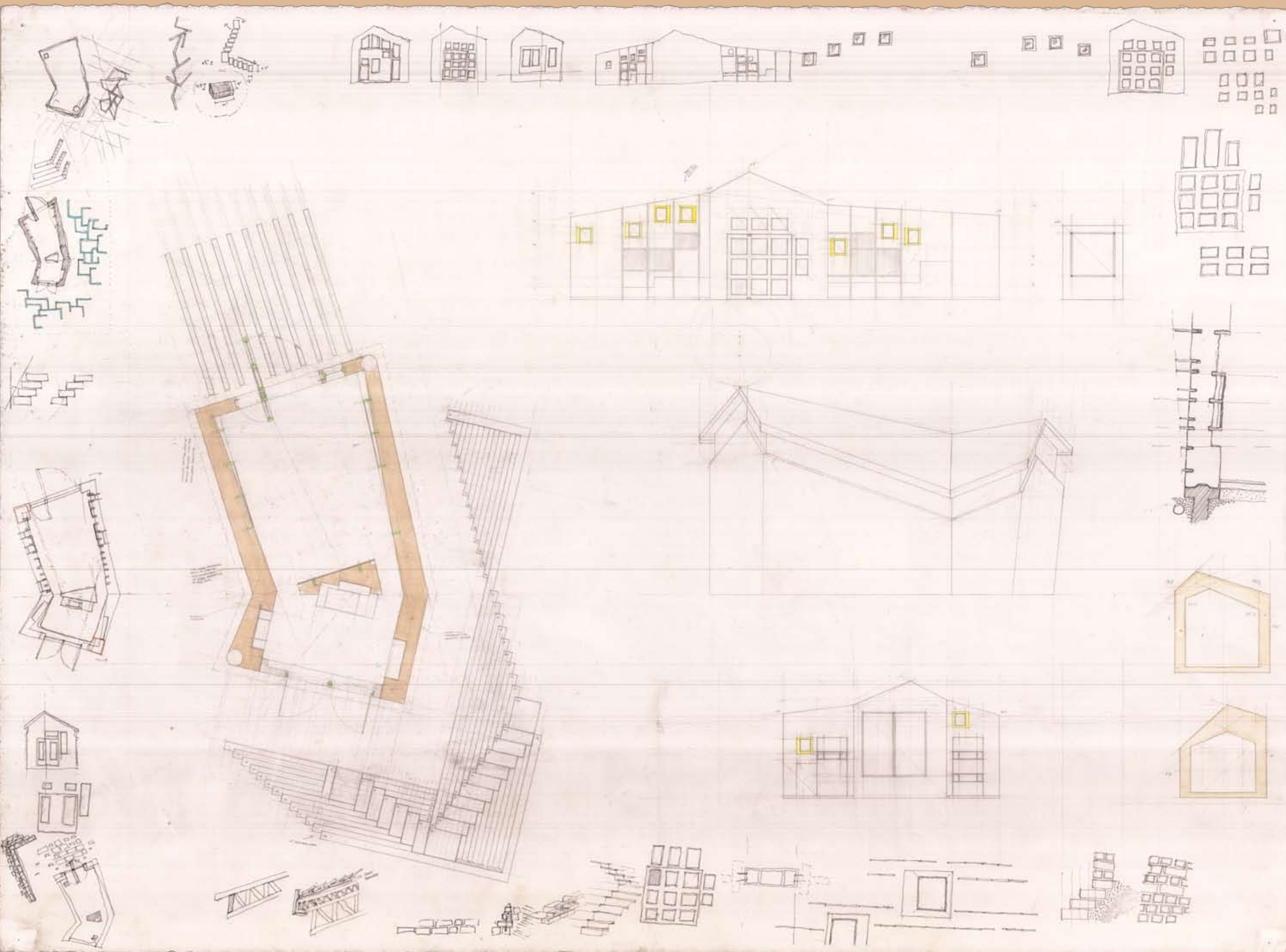


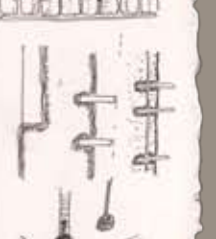
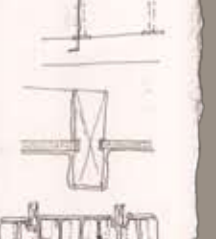
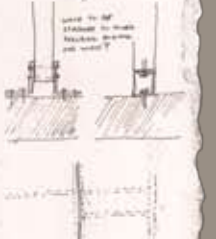
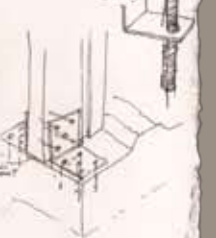
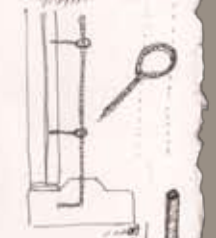
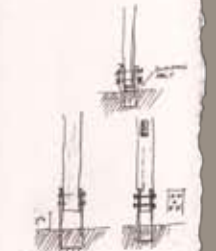
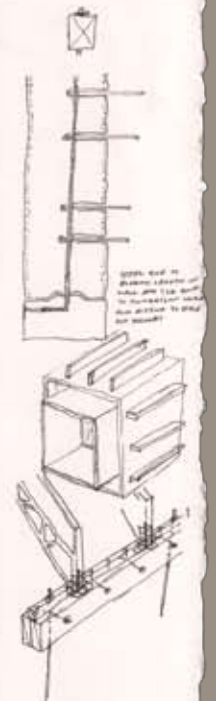
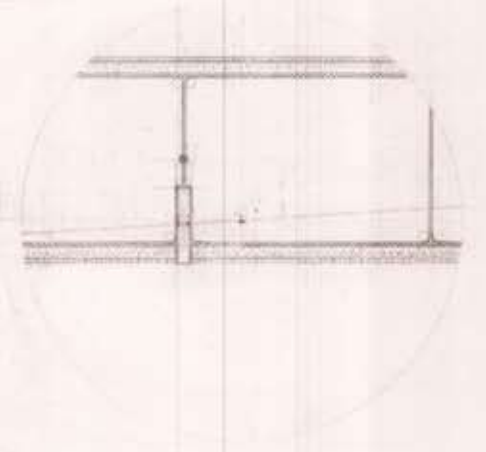
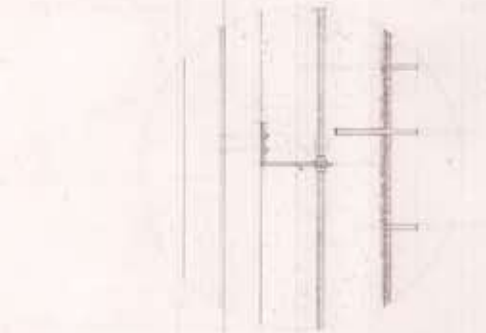
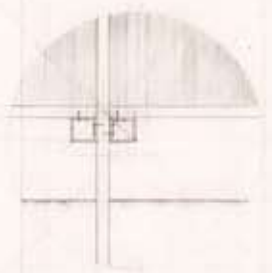
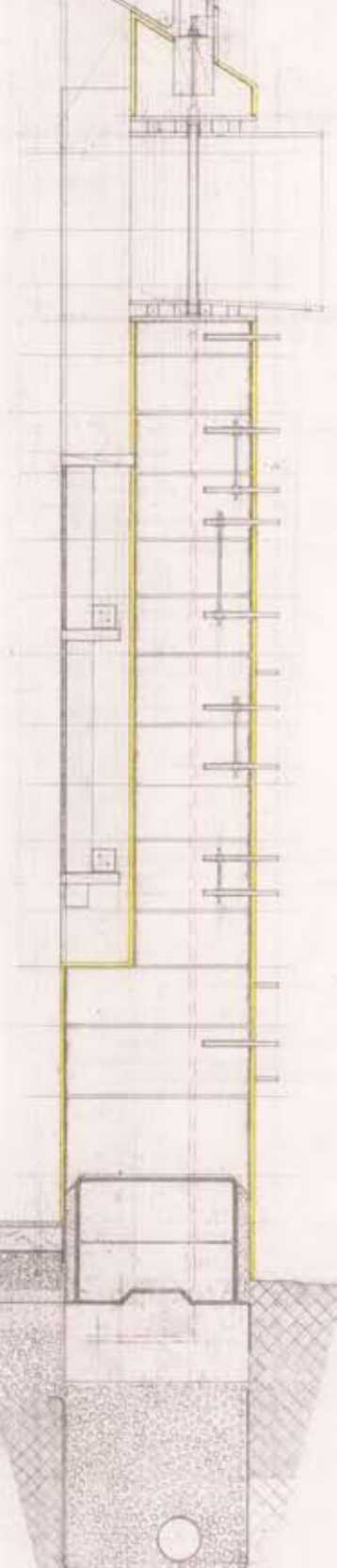
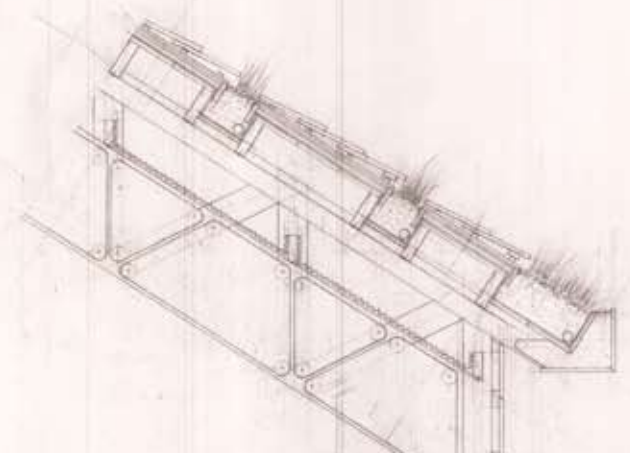
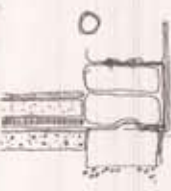
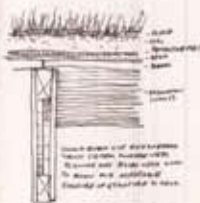
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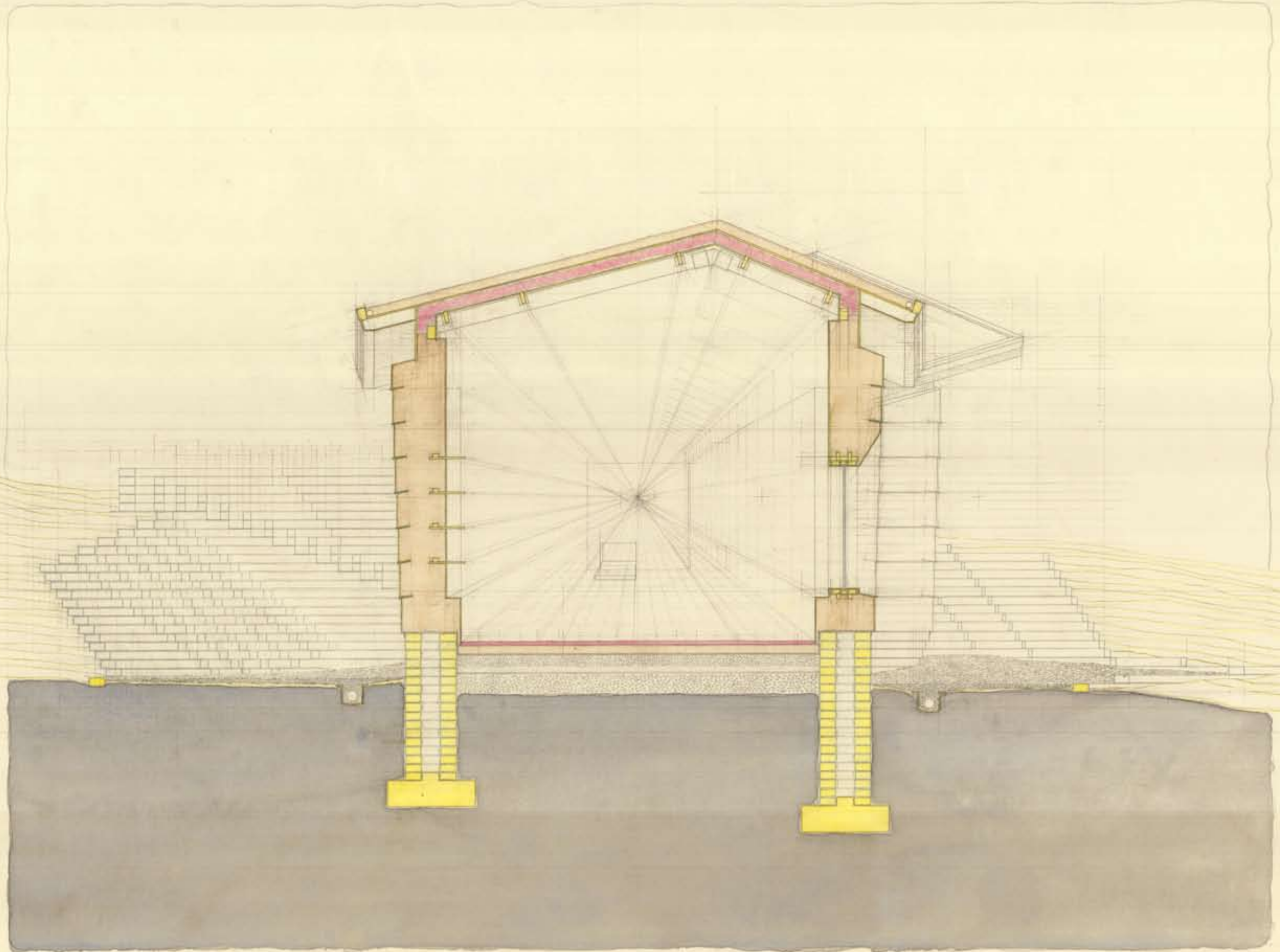


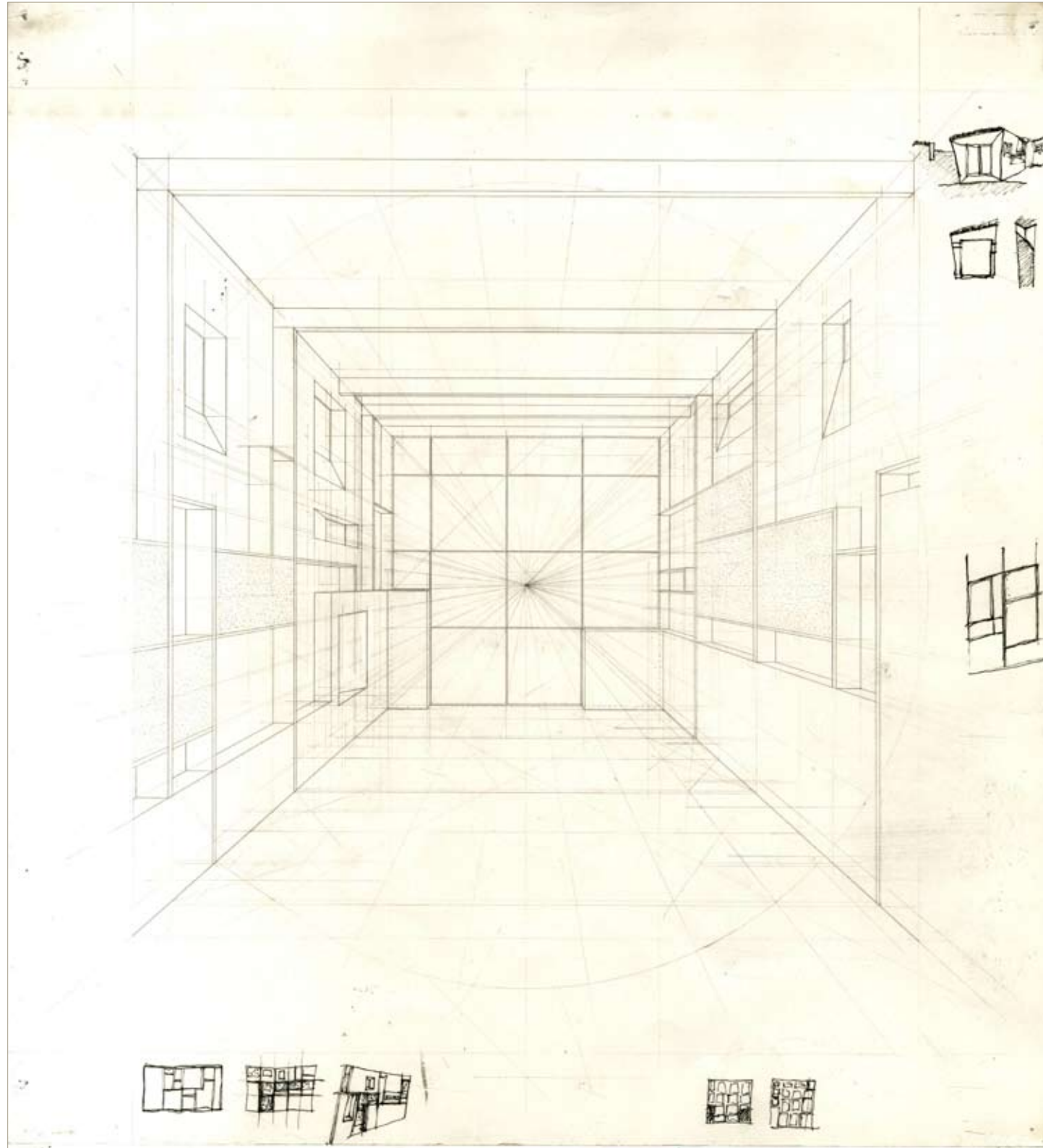
THE WALL
 IS MADE
 OF
 ONE COURSE OF
 BRICKS, BRICKS BEING
 AND EXTENDING
 FULLY THREE WALLS
 IN THICKNESS. IN
 THE FIRST PLACE
 WOODEN, THEN
 RAISED BY LOFT
 WITH
 PLASTERED WITH
 PLASTER, THIS
 THICKNESS IS
 FROM LOW OF WALL BEAM
 (SEE PLAN SHEET) UP TO THE
 TO MAIN LEVEL OF WALL, THERE IS NO
 ONE WALL AT THE TOP OF THE
 THE THICKNESS OF 2 FEET HALF IN
 EXTRA SUPPORT AN OUTSIDE WALL
 PROPOSED INSIDE IN THE UPPER
 PART OF WALL AS SHOWN FIGURE
 BUT IN CASE OF BURNED WALL AND
 ORIGINAL DESIGN. IN PLASTER, THERE
 IS ANOTHER BUT NOT TO BE CONFUSED
 WITH THEM. THIS PART IS A
 THICKNESS OF 10 INCHES. THERE IS
 WITH INSIDE PART. BRICKS BEING
 AS SHOWN FIG. OF THE DRAWING
 AND IN EVERY PLACE THE BRICKS
 A SMALL SPACE IN BETWEEN COURSE
 OF BRICKS BEING IN CONTACT
 THERE IS NO SPACE BETWEEN IF
 THE HEIGHT IS LESS THAN 4 FEET
 THE MORE HEAVY COURSE IS USED IN
 THE OUTSIDE THICKNESS, BUT NOT
 IN INSIDE WALL. BRICKS BEING
 (SEE PLAN SHEET) AND THE
 THICKNESS IS AS SHOWN
 IN FIGURE

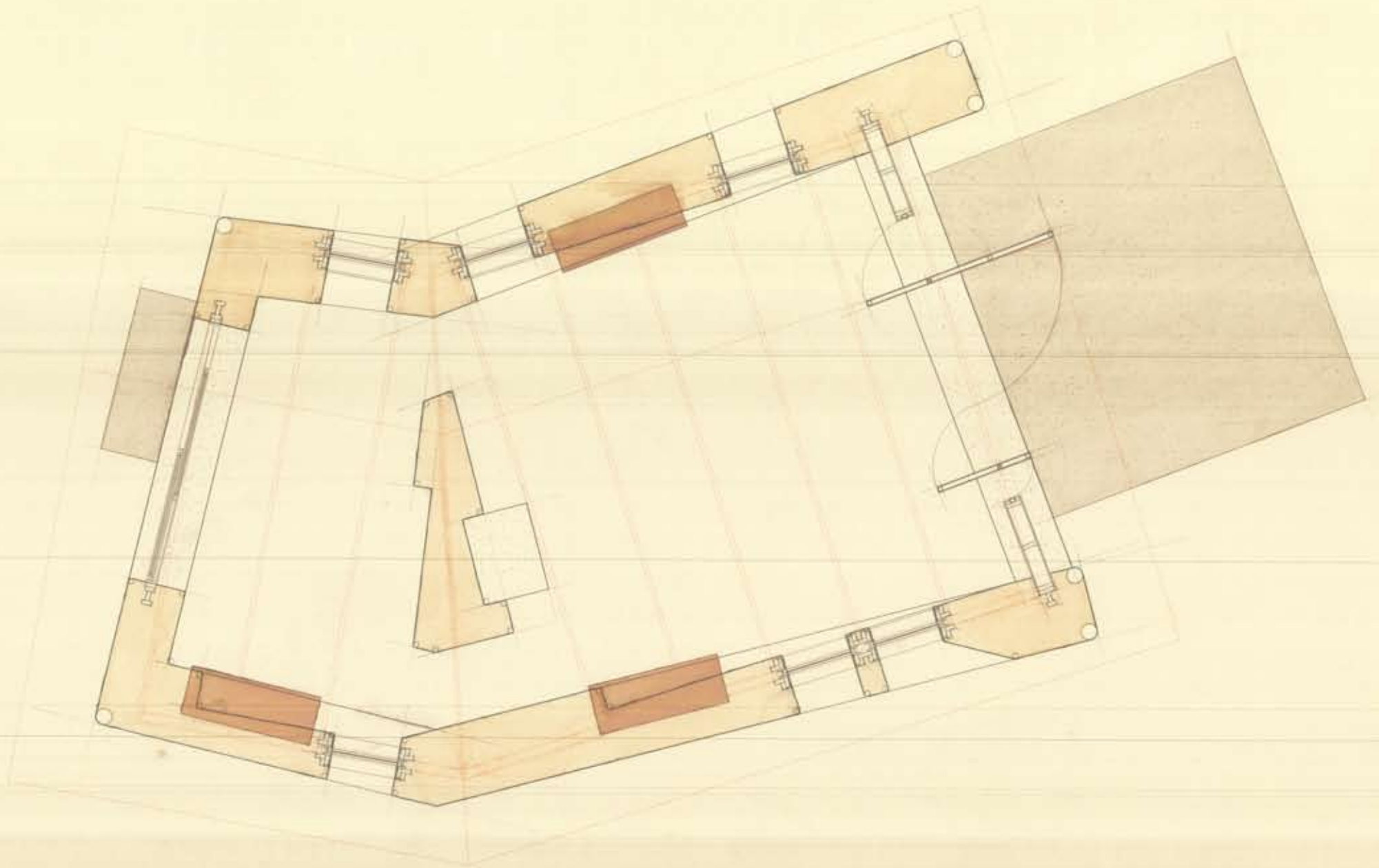


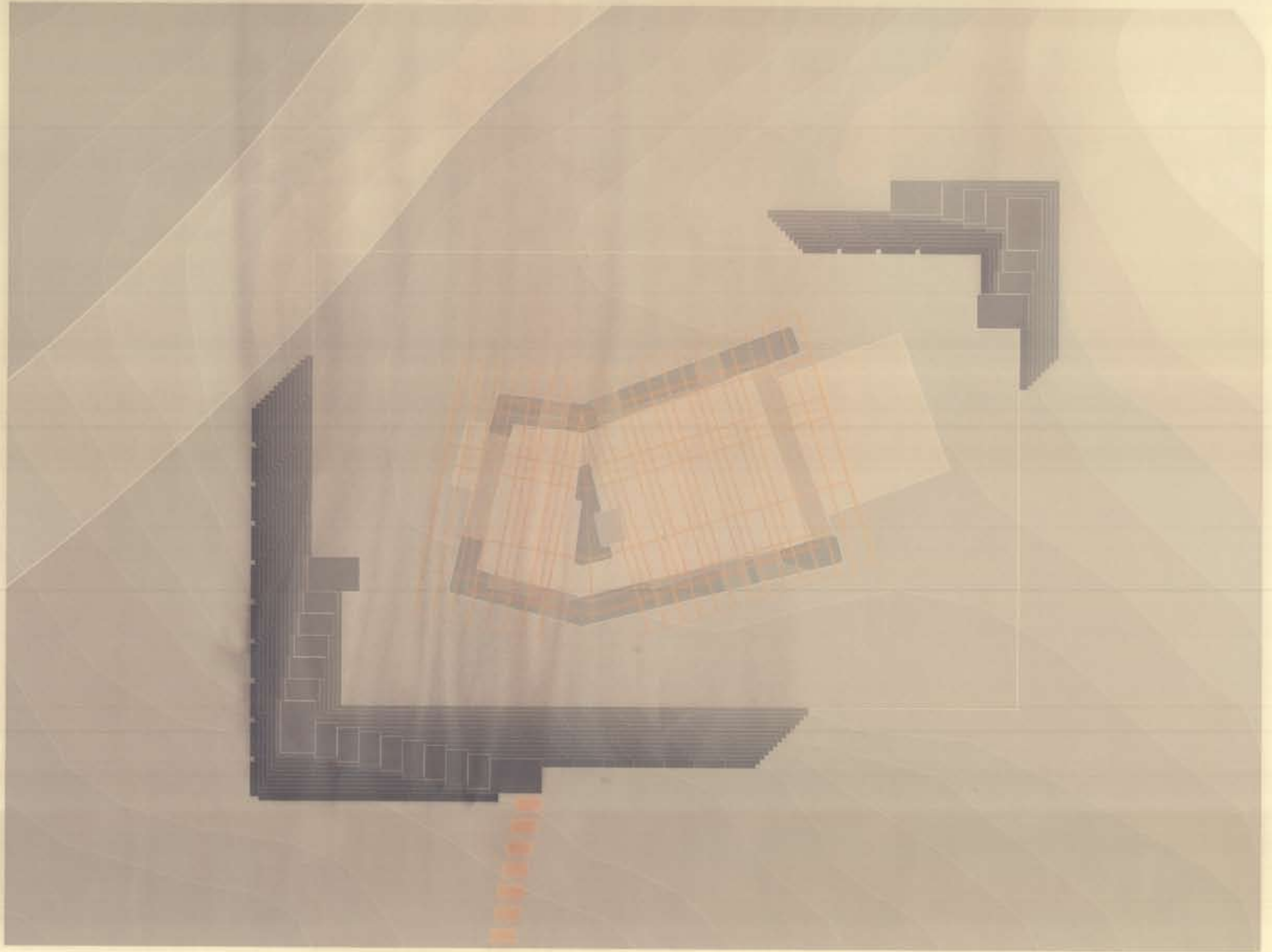




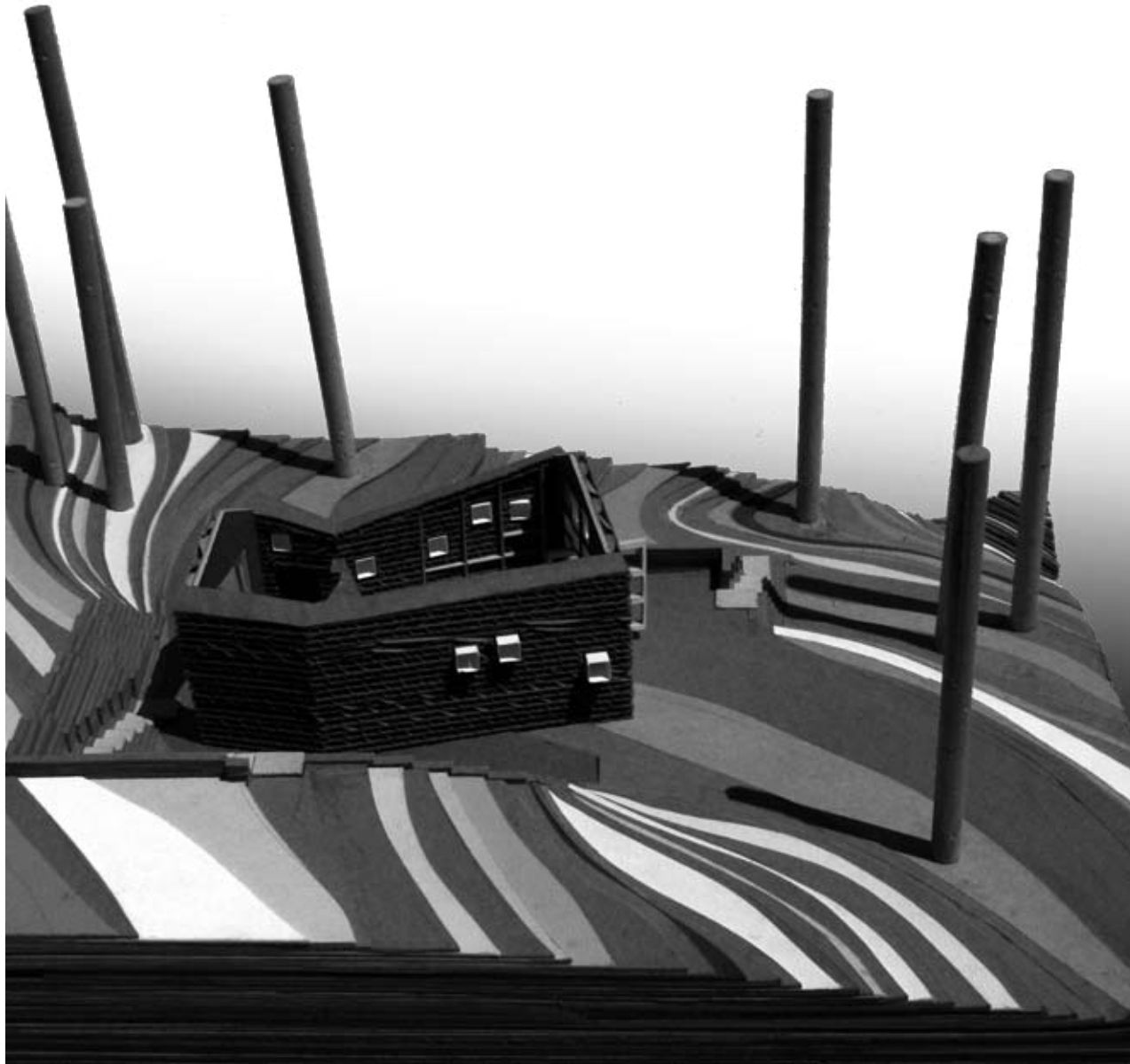


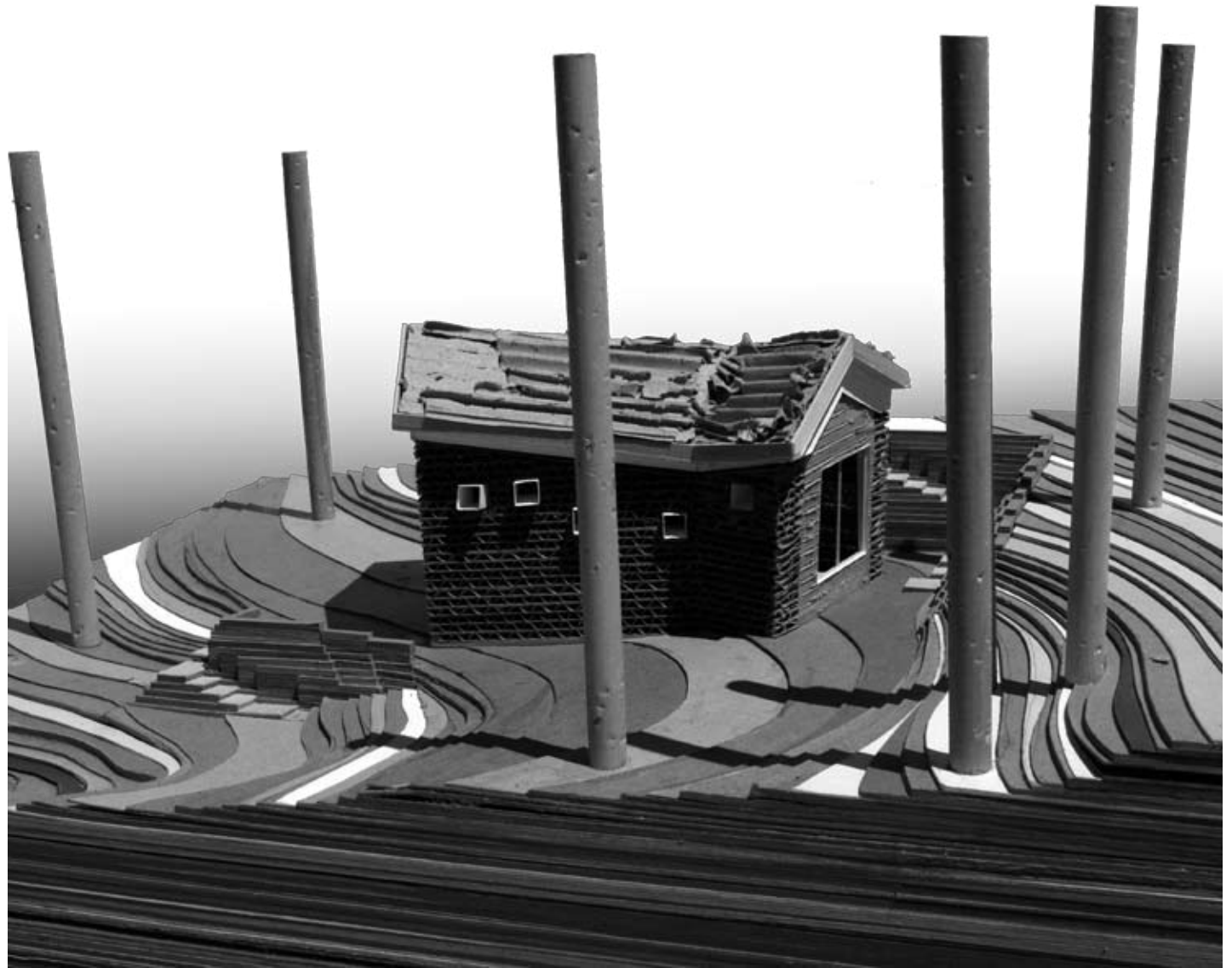
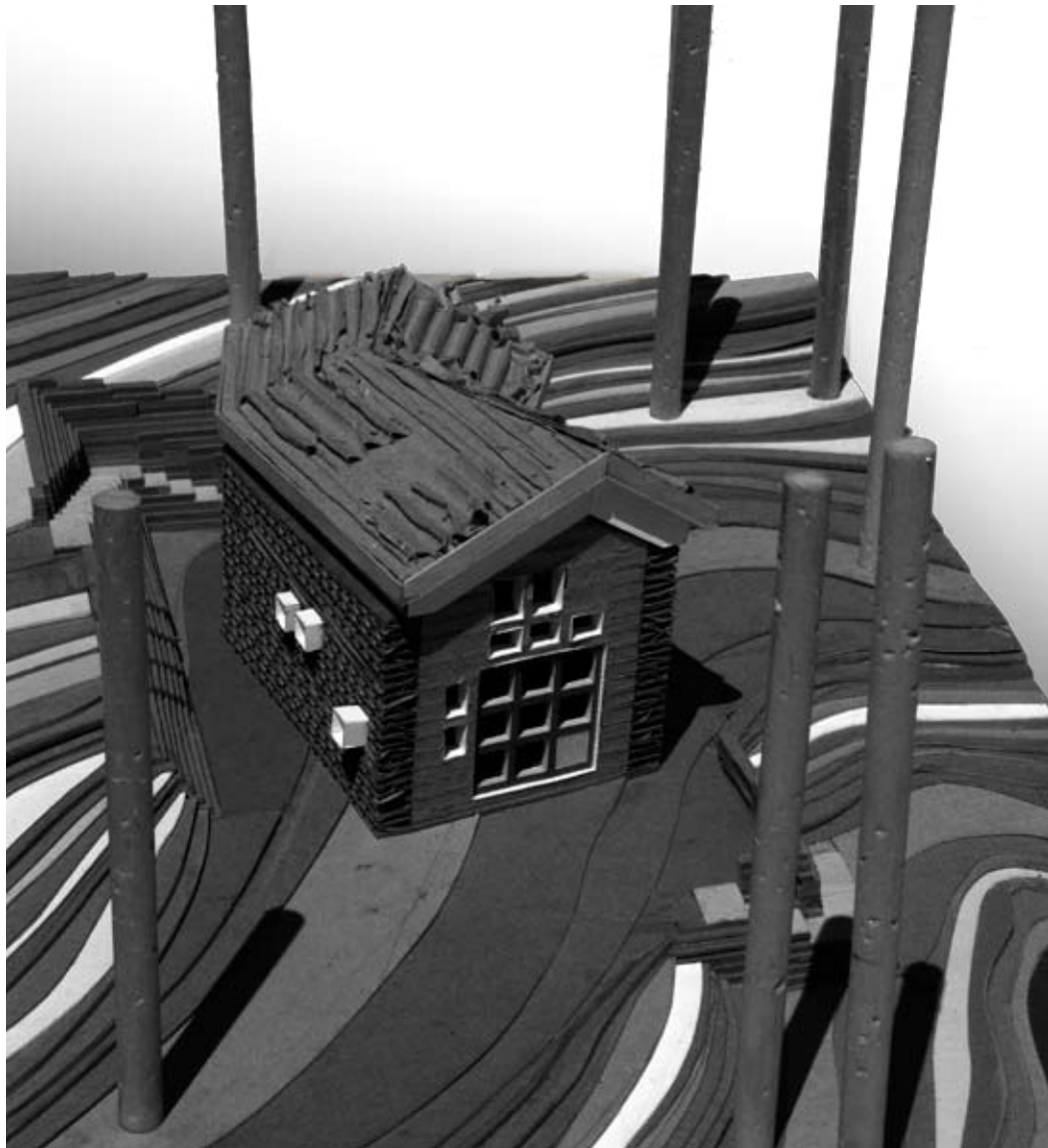






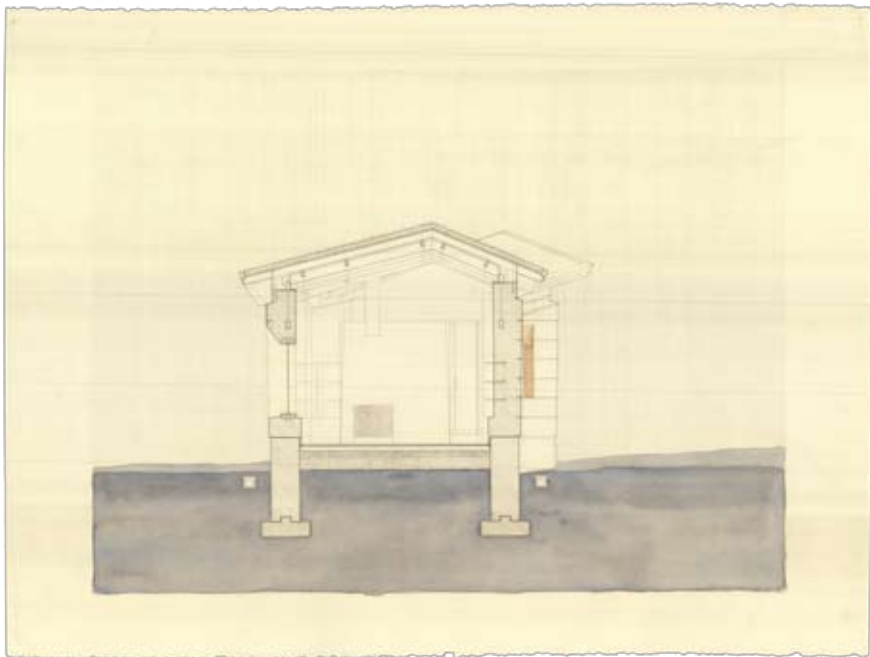
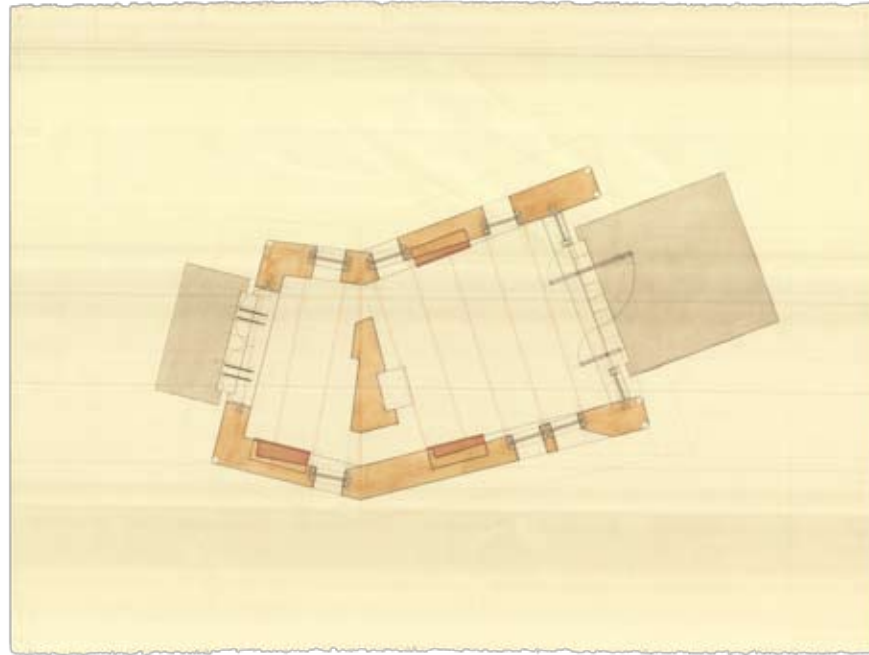
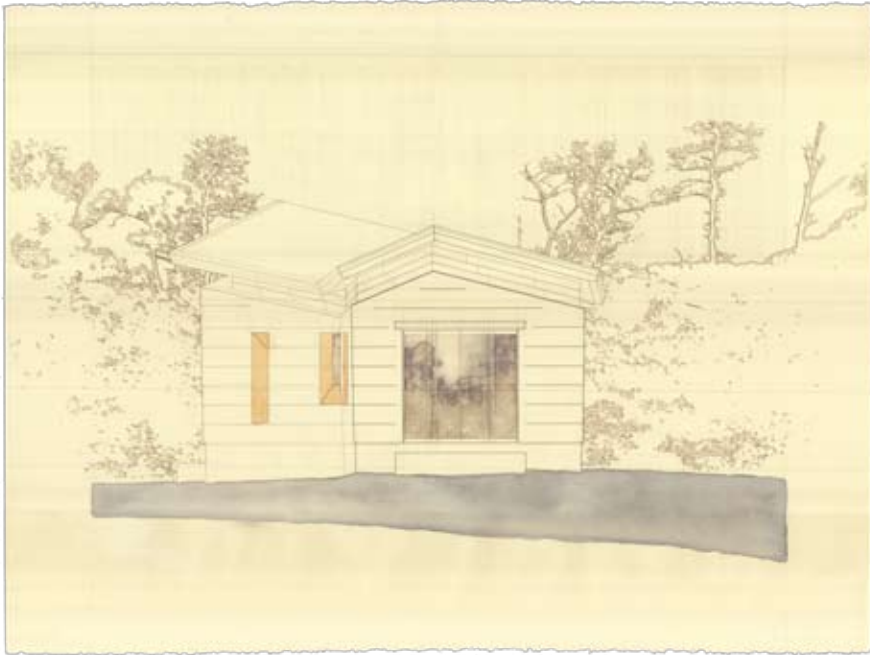
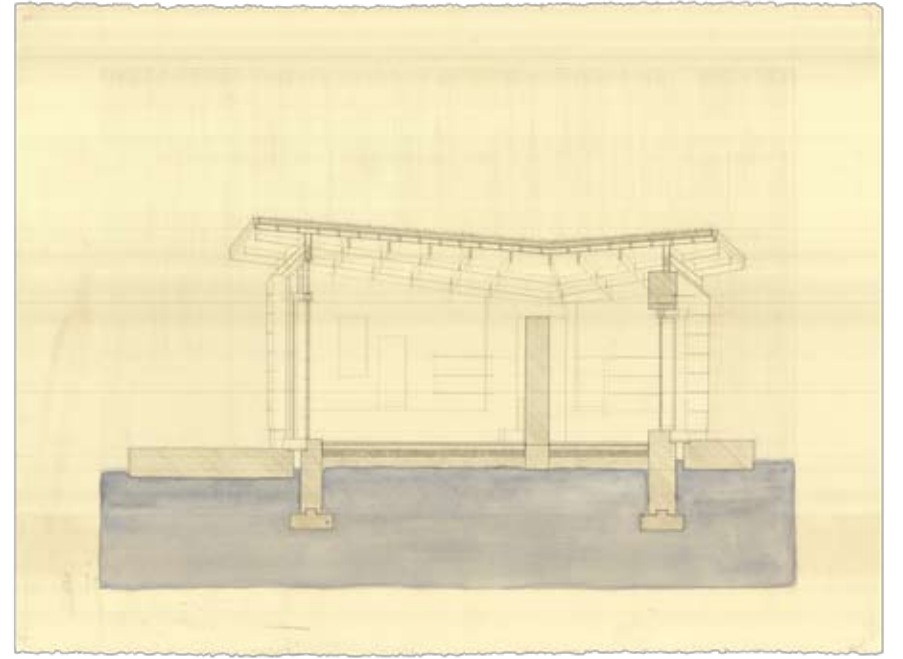
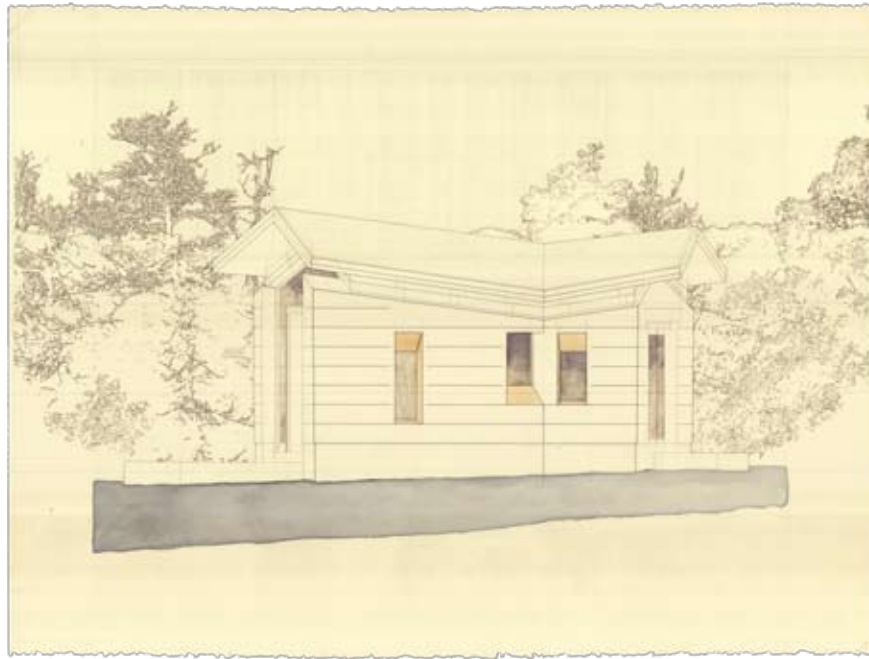
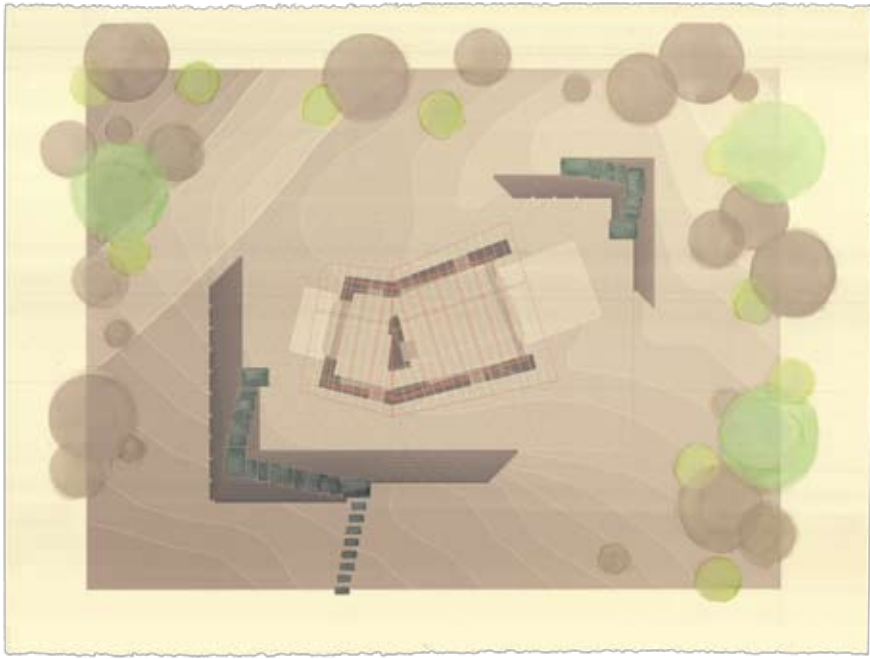


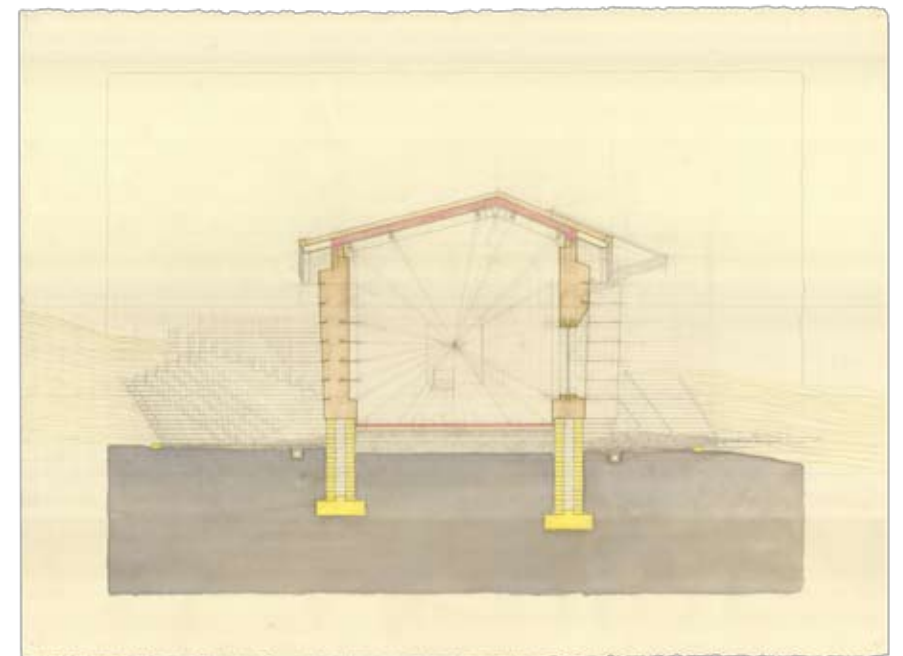
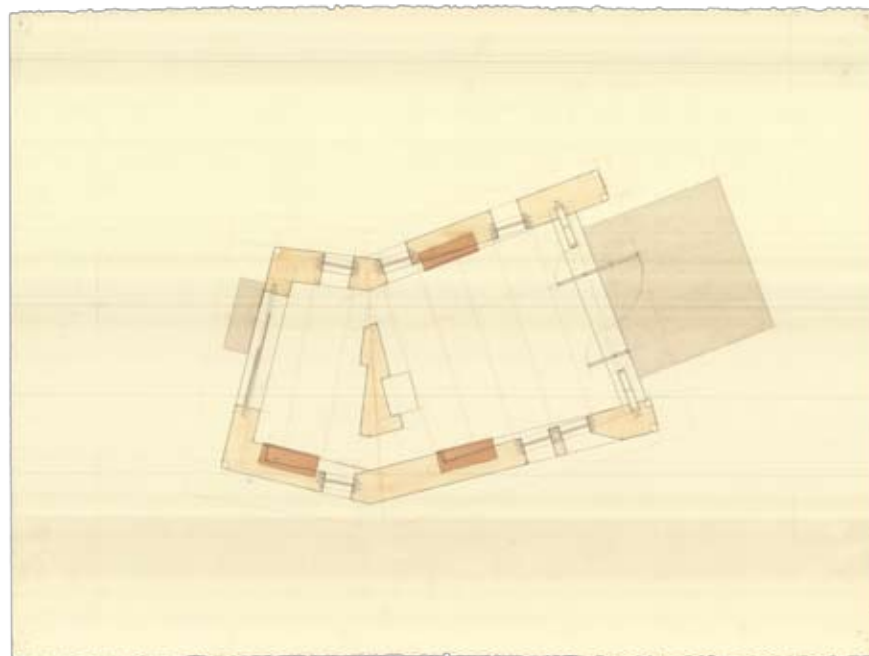
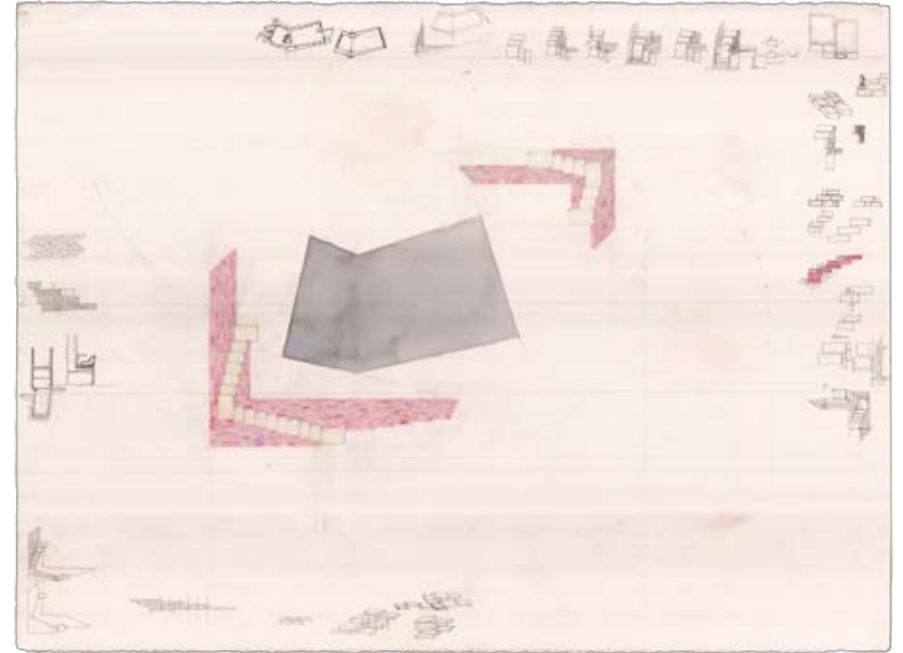
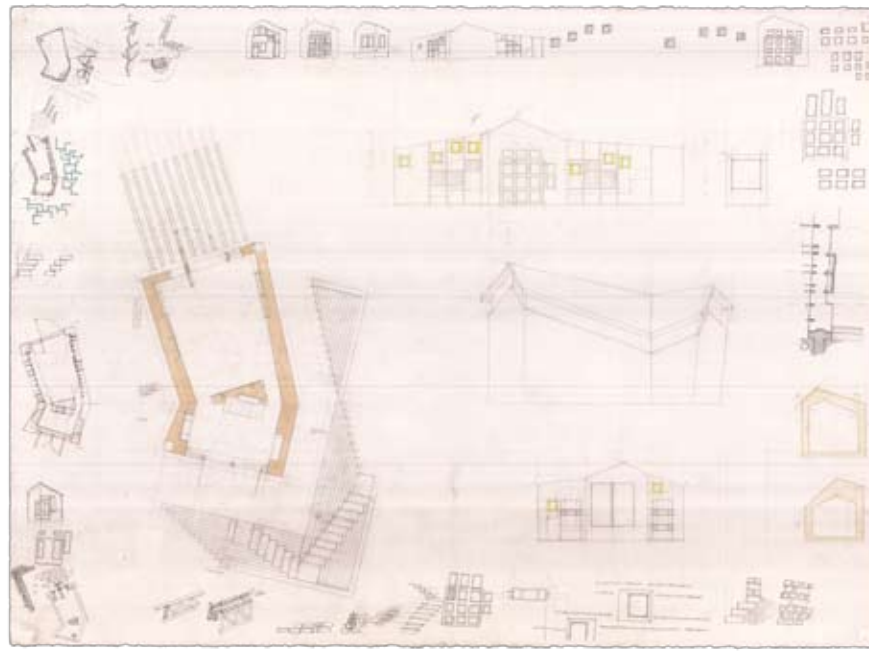
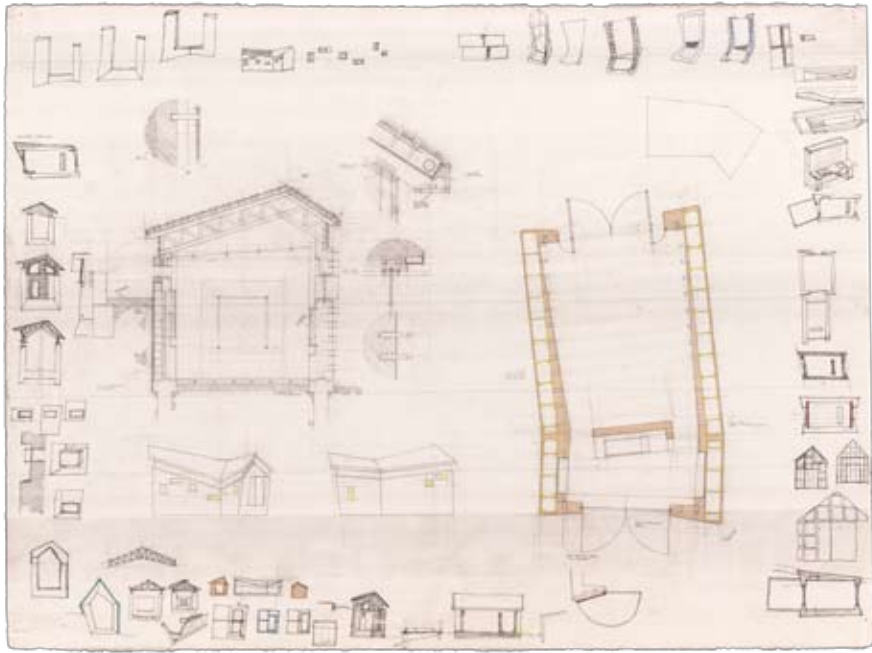
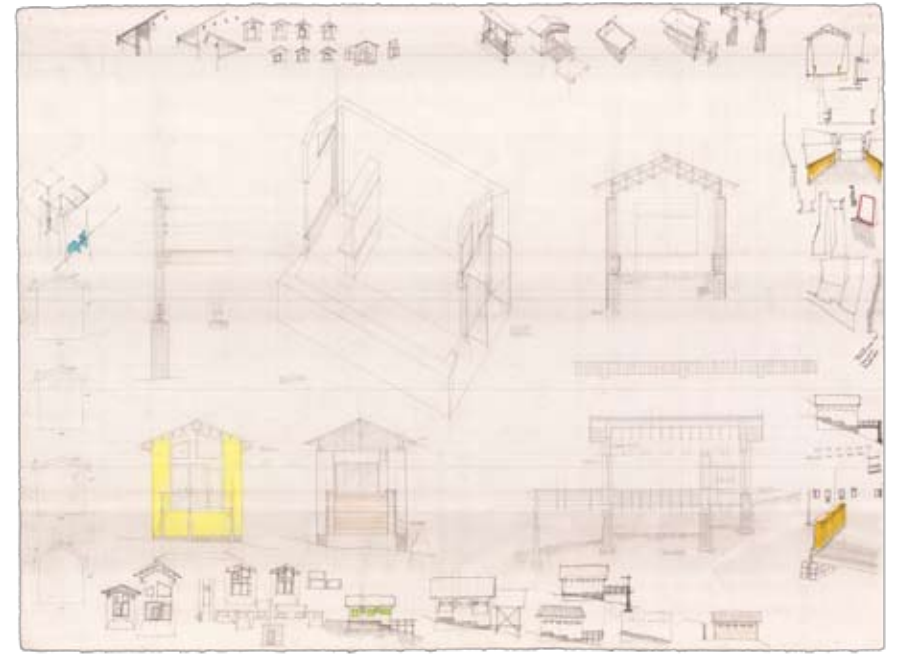
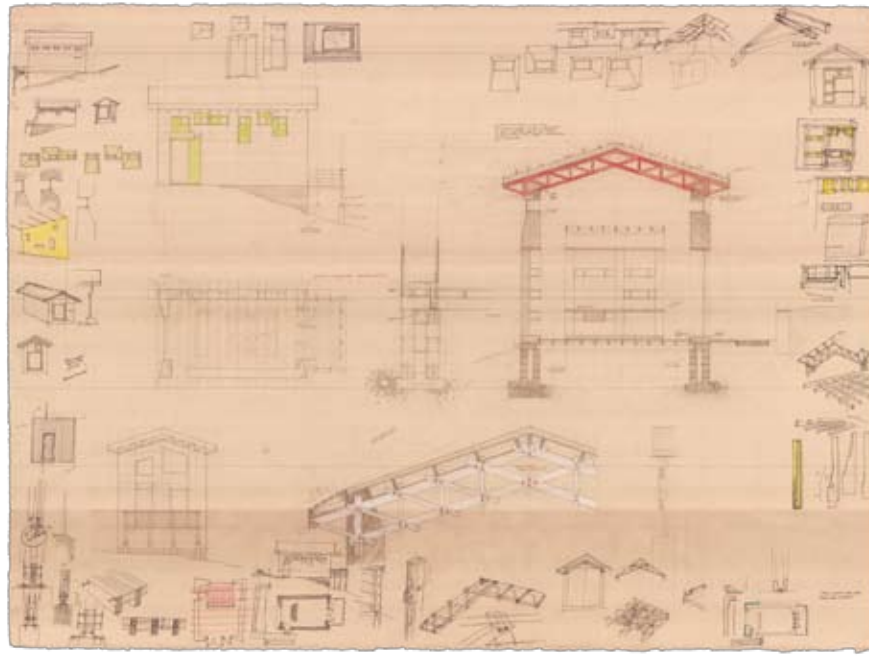
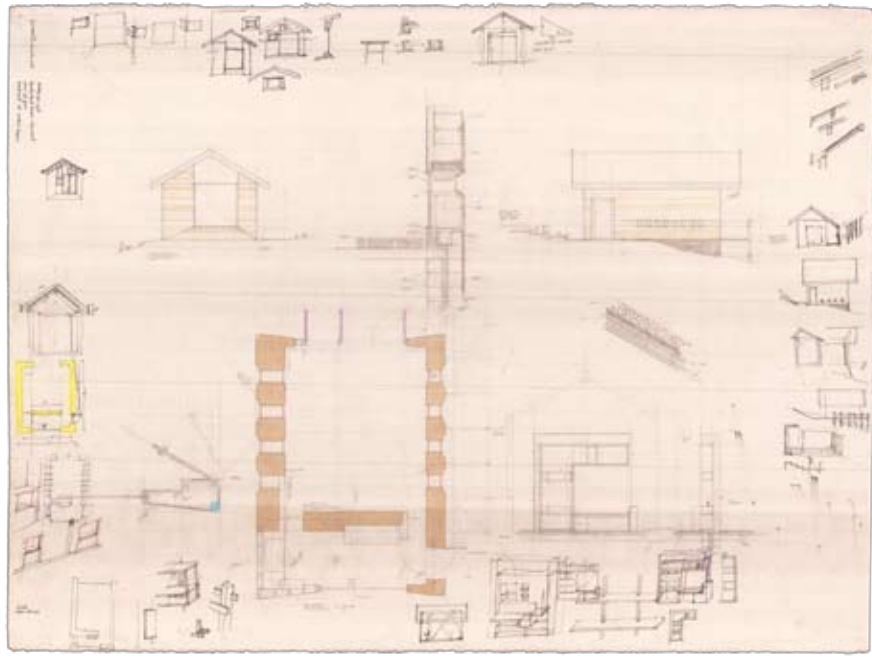


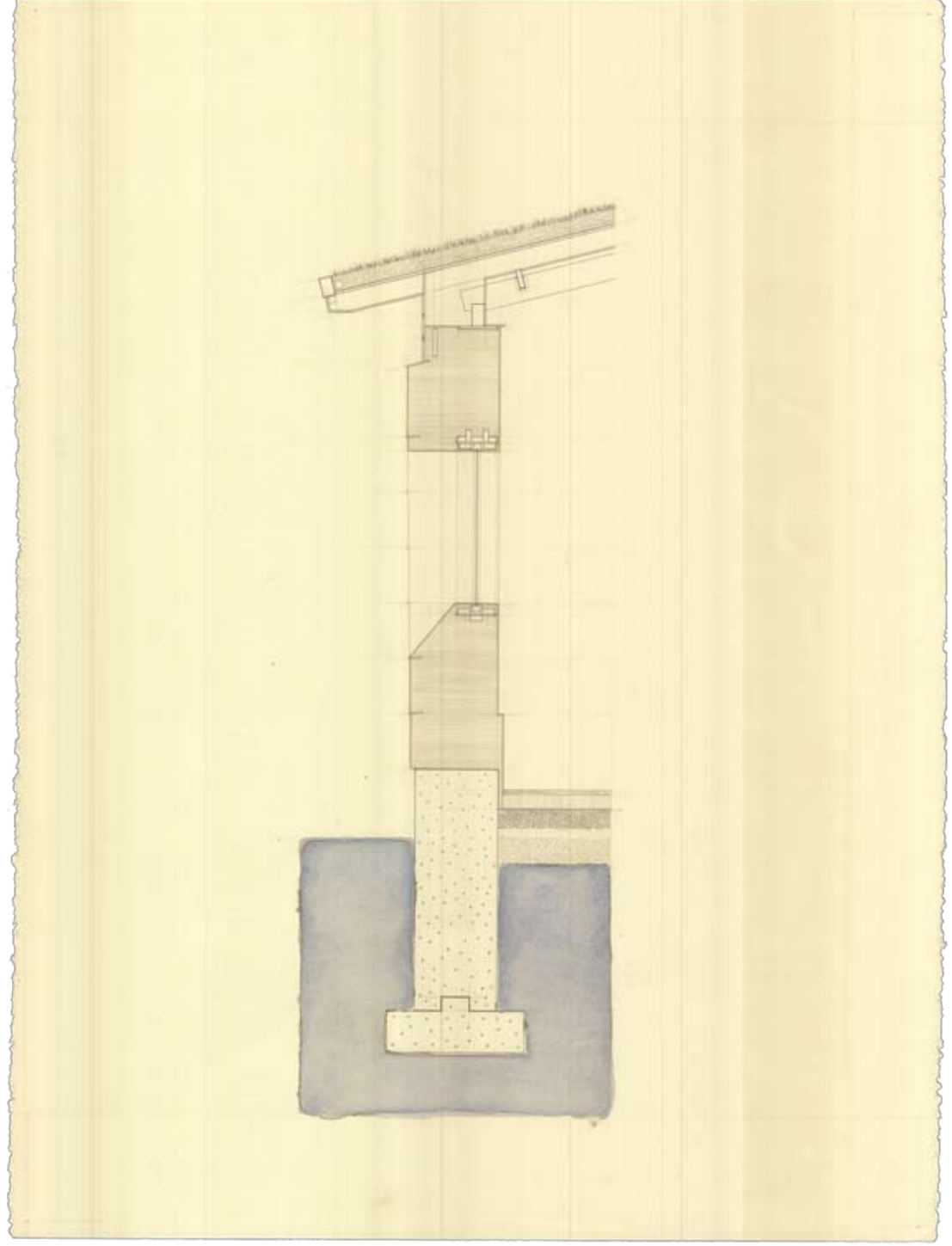
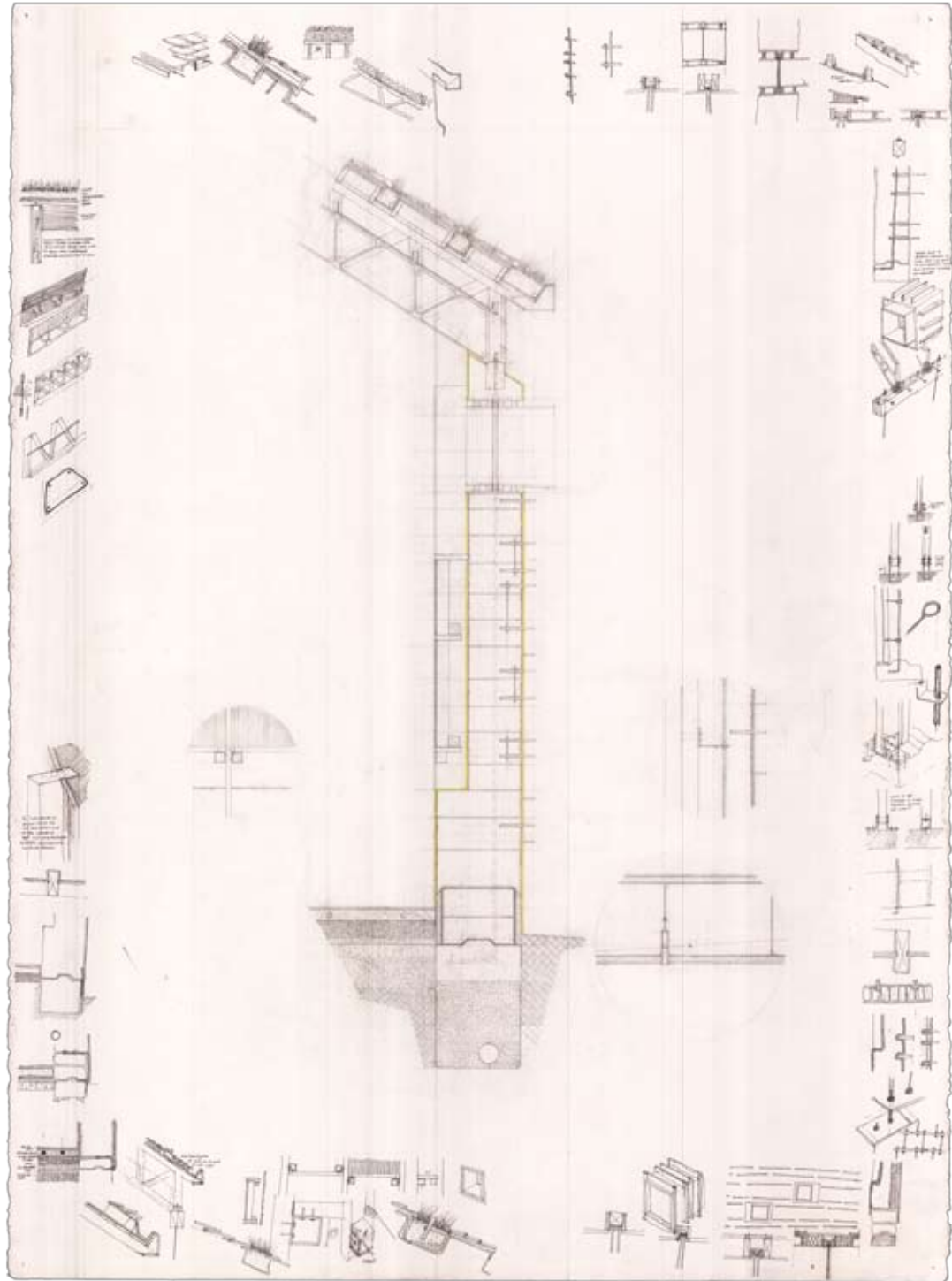


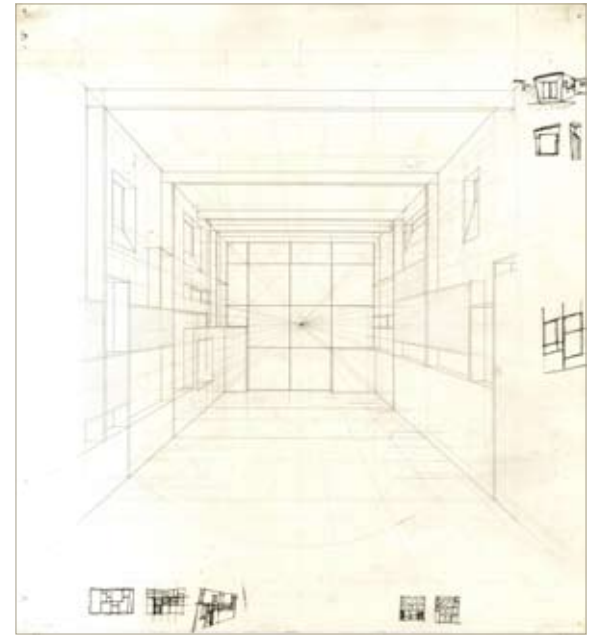
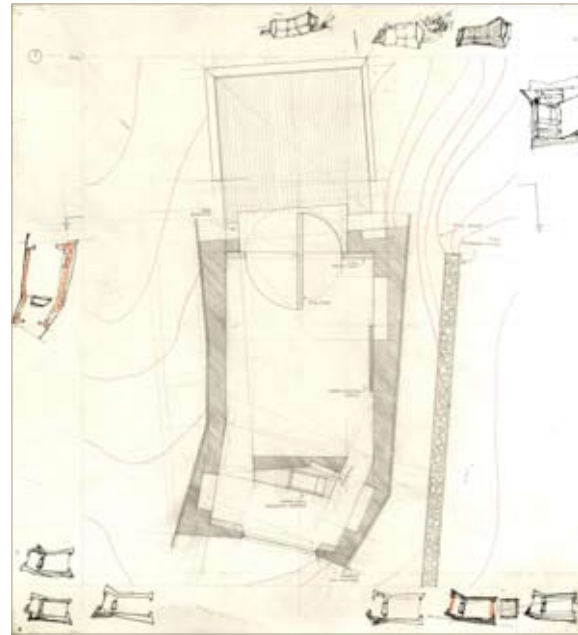
| a compilation of drawing |

a section which speaks for itself.

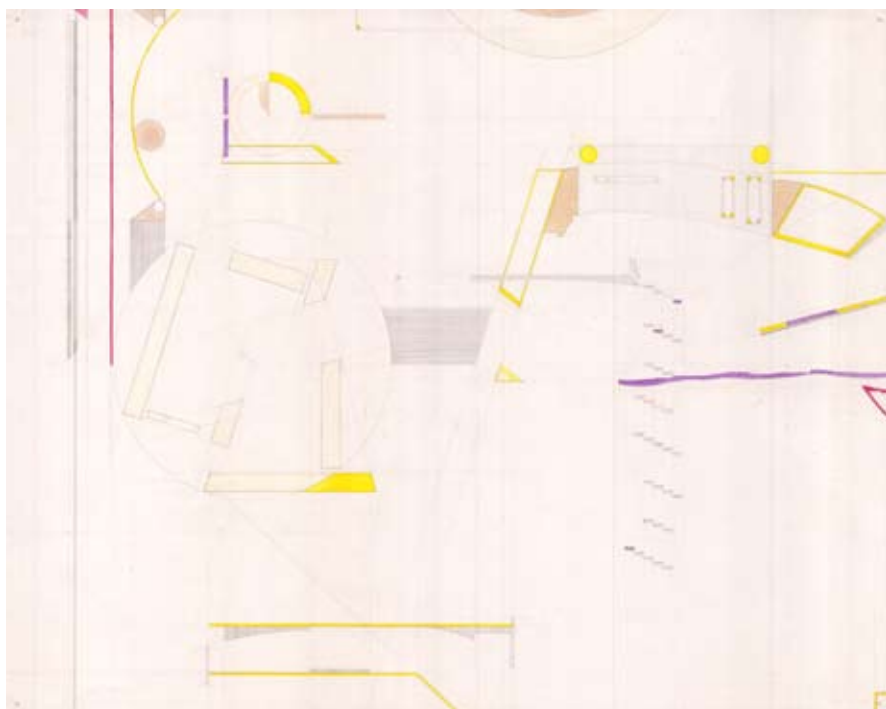
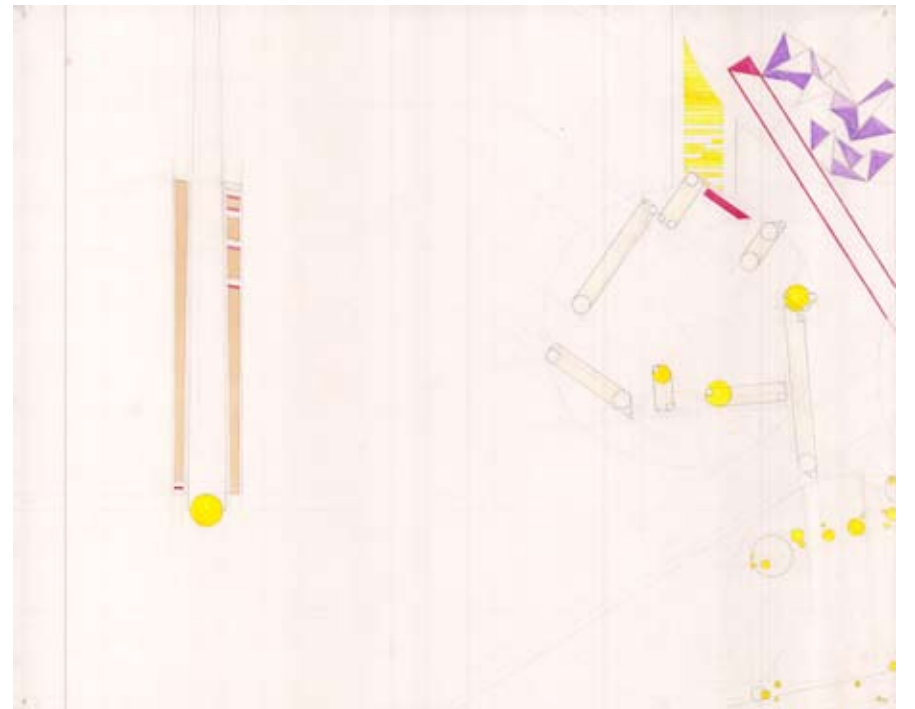
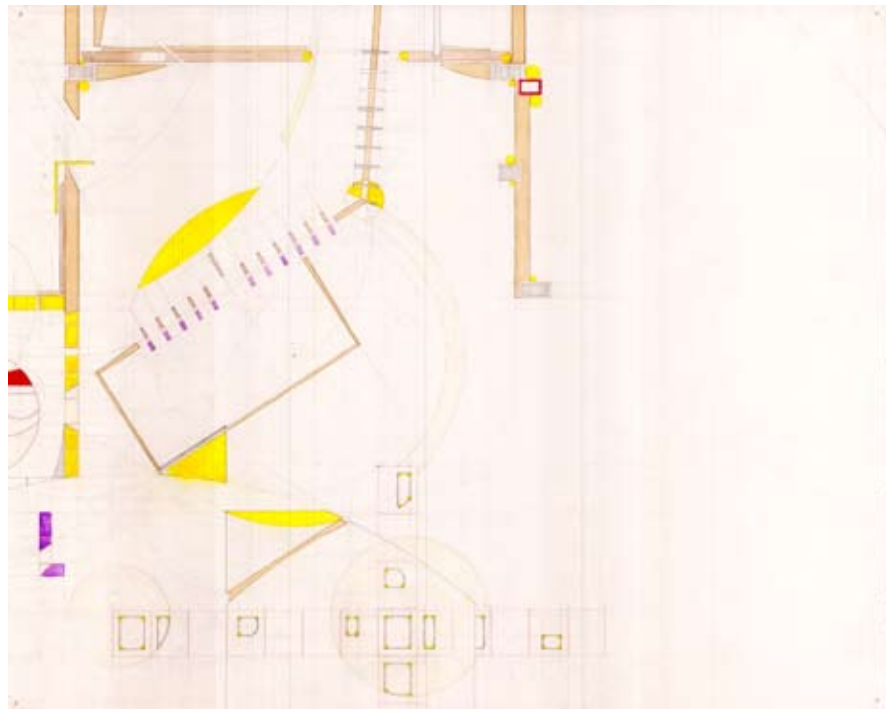
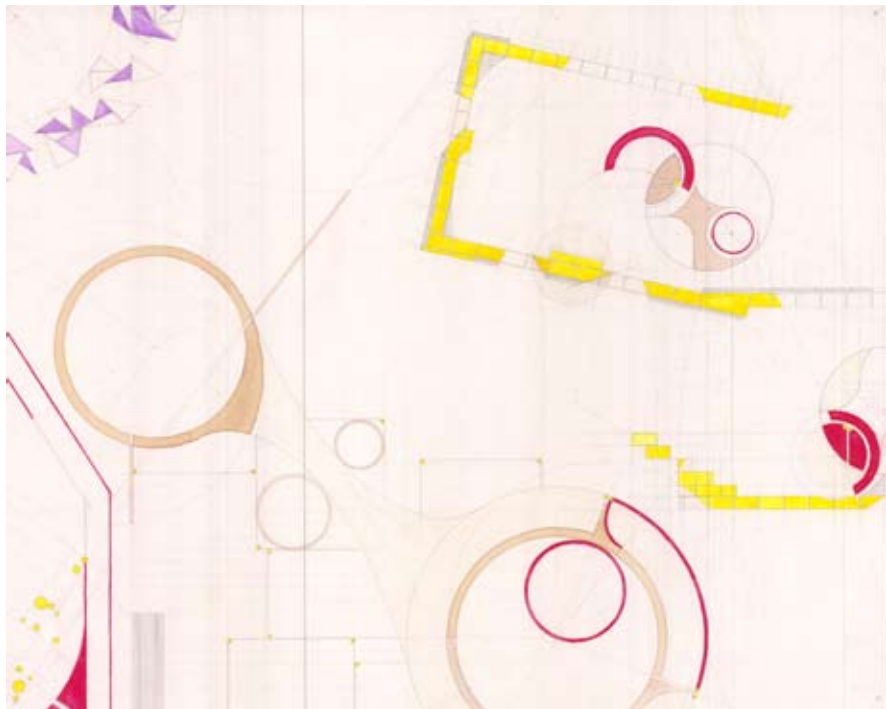
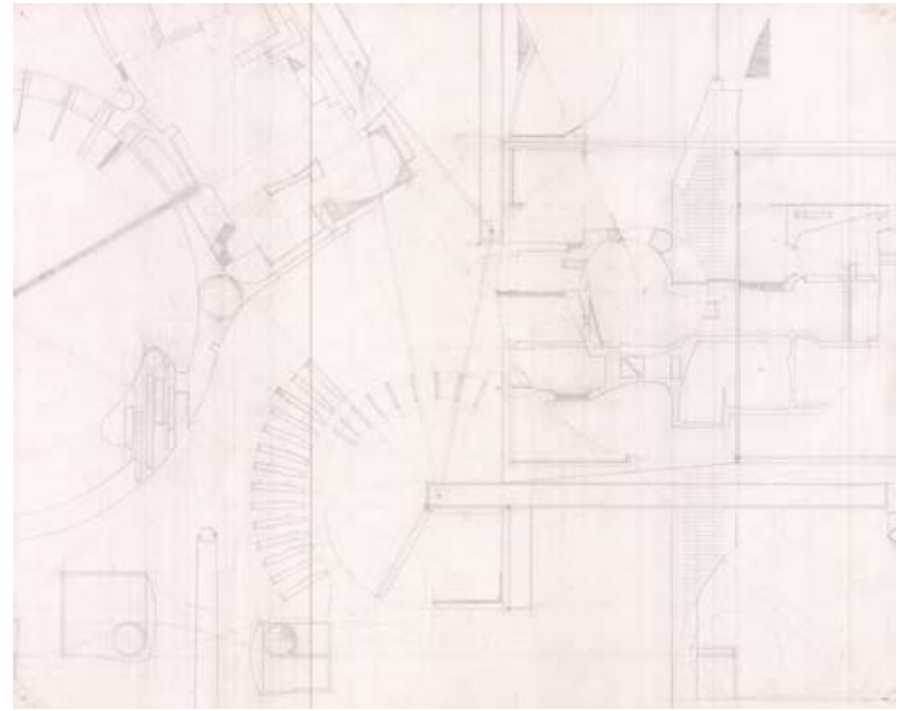
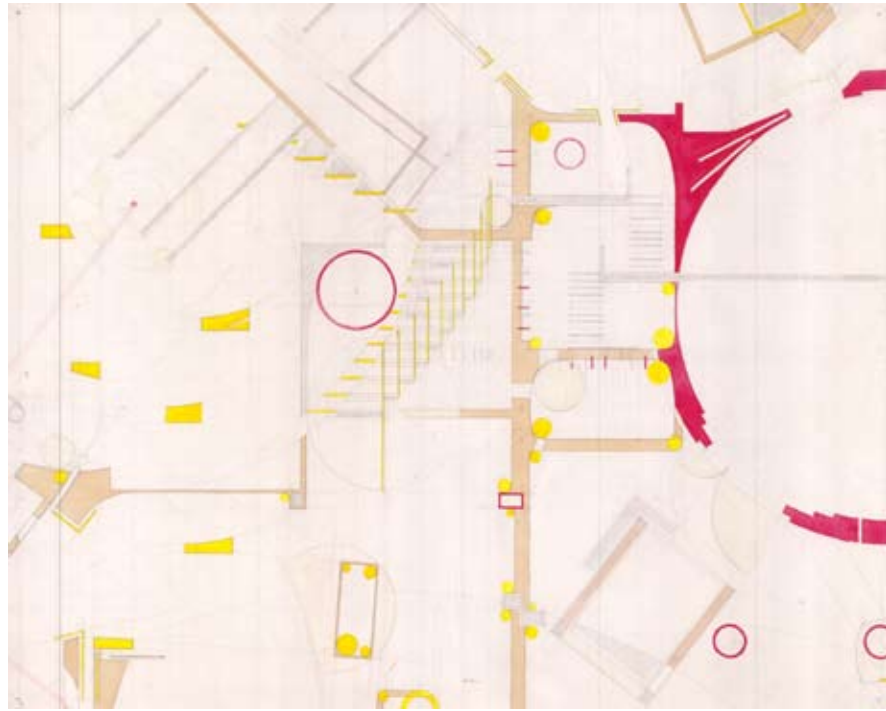
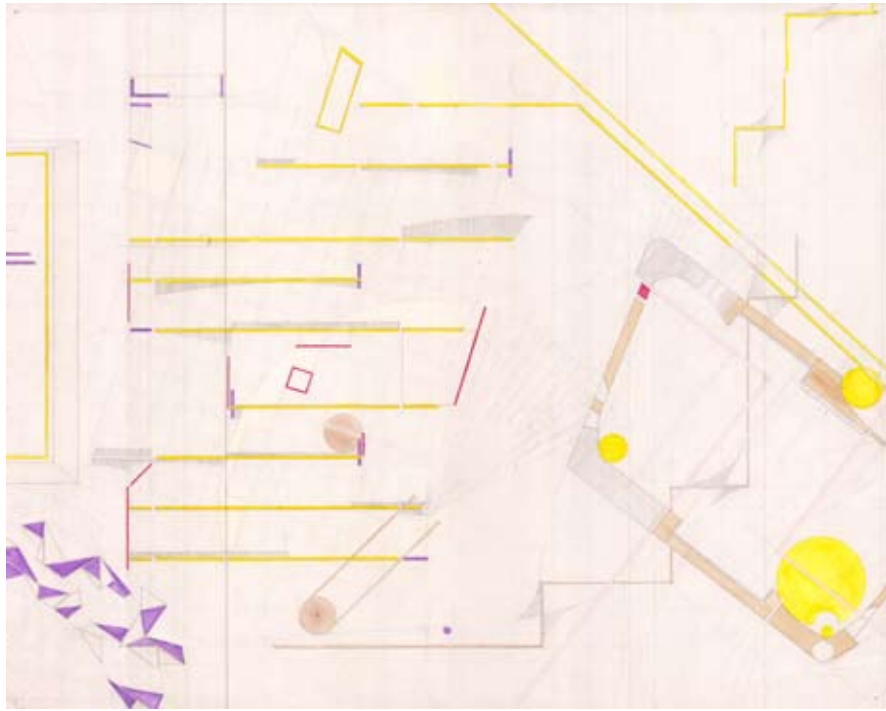


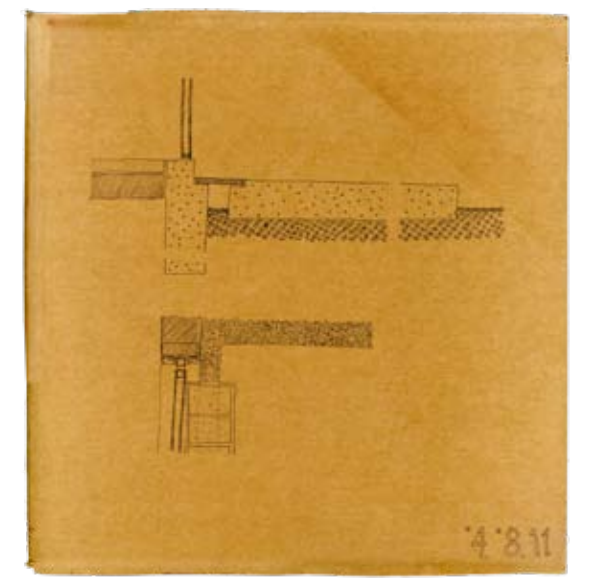
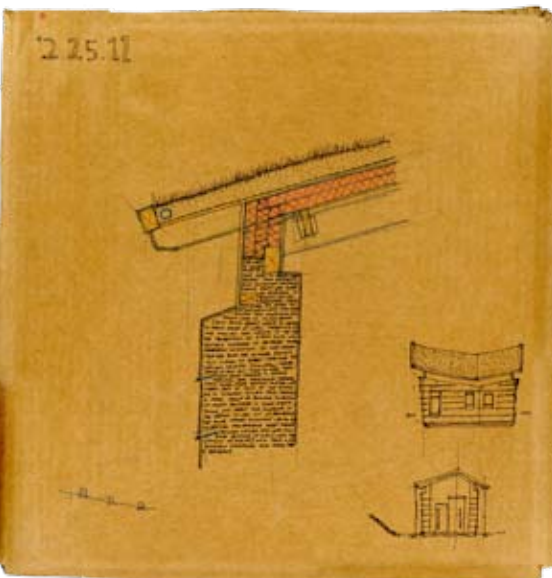
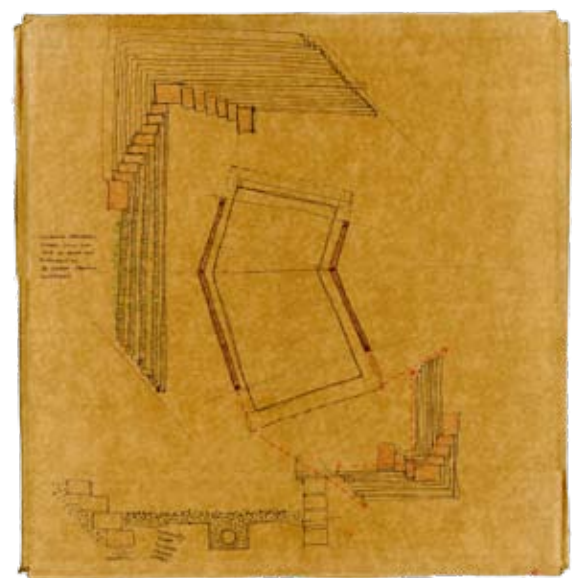
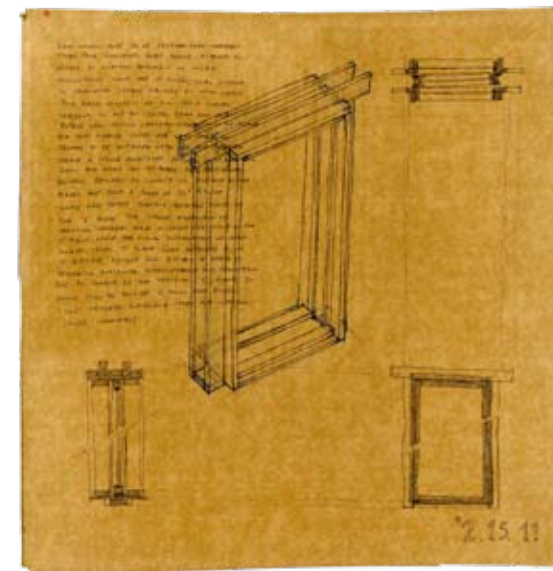
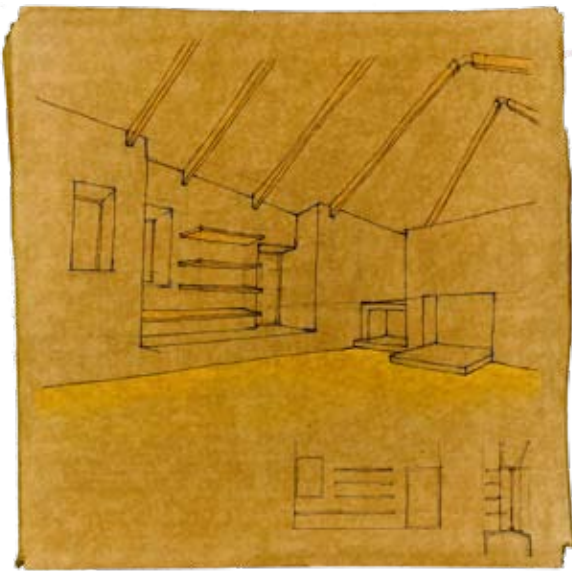
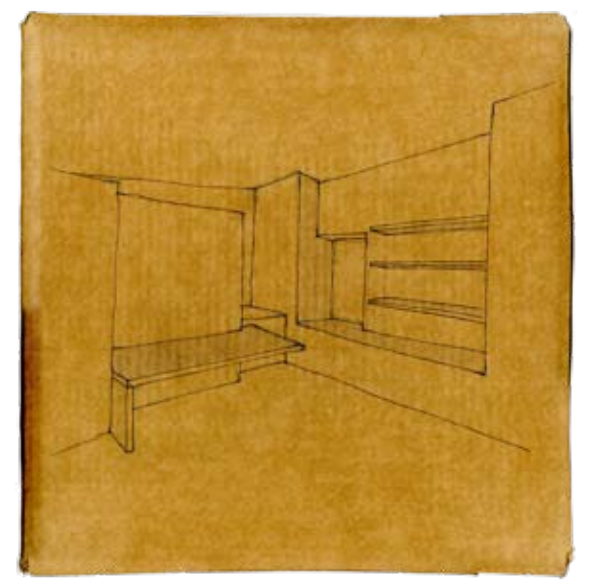
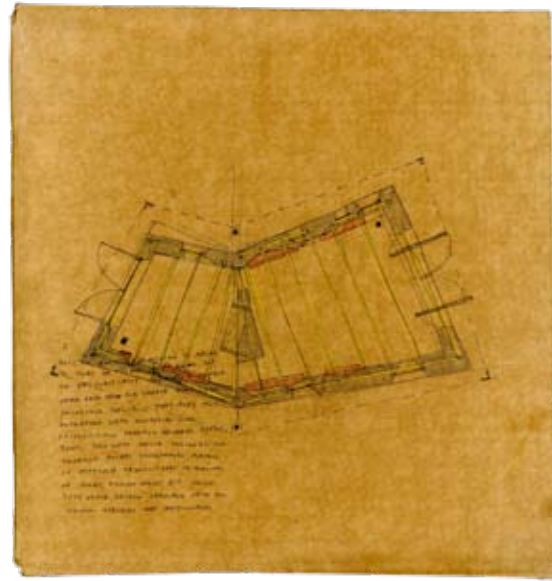






SYNESTHETIC COLLAGE





an architecture evocative
of human tendency was once
executed out of necessity.
the thesis was an attempt to challenge
this relationship at a time when it can
be almost wholly eliminated.
the questions of inconsistency, variation, and uncertainty
are traits which modern progression
has often struggled to eradicate.
and although the benefits credited
to engineering and efficiency are significant,
something gets lost in catering to their sole obtainment.
as such, the hand's role in architecture
remains unclear, for its craft necessitates
a time, energy, and manpower rarely in abundance.
the struggle proceeds as one in search
of finding that proper equilibrium;
a synthesized compromise
of economy and character.

thank you,

my parents tom and pat

my teachers coenraad and james

my committee paul, marcia, jaan, and jon

my compeers shane, monica, and sam

my patrons dani and richard

and for his help **henry**

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and now, the hard part...