

Among Earth and Sky: A Winery

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Master of Architecture in Architecture

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Abstract

This project began as a desire for large open rooms, unrestricted by programmatic requirements; a realm where architecture, its meaning, and its purpose could be explored unhindered. I chose a winery and located it among the rolling hills north of Charlottesville, Virginia.

Inspired by the beauty of vineyards, this winery facilitates the natural process begun in the growing of a grape. Sunk into the hillside, the earth provides the stable temperature and humidity necessary for wine maturation. Accounting for the technical aspects of winemaking, this project likewise addresses the aesthetic, creating not only a functioning winery, nor simply a beautiful building, but a marriage between the two.

The winery consists of a series of rooms that house a singular process of winemaking. Architecturally, the rooms are likewise individual in character: centrally planned spaces described by sacred geometry. These rooms are linked by a series of axial relationships. The descent and subsequent ascent lie on axis, rotated 90° from each other. The entrance and exit halls lie on a separate axis, shifted 45° from the former, marking the transition between the exterior natural world and the submerged built world. Visitors follow a more circuitous path. Weaving in and out, the foot's path intersects the main axes at crucial moments, but is otherwise diverted. The vertical axis also heightens spatial divisions and interrelations. Submerged in the earth the rooms each open to the sky, marking their depth within the dark, quiet earth while reconnecting them to the realm of the vineyards.

Acknowledgement

Thank you to all who have helped me, supported me, and made life richer along the way:

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To my friends and classmates. Thank you for your advice and honesty, and for helping to make the journey a pleasure.

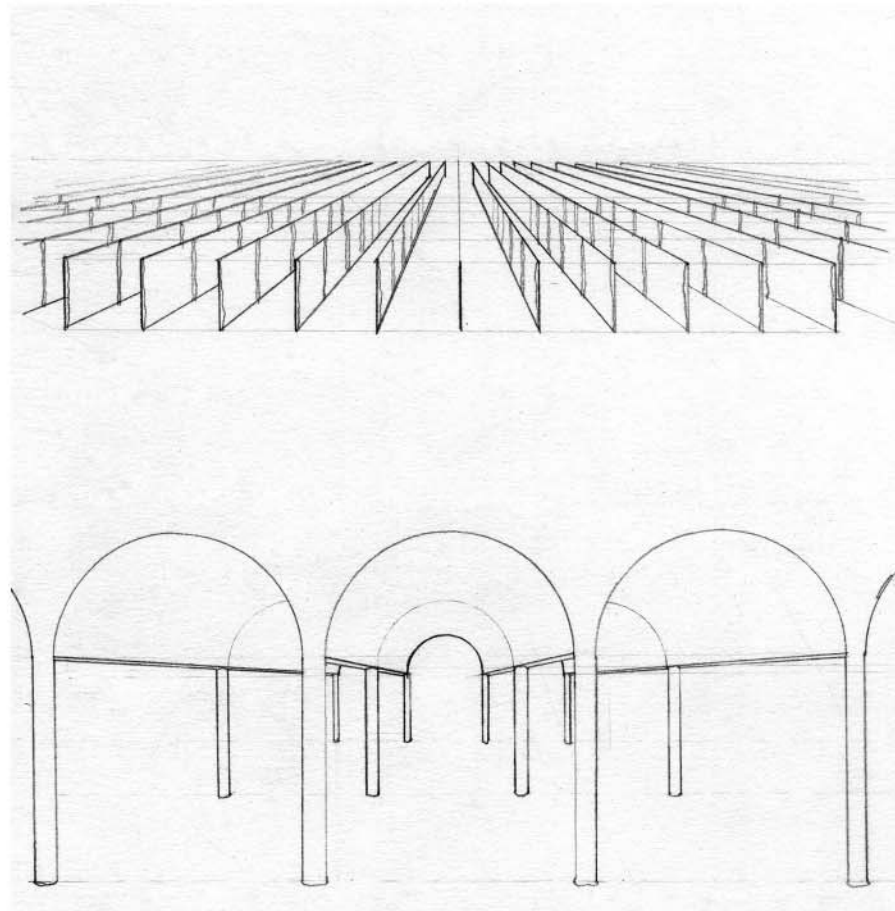
To Kathryn Hoffman, my best friend and bride to be. Thank you for your love, encouragement, and invaluable advice. Thank you for taking late phone calls, and for reminding me of the right path when I myself have forgotten.

To my family: James, Maureen, Andrew, Alec, Derek, and Susannah. Thank you for your love and support, which I have still felt from so far away. Thank you for the faith you've had in me, even when I have lost it myself.

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Introduction

Wine has been made for thousands of years. Through much of this time, winemaking has been treated as an art form. Akin to alchemy, it consisted of experimentation with grape varieties and their blending, yeasts for fermentation, aging, and containers that impart flavors. Different regions became known for their grape varieties and styles of wine. In the last century, the art of winemaking has become more of a science; everything explained and summarized by chemical equations, their reactions charted and graphed to optimize each step in the process. Machines harvest the fruit, replacing seasonal hired hands. Machines crush the grapes, replacing the ritual of stomping them with bare feet. Machines refrigerate the wine, replacing underground cellars. Machines analyze the chemical composition of wine to determine an optimum solution, replacing the winemakers themselves. This has promoted mass production of cheaper wines. However, Old World wines are still highly prized and sought after, and wherever quality is desired the process is entrusted to the human hand. For machines still cannot tell a rotted grape from a healthy one, and refrigerated stainless steel vats do not contribute to tannic maturation and woody flavors as do wooden barrels. Therefore, the world of wine offers two roads: the scientific, machine dominated quantitative method, and the empirical, nature driven qualitative method. Architecture shares a similar question between quantitative and qualitative concerns.

Initially, architecture was considered a qualitative approach towards discovering beauty through the built form. The definition of beauty, however, has been heavily contested, labeled subjective, and any proposal for a universal definition is summarily attacked. Architecture has likewise become a subjective art: undefined collectively and left to the individual architect to find meaning and to explore in their individual work. A thesis, then, as the final step in an architect's formal education, must wrestle with this question and reach towards a working definition.

While not leading to an absolute definition, this project has helped distill my thoughts and point me in a clear direction. I have encountered many varying viewpoints of architecture in my studies. Included among them are: the magnificent explorations of sacred geometry in the work of Andrea Palladio, the awe inspiring exuberance of invention in the work of Francesco Borromini, and the pristine clarity of structural logic in the work of Mies van der Rohe. Each argument has spoken to me, found a place in my imagination and enhanced my understanding of architecture. Yet my understanding of each falls short of describing the reality of architecture; there always seems to be more. In the end, architecture is part of the world. Not just an object on a page or volumes of space, architecture, whether in mind, actuality, or both, is a part of existence. It facilitates the interactions of mankind and is part of the experiences of man. Placed in the world, upon the earth and beneath the sky, architecture offers a place for life. It is filled with air that is breathed, it sweats in the heat and freezes in the cold, it is lit by the sun, and it is soaked by the rain. Good architecture benefits the earth; it leads to a more fruitful existence.

The Dream



The dream exists before the plan takes shape. The dream exists before the first drawing is drawn. The dream exists with the first desire. Hazy, elusive, it lies tantalizingly close. The dream is the beginning.

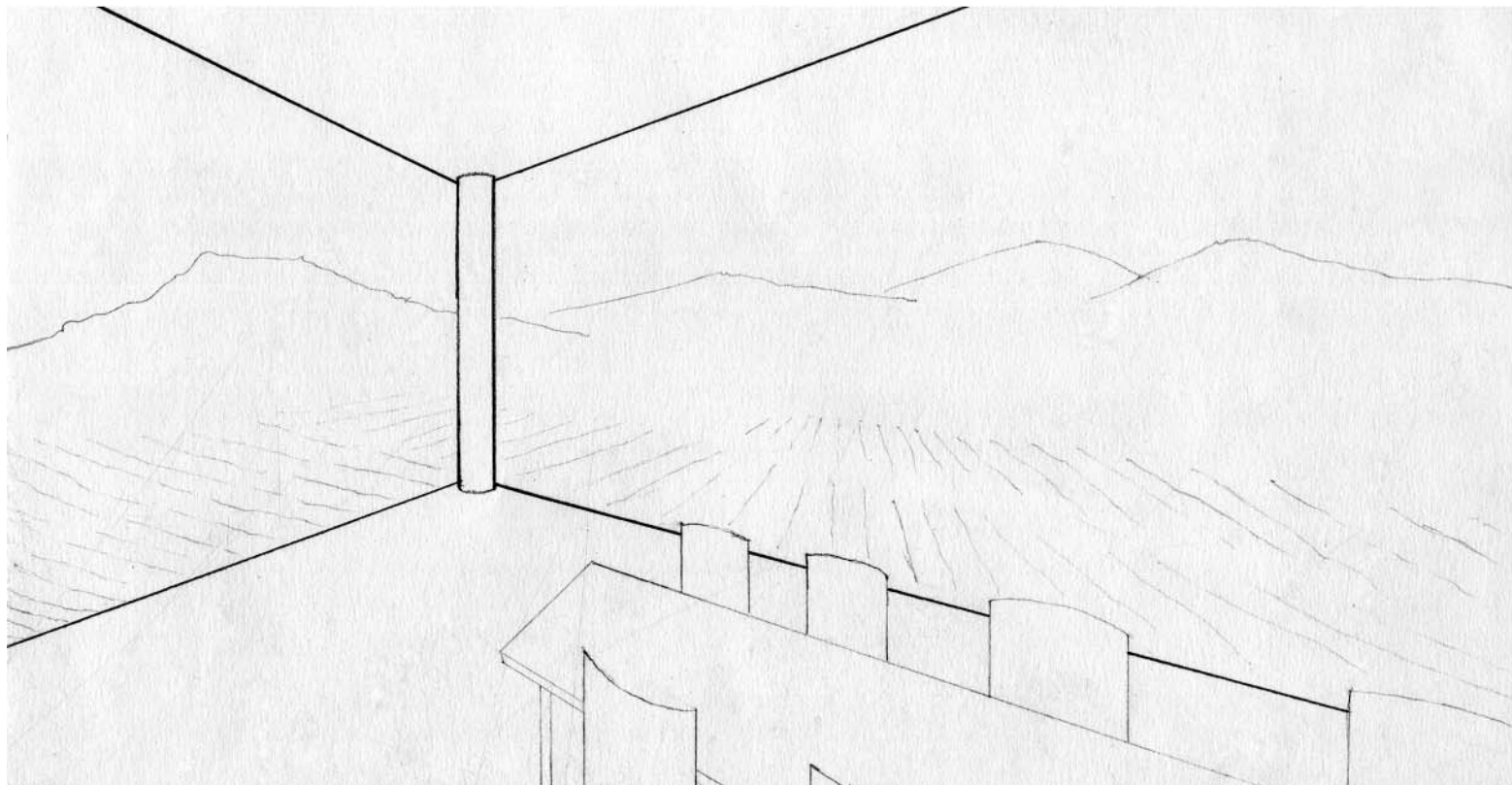
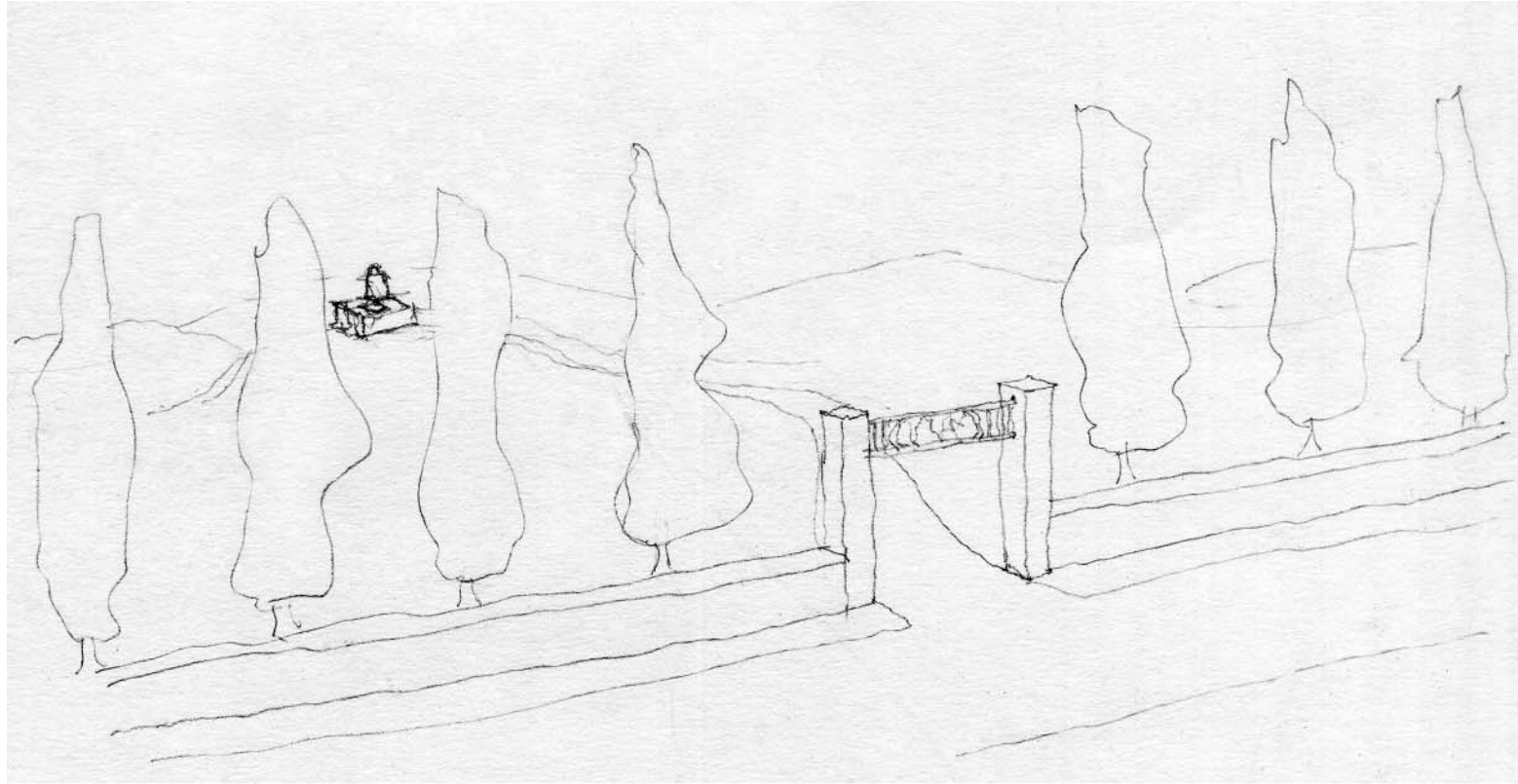




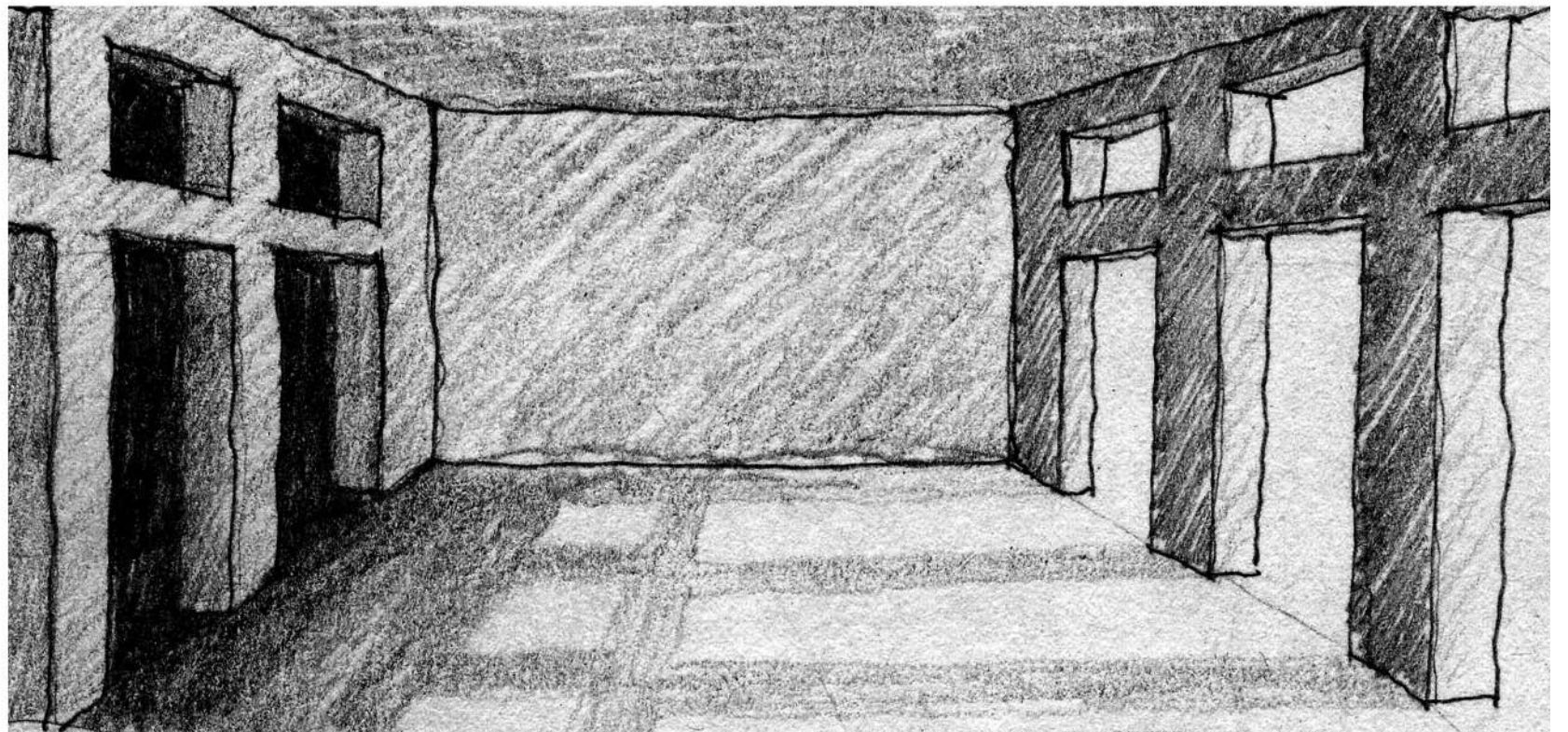
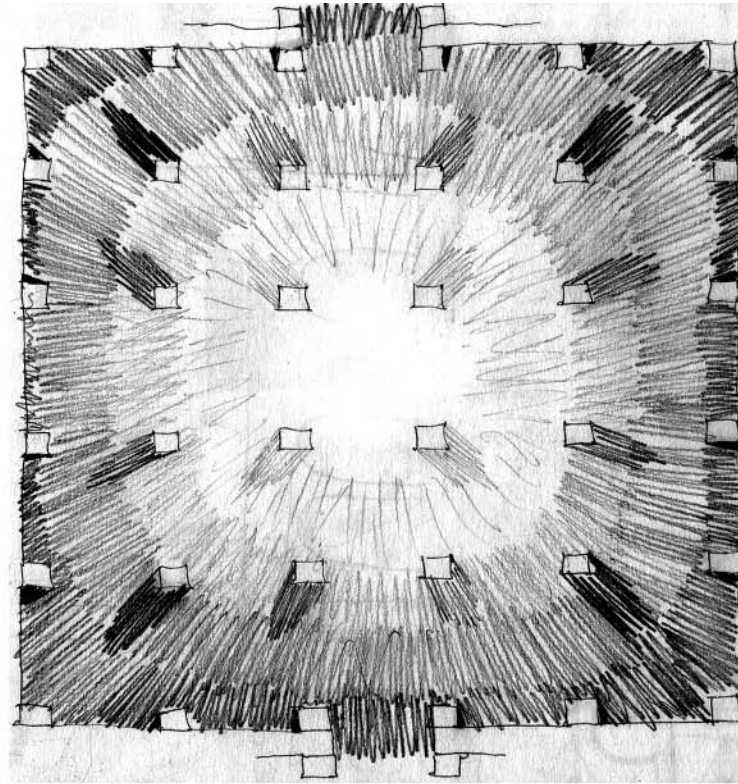


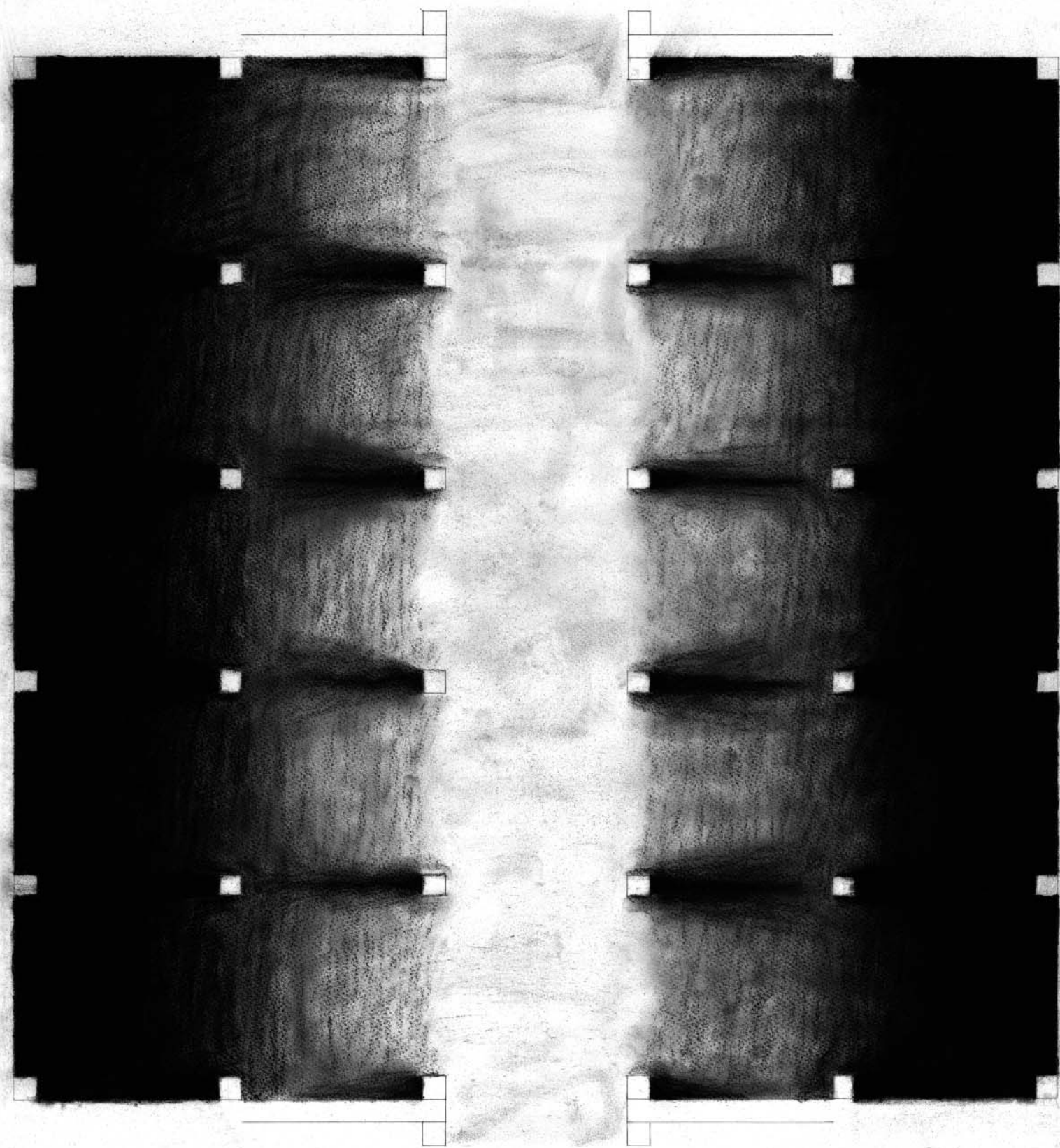
7 -The Dream Hillside Section



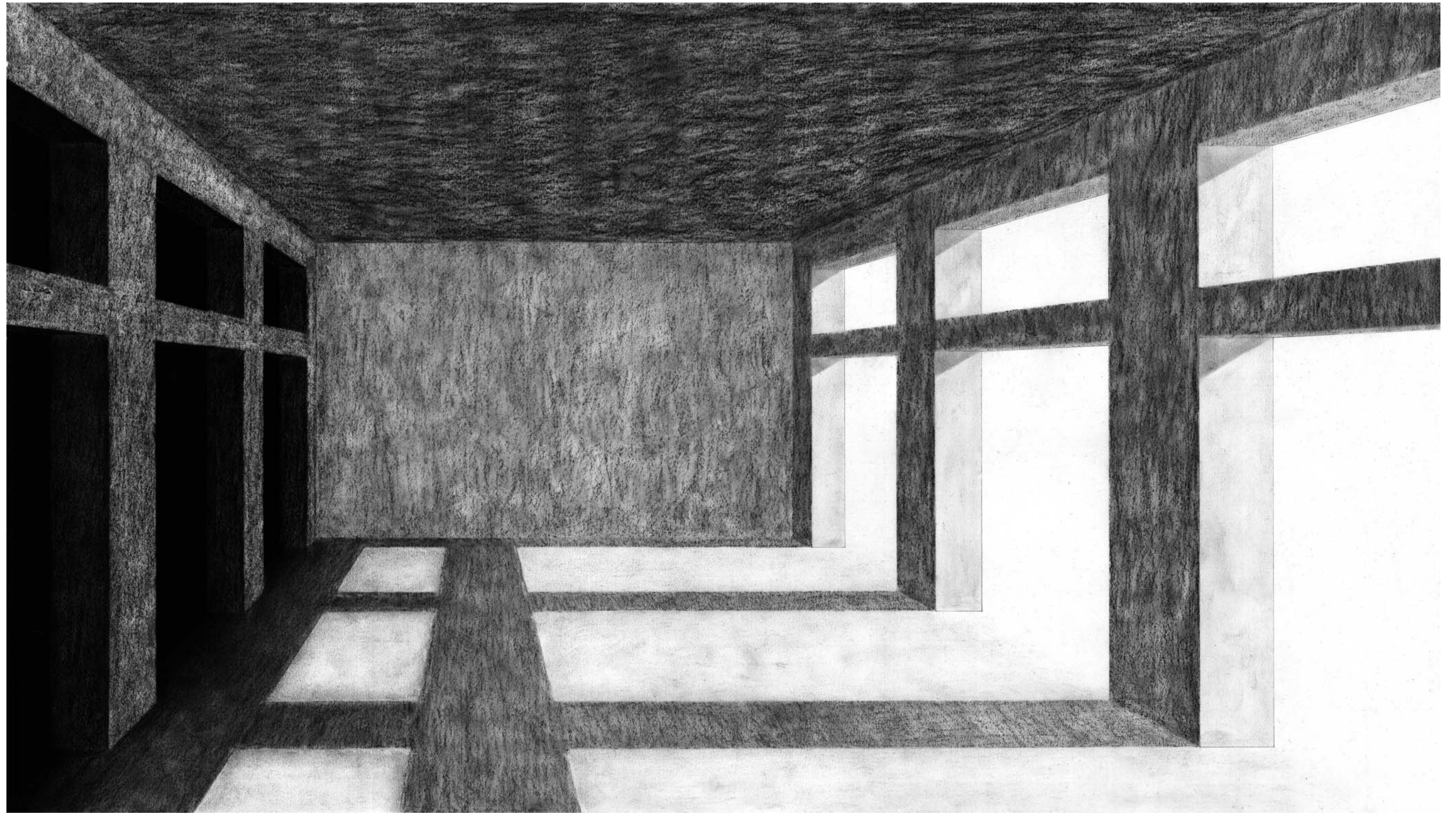


9 -The Dream In the Landscape





11 -The Dream Cellar





13 -The Dream Cellar

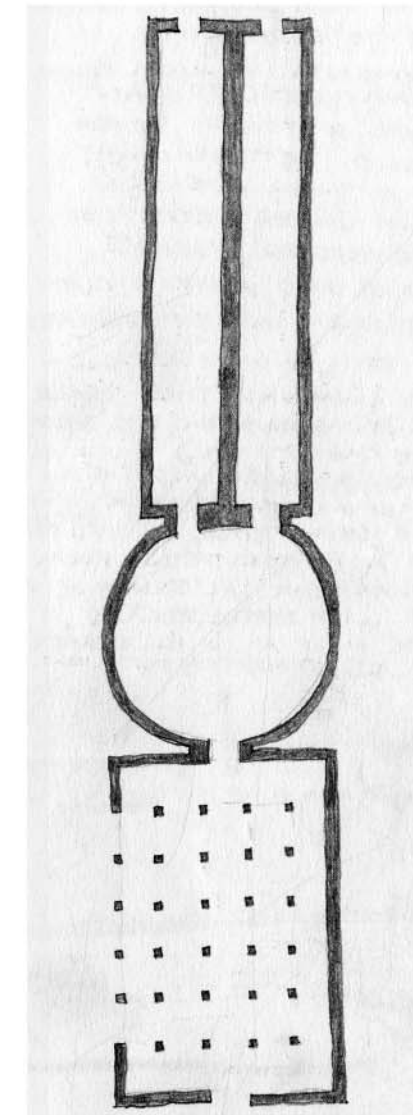
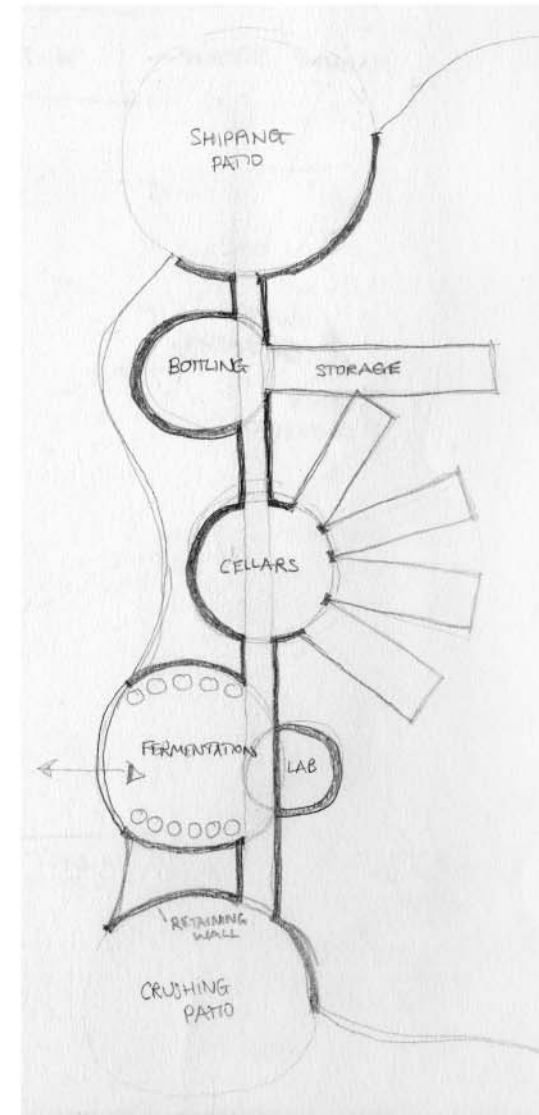
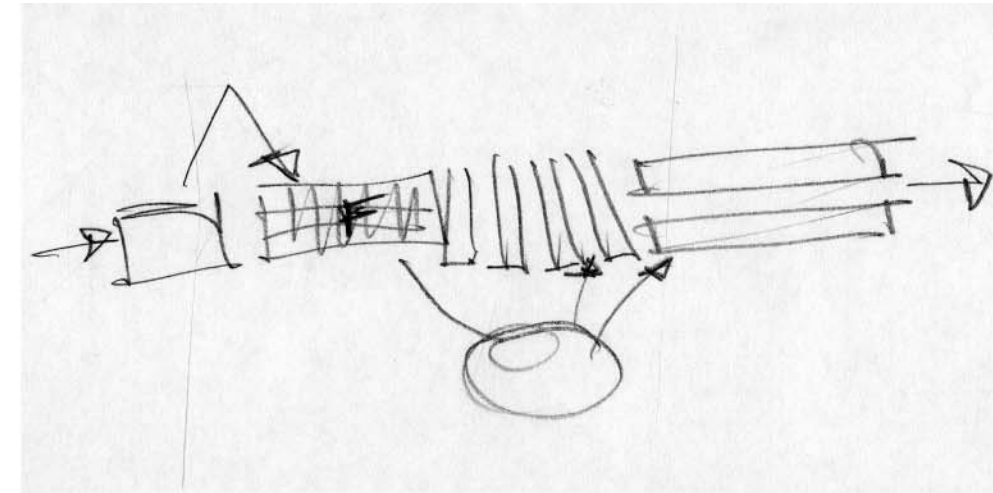
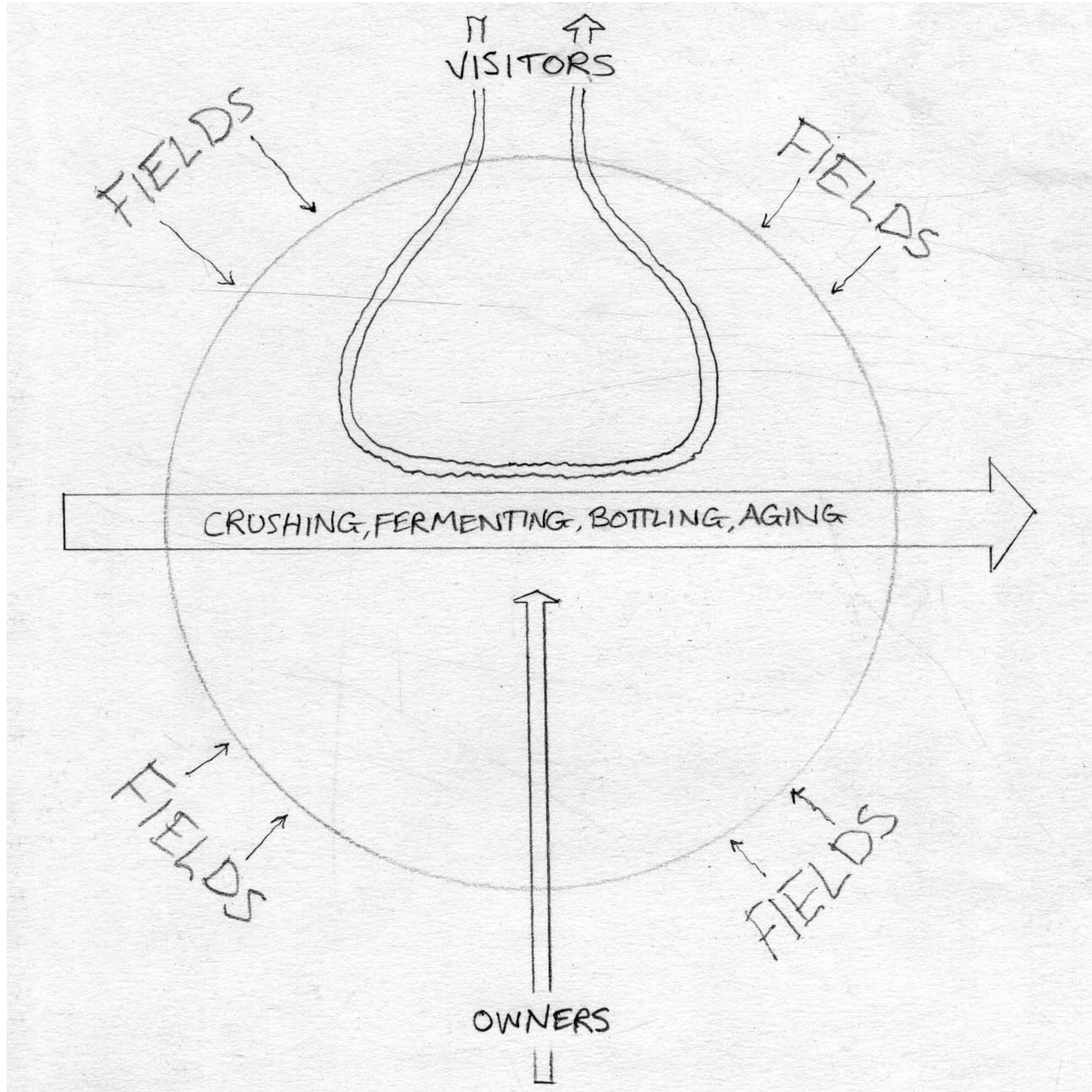


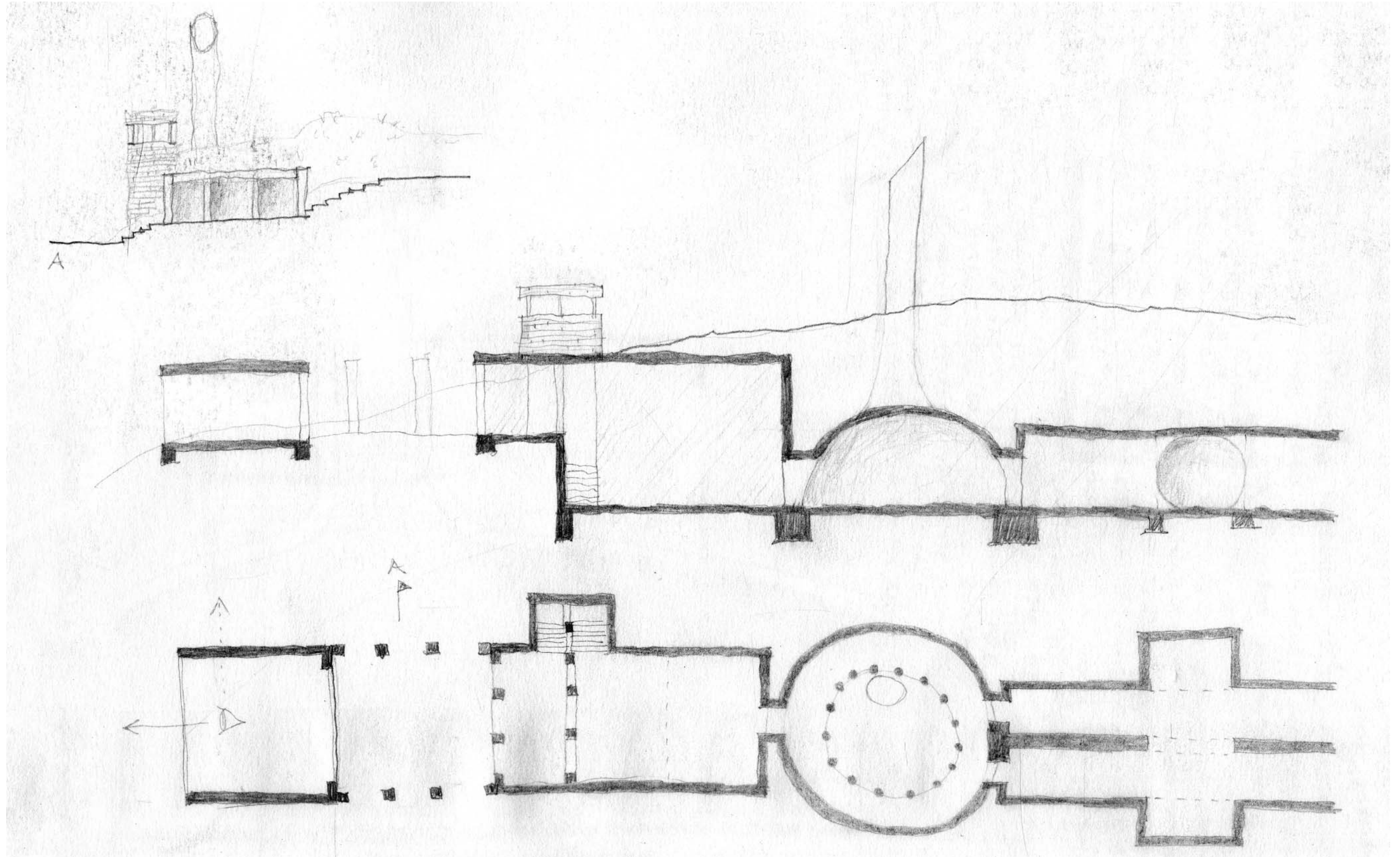
Model: Cellar The Dream- 14

Exploration

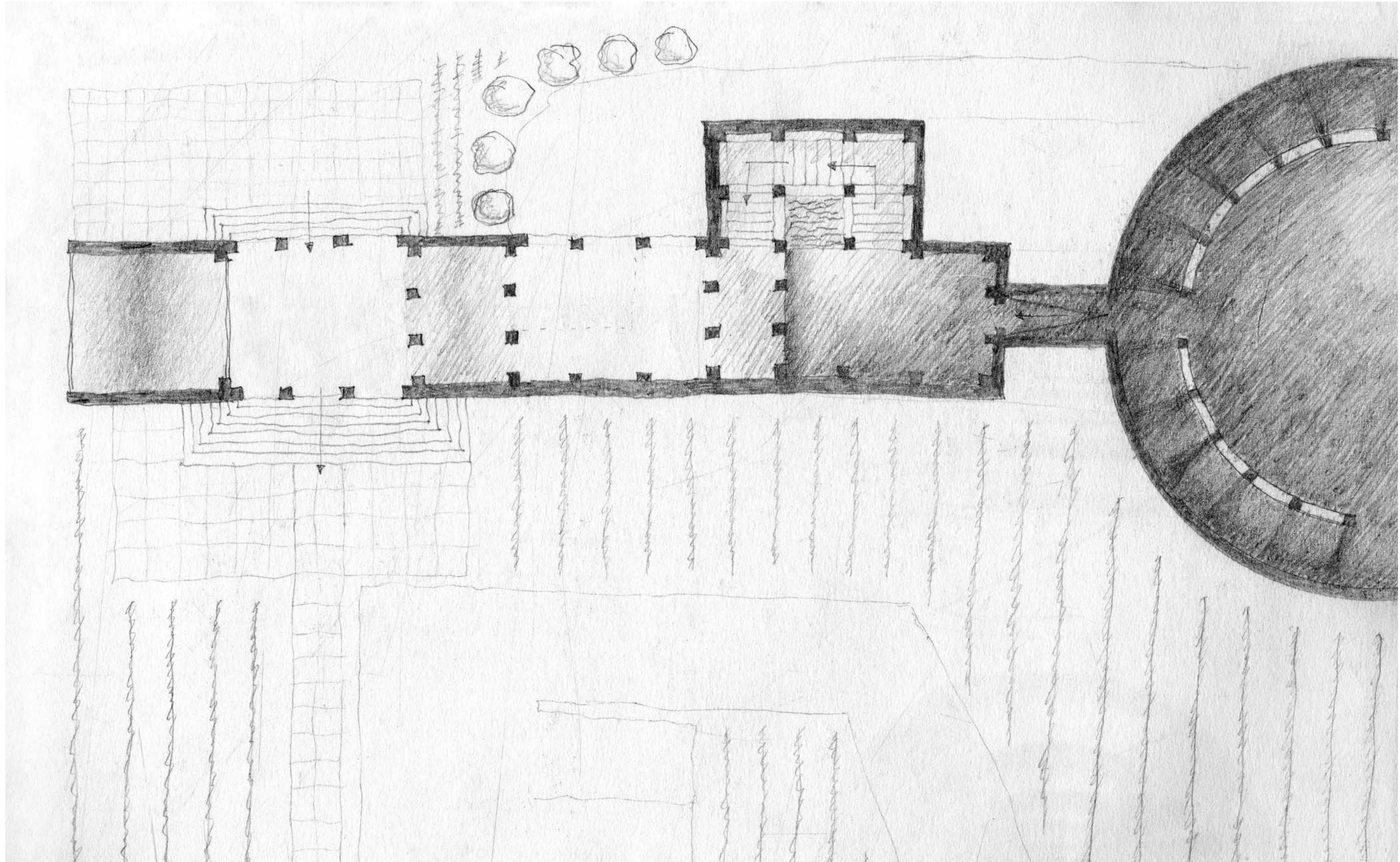


Uncertain and undetermined, the design comes into focus. Repetition, repetition, repetition brings it closer. Failed attempt, brings failed attempt, brings another failed attempt. Yet even these have purpose: the stepping stones that pave the way. Not quite right, not quite right, still not quite right. But it's getting there.

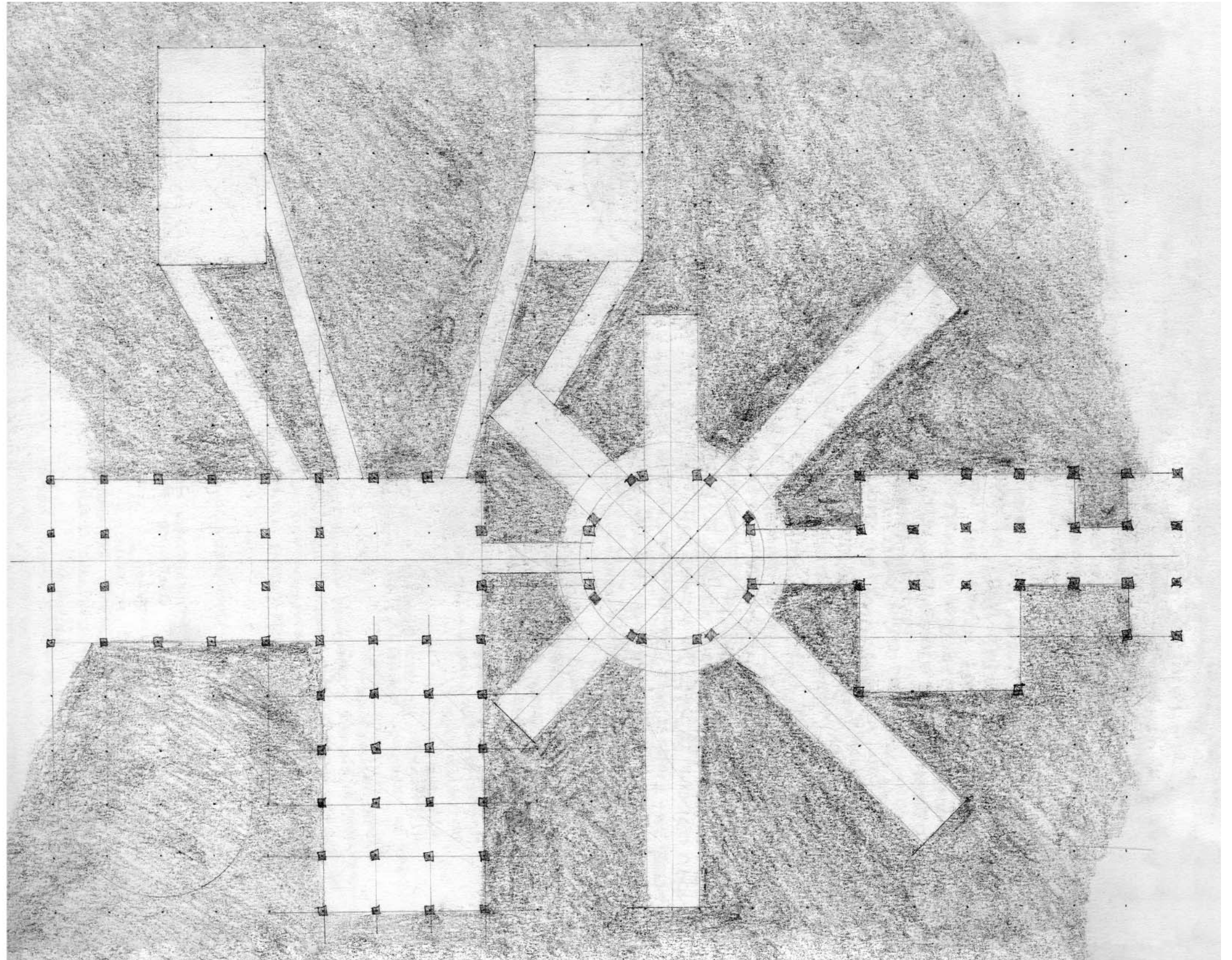




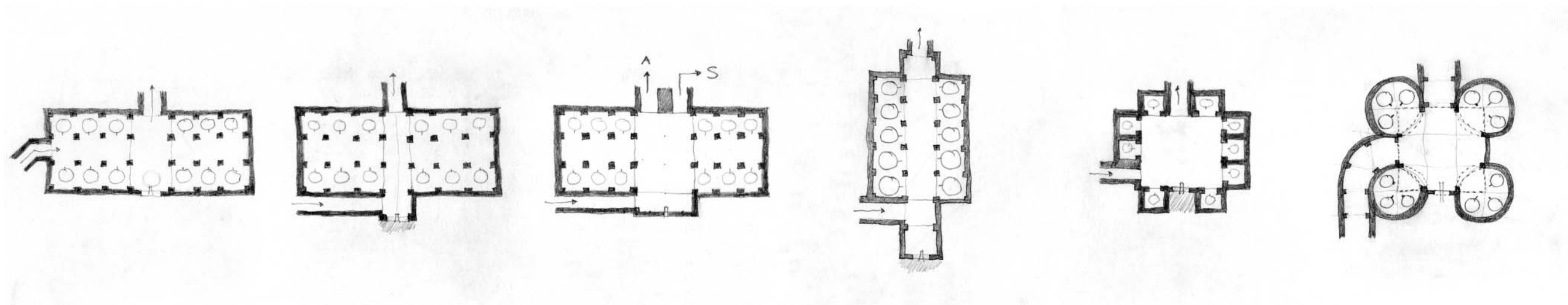
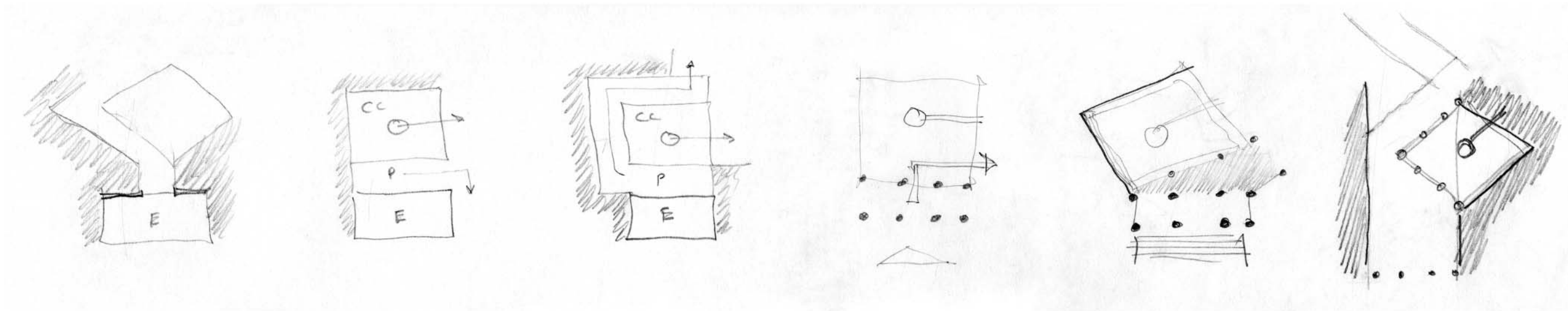
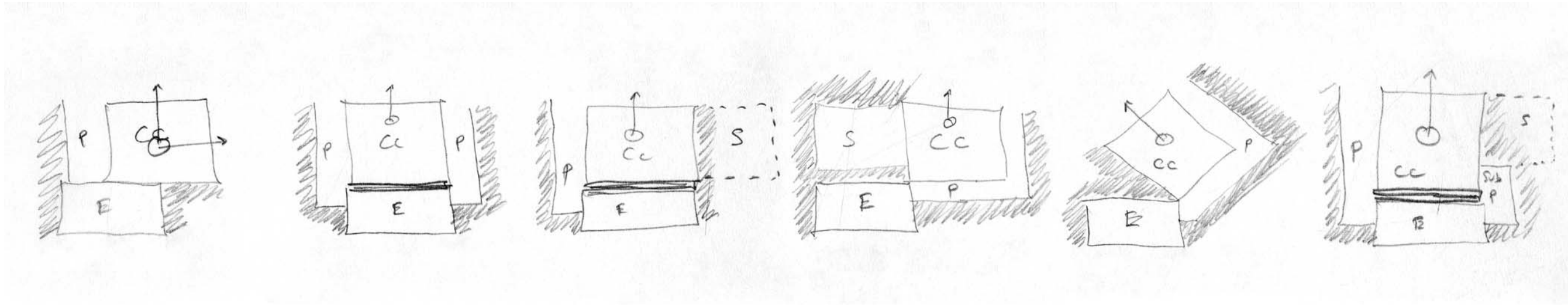
Floor Plan, Section, Elevation Exploration- 18

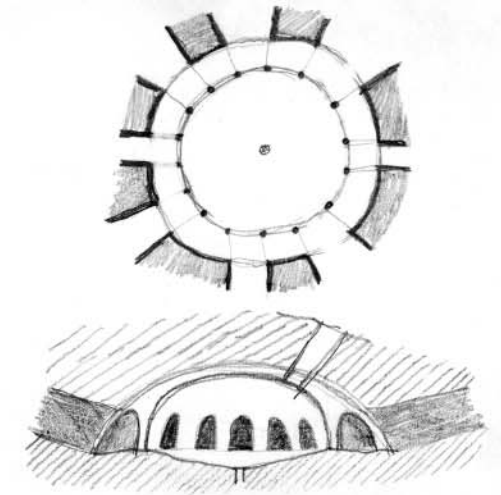
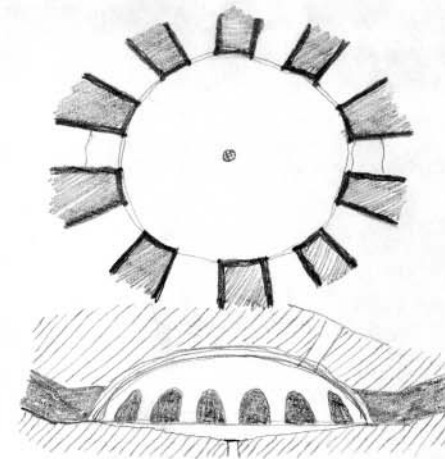
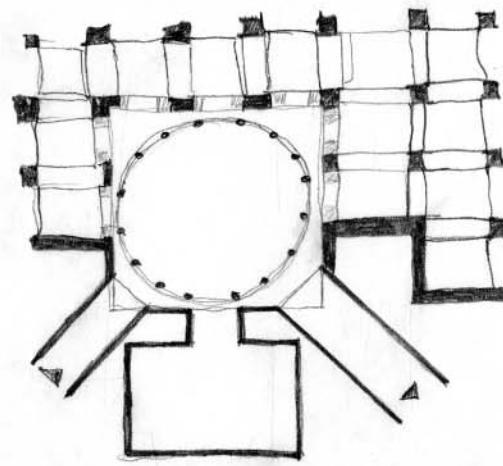
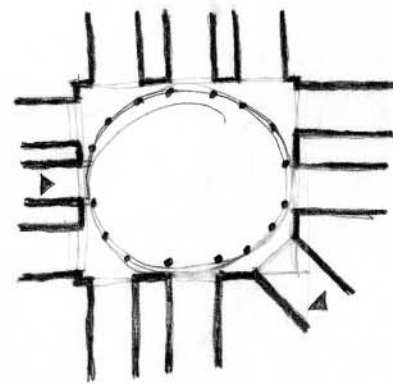
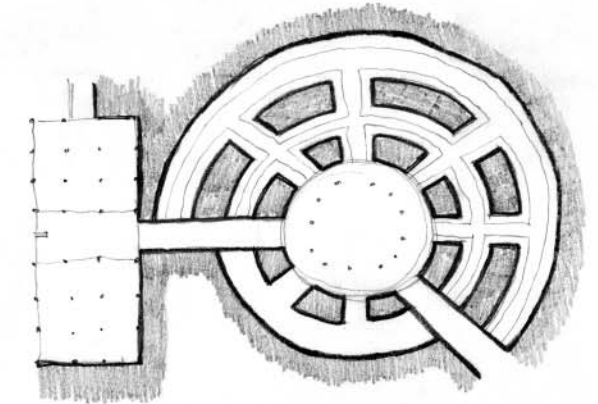
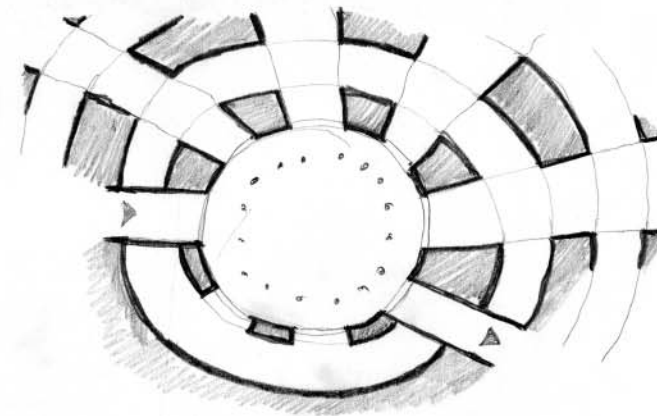
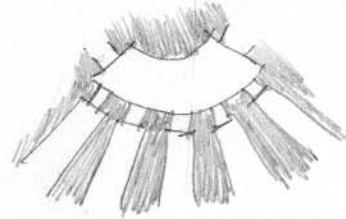
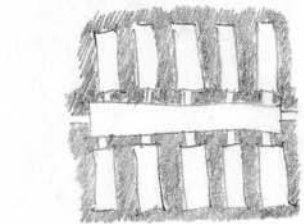
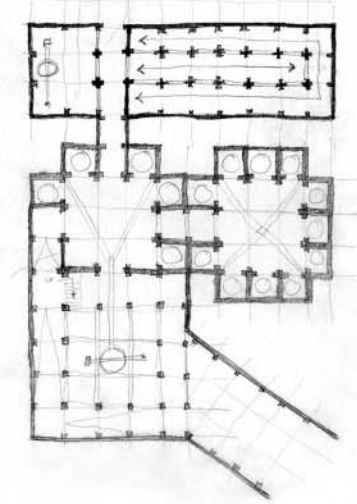
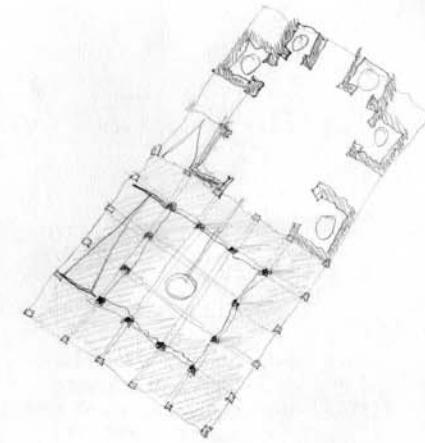
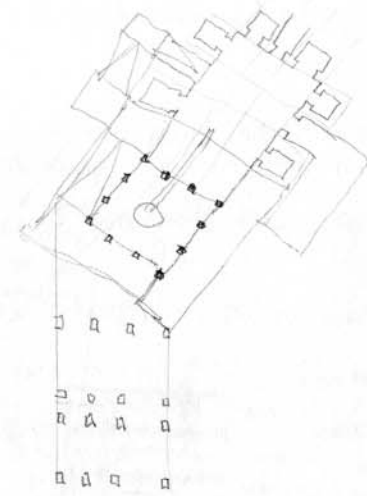
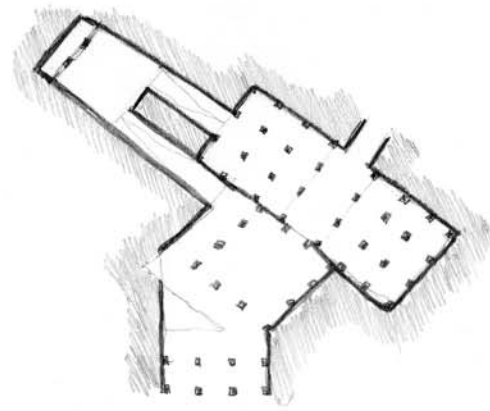


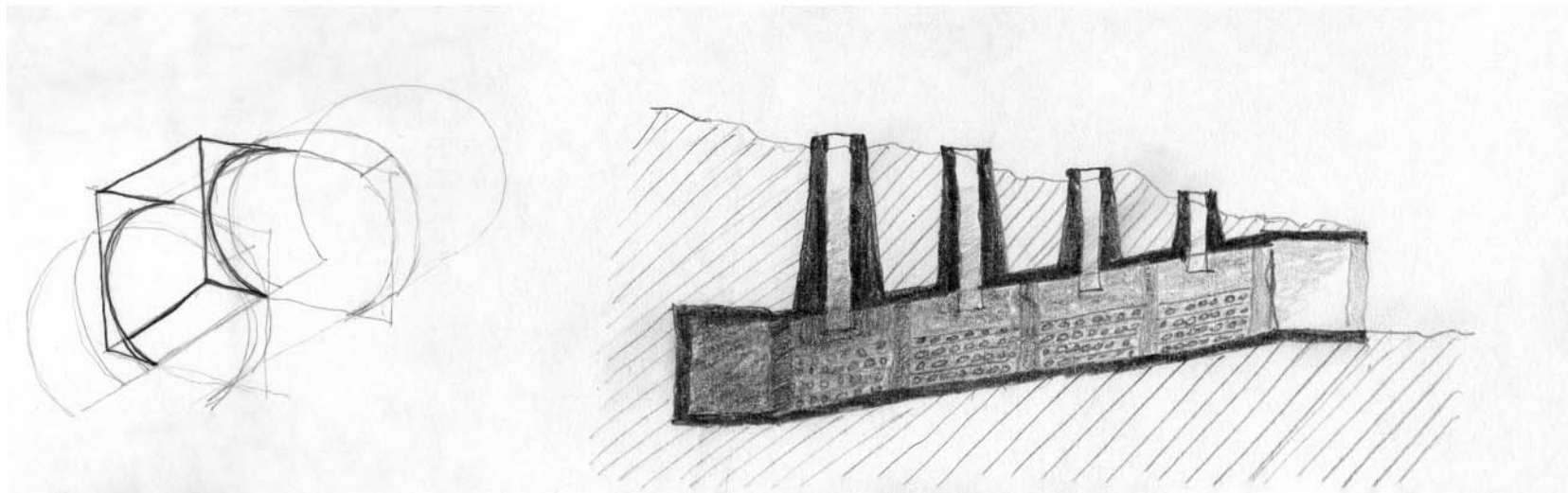
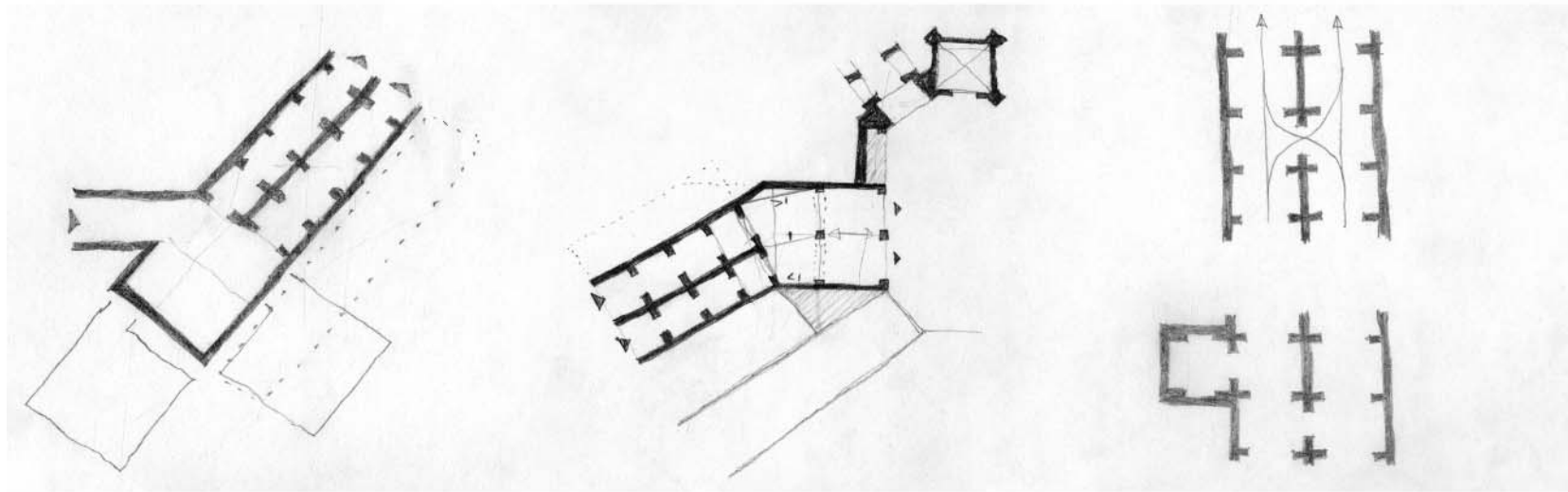
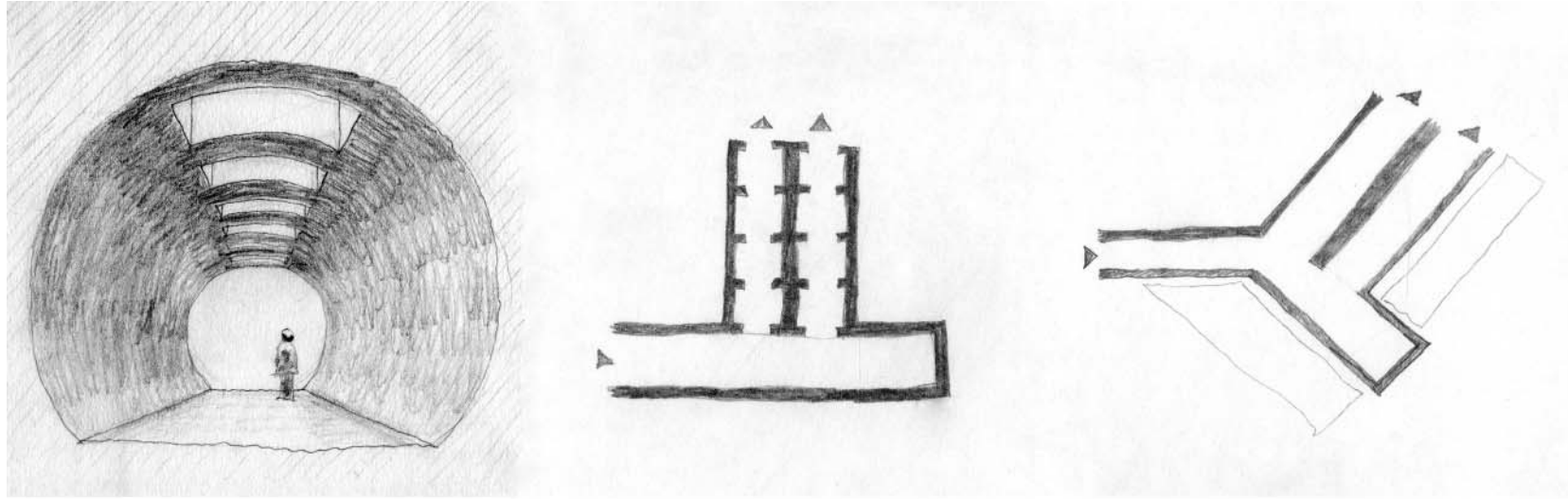
19 -Exploration Site Plan

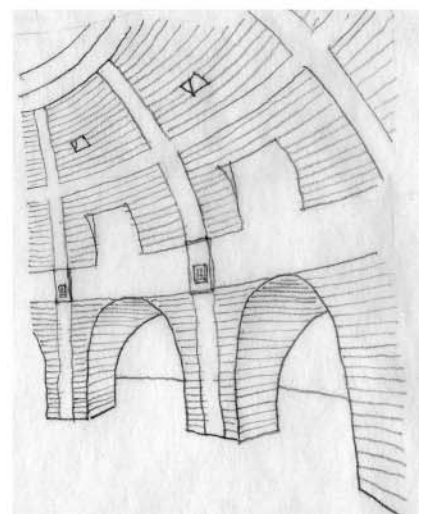
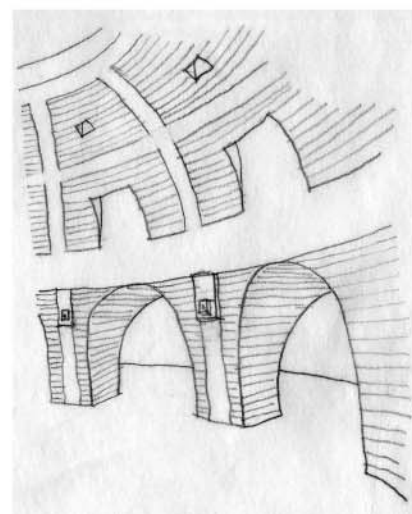
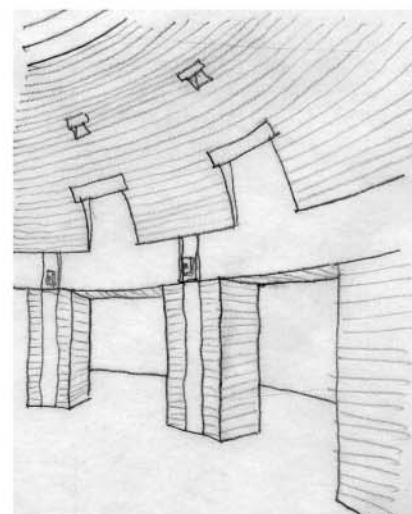
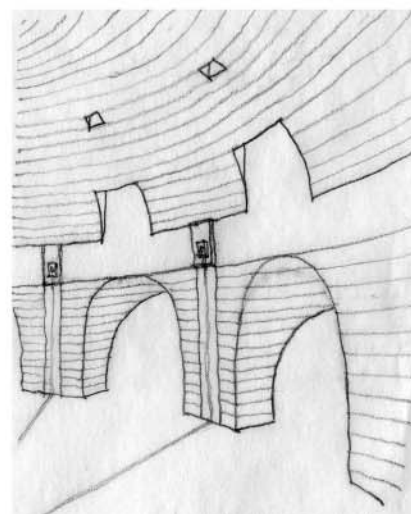
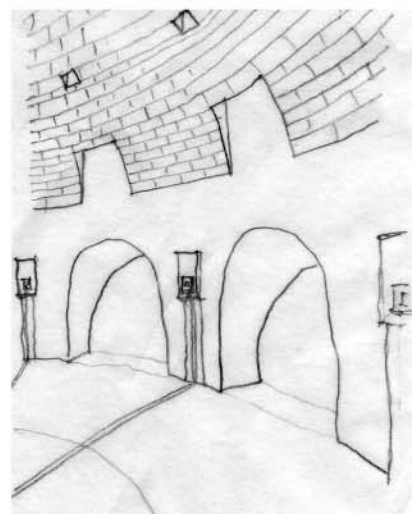
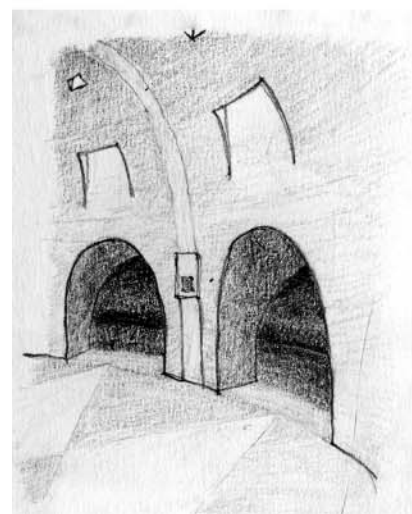
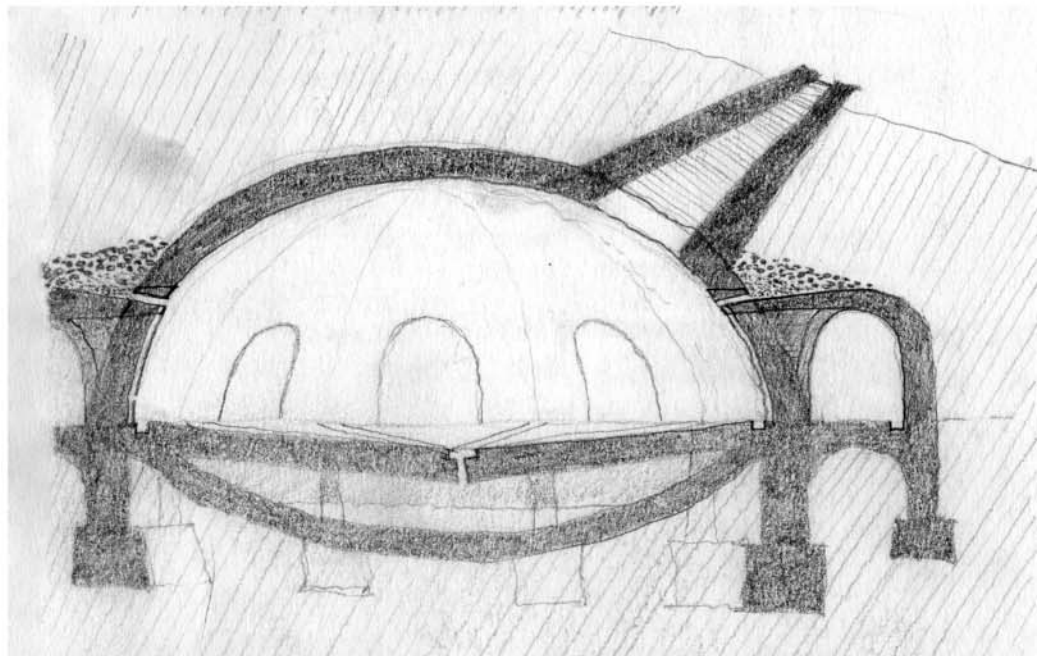
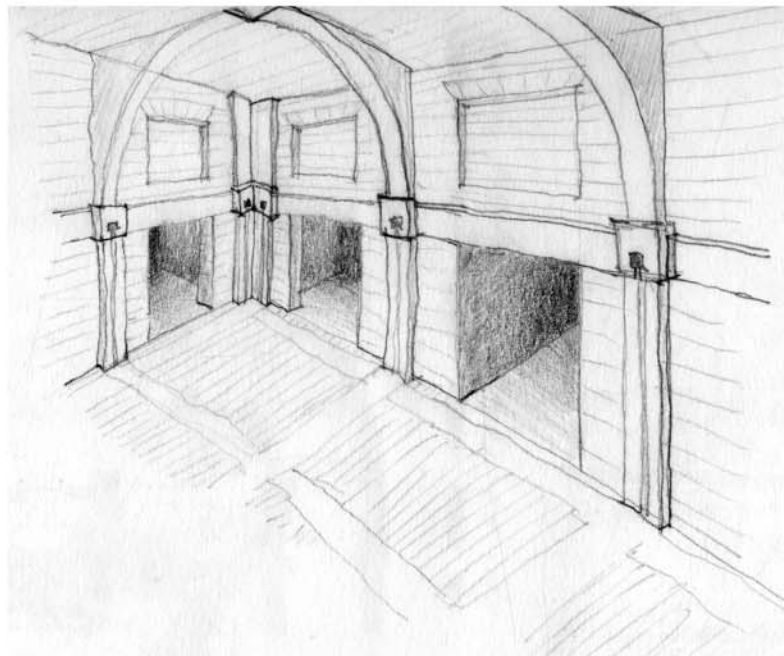
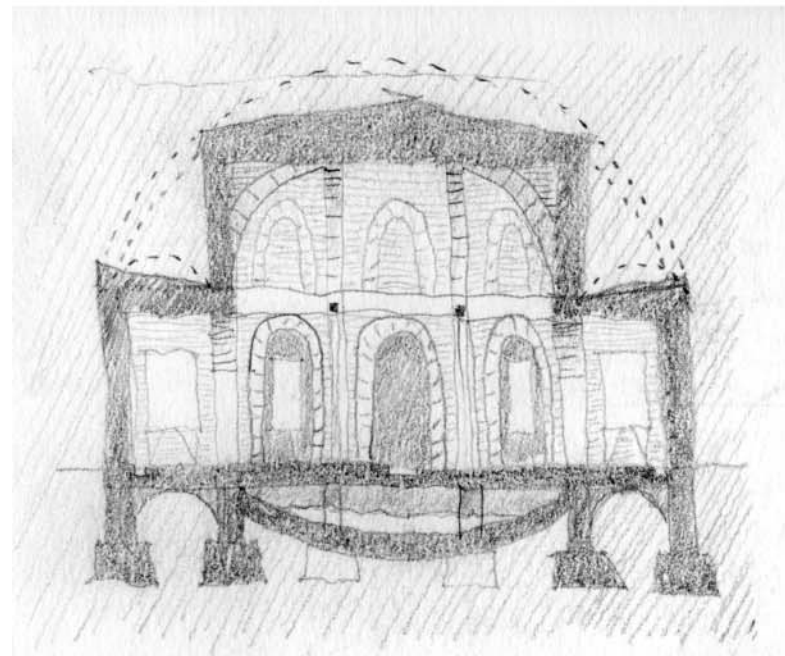
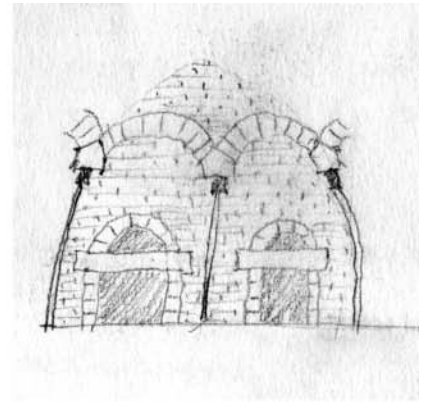
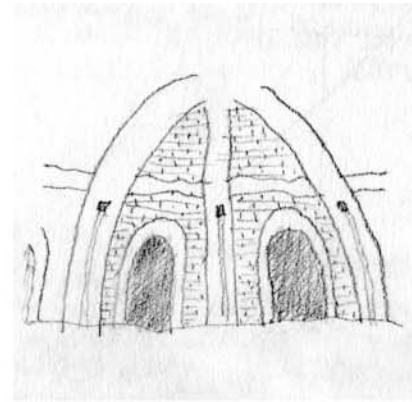
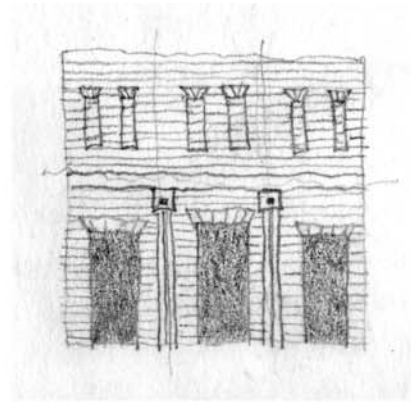
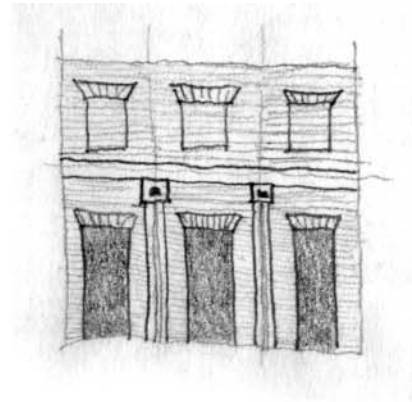
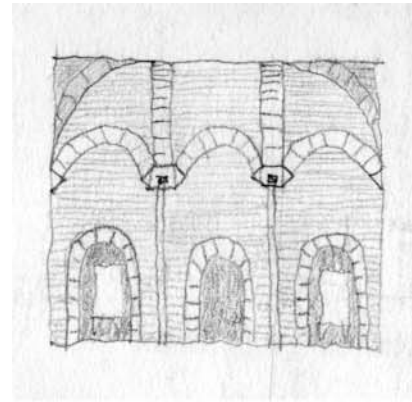


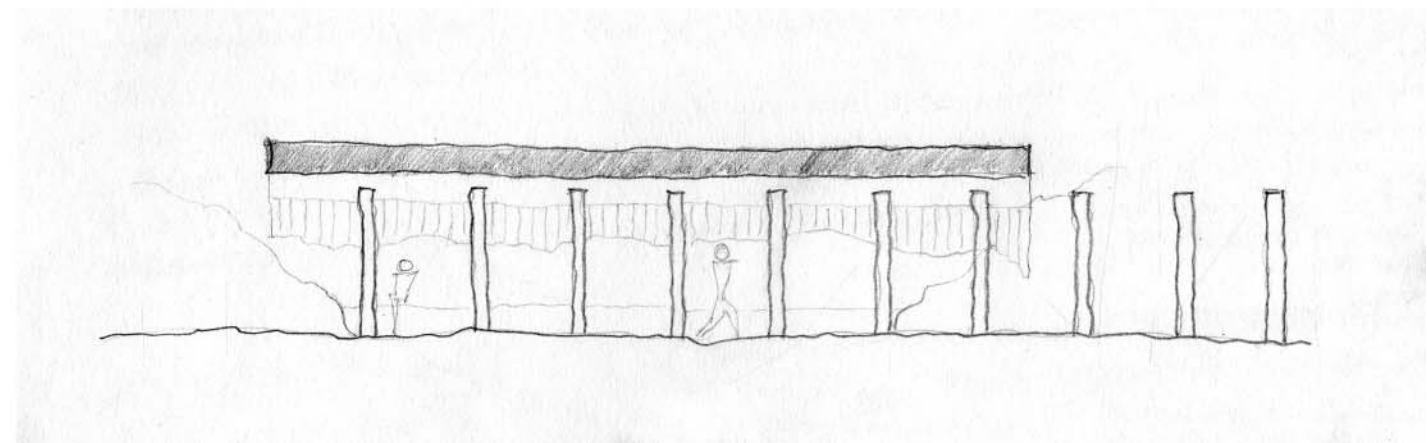
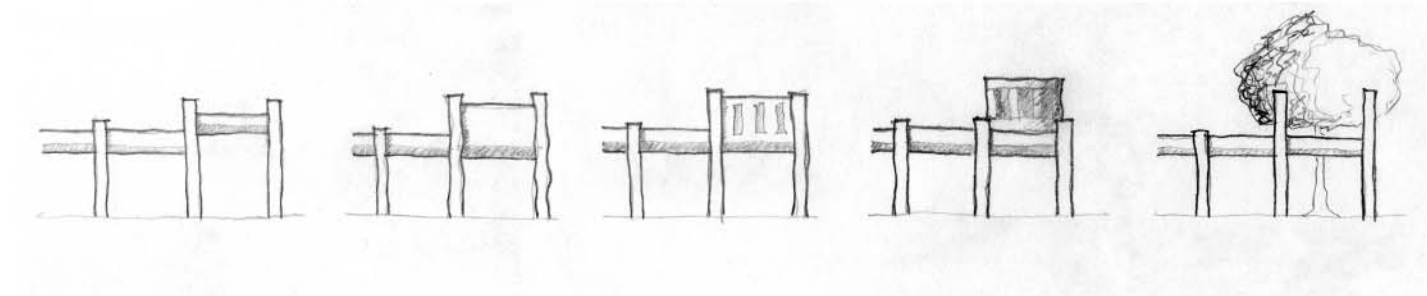
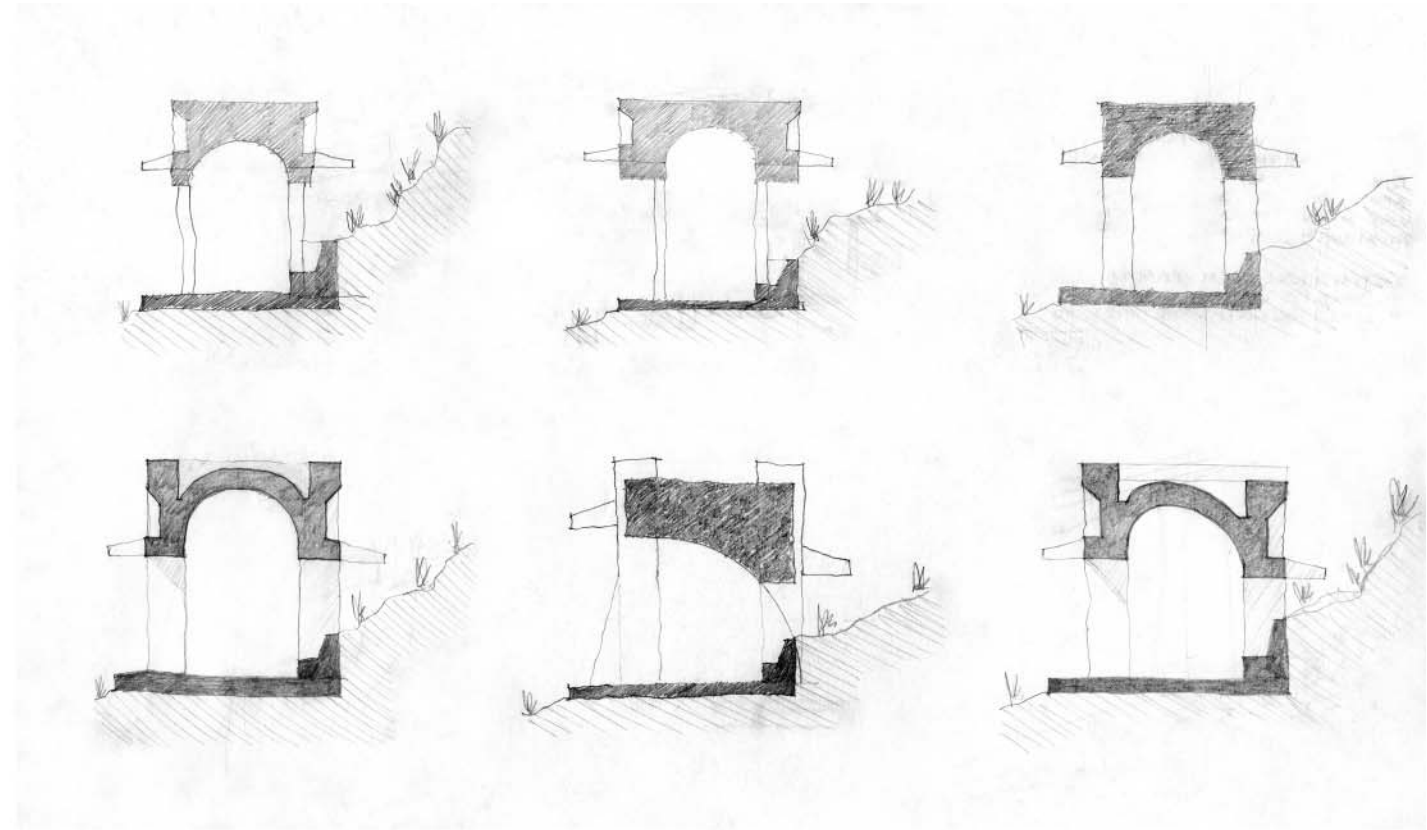
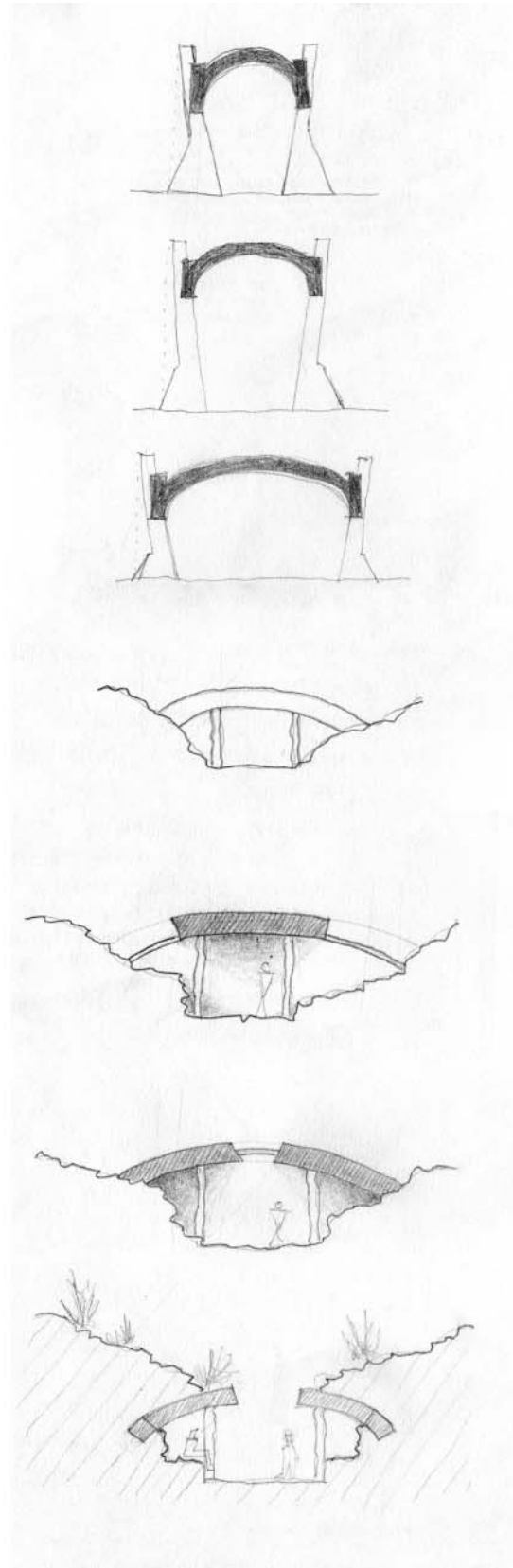
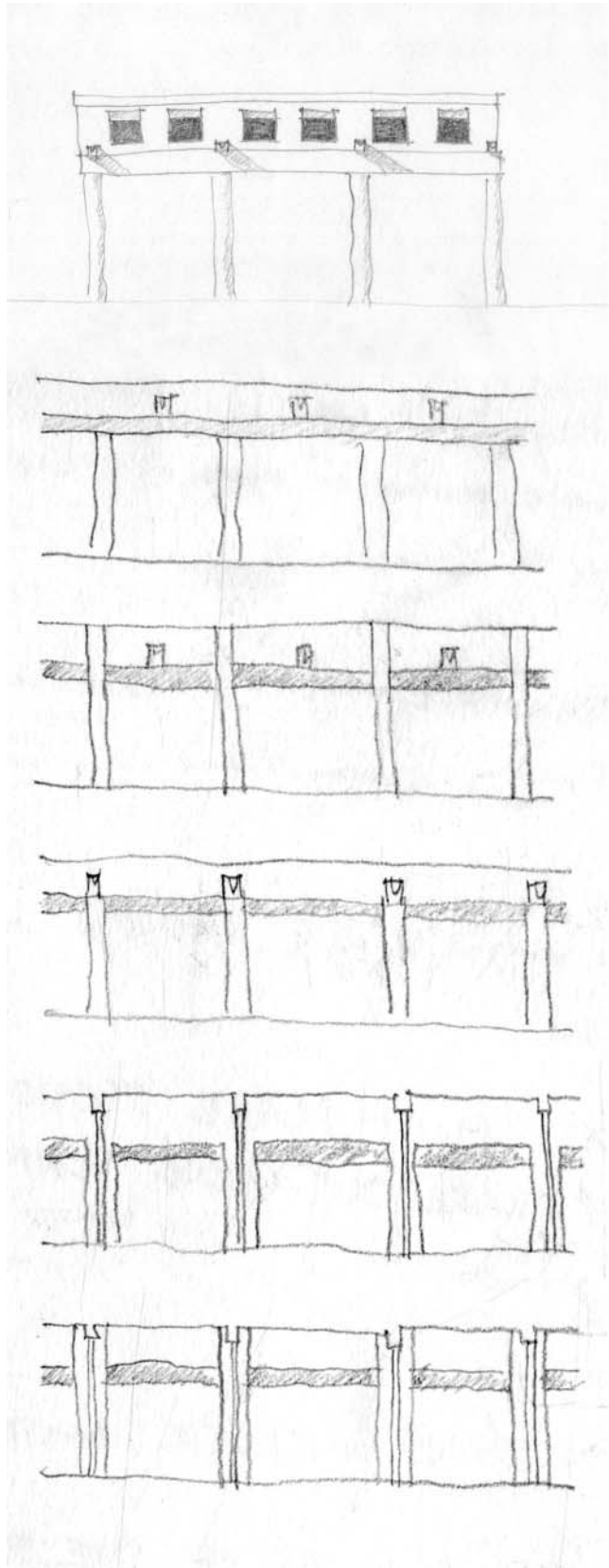
Floor Plan Exploration- 20



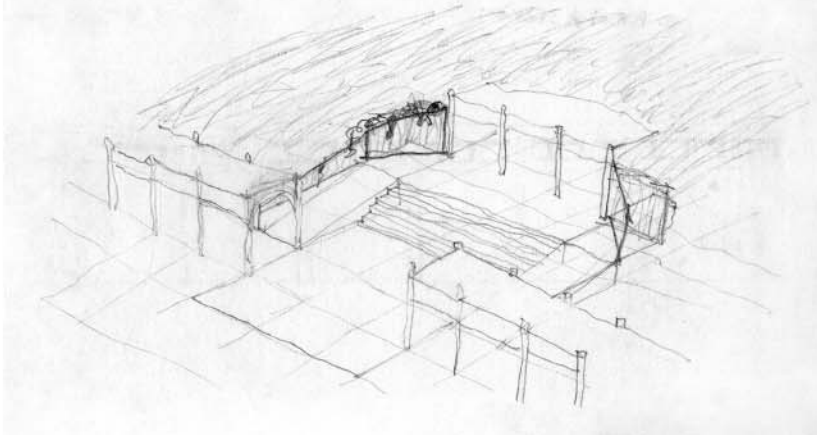
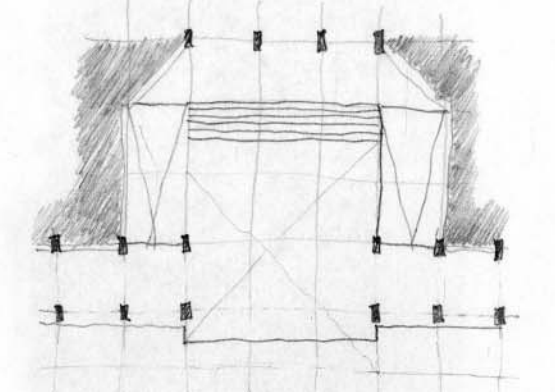
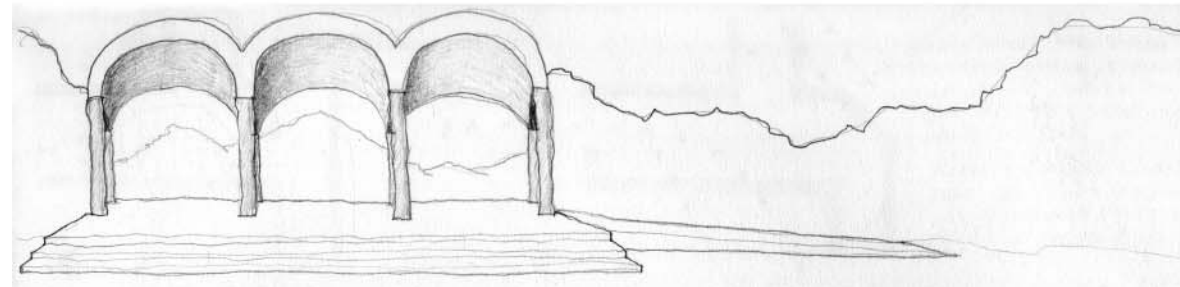
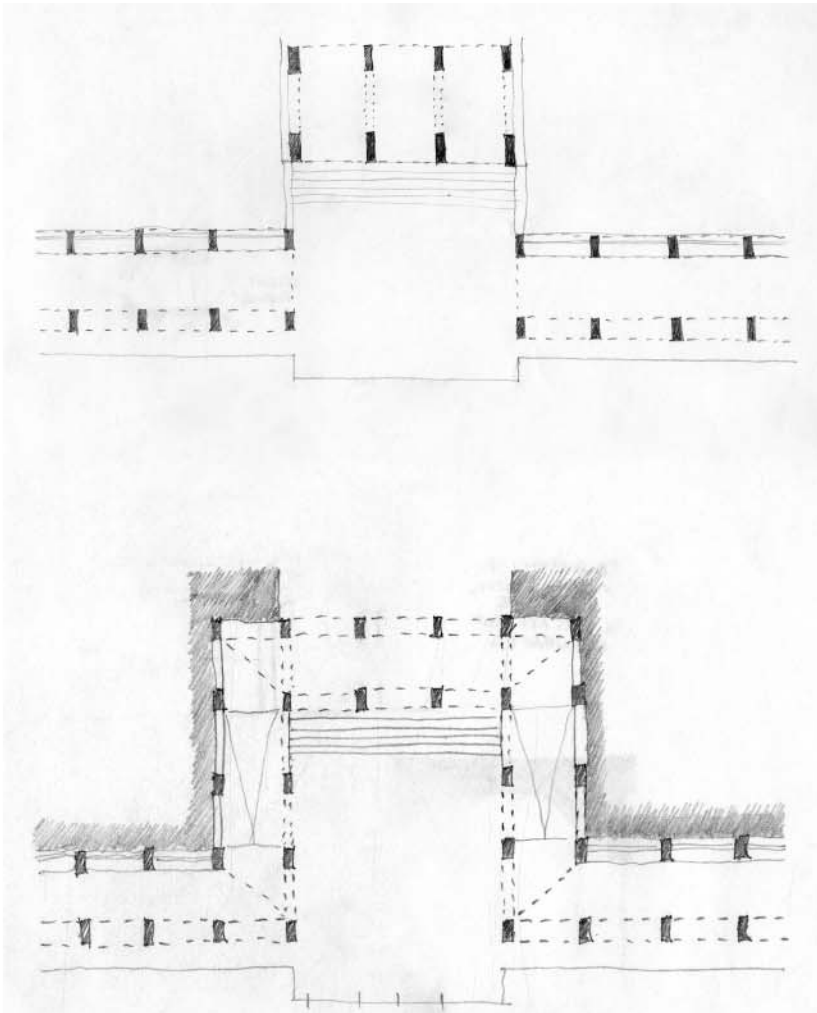
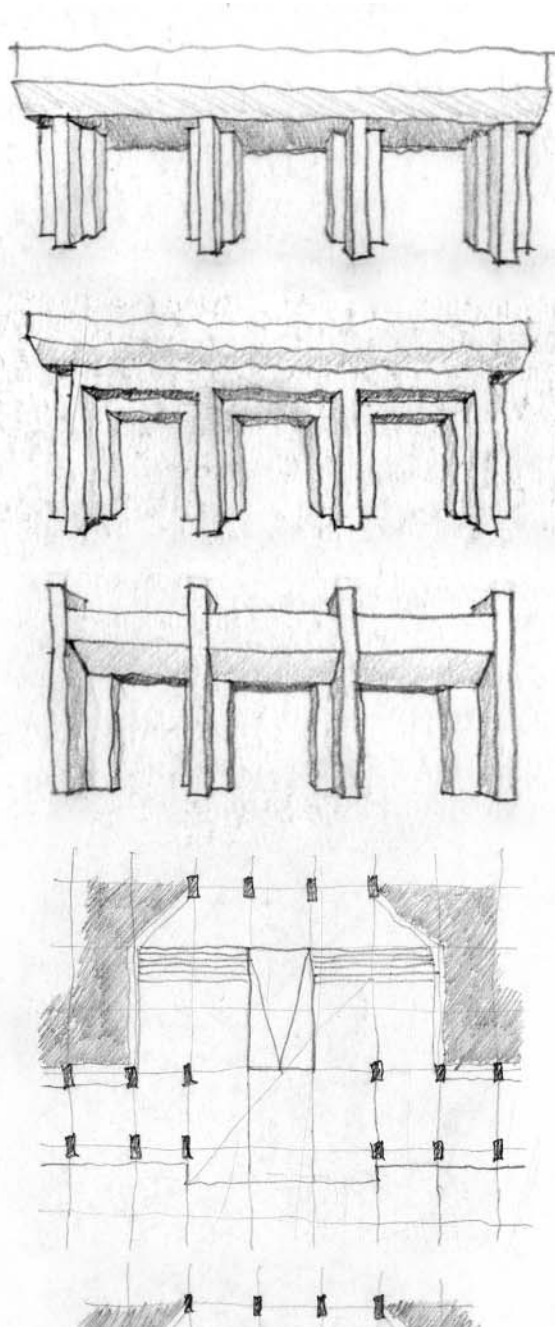
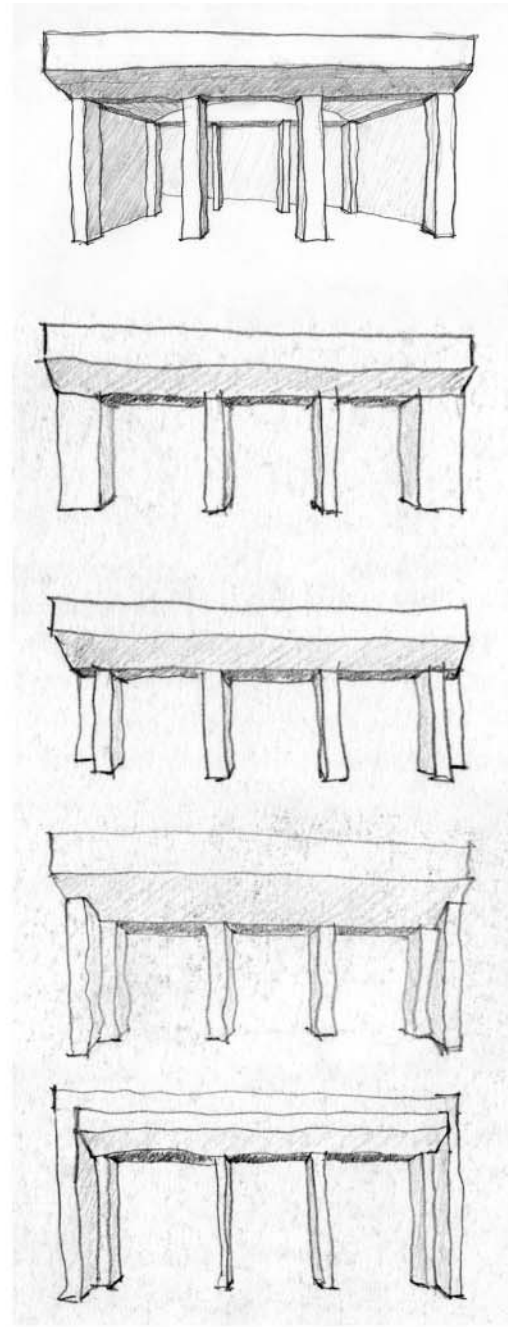
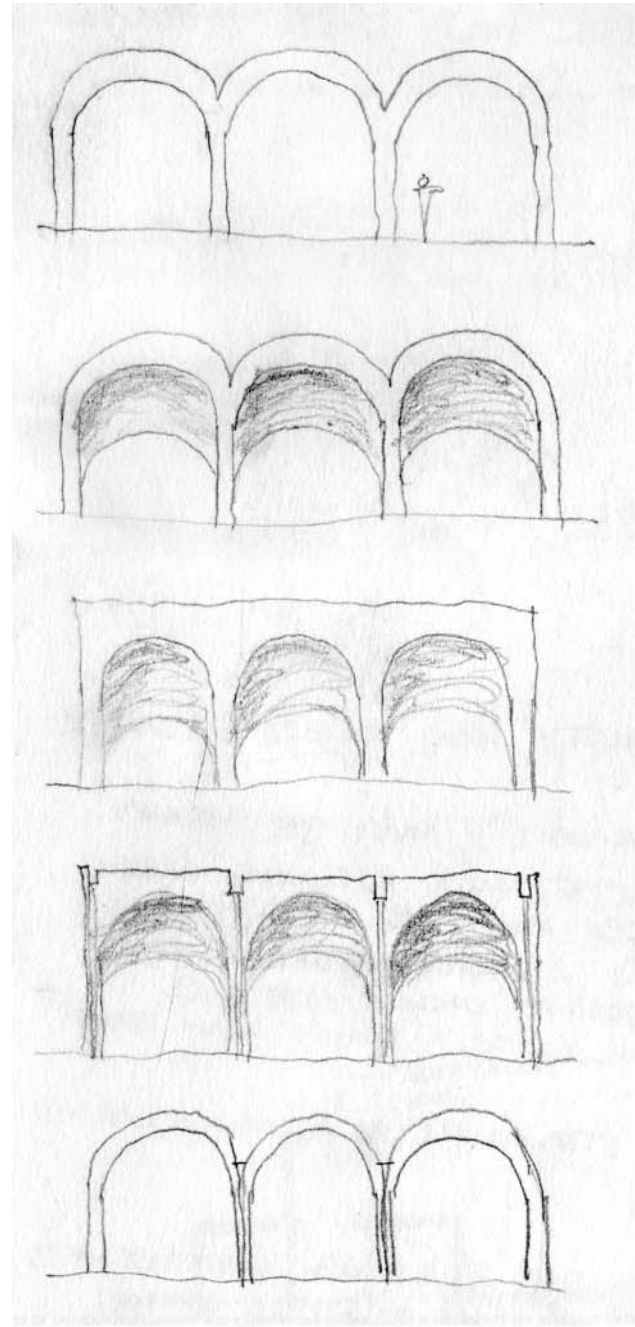


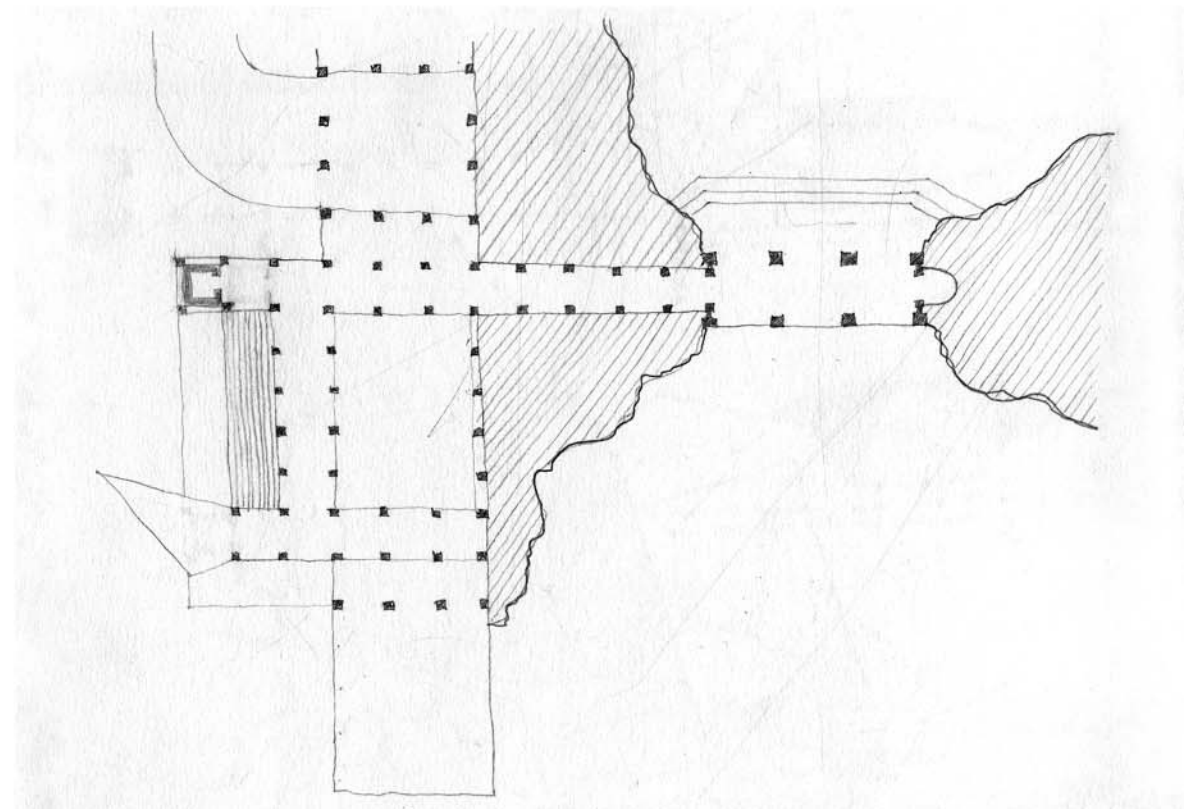
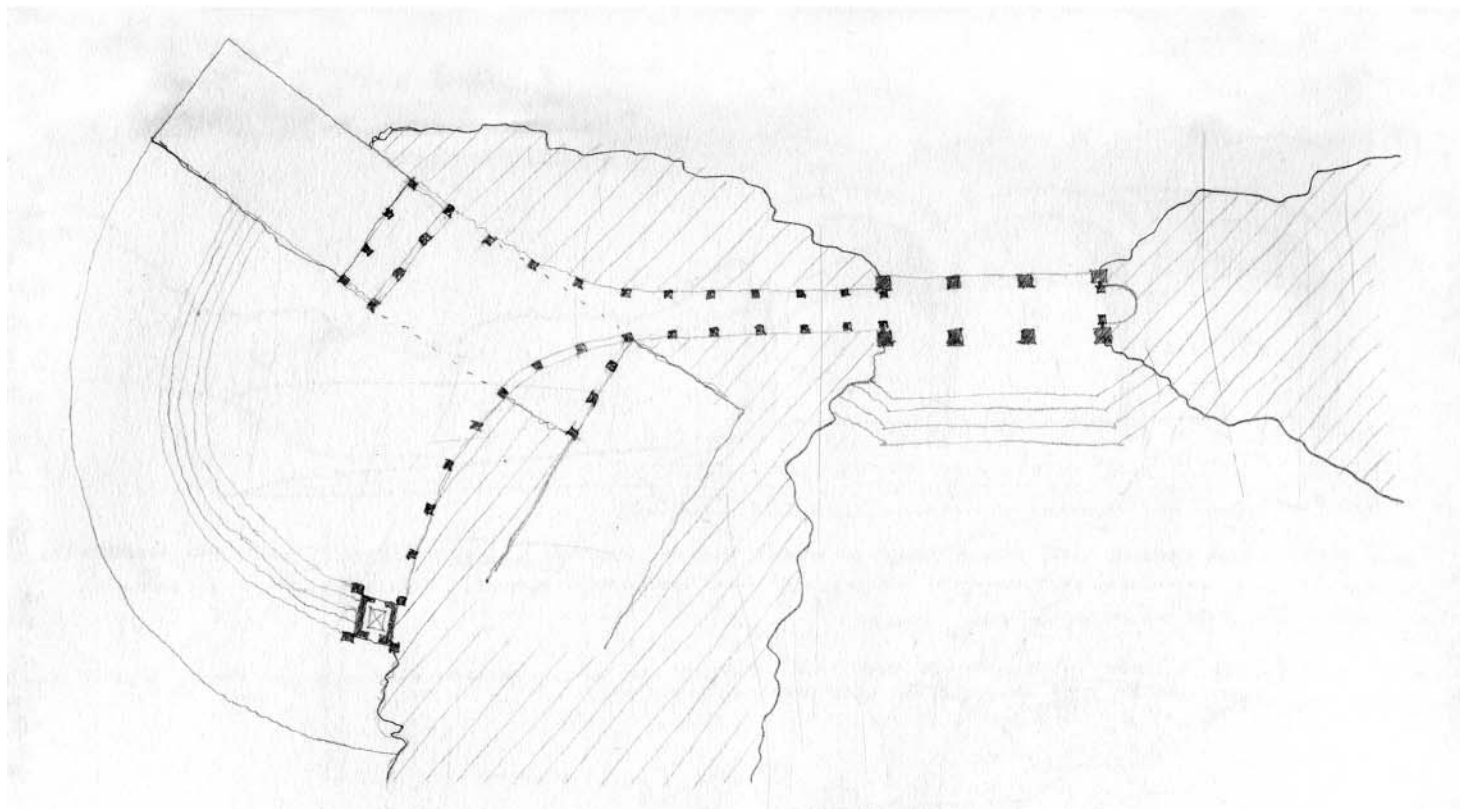
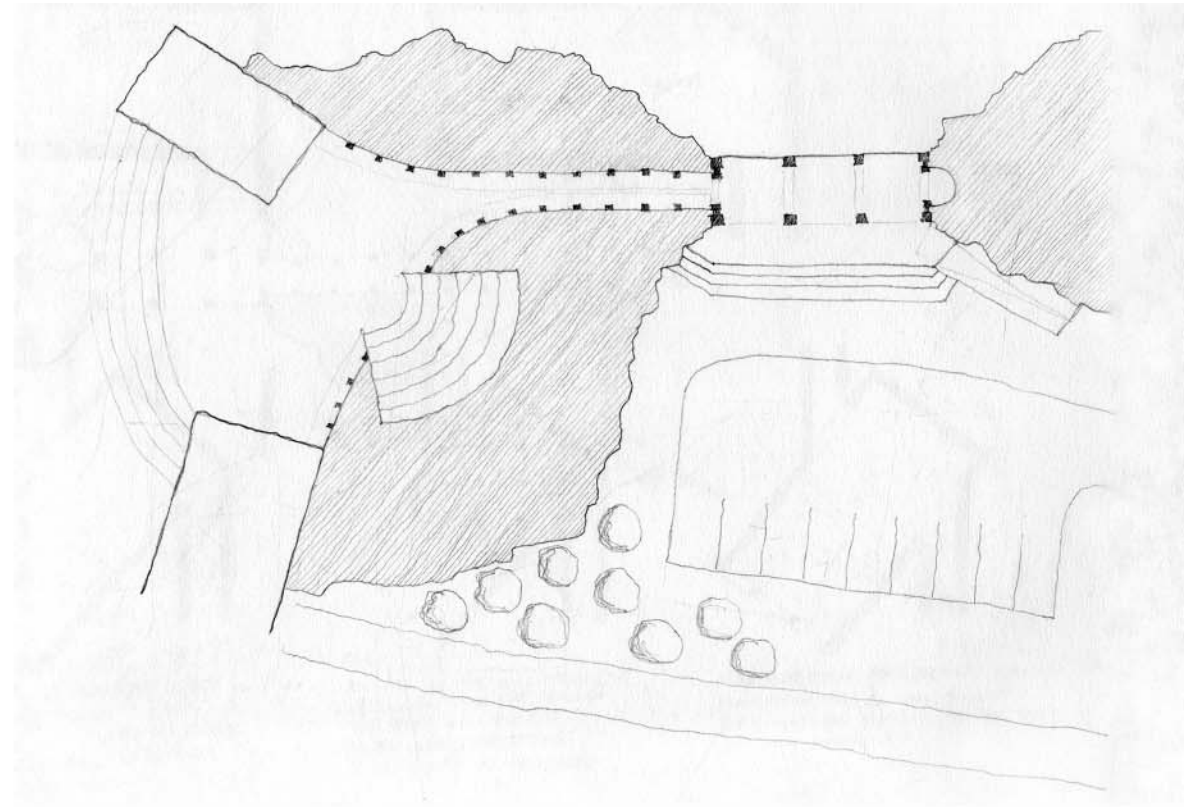
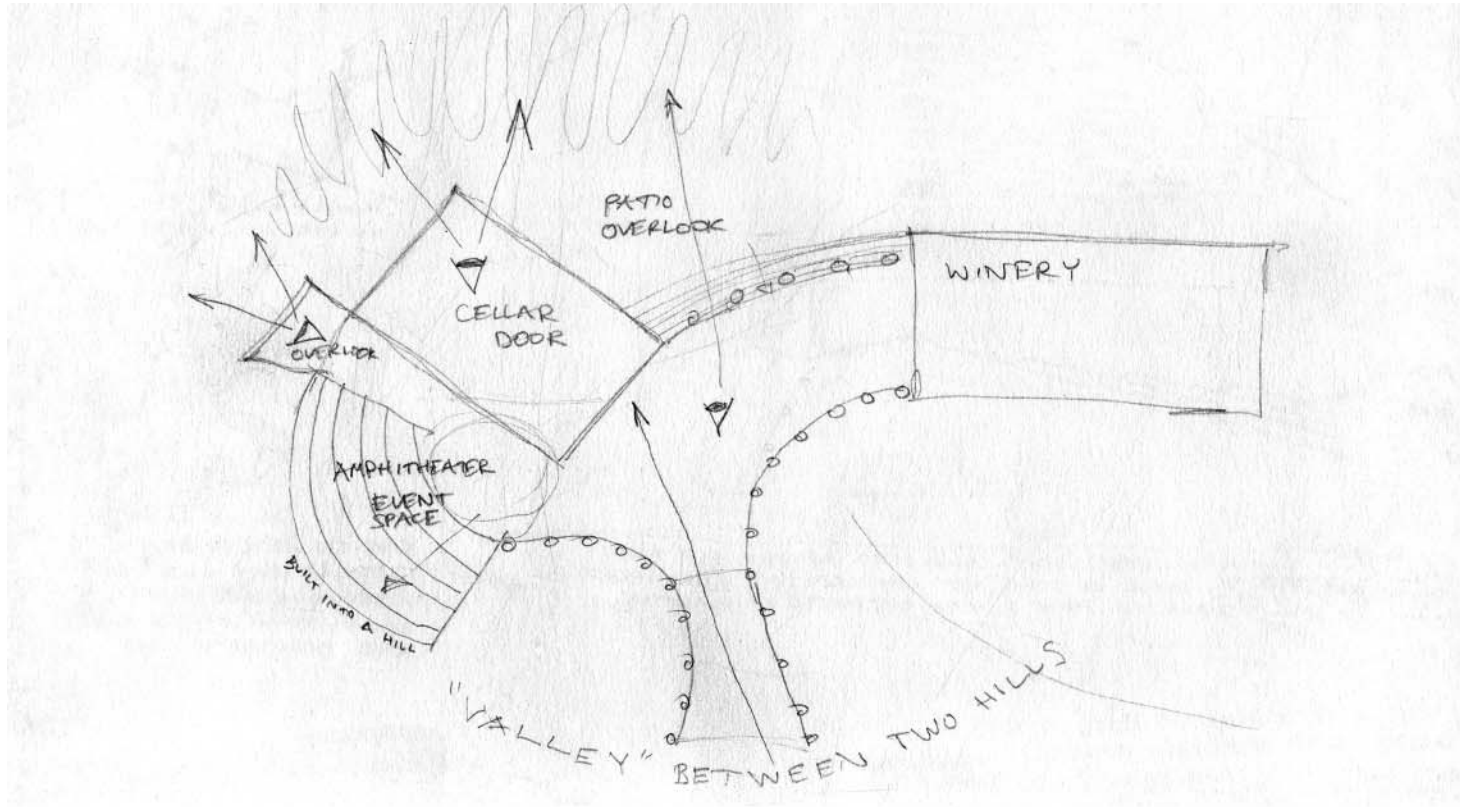


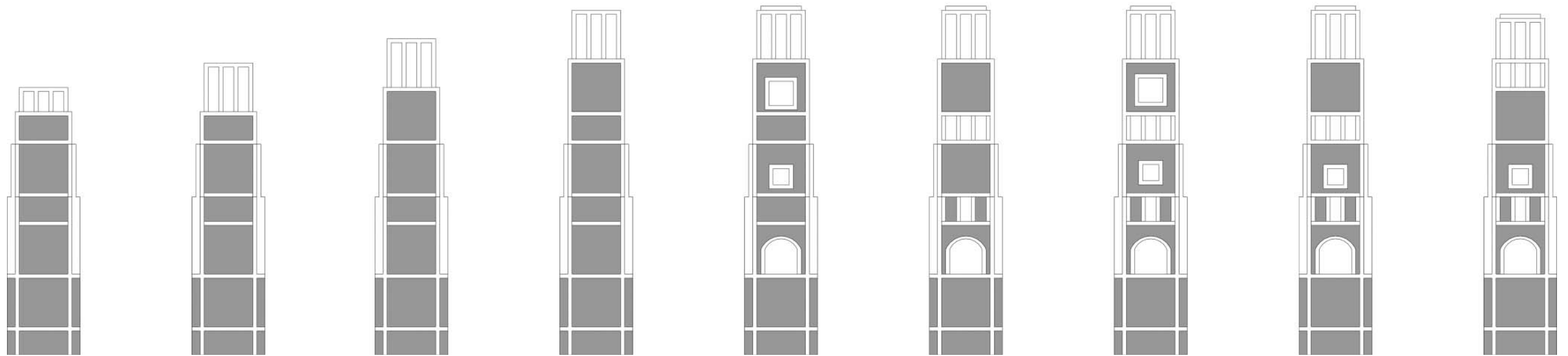
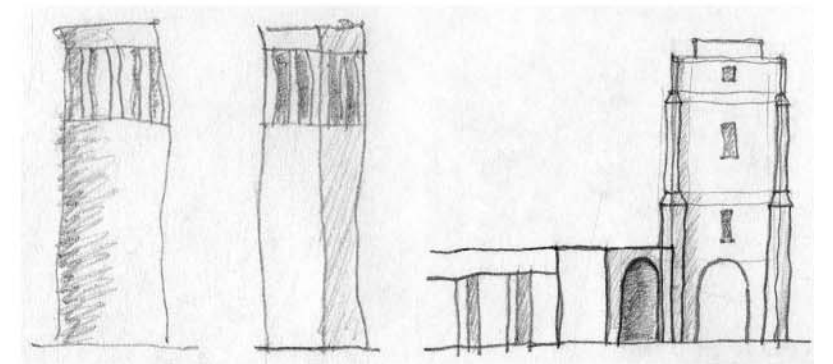
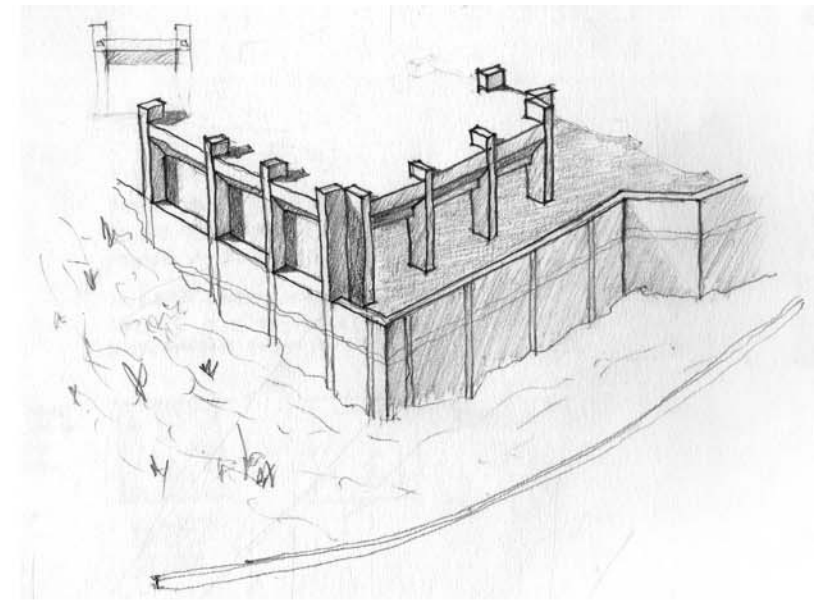
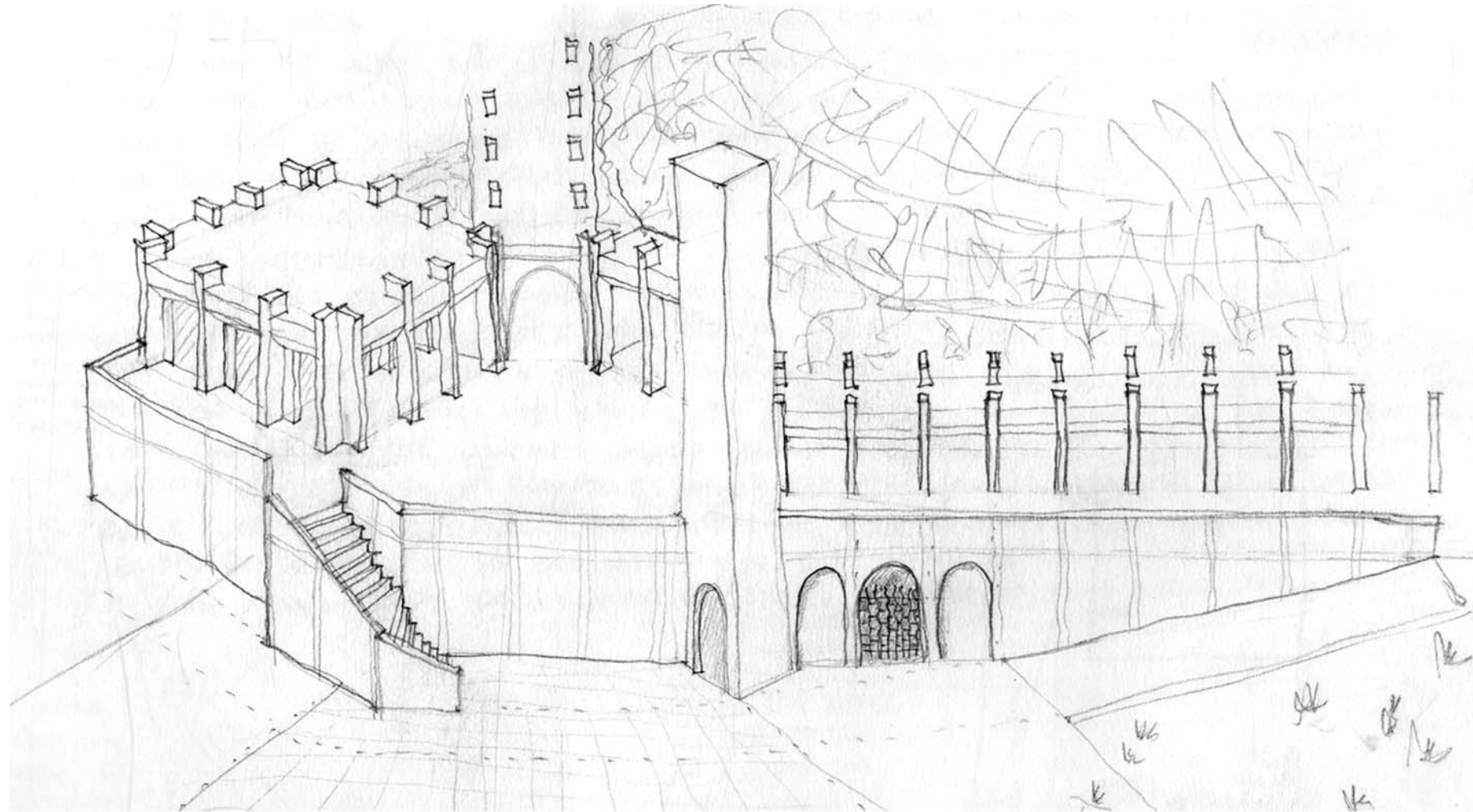




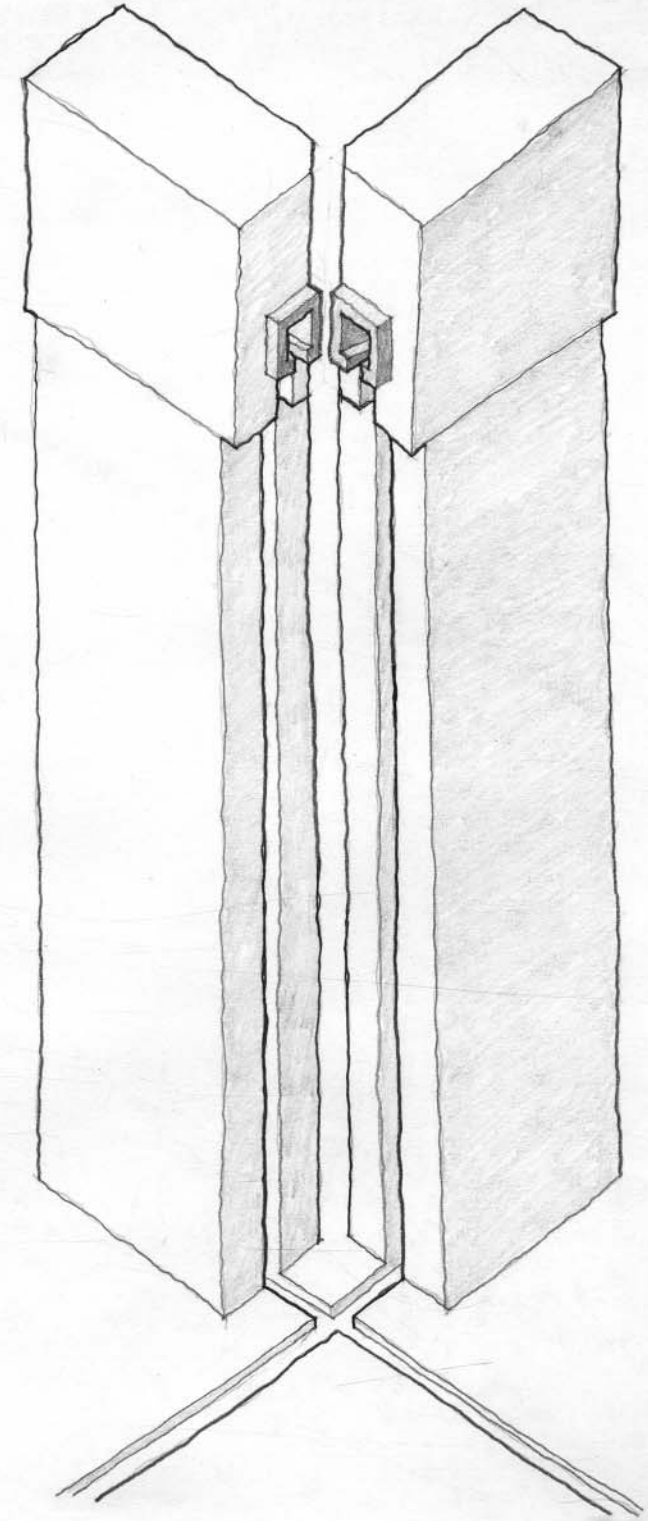
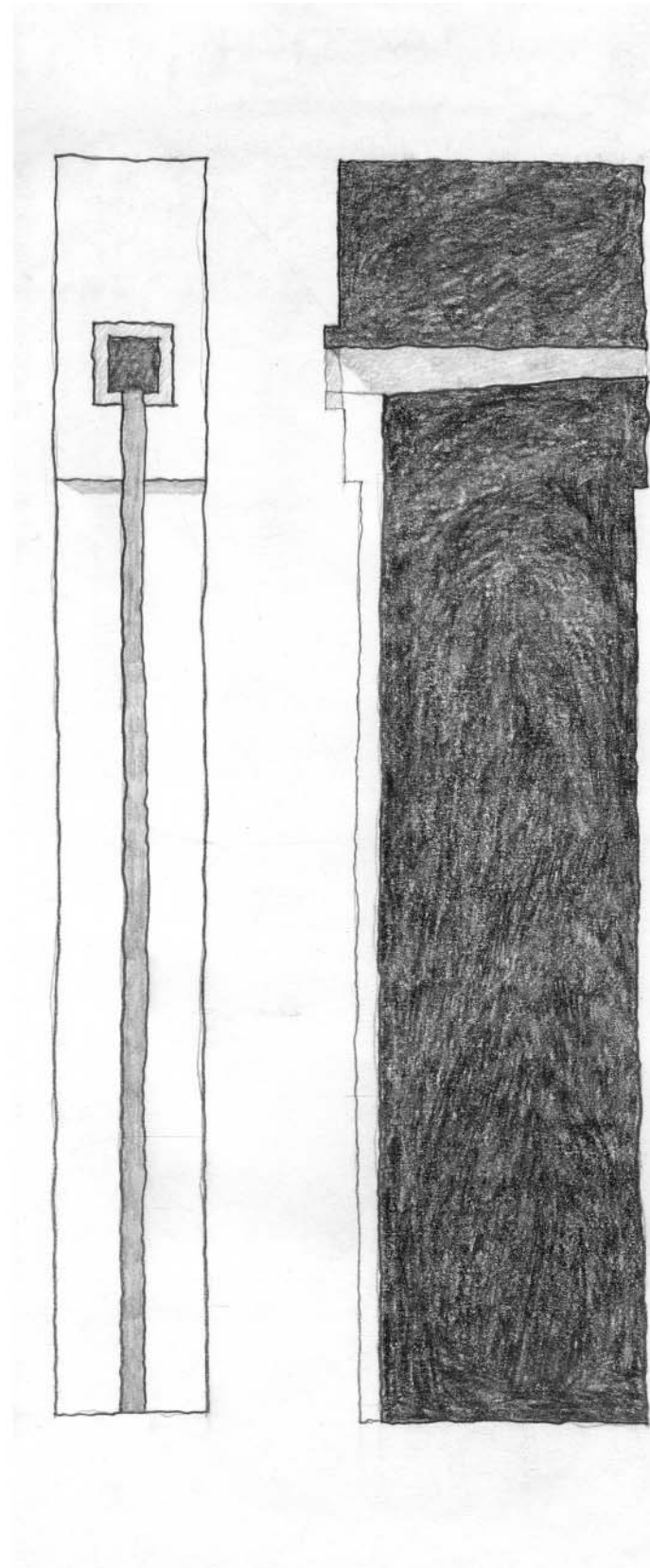
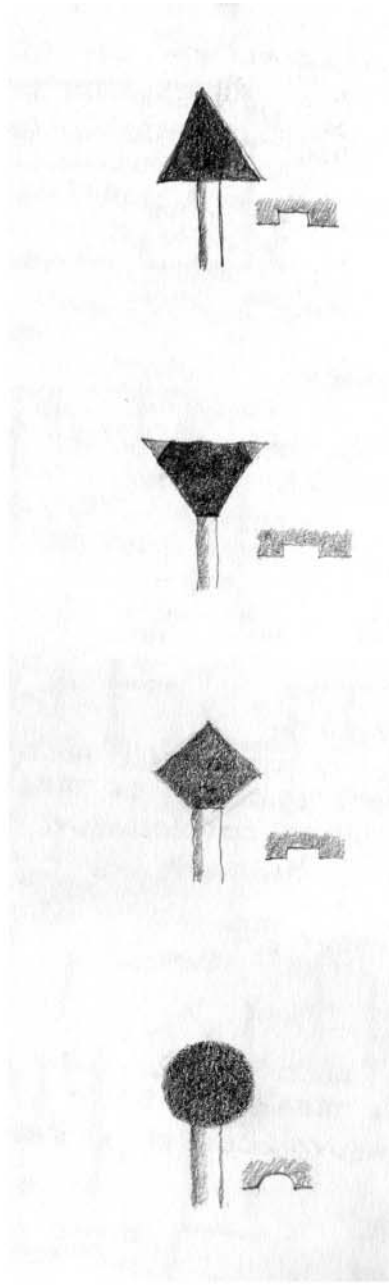
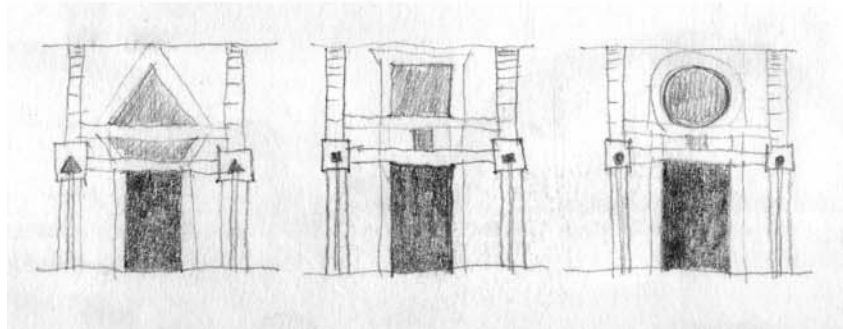
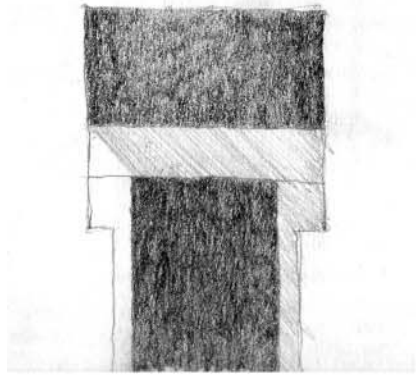
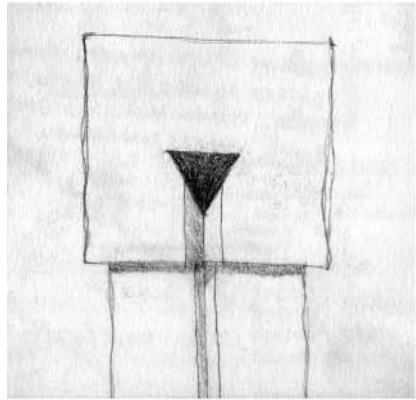
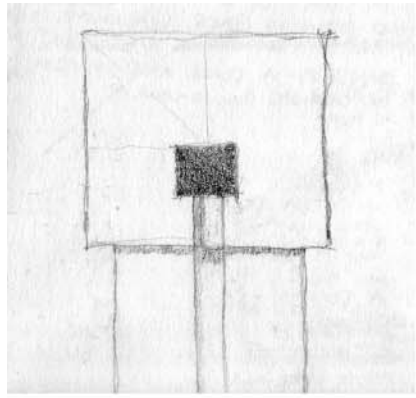
25 -Exploration Arcaded Walkway



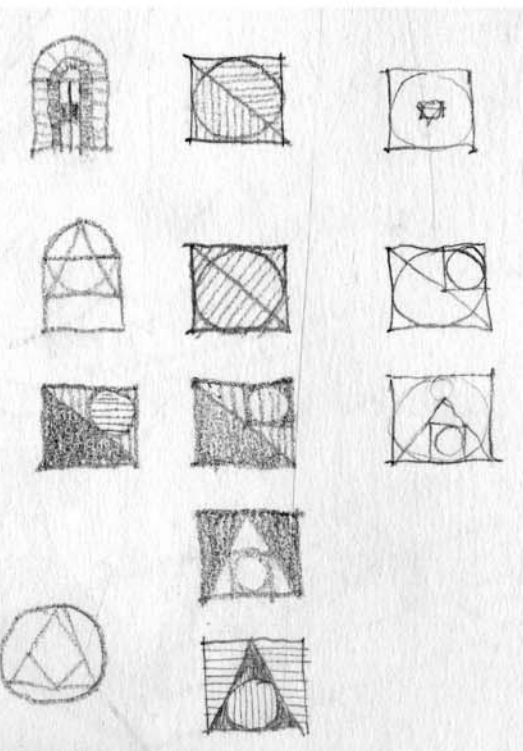
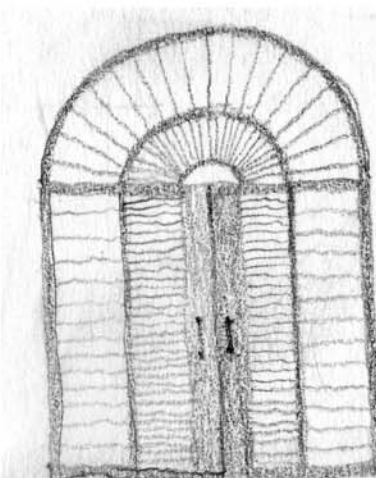
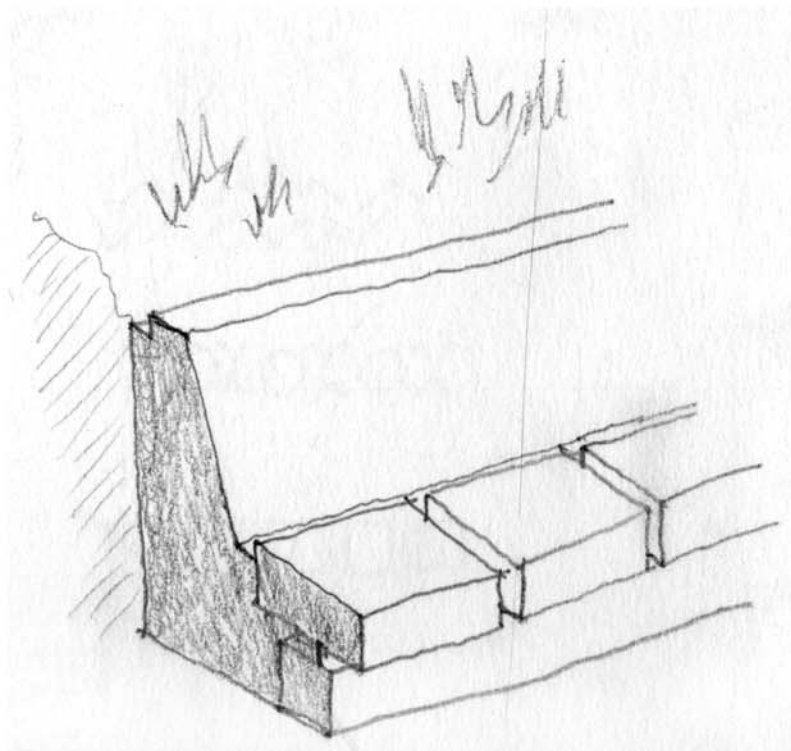
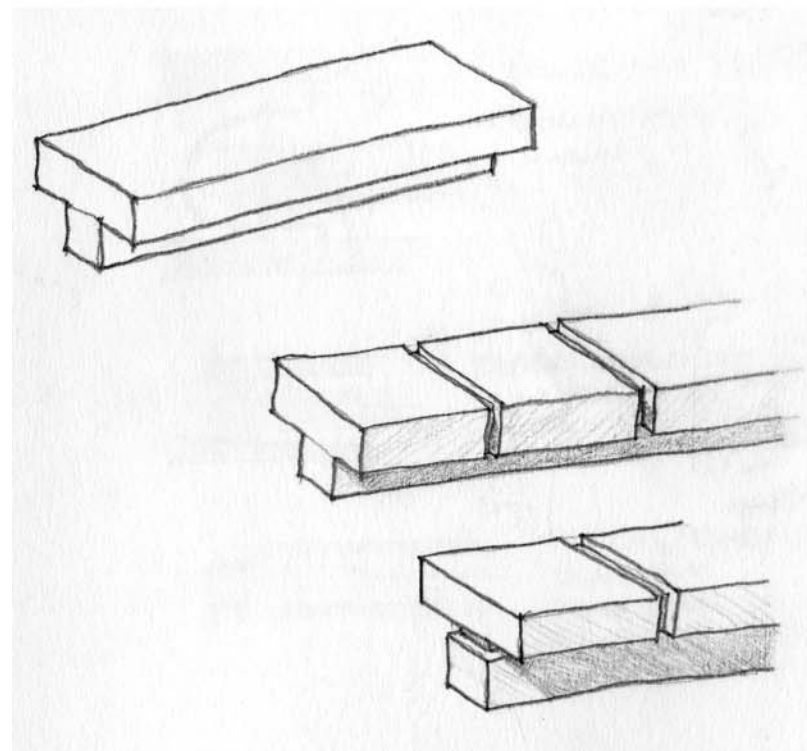
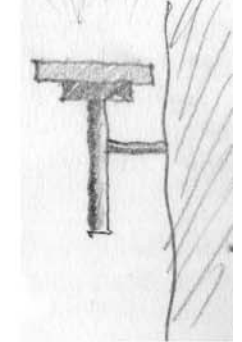
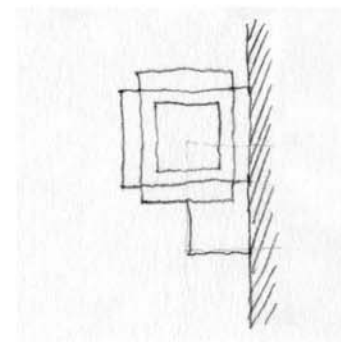
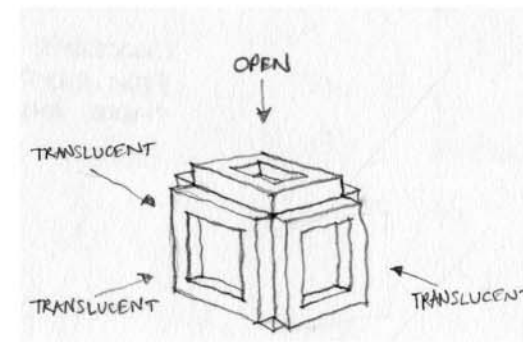
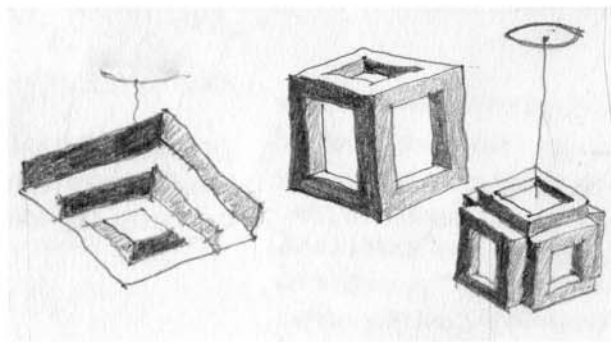
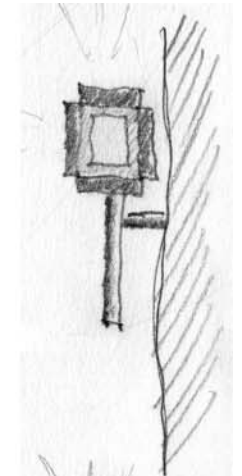
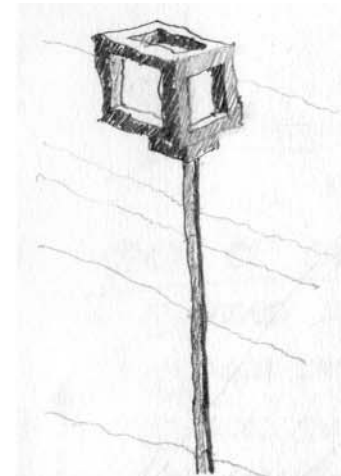
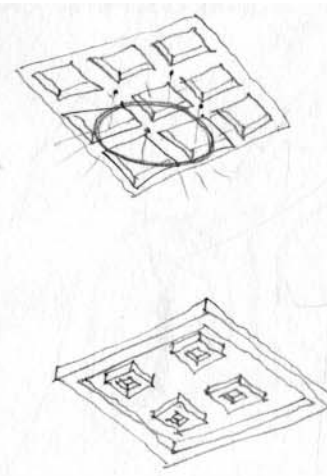
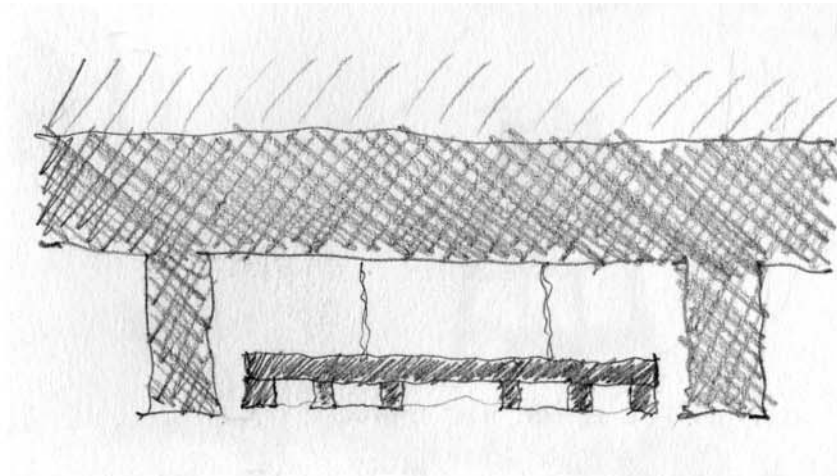
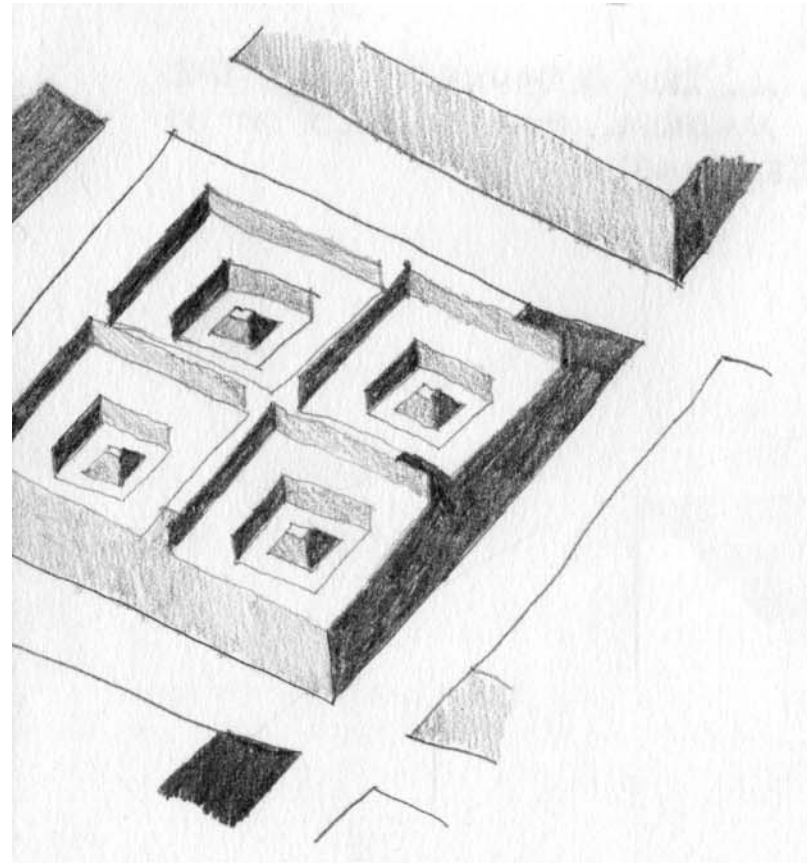


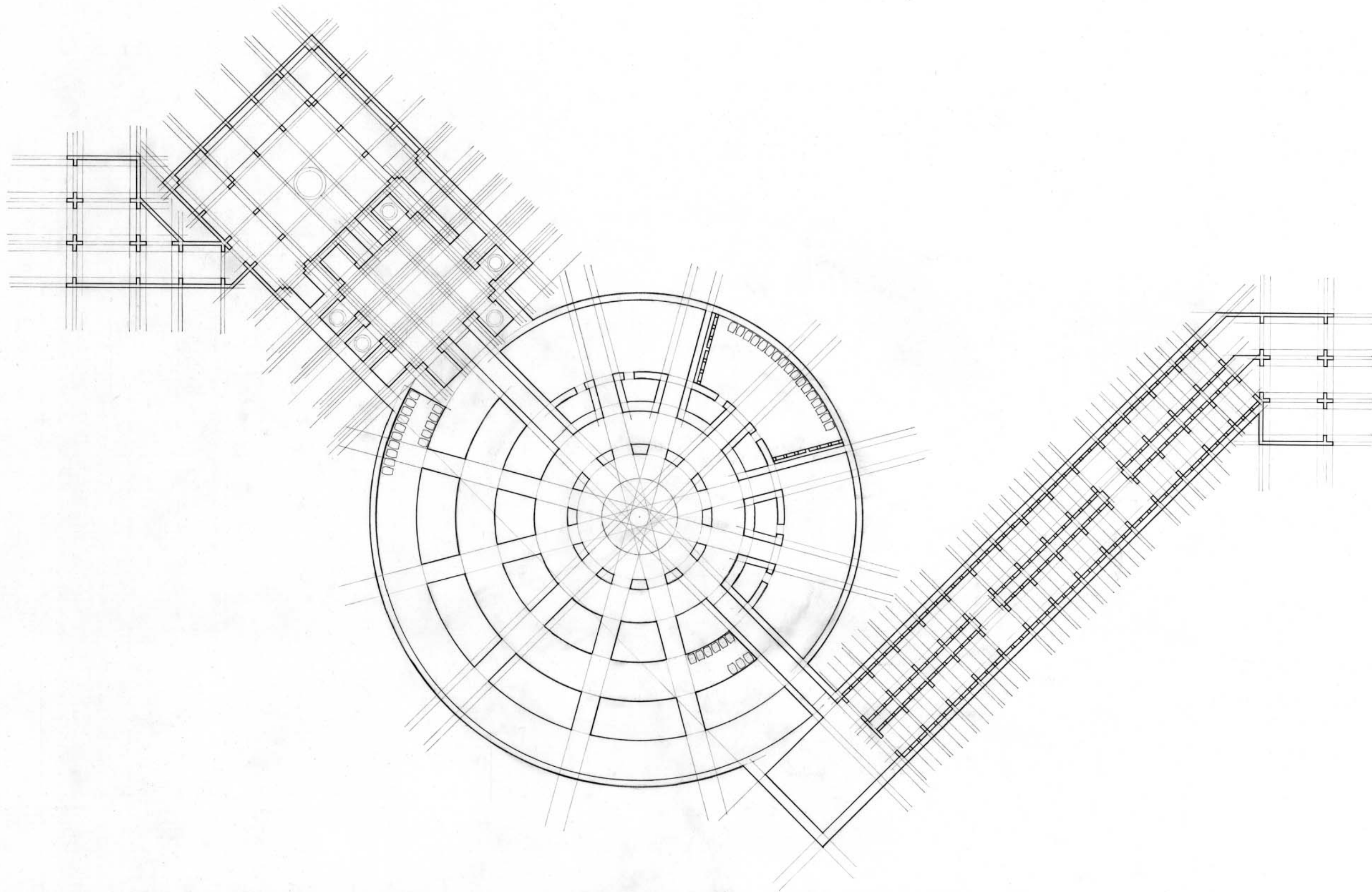


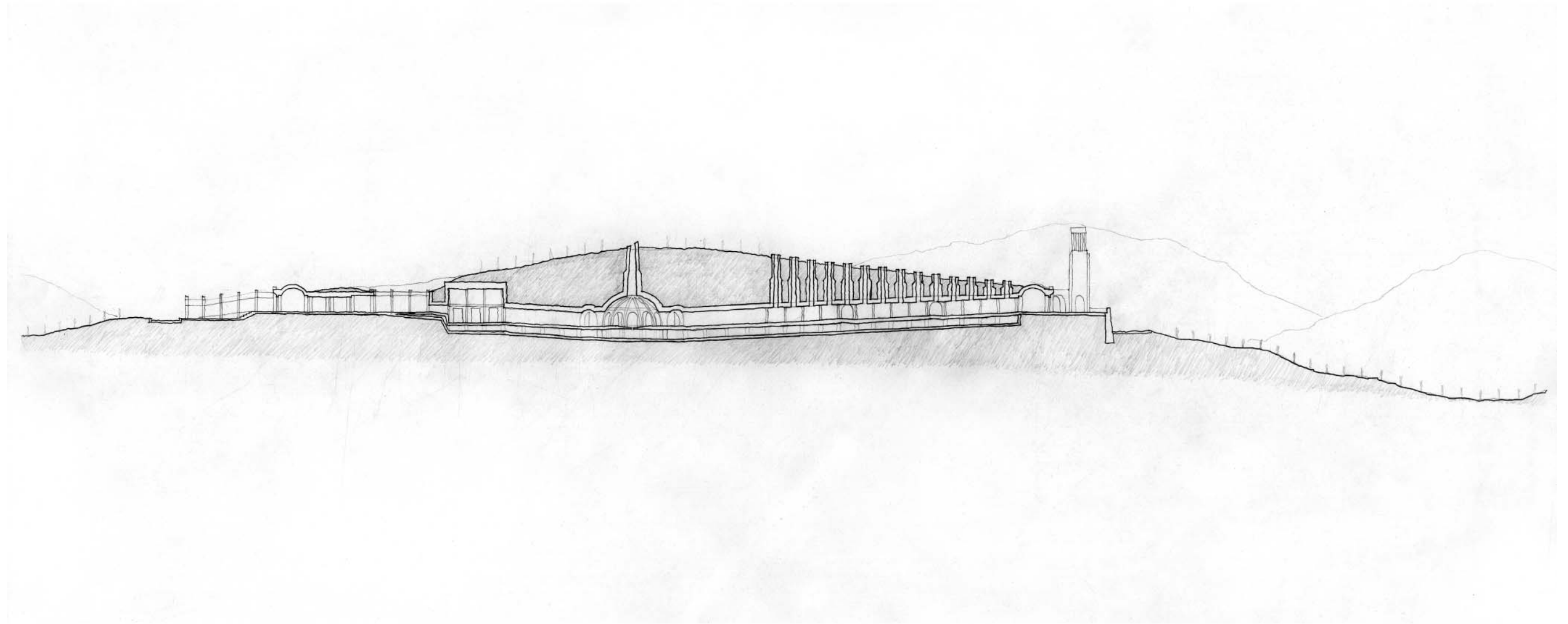
Plaza & Tower

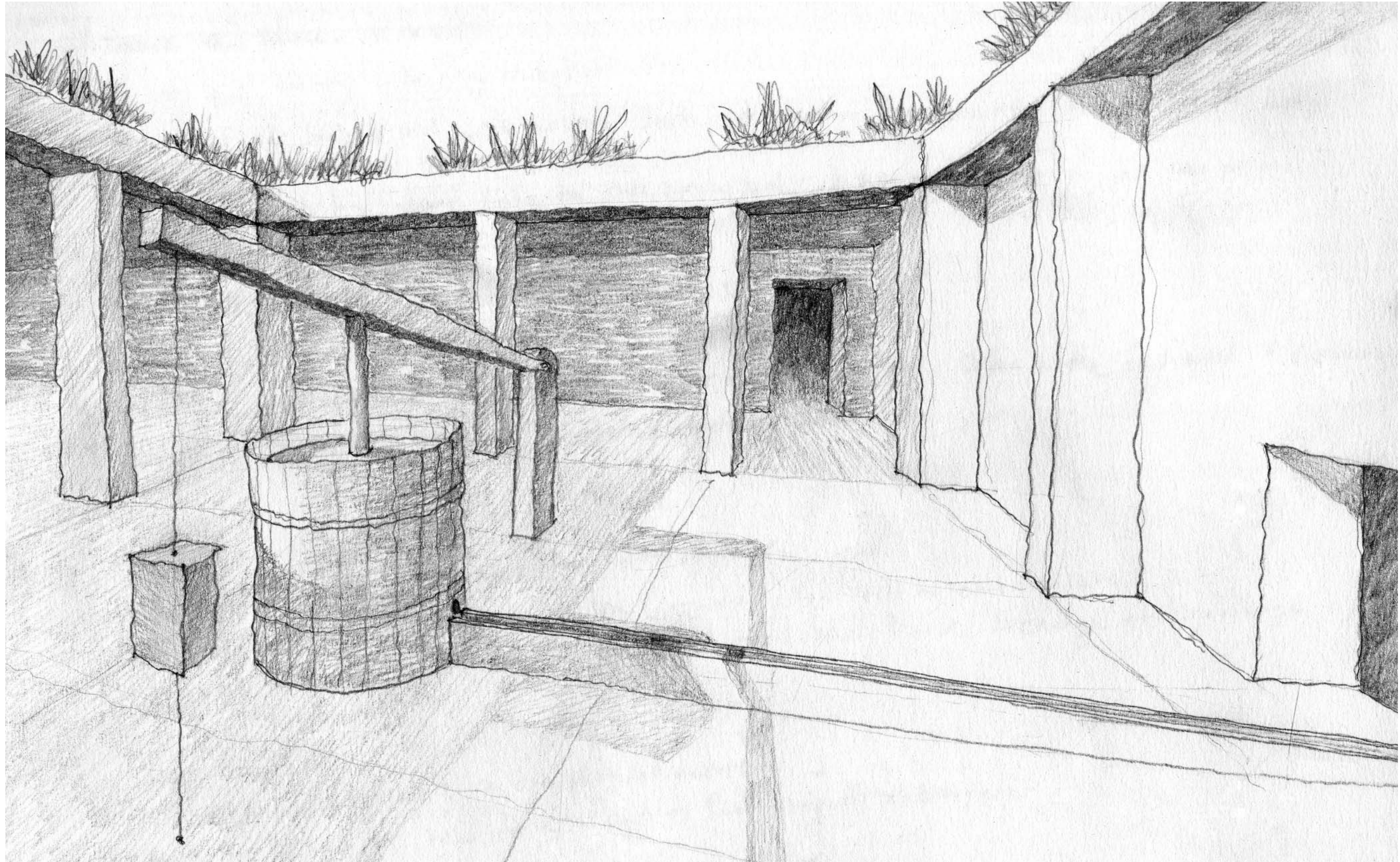


29 -Exploration Column

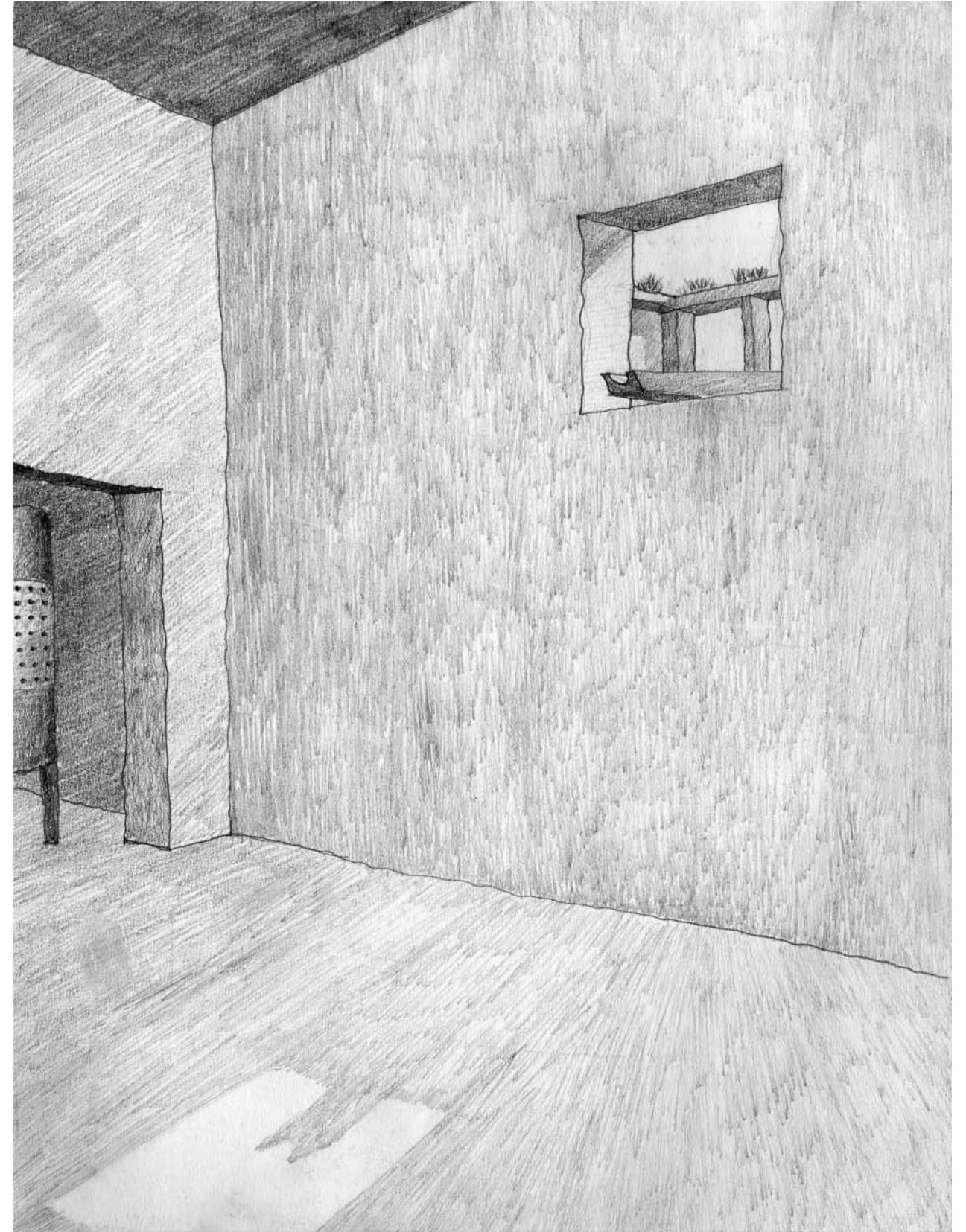








33 -Exploration Perspective: Crushing Court

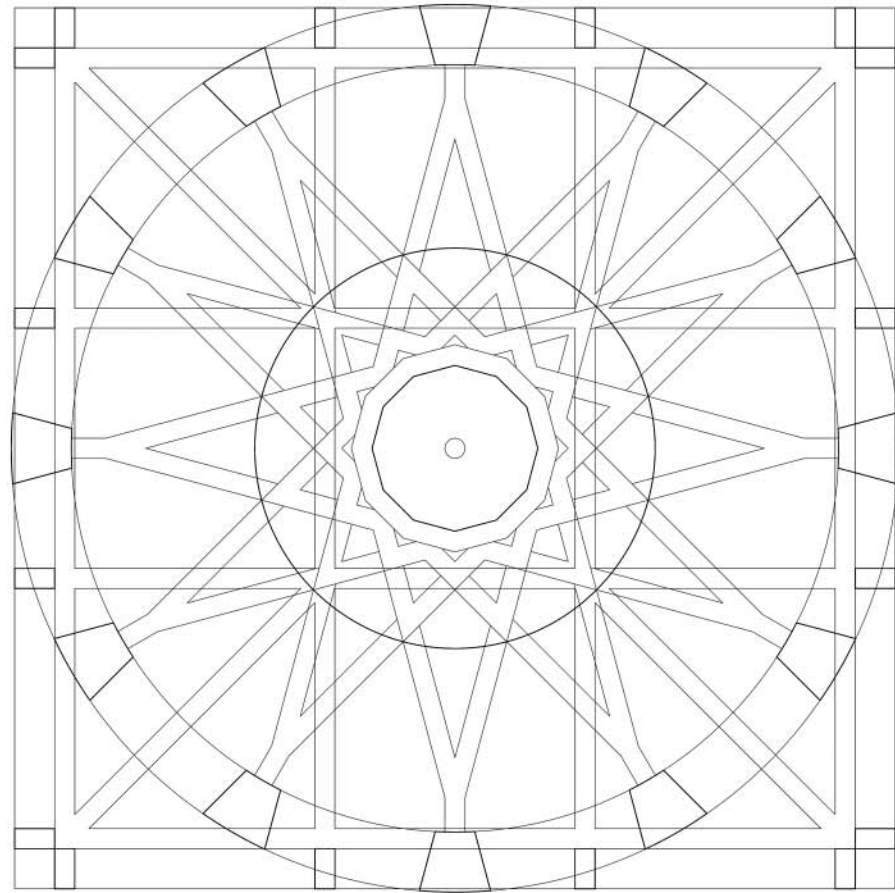


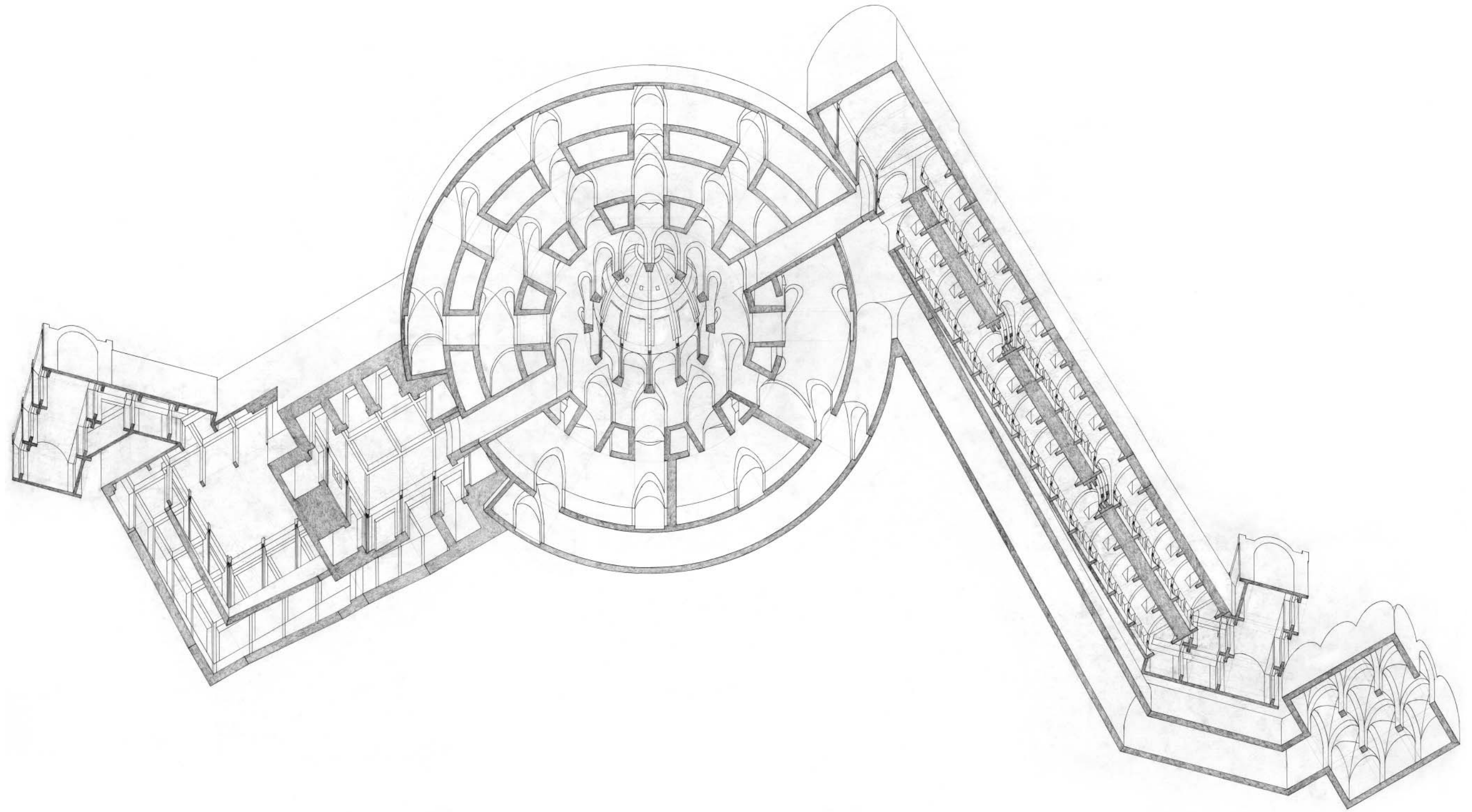
Perspective: Fermentation Hall Exploration- 34

Realization



The fruits of hard labor;
The ripened vine.
Sit back, relax,
Pour a glass of good wine.

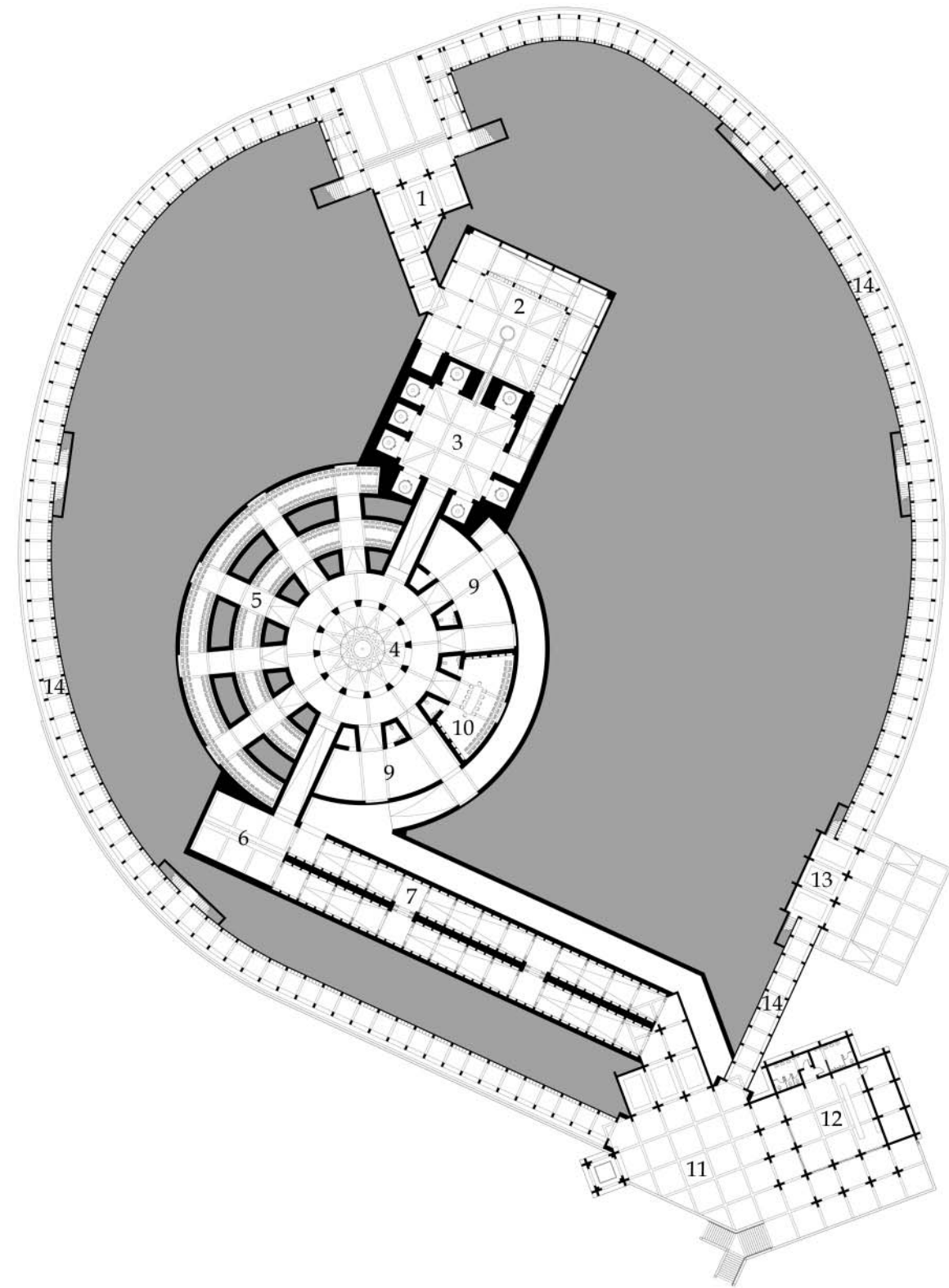
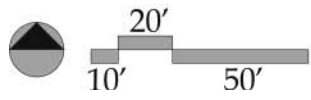
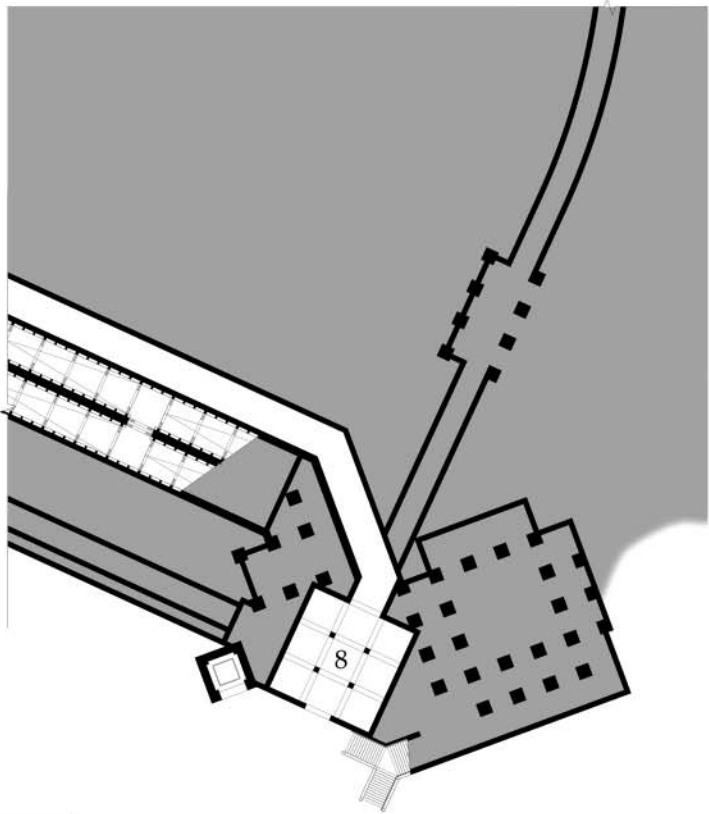


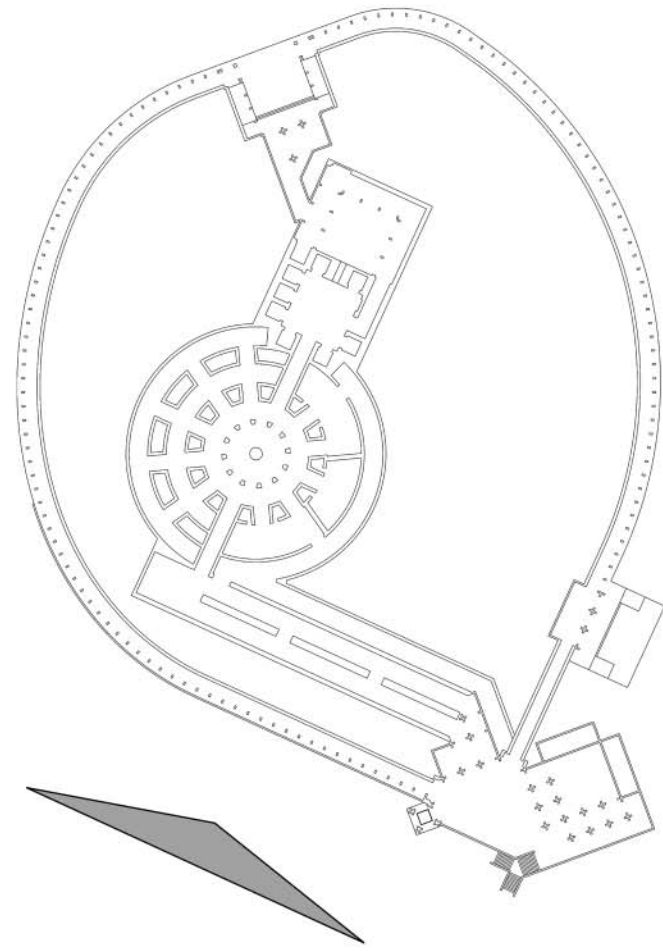


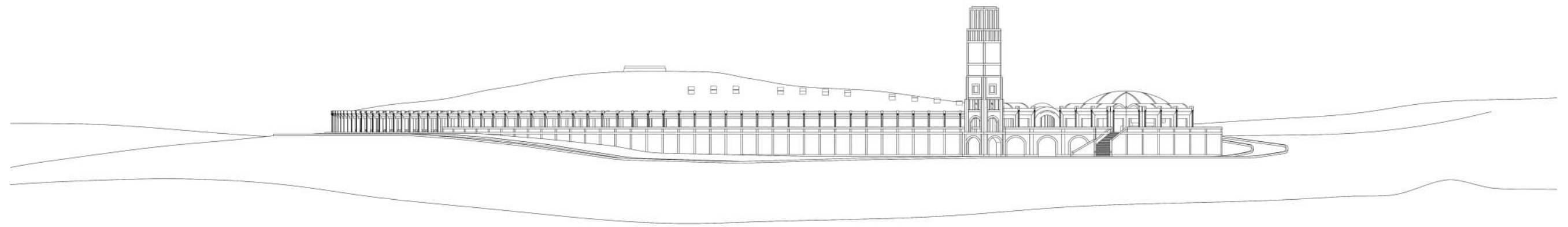


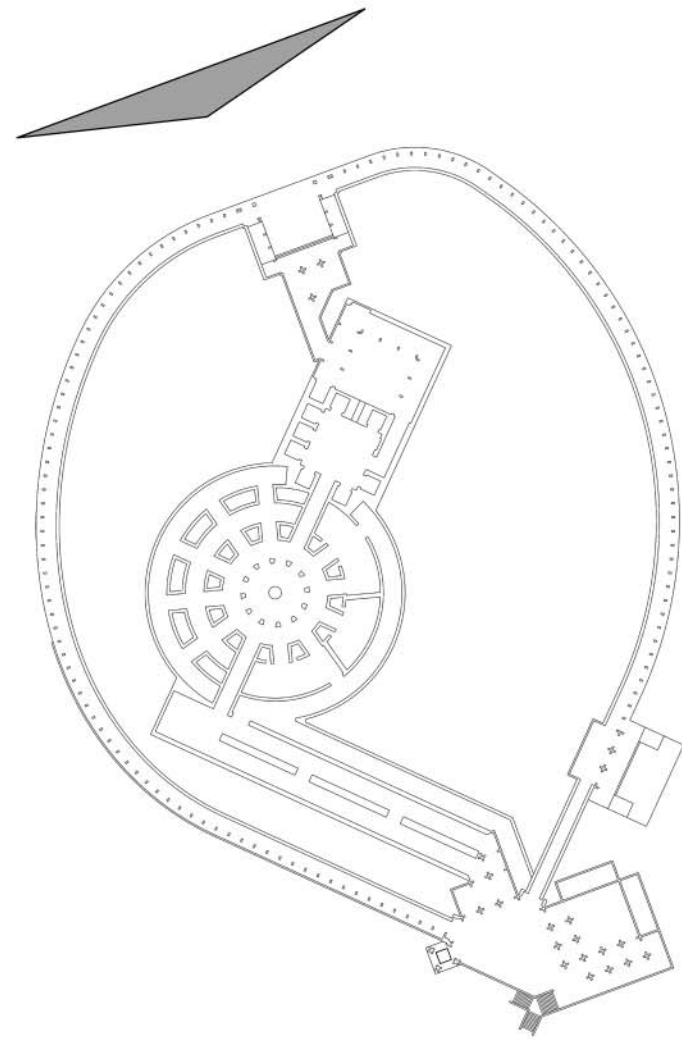


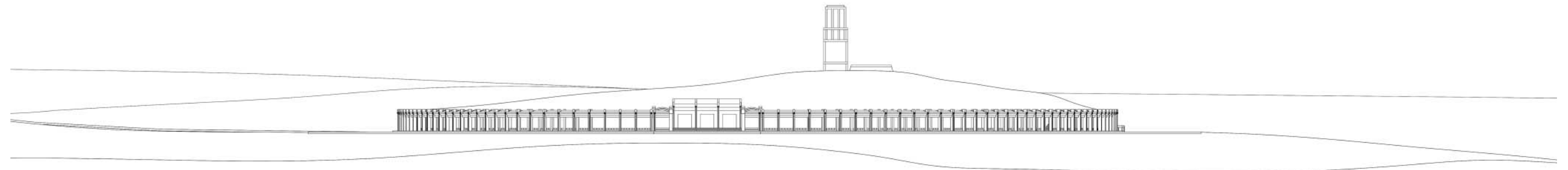
1. Winery Entrance
2. Crushing Court
3. Fermentation Hall
4. Central Chamber
5. Aging Cellars
6. Bottling
7. Bottle Cellars
8. Loading and Shipping Bay
9. Workroom
10. Wine Library and Tasting Room
11. Plaza
12. Cellar Door
13. Entry Pavilion
14. Arcaded Walkway

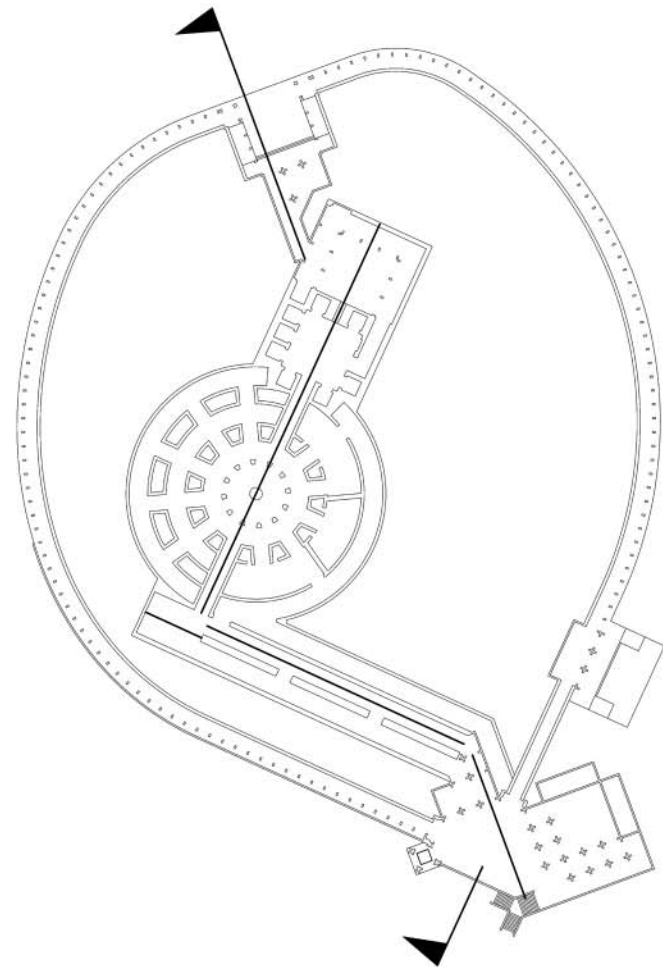


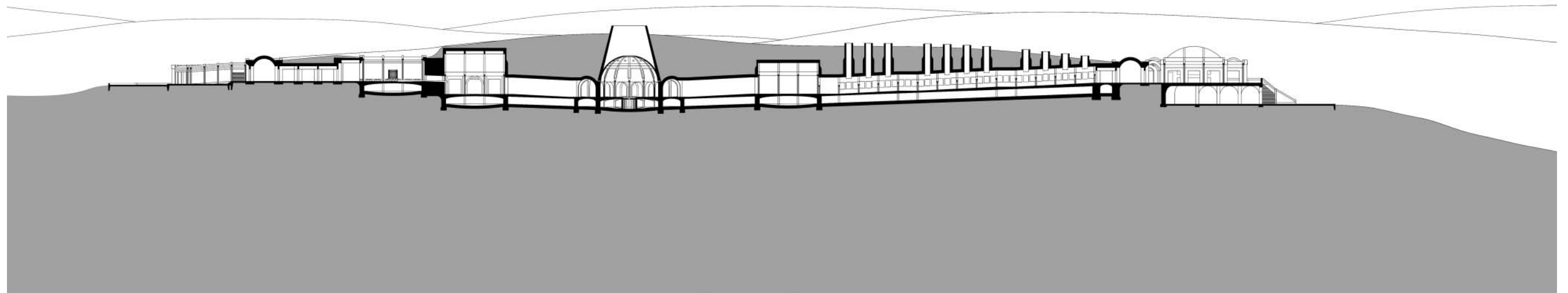


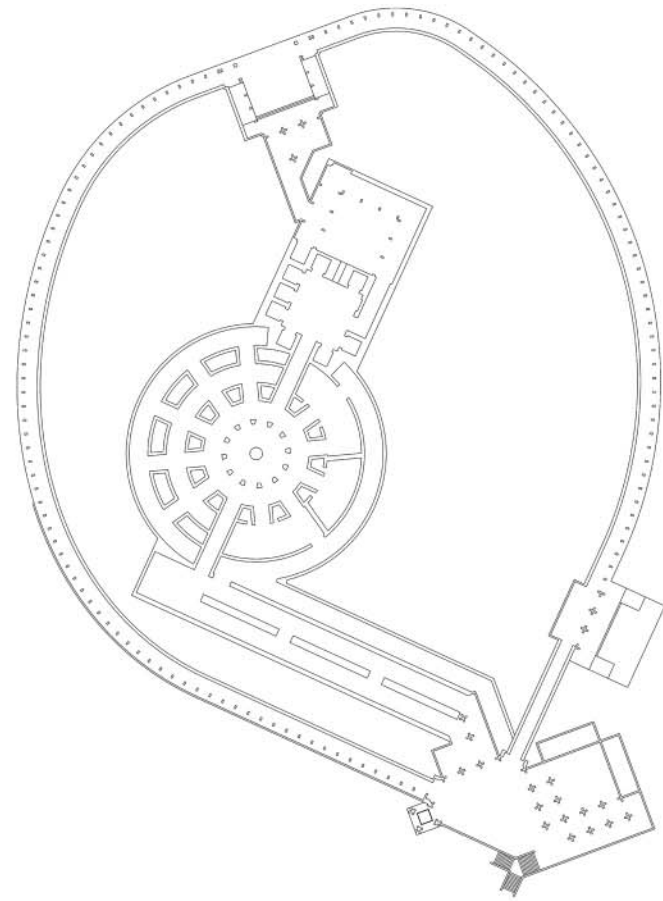


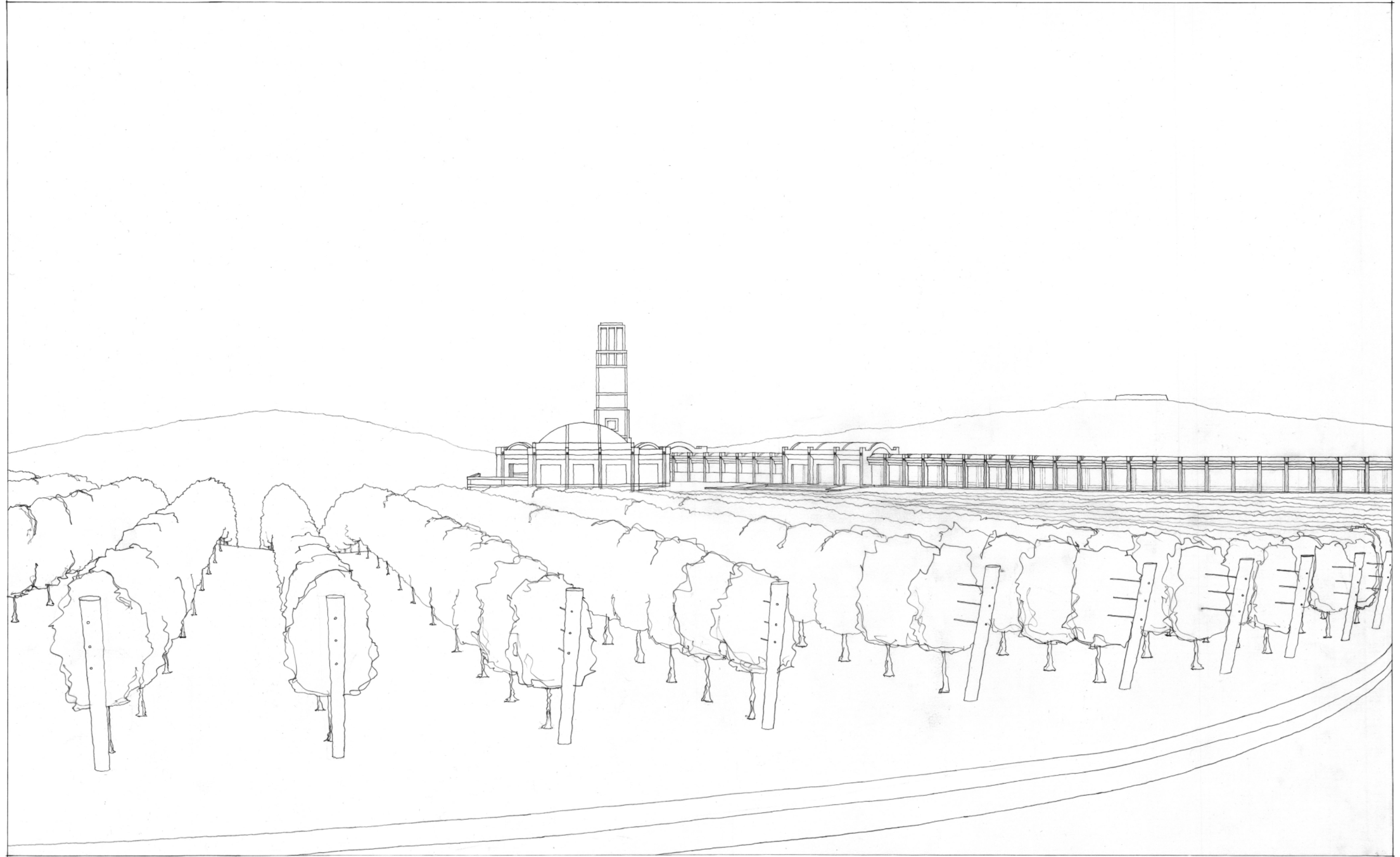


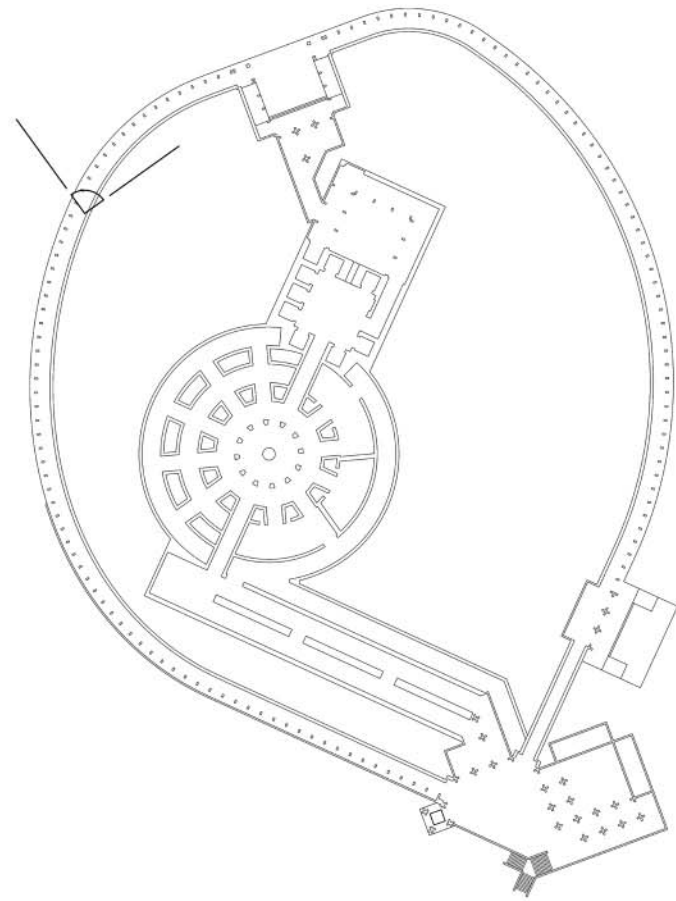


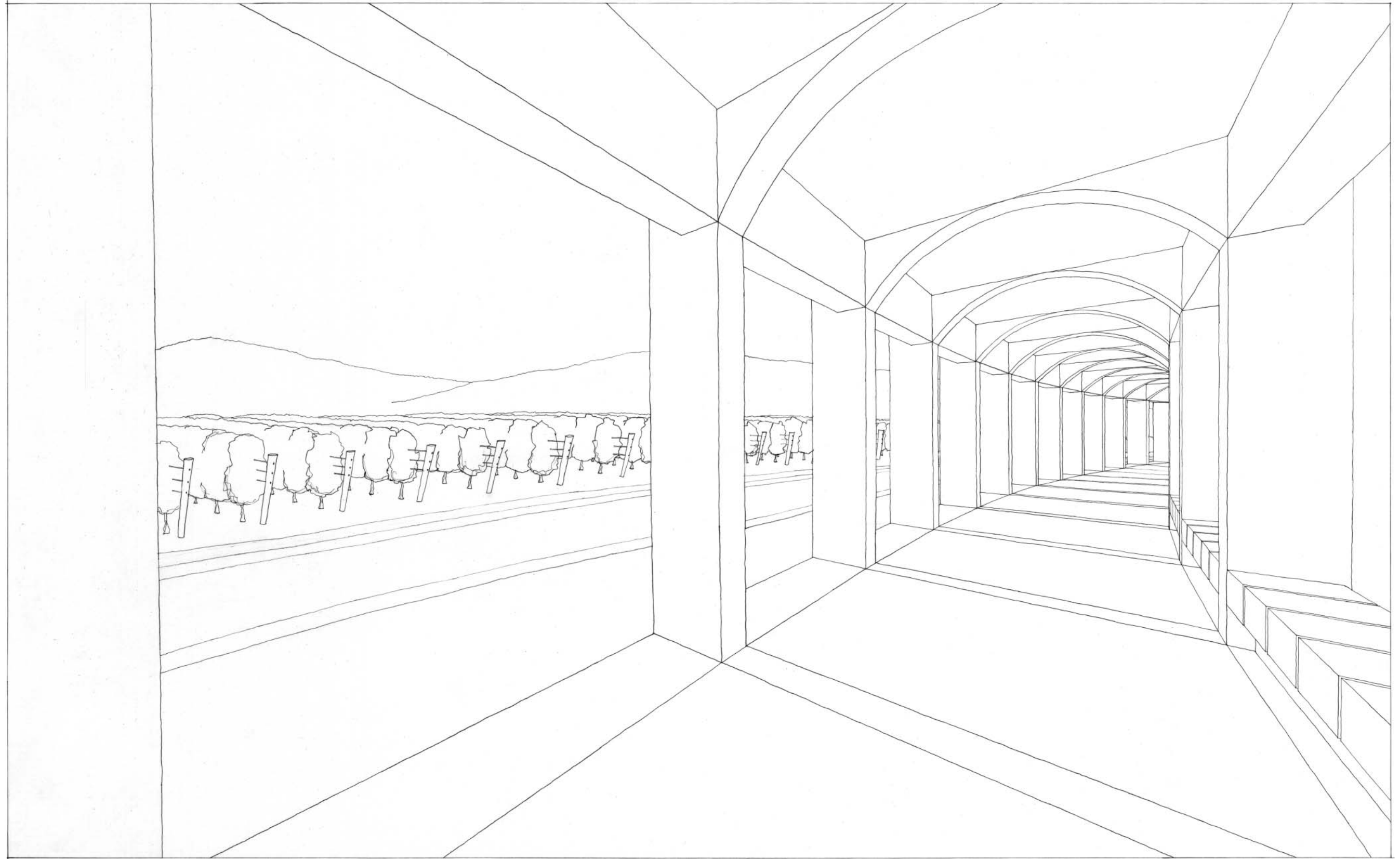




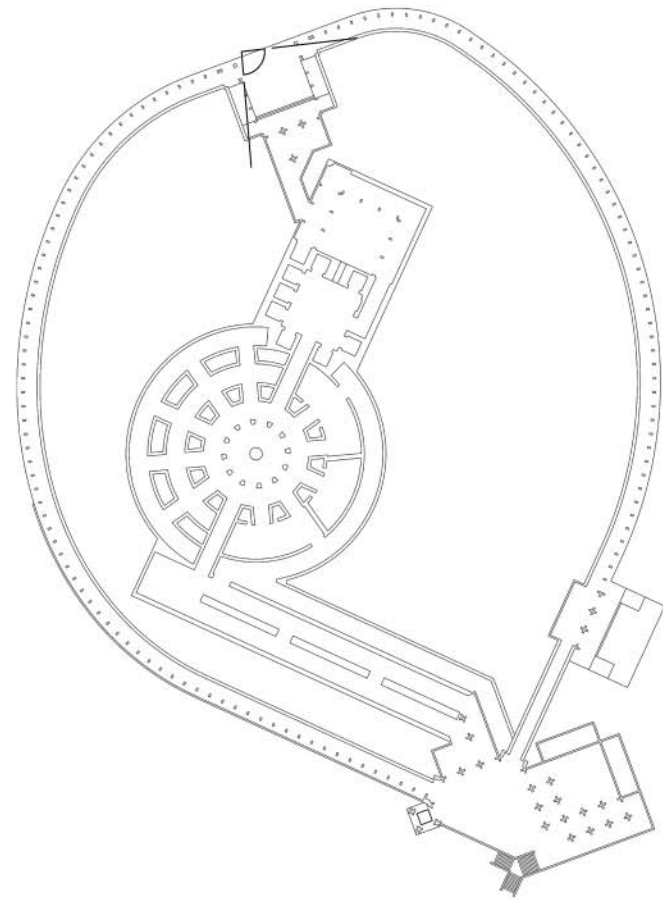


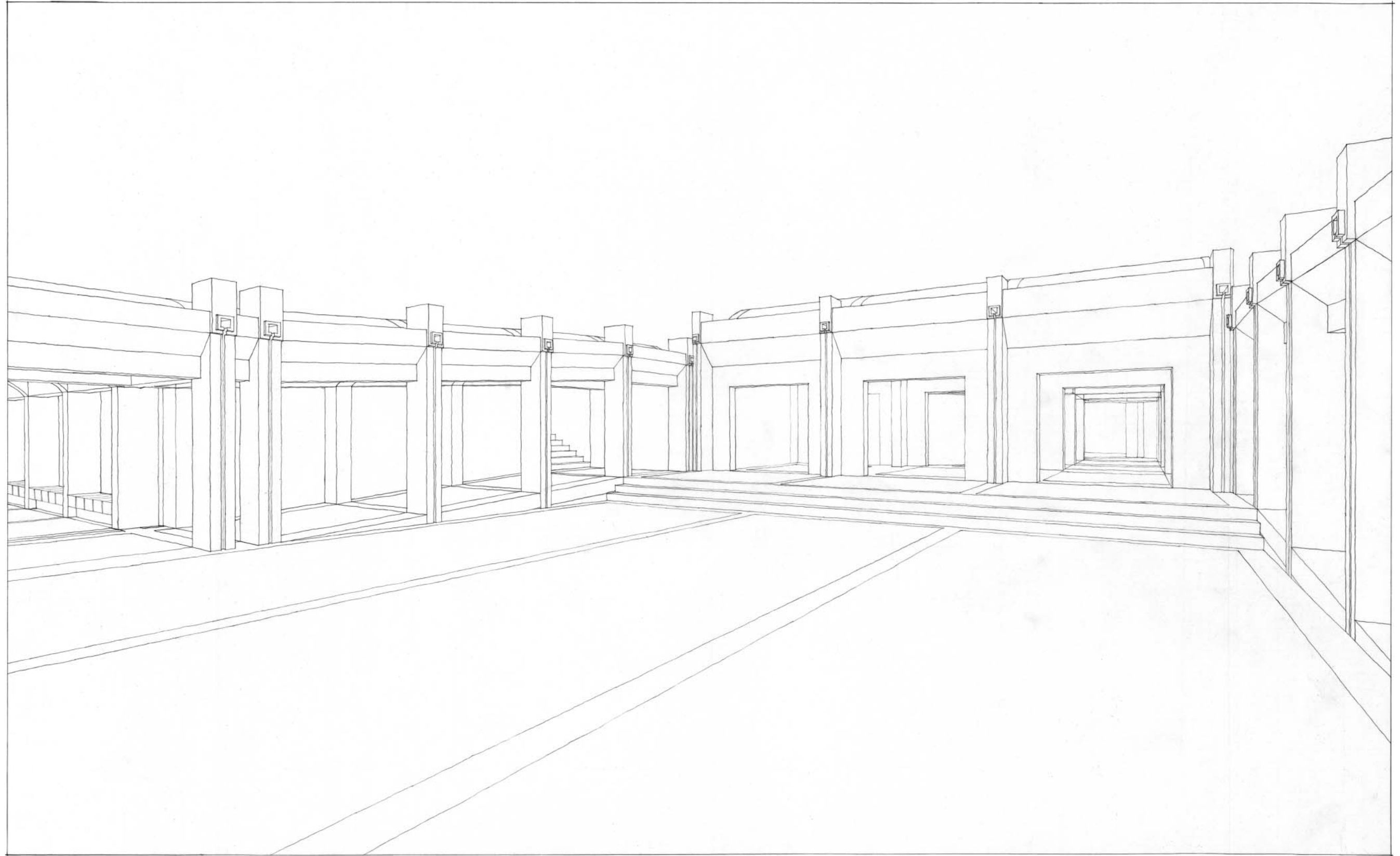




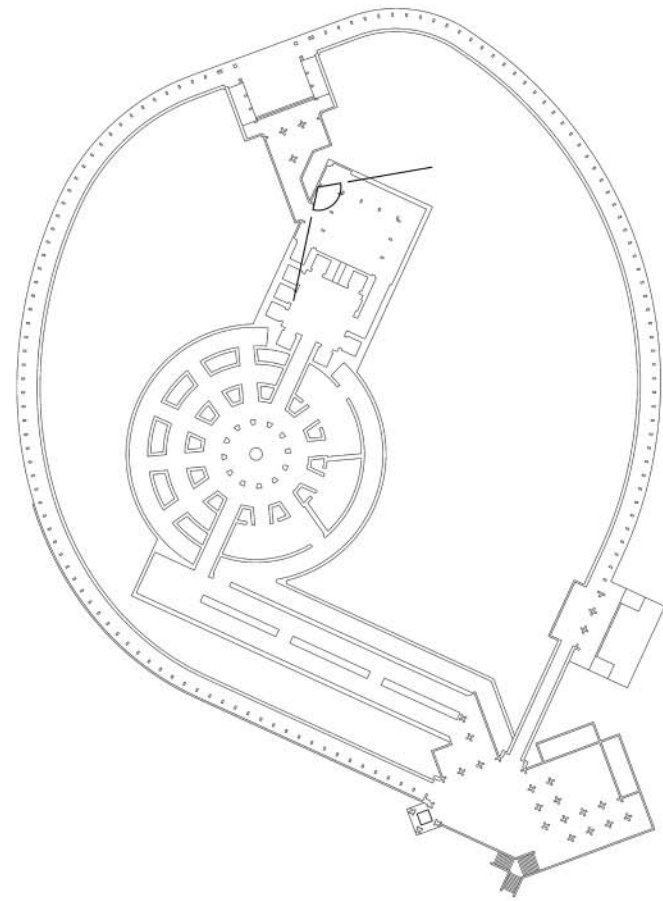


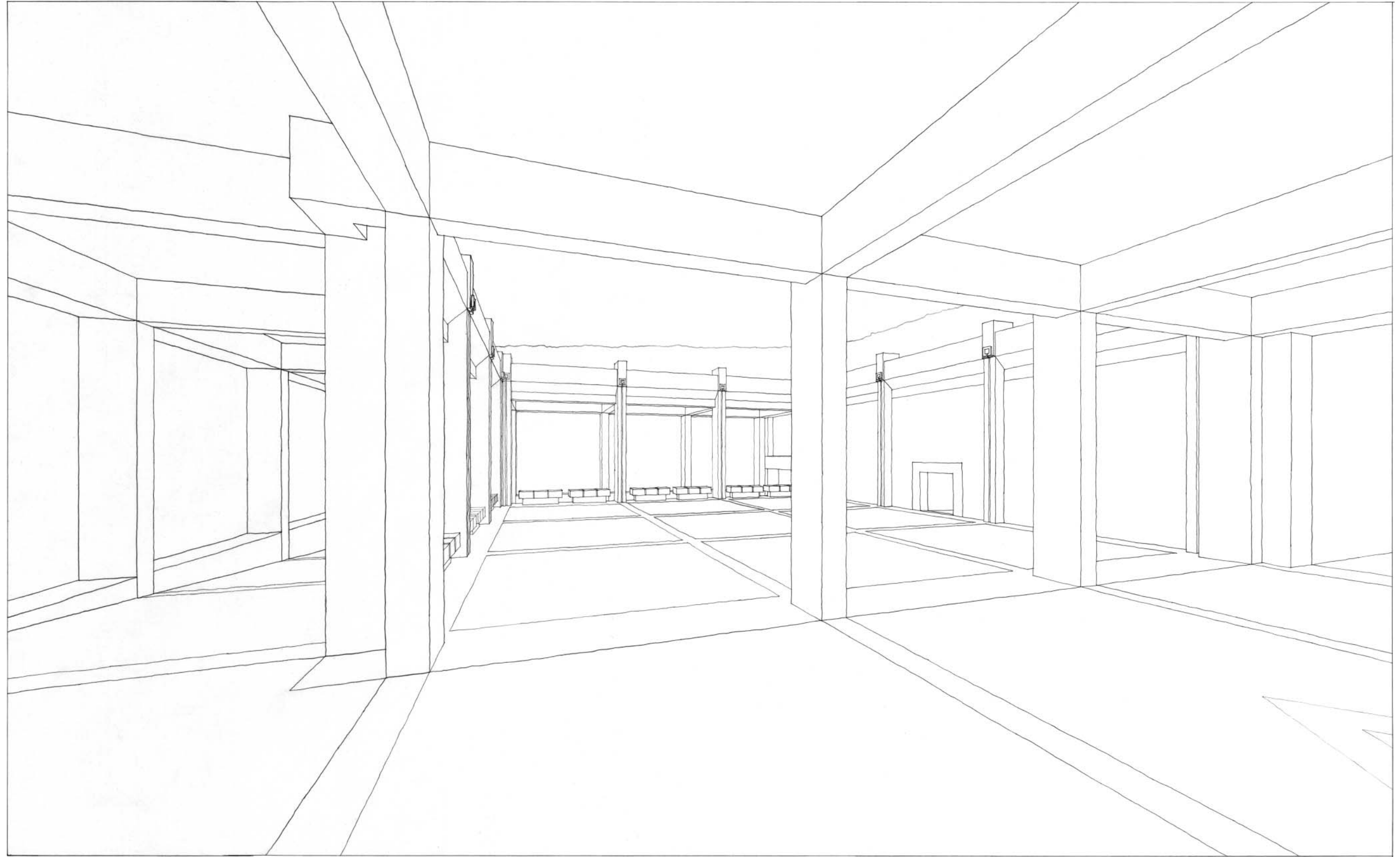
Perspective: Arcaded Walkway Realization- 52



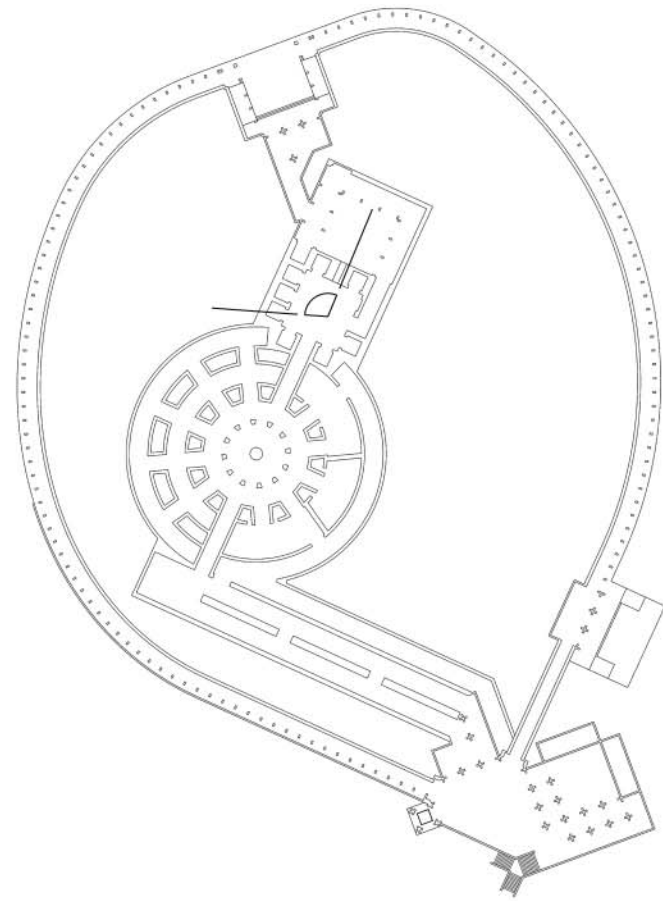


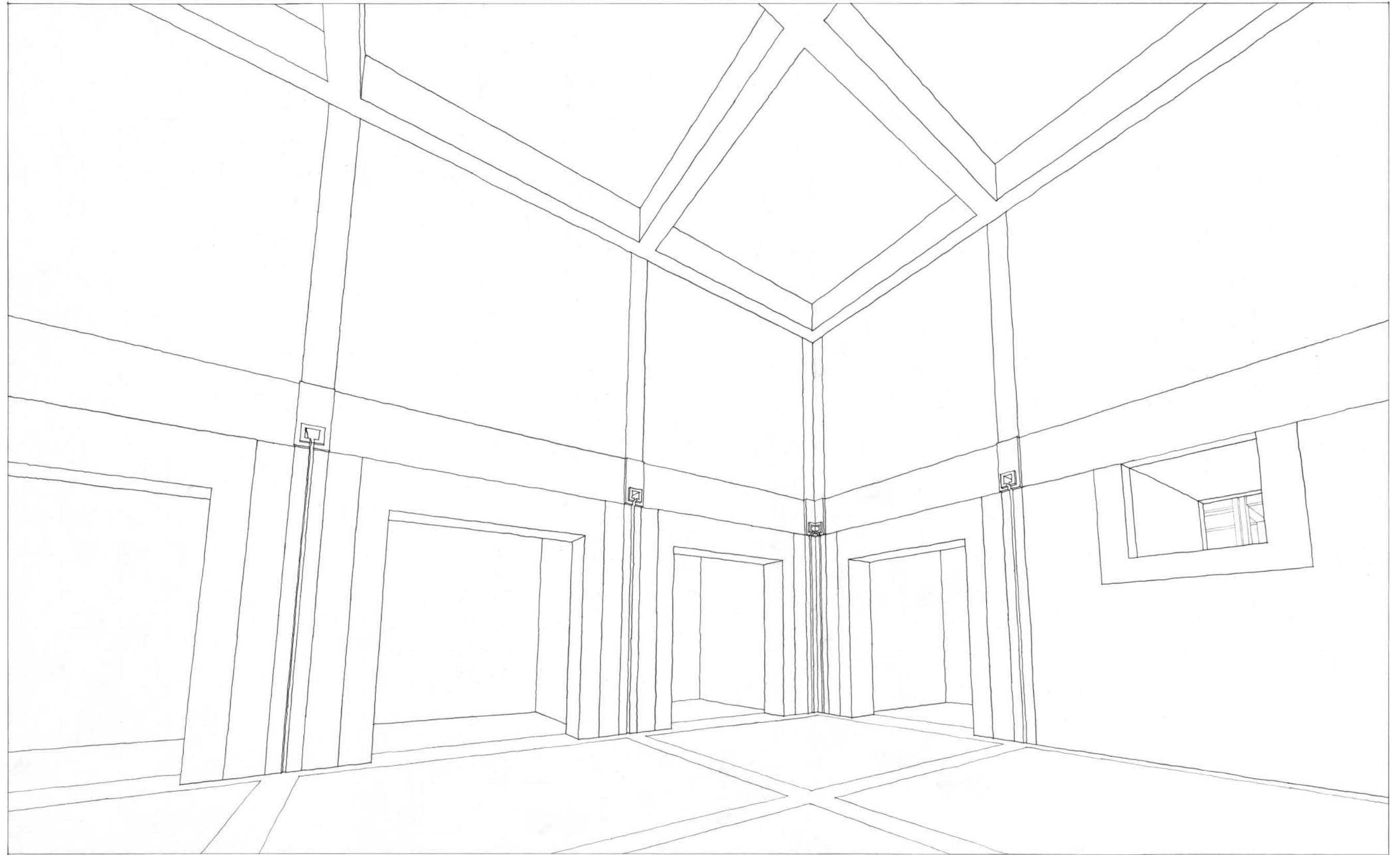
Perspective: Winery Entrance Realization- 54



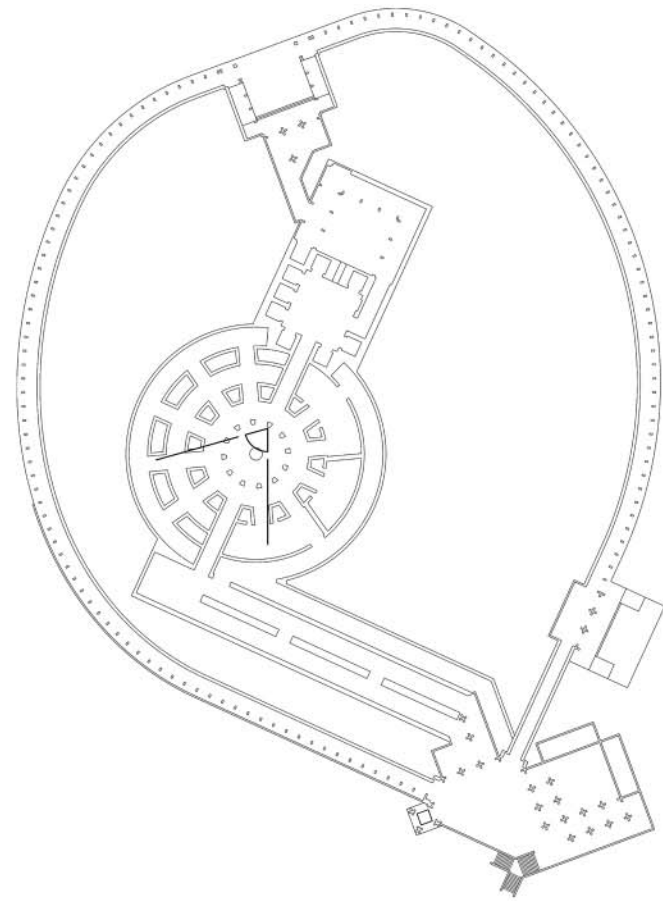


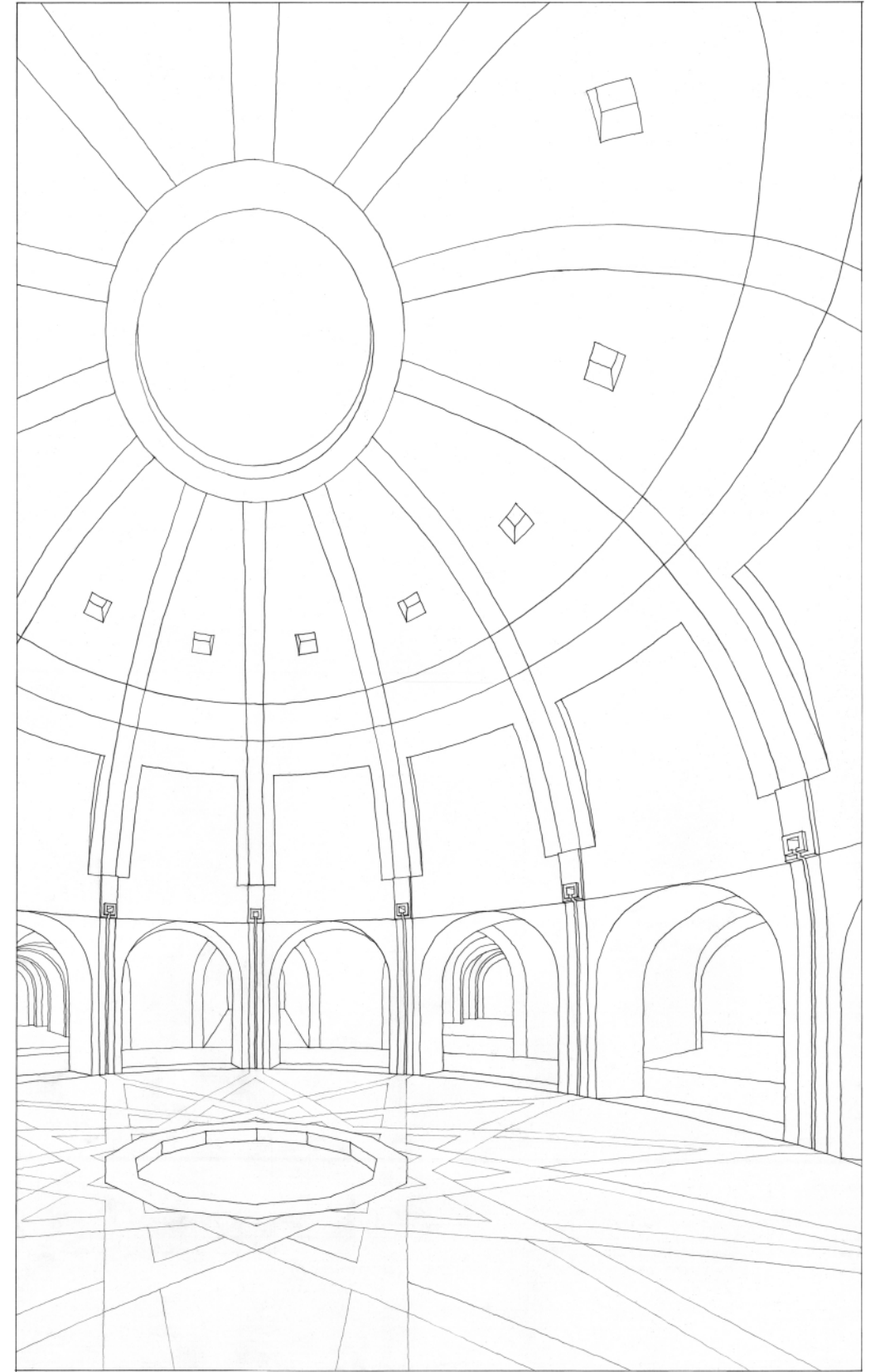
Perspective: Crushing Court Realization- 56



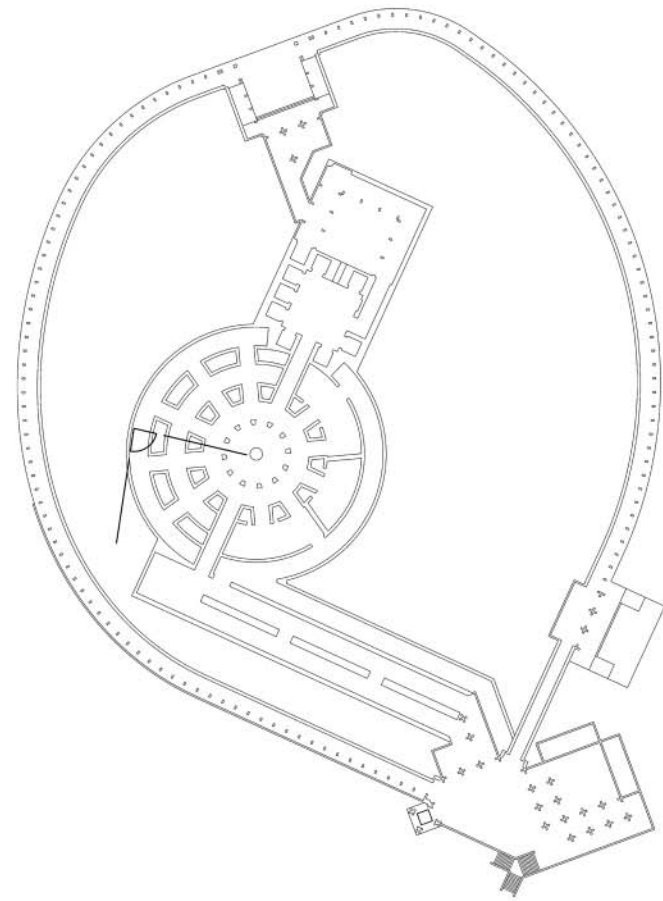


Perspective: Fermentation Hall

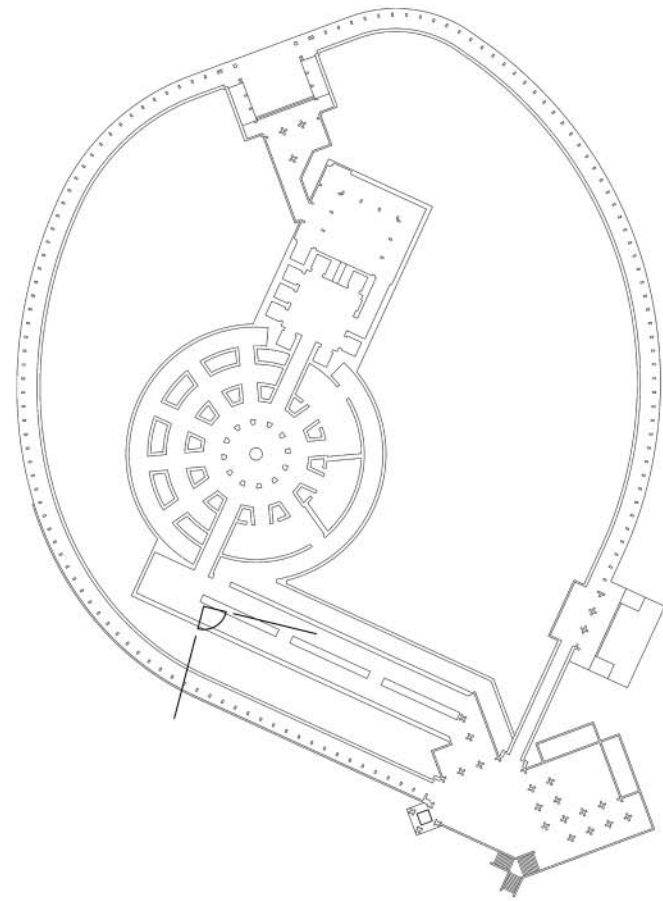


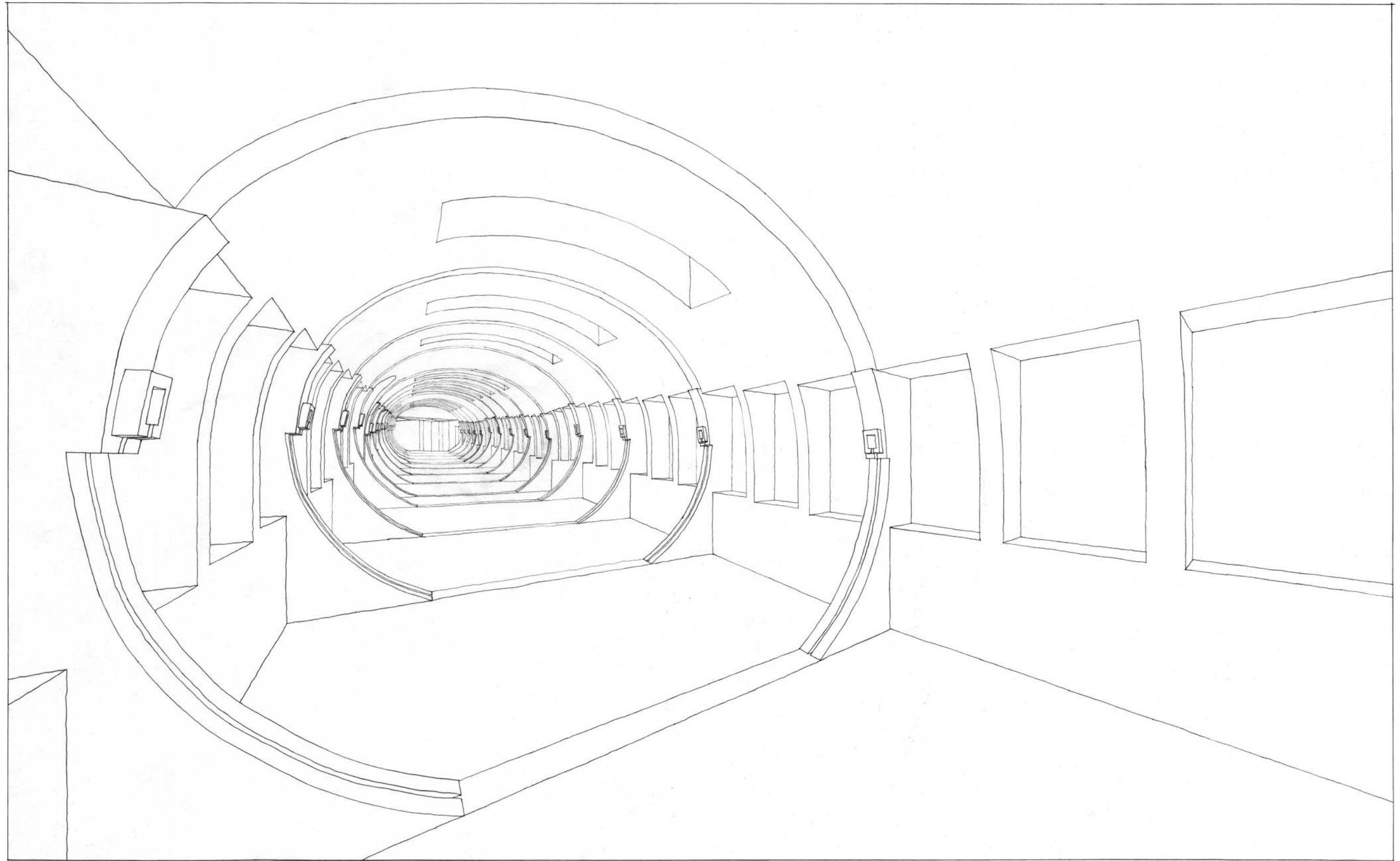


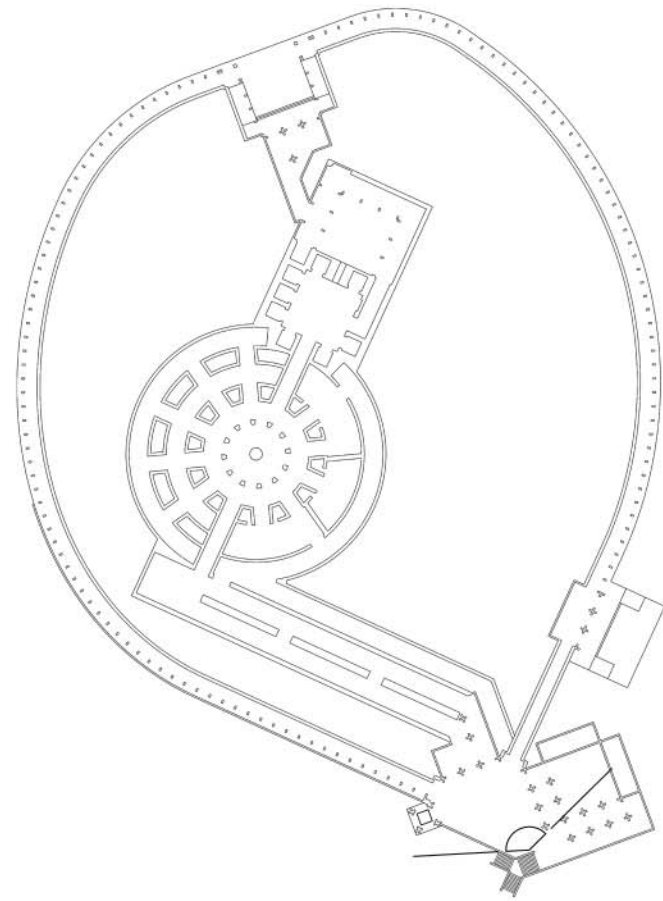
Perspective: Central Chamber Realization- 60













Perspective: Plaza Realization- 66

A Last Word

Architecture is undefinable,
Yet it is recognizable.
There in purity,
Existent in form:
We see but its shadow
On Plato's wall,
Perceive only
What our minds will allow.

A child sees a pretty building,
A mason, a symphony in brick.
A family sees a place to live,
A real estate agent, a commission.
It all depends on what we see,
It therefore depends on how we see.

What then is architecture
In the eyes of an architect?
Playing with space?
Material expression?
A work of art?
A geometric exercise?
Clear structural logic?
Bread and butter?

Architecture is all these things;
It is all these things and more.
It shapes our world,
Enters our memories.
It is something when fully realized
Is a dream brought to existence,
An existence worth dreaming of.