

Rebirth of a Rock:

Pembroke Quarry Amphitheatre

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Defense Date: 14 July 1999

Blacksburg, Virginia

Thesis submitted to the faculty of Virginia
Polytechnic Institute and State University
in partial fulfillment of the Requirements
for the Degree of Master of Architecture.

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Abstract

Every place on earth has a voice. This voice resonates from the shaping events that have long passed and the current conditions that continue to give each place its individual character. The voice continually evolves as the cycle of birth, death, and rebirth leaves its trace. This voice in its endless variety of forms expresses the beauty that is inherent within each and every location on earth.

The potential of architecture is the translation of this voice into human terms and the formal declaration that we as humans play a meaningful part in the cycle. The guiding forms, surfaces, substances of architecture allow the human body to move in grace, unhindered, and inspires the mind to sense the essential connection between matter and spirit; between the individual and the whole.

The role of the architect is to become sensitive to this voice; to silence the mind enough to hear, and to respond to it in material form. The resulting dialogue between the edifice and the encompassing site reaches a certain completeness that enriches the living experience of the end user, bringing the wandering mind to the present long enough to inspire the thought that "I belong here, among all of this."

The technical training required in order to gain an inherent understanding of structure and materials undoubtedly takes years of experience in the field of architecture. However, it has been the focus of my graduate career to further develop this sensitivity to the site and make my first attempts at formulating an architectural response, suggesting structures that could achieve this engagement with the end user and the site itself.

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Introduction

Some rock sprouts to life as a pure mineral...



and some emerges from molted masses deep inside the earth.



Rock continually changes form with the help of water...



... wind and sand...



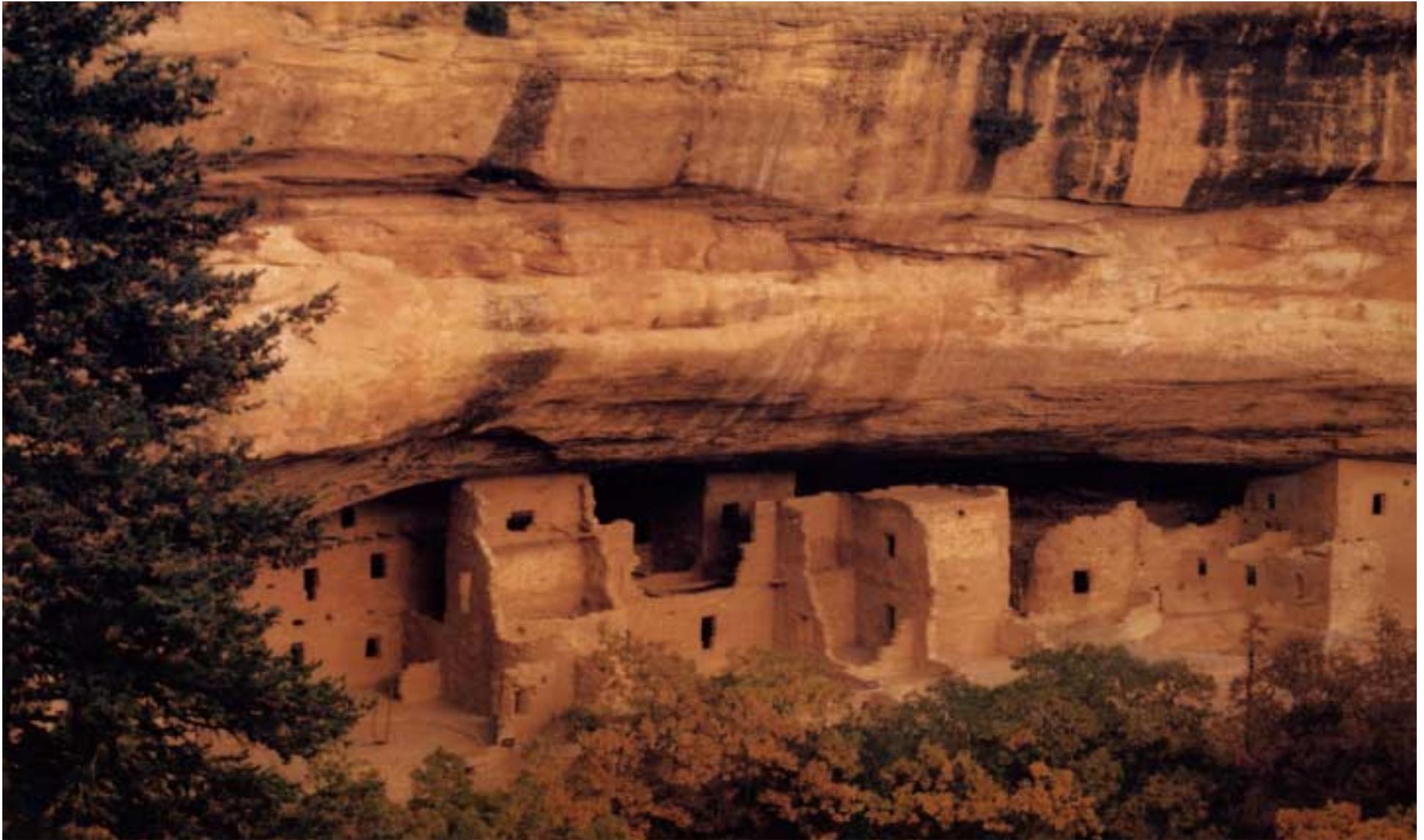
...and the perpetual pull of gravity.



Rock is also transformed by man by carving...



or breaking it down for re-assembly.



Regardless of how permanent and unmoving the rock may seem, it remains in a constant process of evolution.

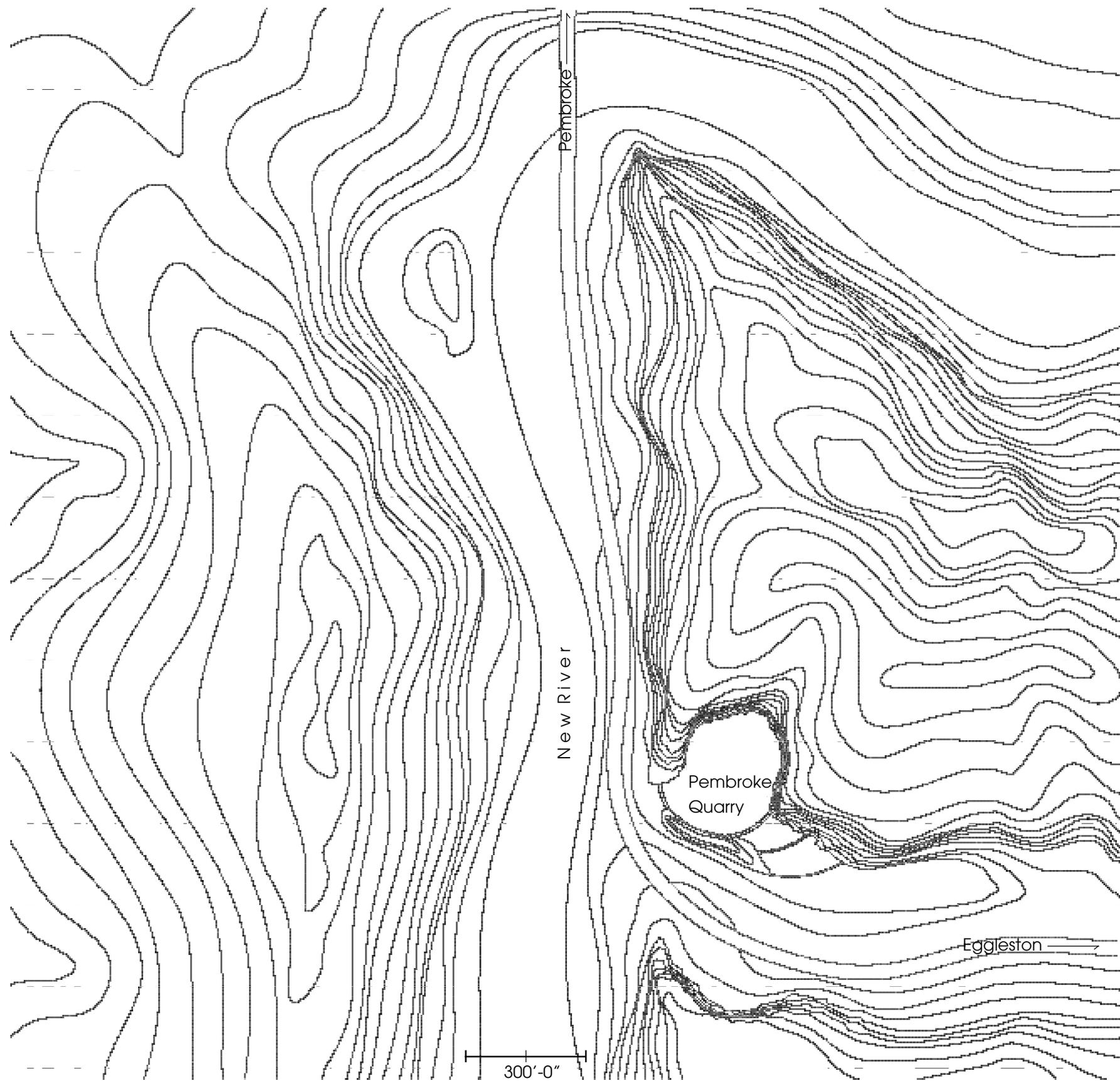


Rock is the living flesh of the earth.



Site Analysis

In the folds of the Appalachian Mountains there rests an old stone quarry. It is comprised of two major walls that face each other with a road passing in between. One wall suggests a straight line while the other follows a semi-circular curve, marking a certain amount of space within its boundary.



The New River flows nearby, just out of sight from the quarry's bottom. The car that travels the back way from Pembroke to Eggleston is confronted by this massive rock wall in the wintertime, shrouded from it by the foliage of summer. Occasionally, subtle rhythms of the nearby train are caught within the walls of the quarry, creating an echo as the sound waves reverberate against the solid walls.

SOUNDS

OUTSIDE GROUNDS (QUARRY)

vs.

WITHIN QUARRY WALLS

WHIM OF PASSING TRAIN
DISTANT TRUCKS ON RD
OCCASIONAL CAR
HOWLS ACROSS RIVER
TREES LINING RIDGE OF QUARRY

SMALLER BIRDS AT BASE OF QUARRY
CRICKETS
LEAVES OF YOUNG SAKUNGS

DREAM-LIKE QUALITY OF THE SOUNDS -
AS THEY ARE PASSED FROM
WALL TO WALL.

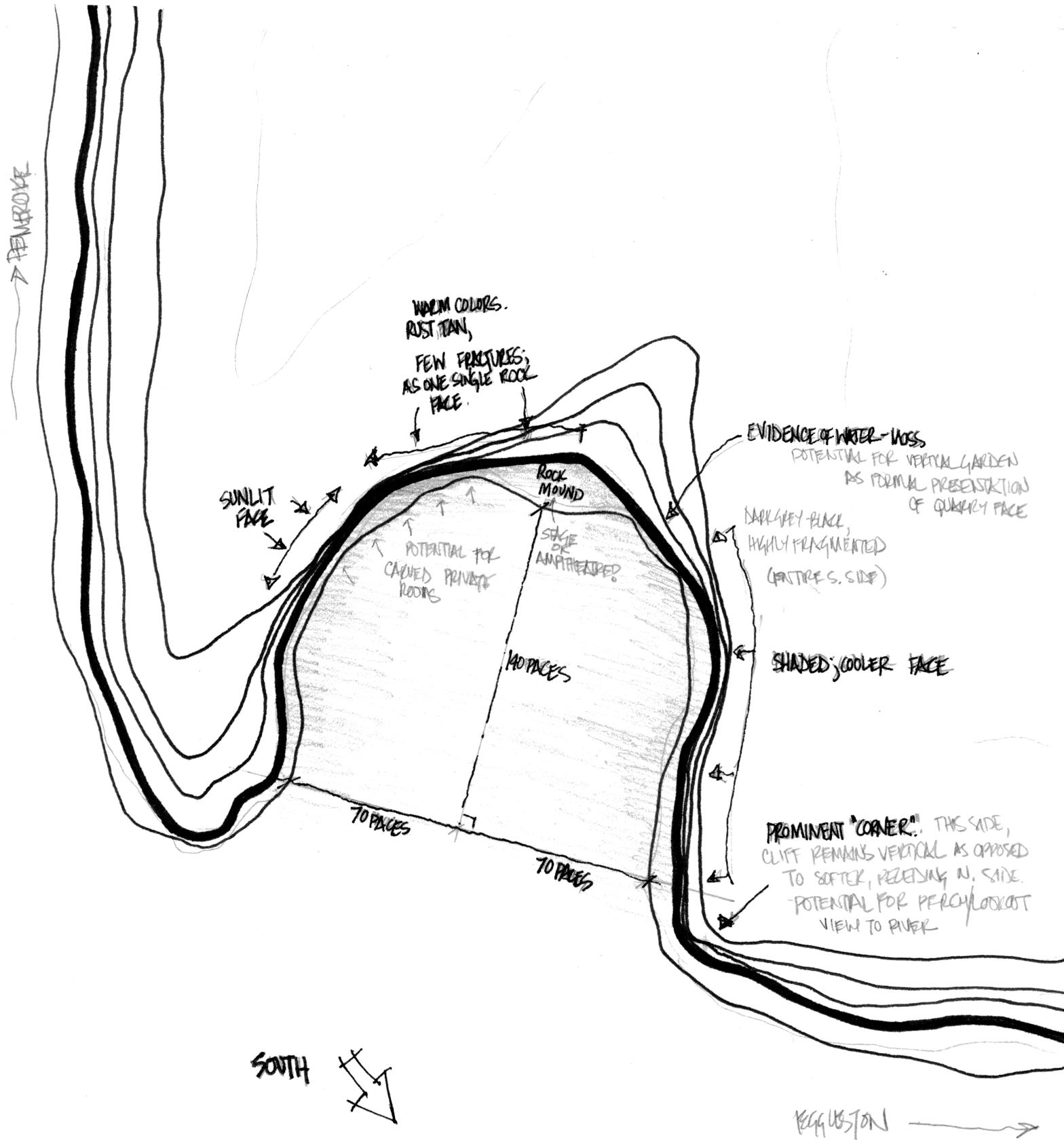
SOMEHOW MORE REAL - I RECEIVE
THE SOUND DIRECTLY BEFORE
IT IS TRANSLATED BY THE WALLS.

CAUGHT IN AN ECHO.

ALTHOUGH - I FEEL THAT
I AM SIMPLY IN THE WAY -
LUCKY TO BE HEAR
THE SOUND ON ITS WAY TO
THE WALLS WHERE IT WILL
BE TRANSFORMED.

↑
↑
THE DEEPER I GO WITHIN THE
QUARRY, THE MORE TRANSFORMATION
OF SOUND.

Towering rock walls confront the approaching visitor with overwhelming scale and presence. As one walks across the vast floor of the quarry, the perspective of the scene changes very slowly because of the extreme difference between the size of the visitor and that of the quarry itself. Continual movement and changing of the vantage point is necessary to gain a grasp of the quarry's volume.



The quarry's crescent shaped wall looks down upon a flat floor that is scattered with rusted appliances, tin barrels pierced with bullet holes, bright shards of broken glass that lure down an occasional hawk flying overhead.



The exposed rock surfaces of the quarry are in stark contrast to the lush forests of the surrounding hills. All soil and trees have been stripped away here, revealing the structure of the mountain.



After much wandering around the floor of the quarry, one notices that the line separating the top of the quarry wall and the sky begins to change character. From certain viewpoints the rock wall seems to pierce the dome of the sky,...



...while at other times the wall forms a bowl
that harbors a bit of the sky within its edge.



While removing layer after layer of this mountain, the quarrymen long ago tapped into the grand scale of earth, revealing stratas of time that far surpass the duration of mankind's influence.

The fissured limestone walls stand as a monument to eternity, remaining long after the the nearby once-thriving town shrank to a handful of homes. This hollow mountain, once full of human life, now stands silent, as if waiting for sufficient time to return it to the lower ground and once again blanket it with the green of the trees.

When the quarry was still active, humans made our place within it. Now empty, any visitor is an intruder below it's towering walls. There is no "place" now; the walls are simply the edge of an emptiness.



Although the quarry seems to be in a silent state of disarray, there exists within the quarry an intense potential for the making of a meaningful place.

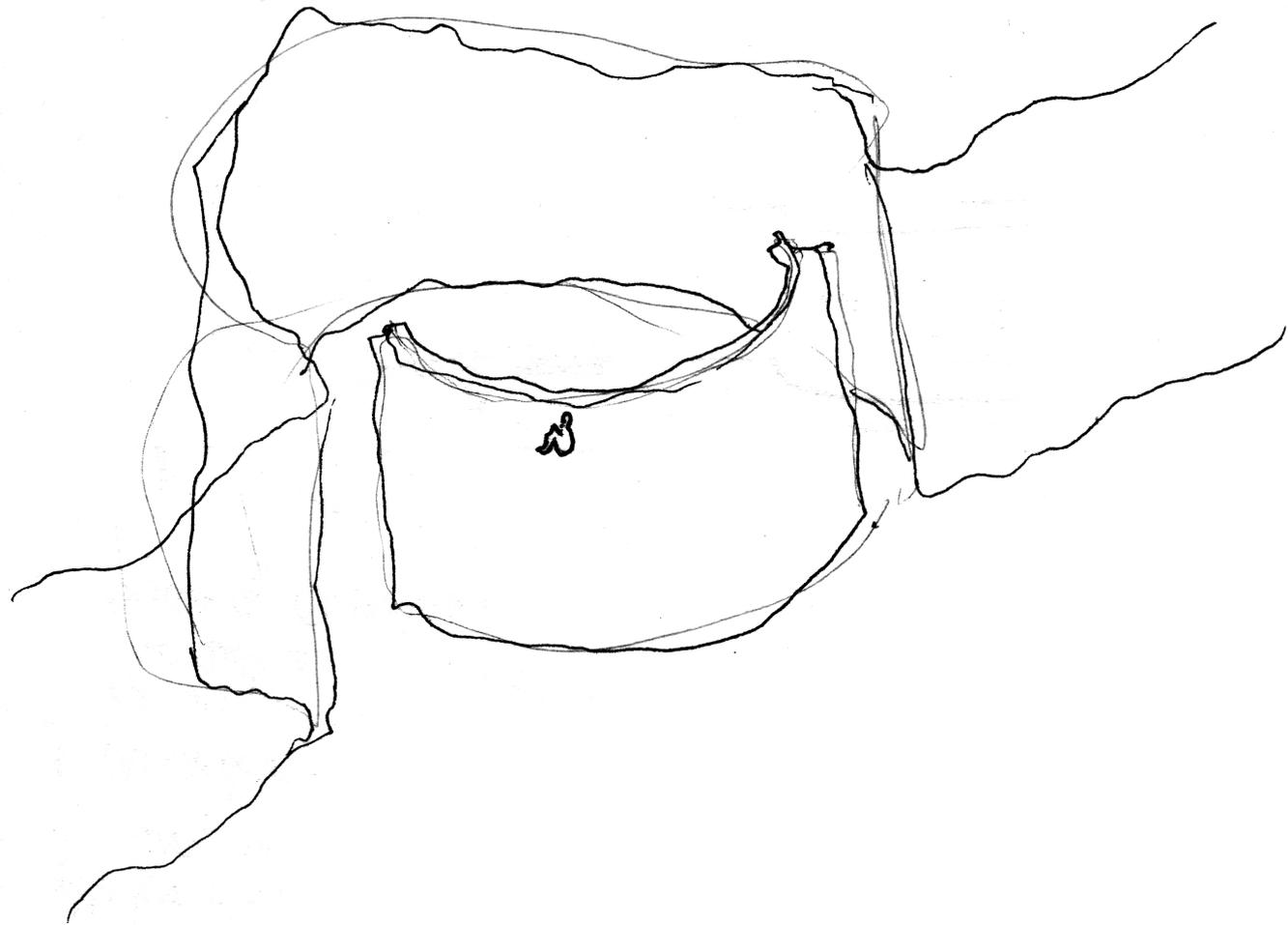


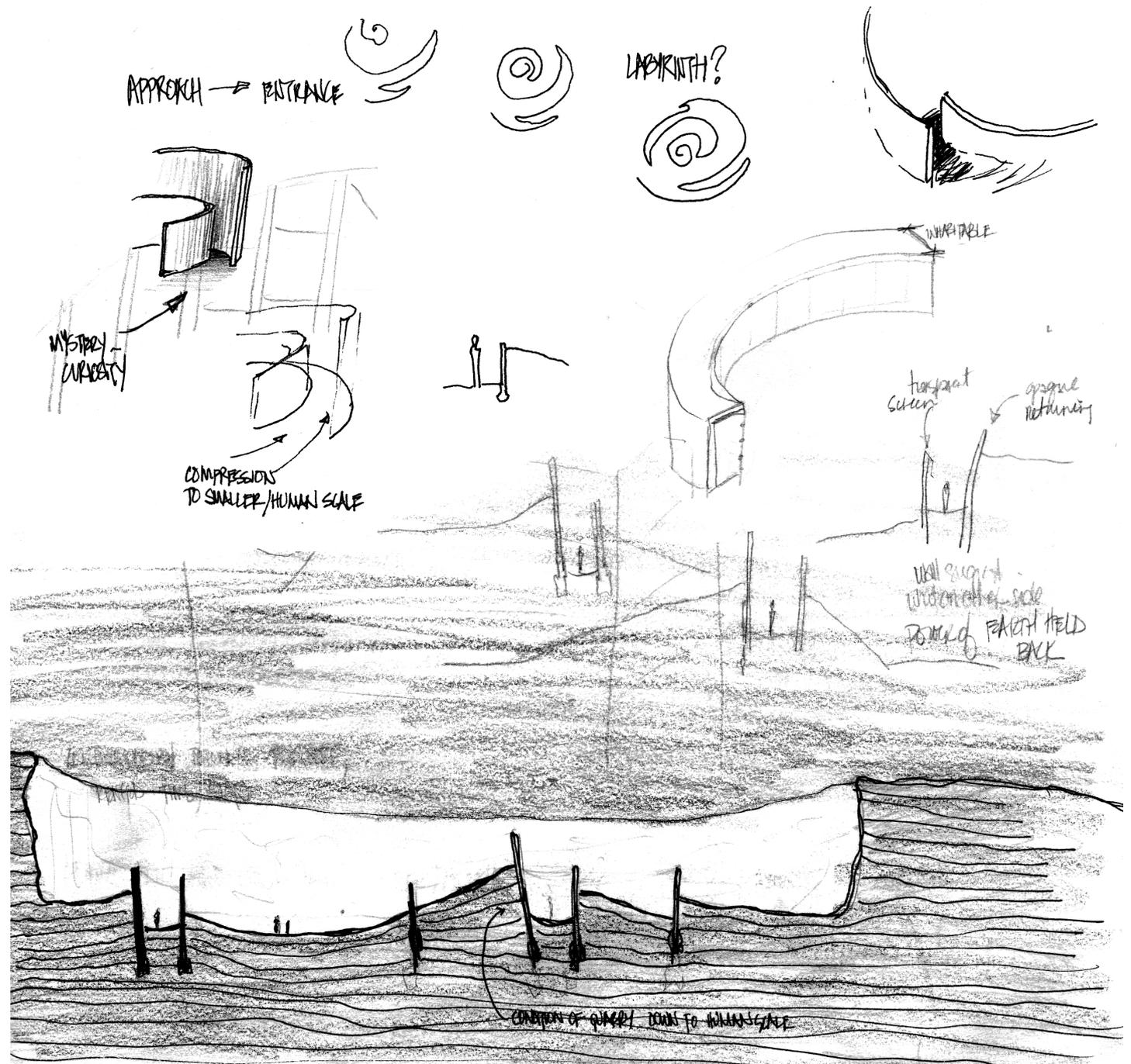
...This is accomplished through architecture.



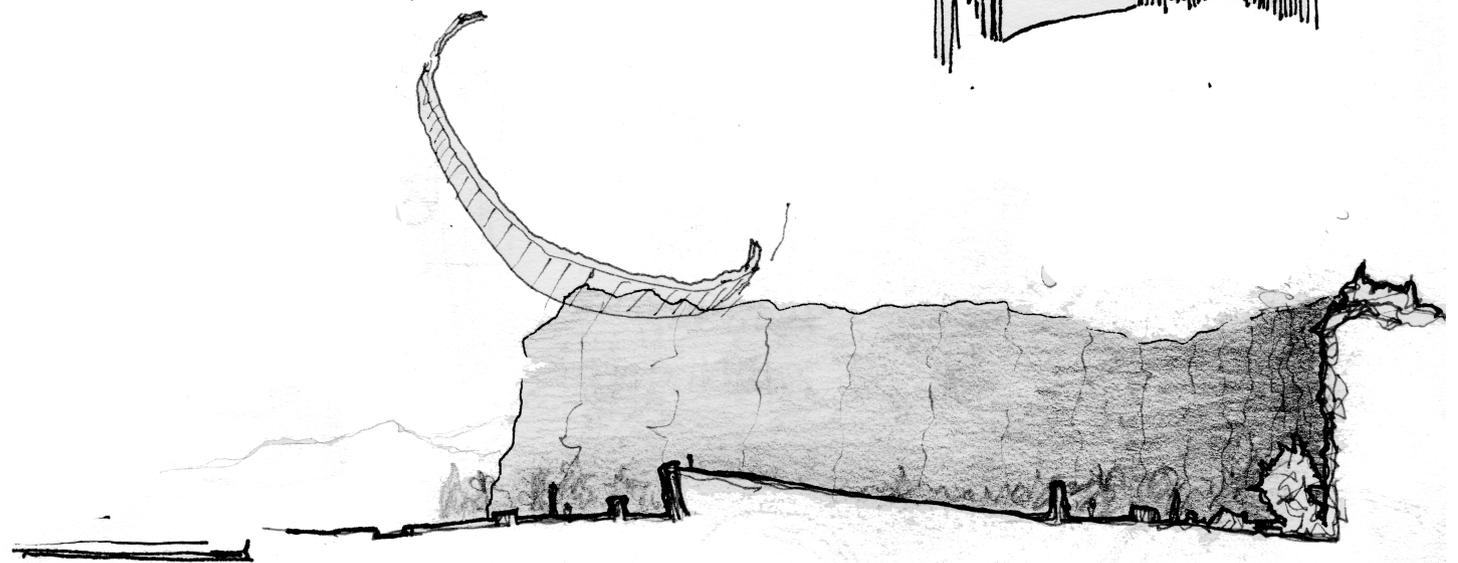
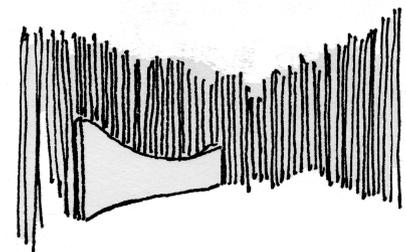
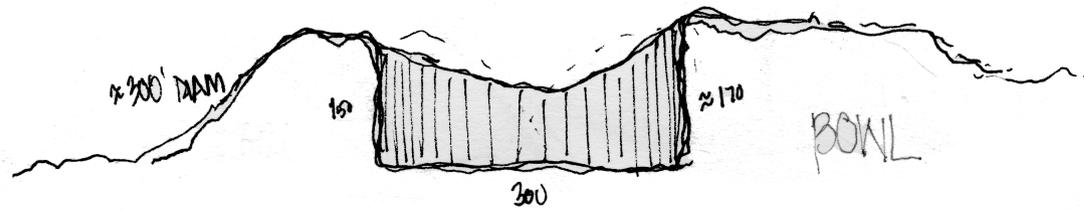
Development of a response to the site...

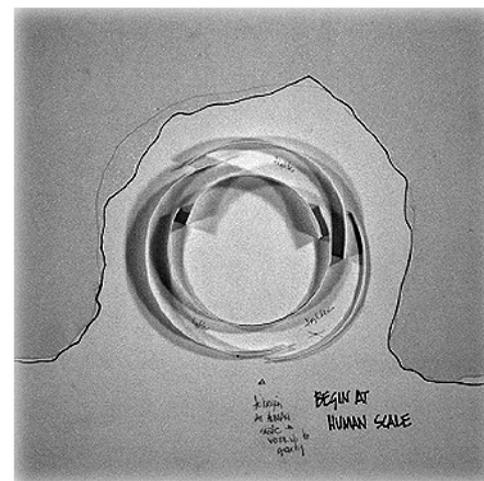
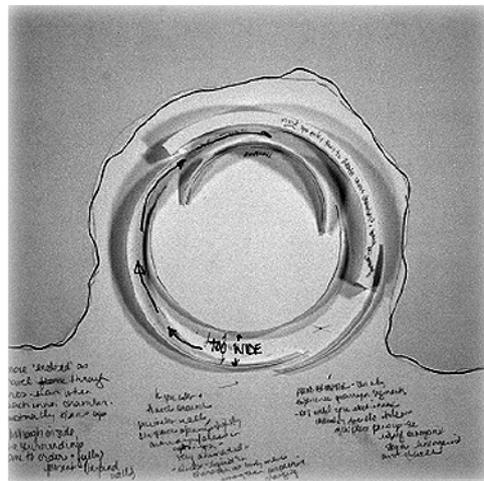
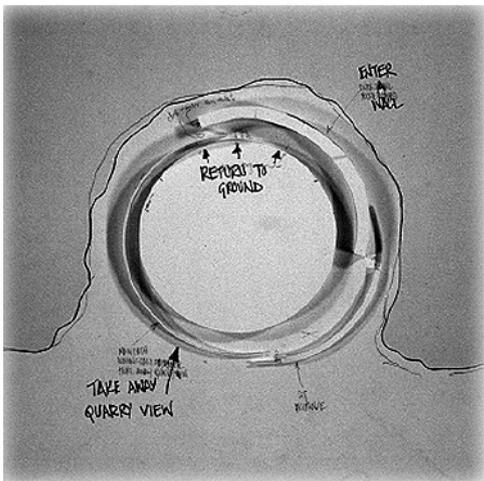
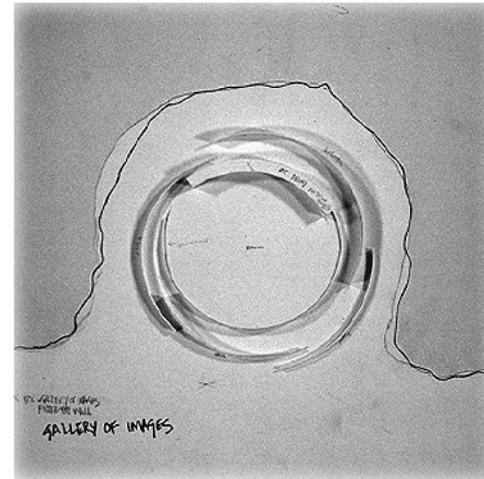
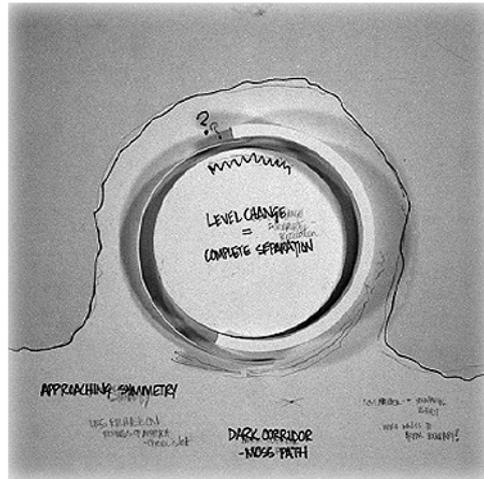
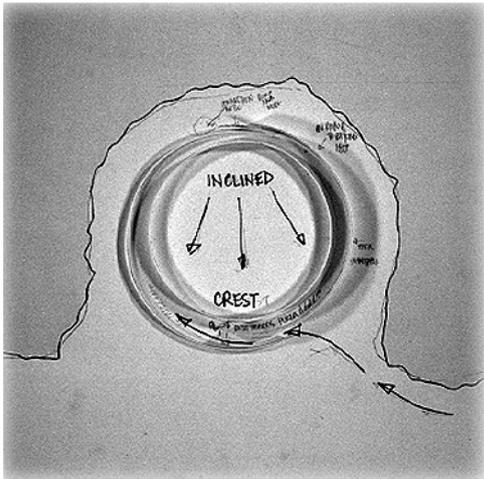
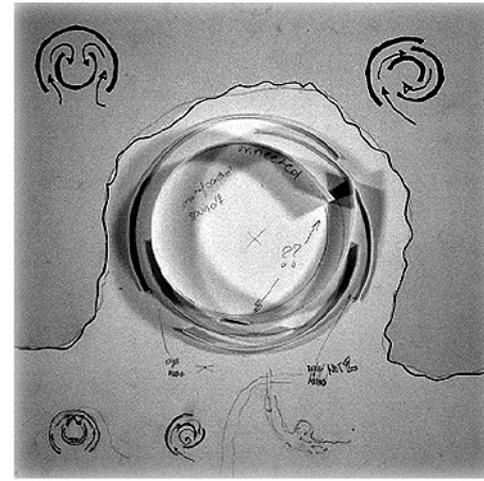
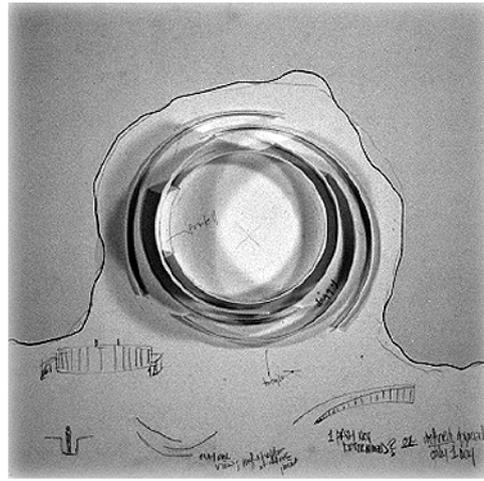
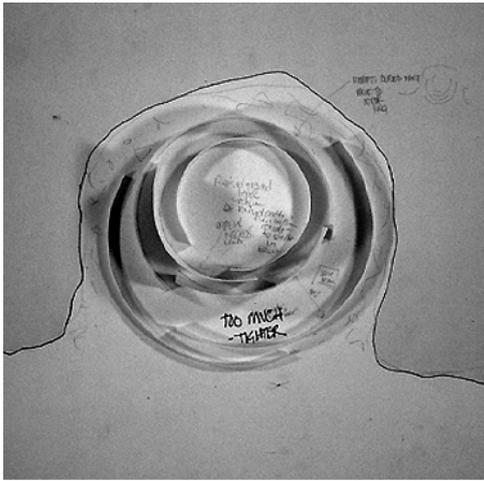
Within.



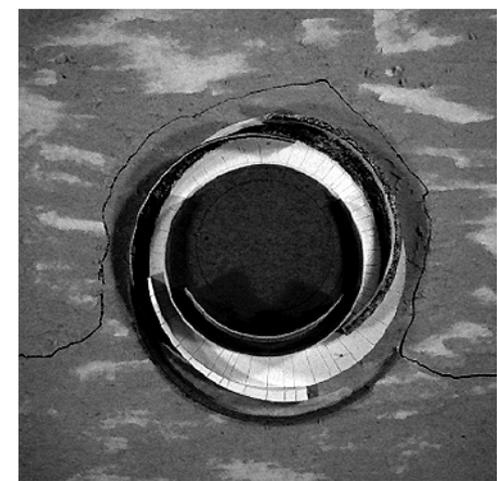
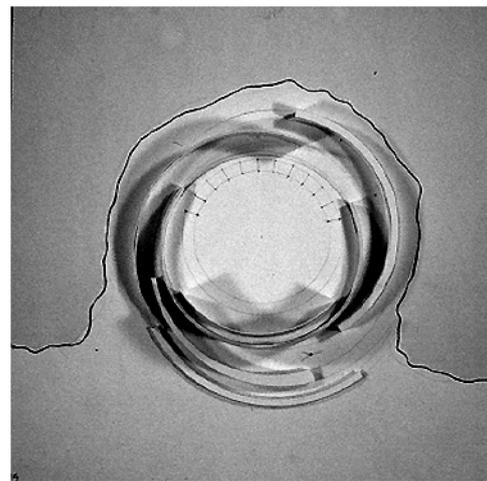
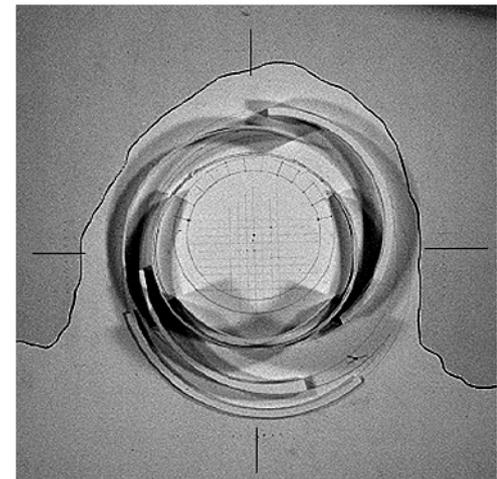
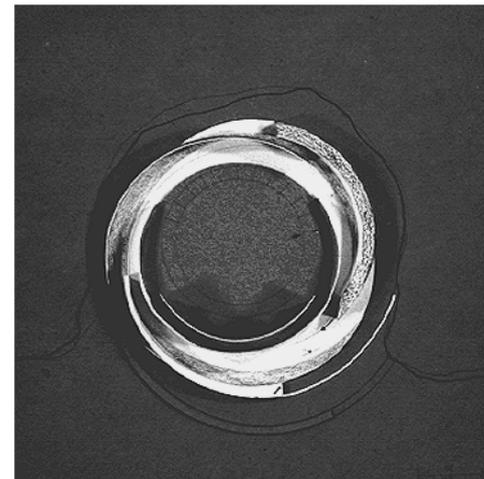
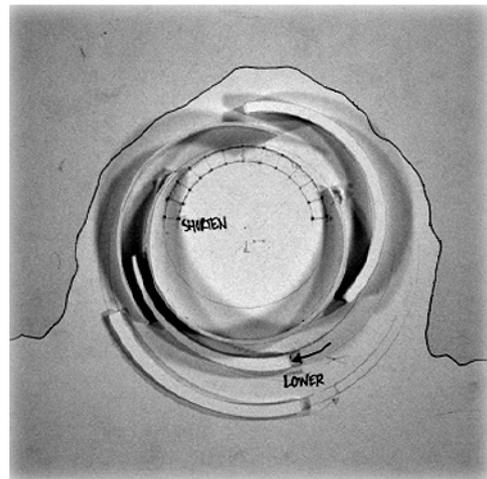
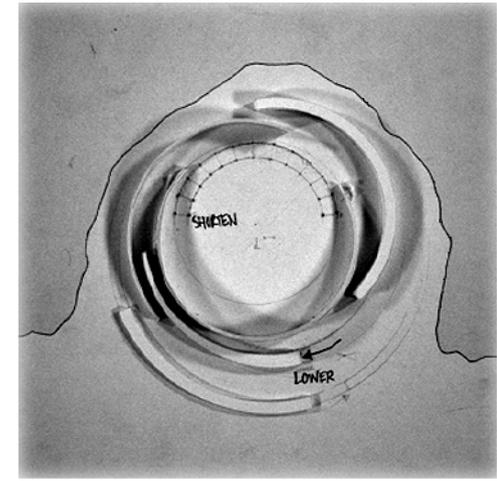
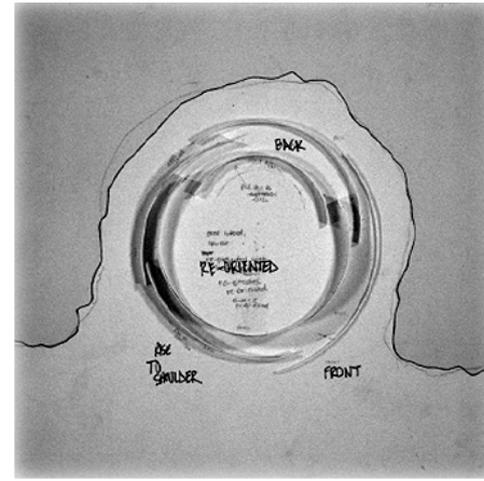
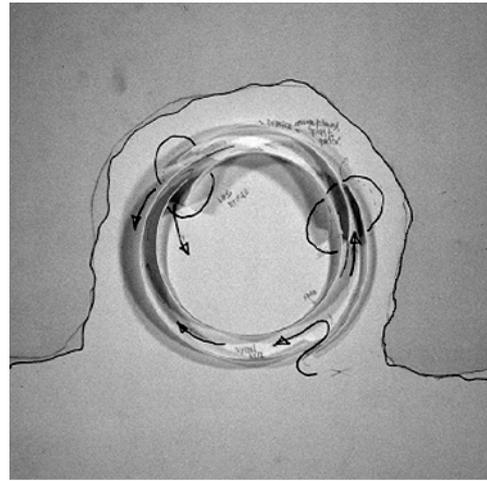


RECLAMATION
REVITALIZATION RE-ENGAGEMENT
RECONCILIATION

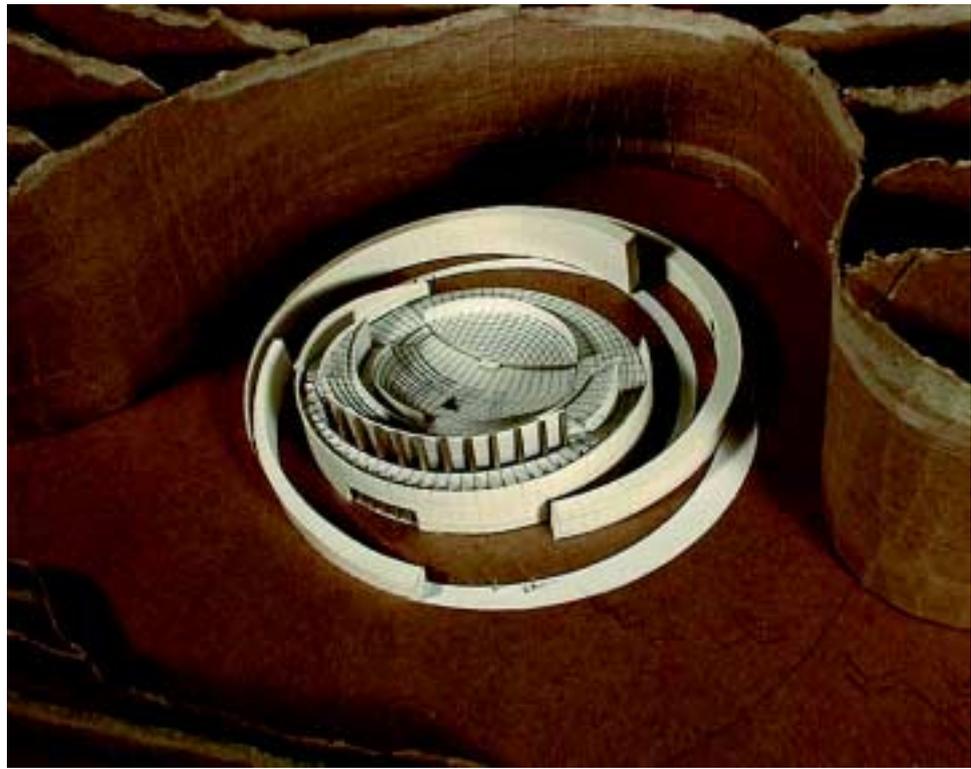




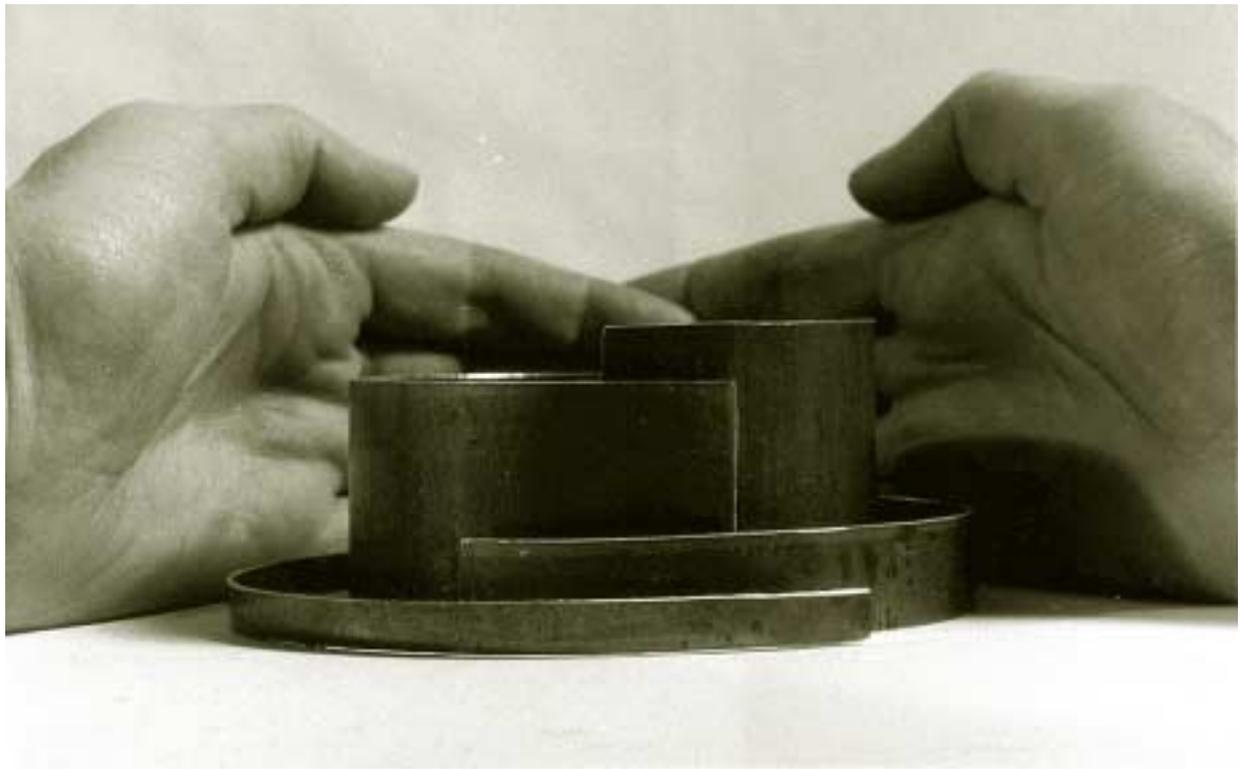
Study model series



Culmination of model study...



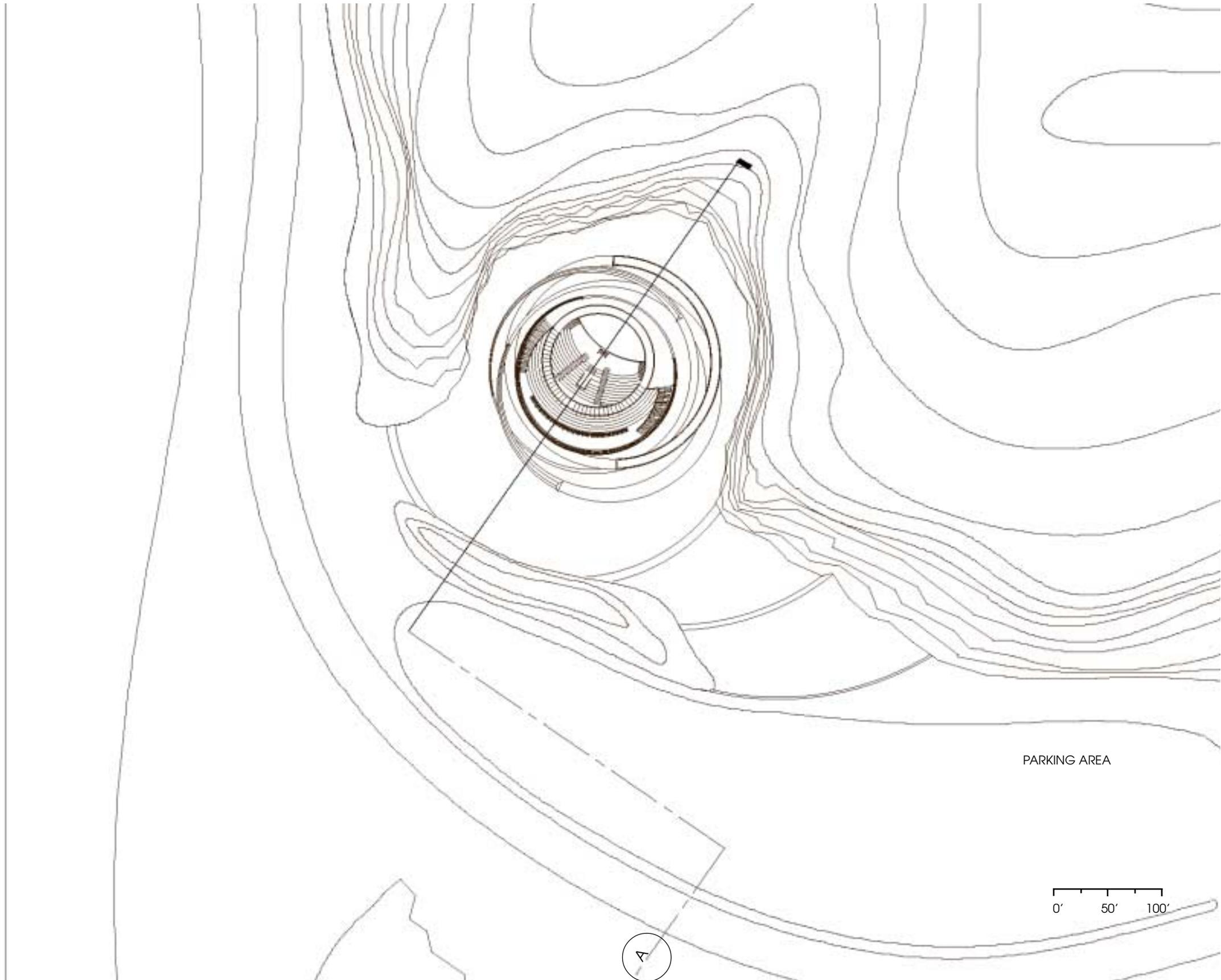
Rebirth of a Rock:
Pembroke Quarry Amphitheatre



Completed site



Site Plan

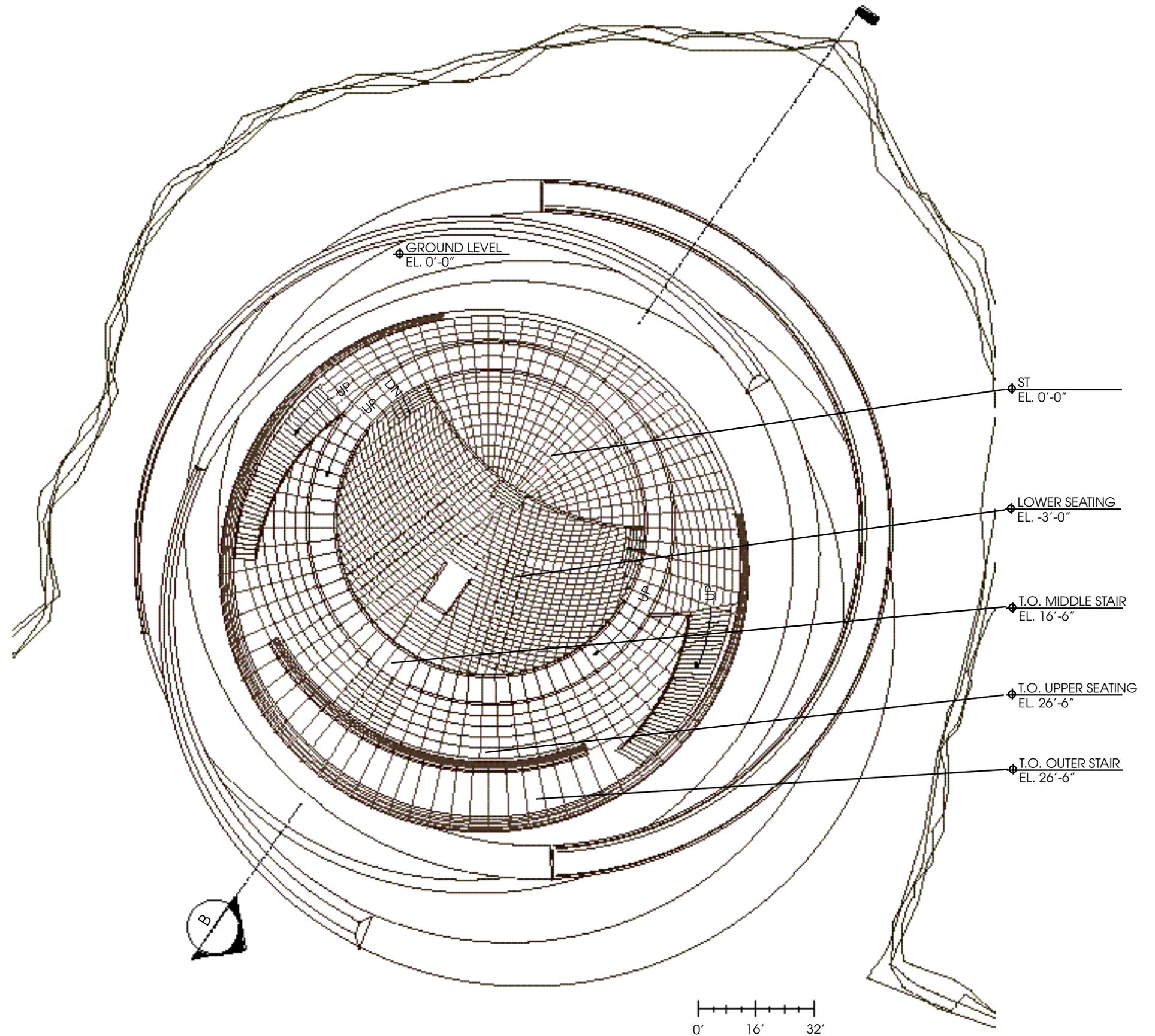


PARKING AREA

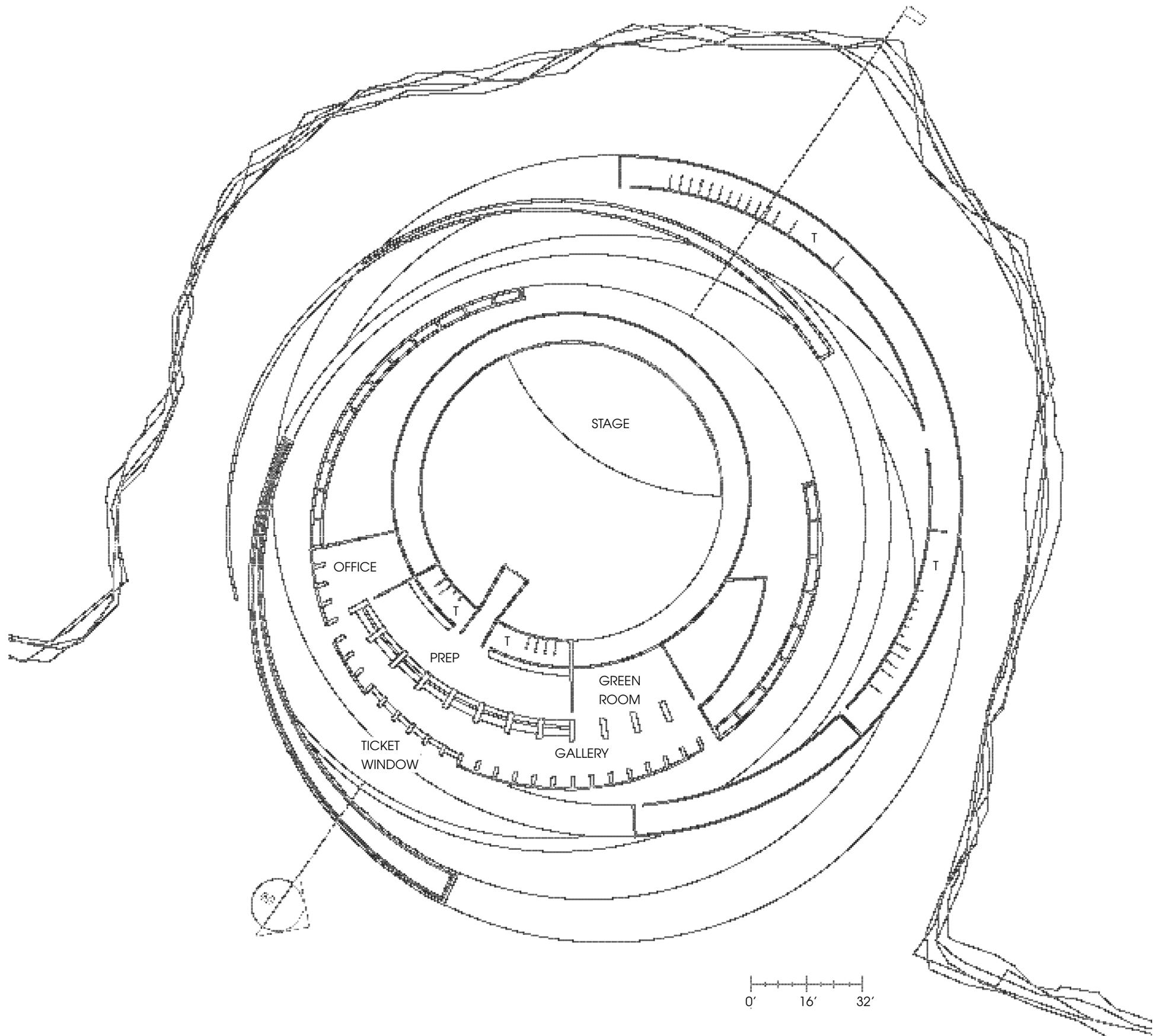
0' 50' 100'

A

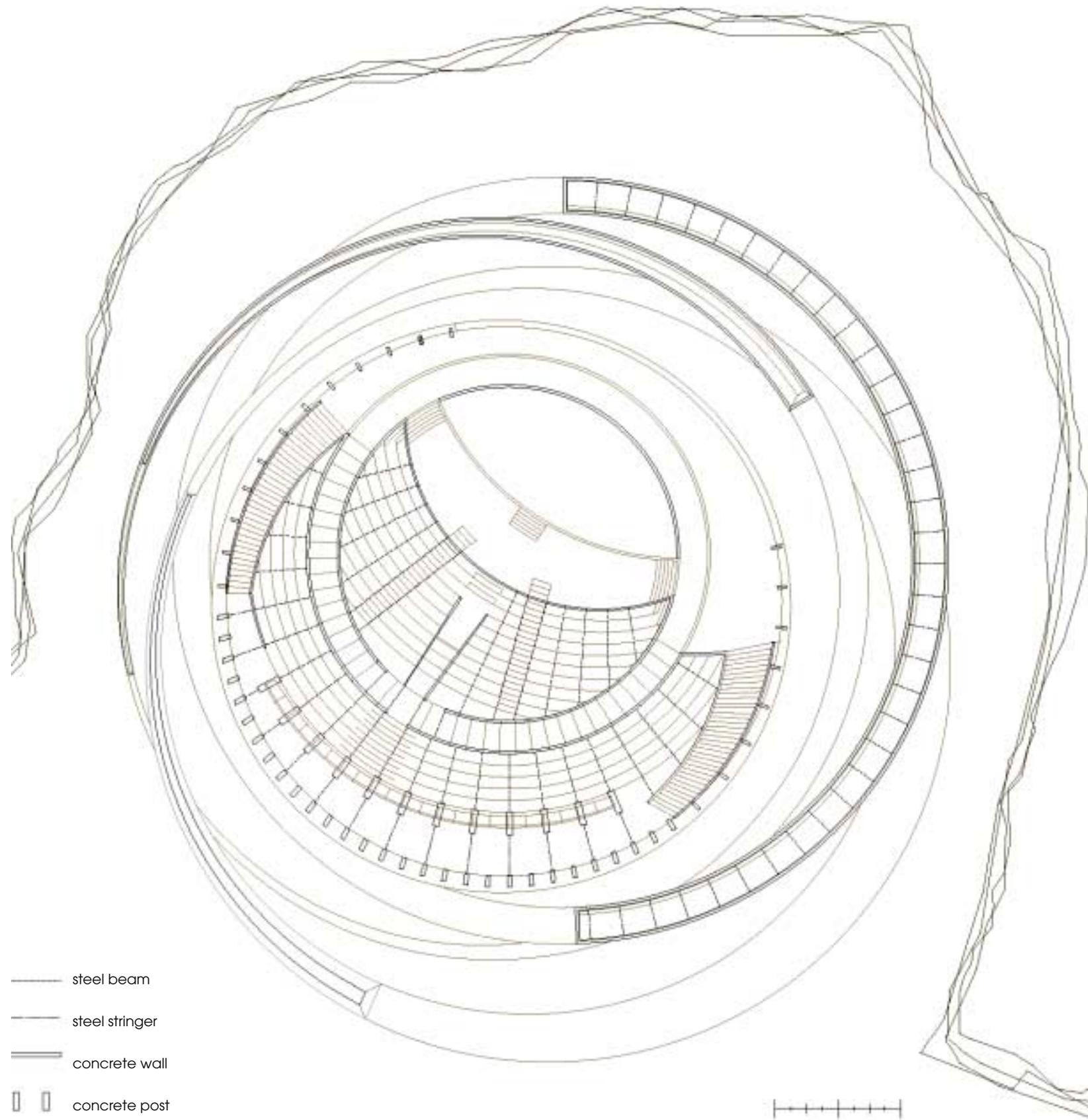
Seating Plan



Floor Plan



Structural Layout

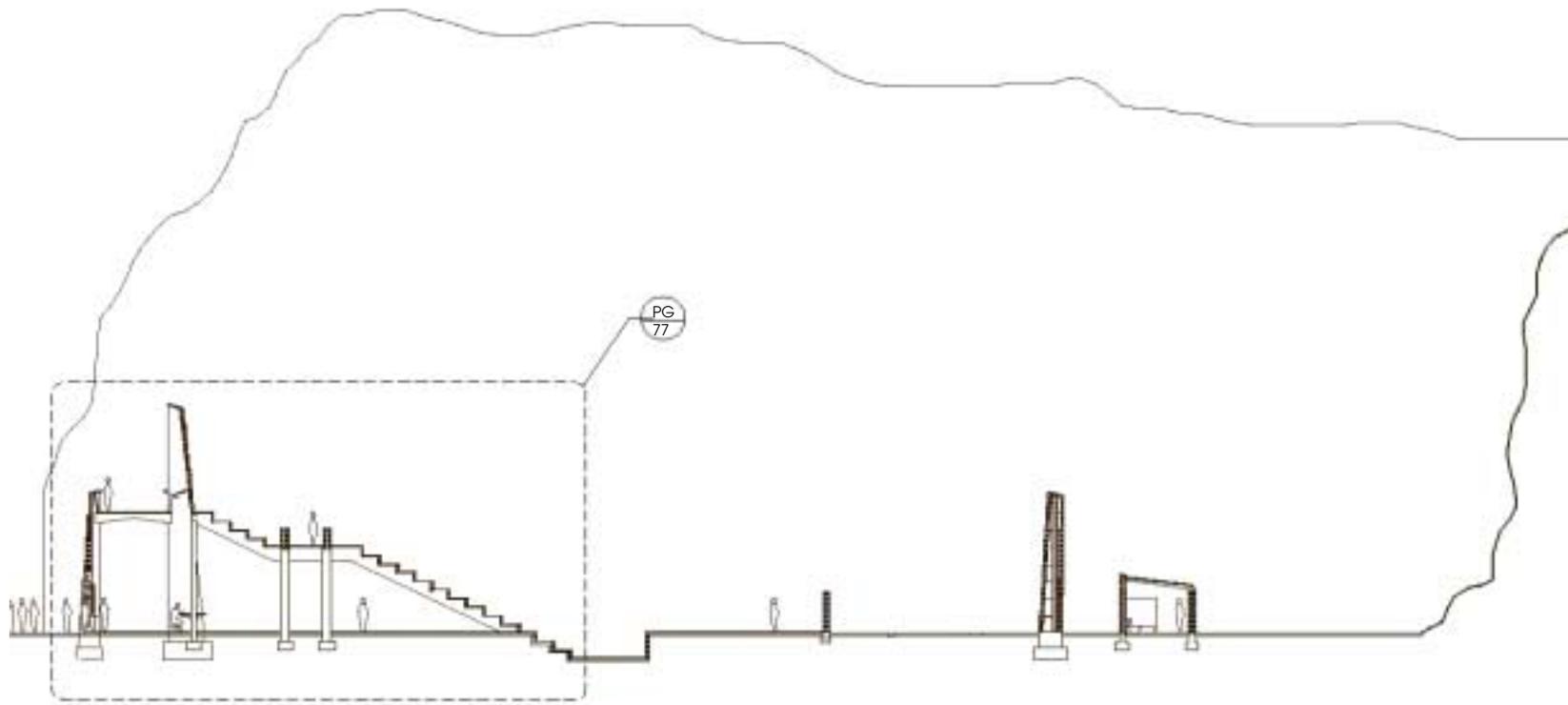


Site Section

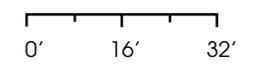


0' 50' 100'

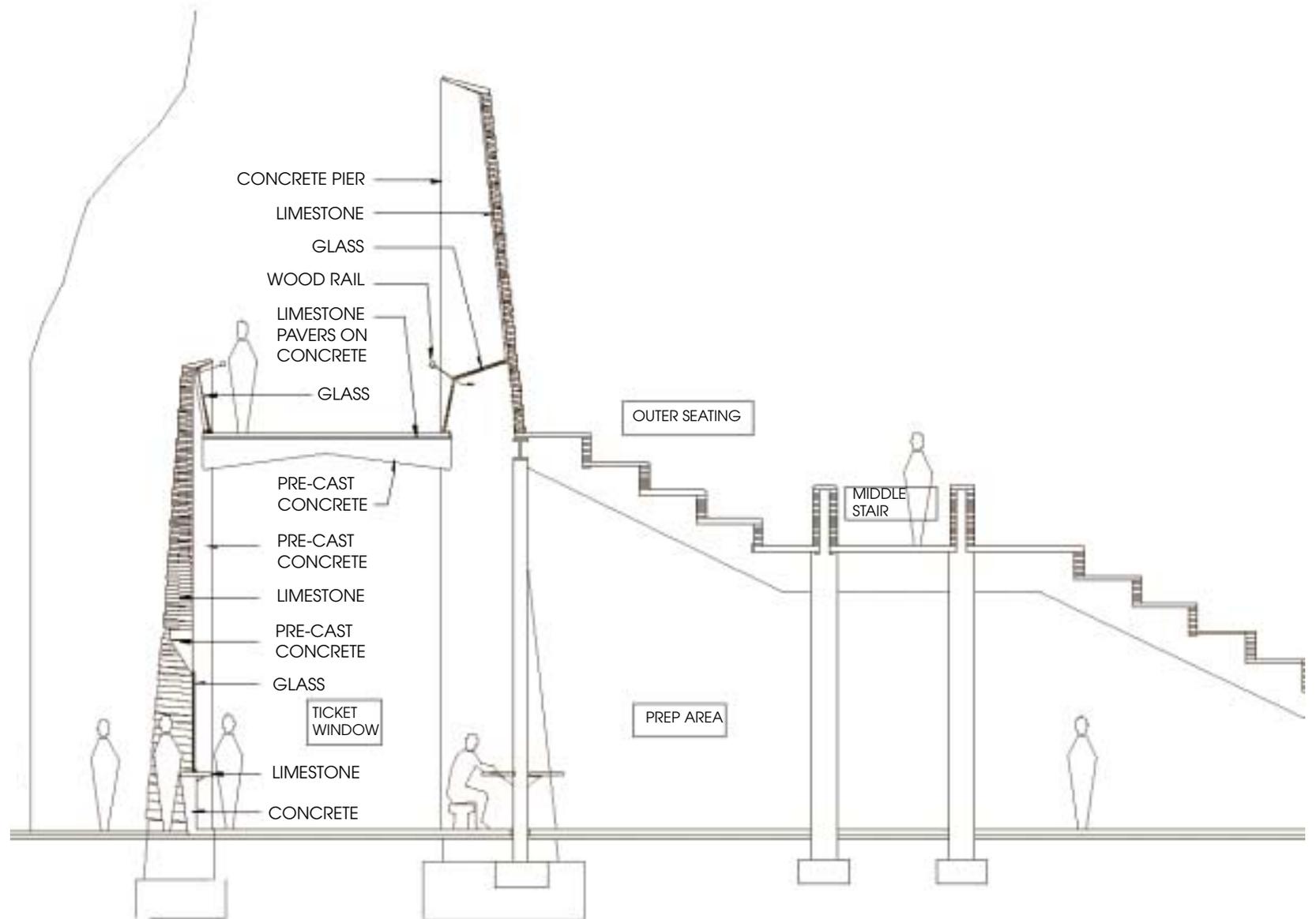
Building Section



SECTION B
1" = 32'

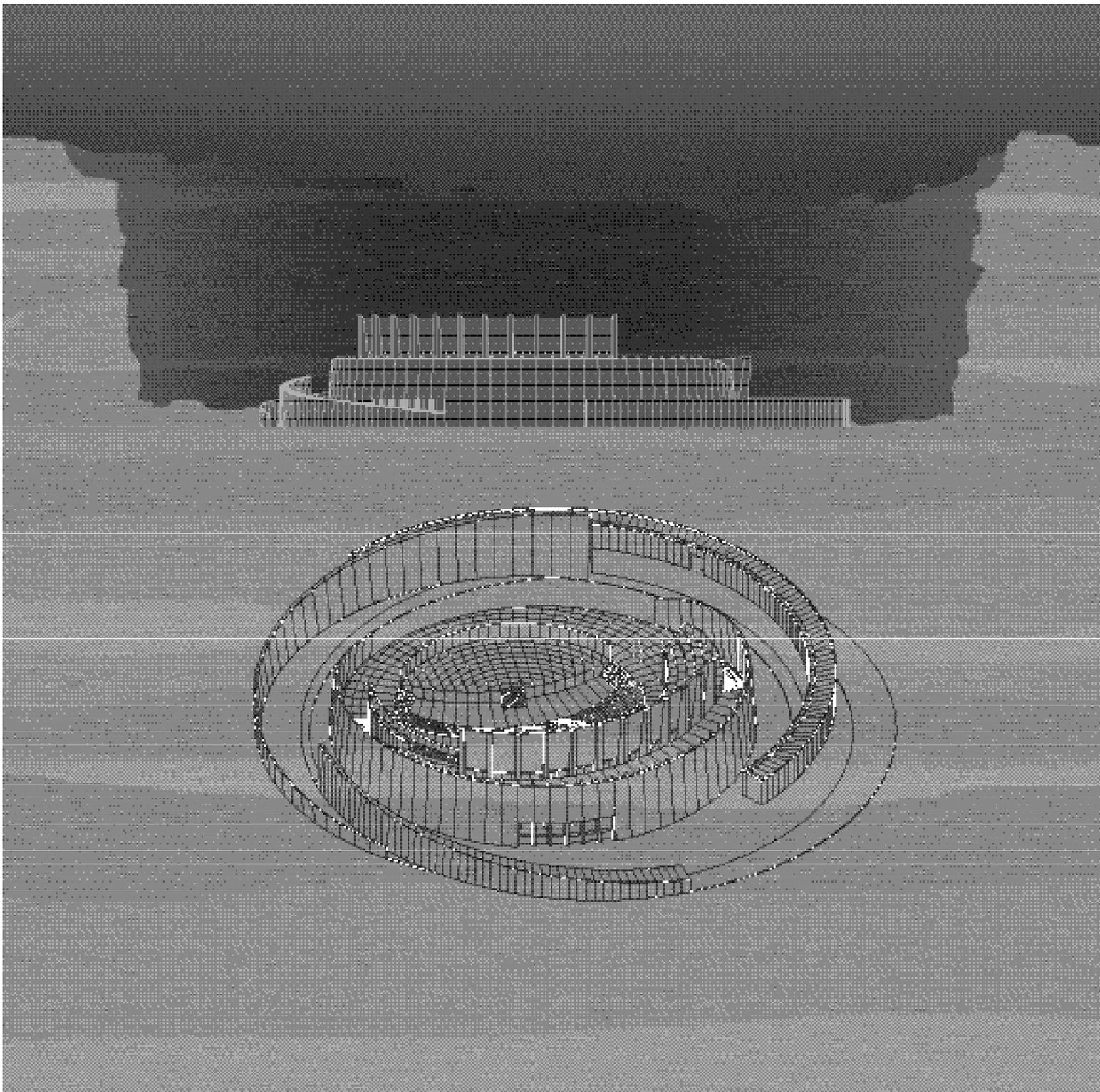


Section Detail

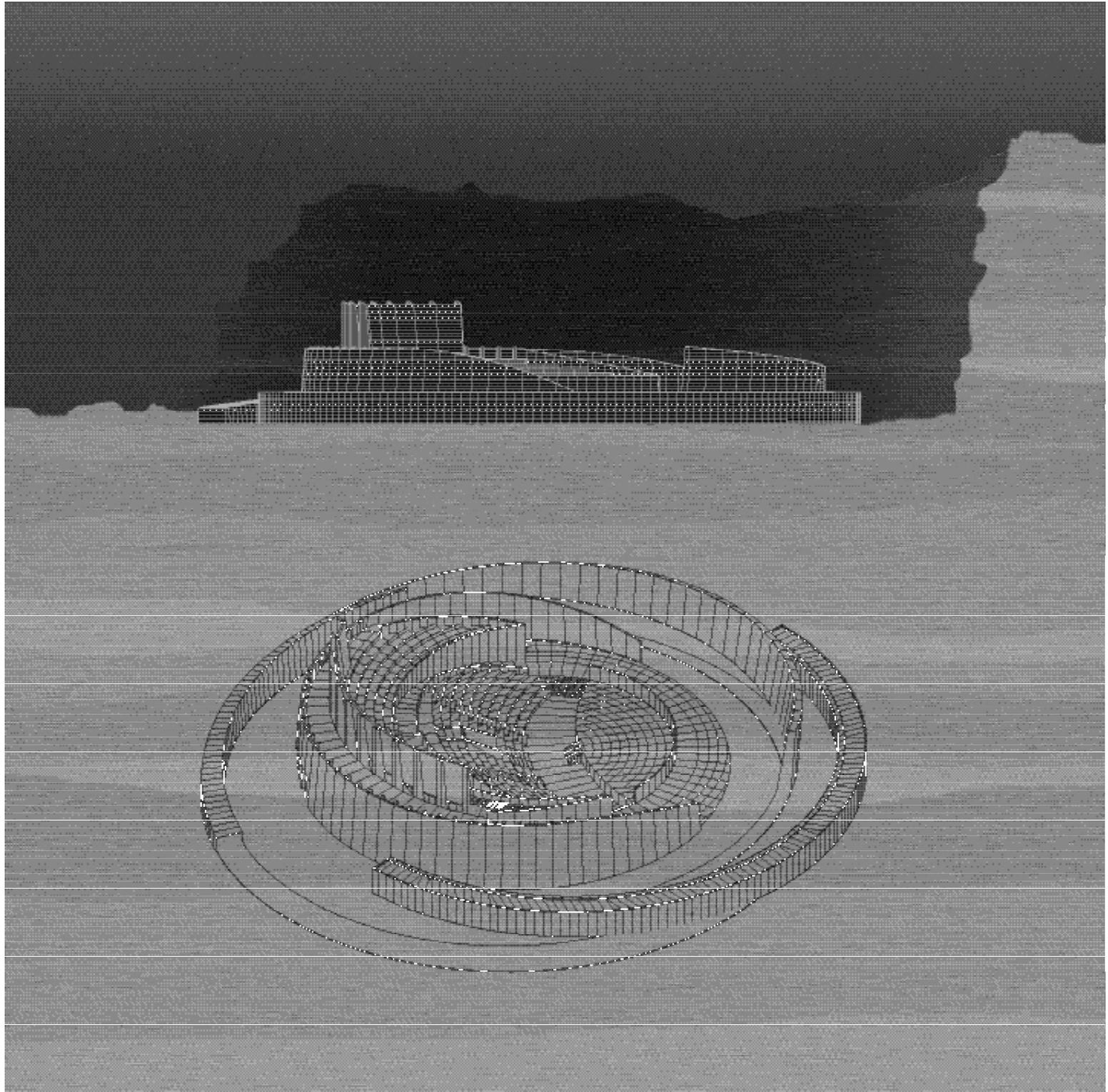


0' 4' 8'

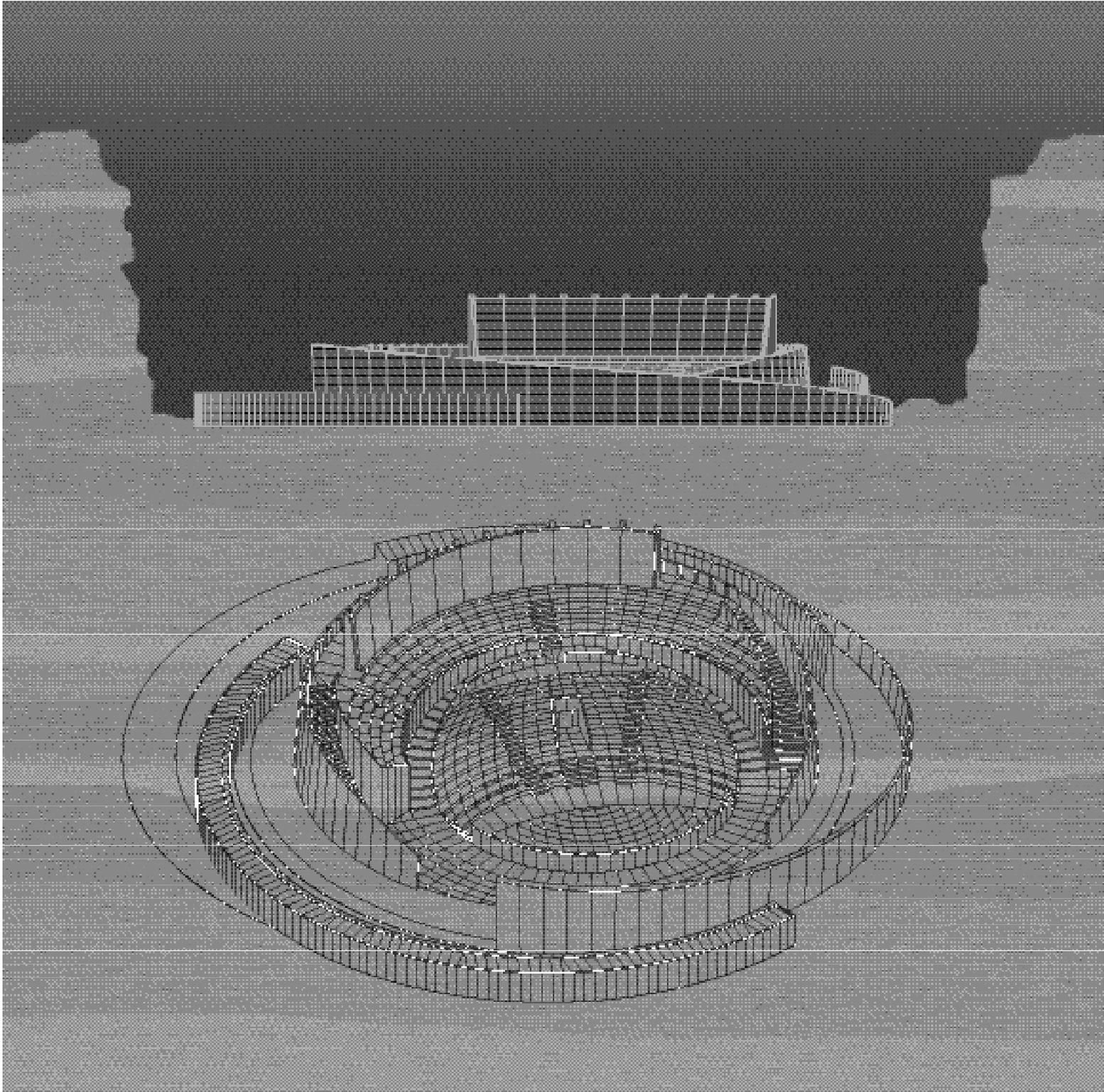
South Elevation



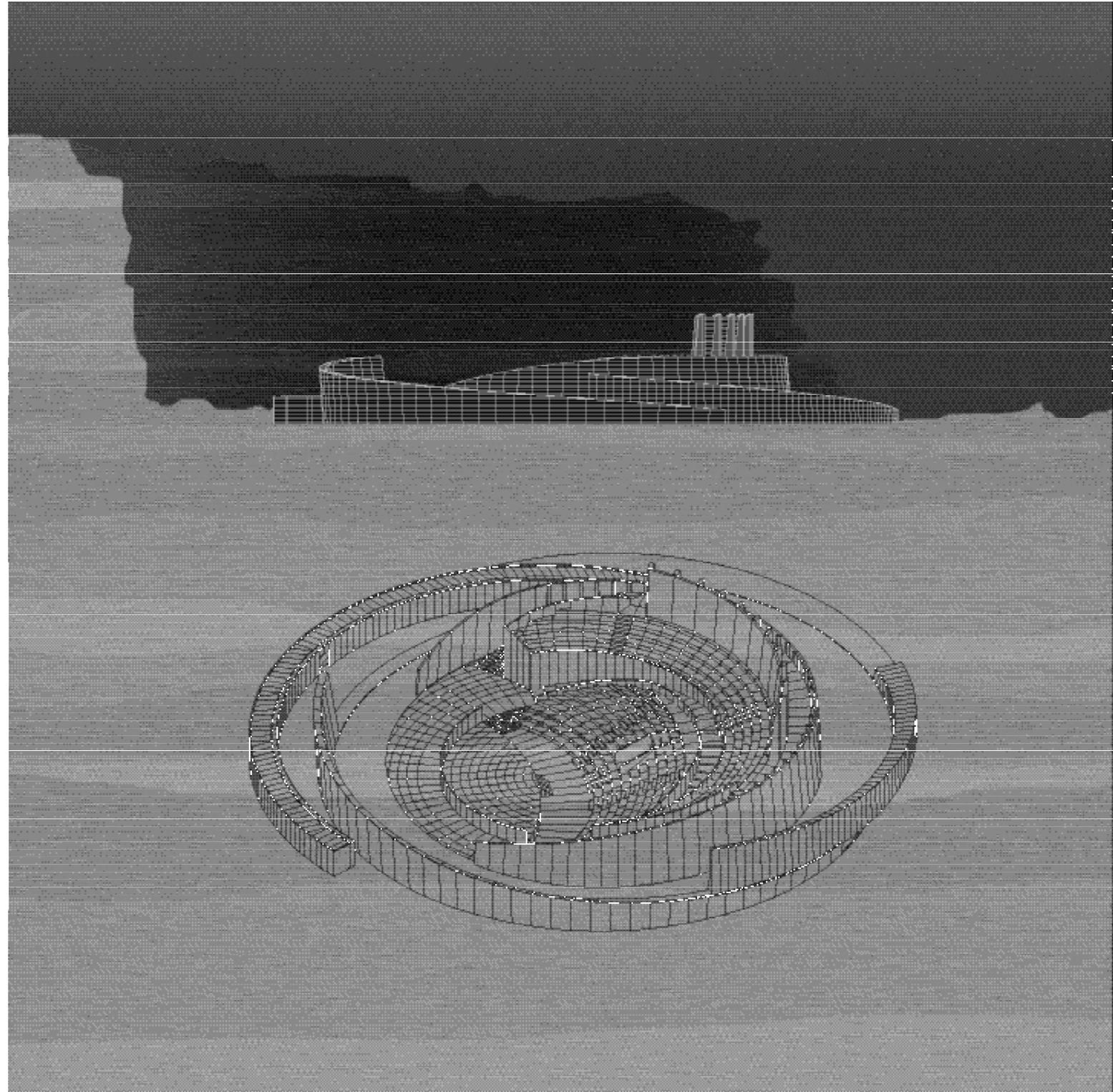
East Elevation



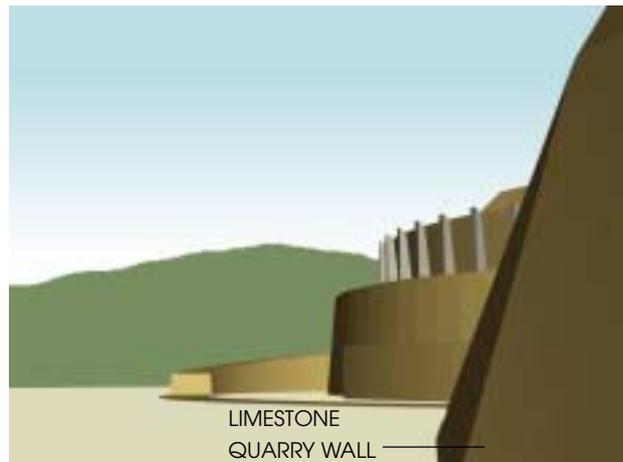
North Elevation



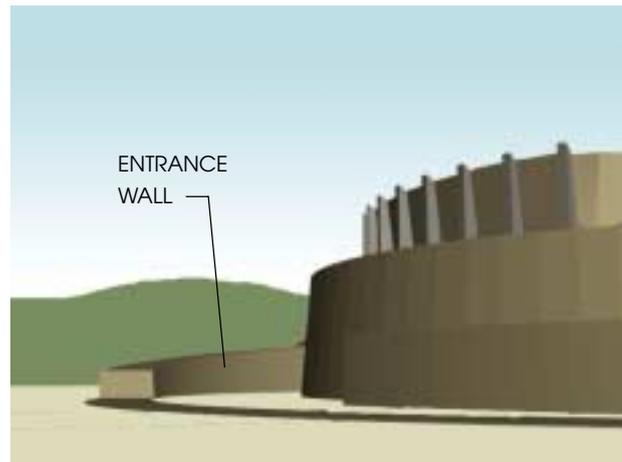
West Elevation



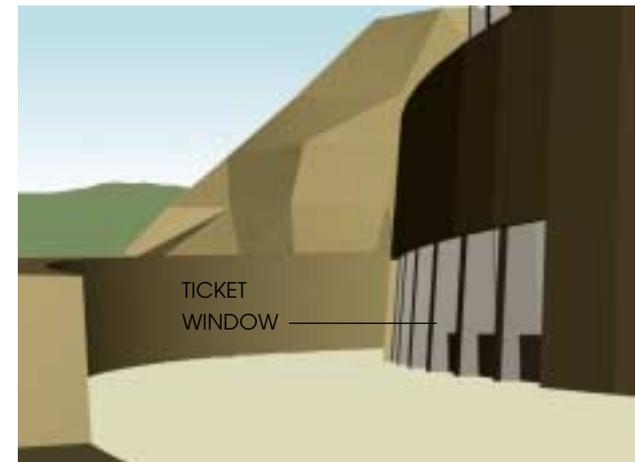
Following are a series of perspectives illustrating the sequence of experiences one would encounter while walking through the amphitheatre. The plan at the right traces the line of travel that will be taken.



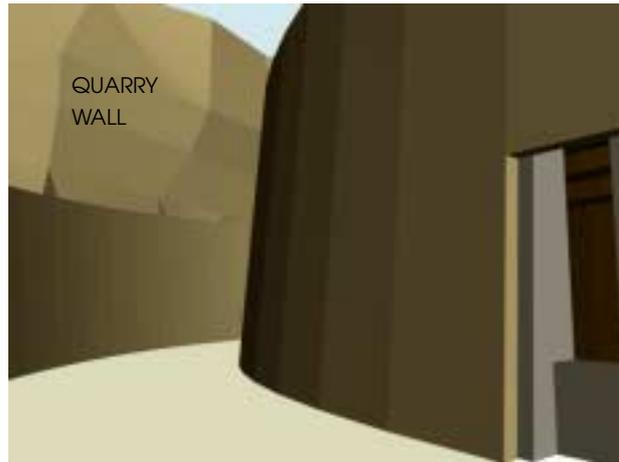
From the approach to the amphitheatre from the parking area, just a portion of the structure extends beyond the wall of the mountain.



Coming into the closure of the structure, the front of the building blocks the view of the quarry wall behind. A single curving entrance wall reaches out as if to draw the visitor in.



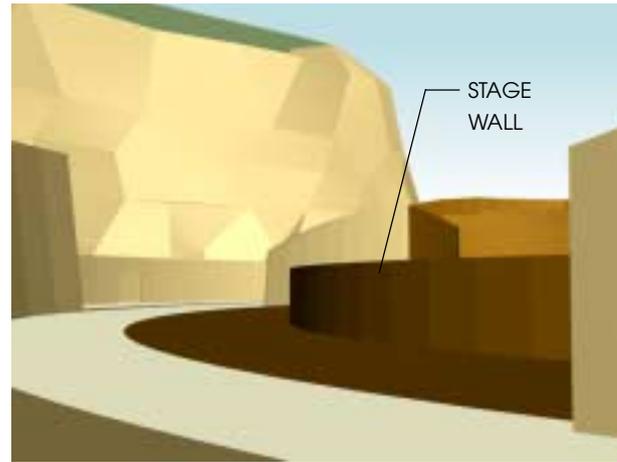
The entrance wall starts at five feet high and gradually rises as it continues around the curve of the building. The ticket window to the right exposes the concrete structure that supports the limestone skin.



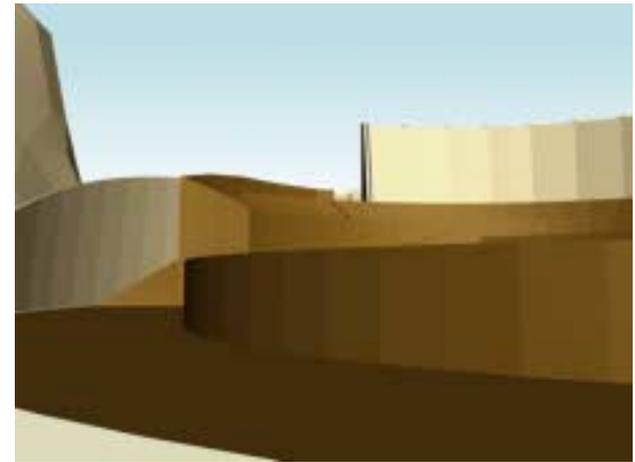
Past the ticket window, the entrance wall rises at the left. The wall to the right concurrently descends and a portion of the actual quarry wall is revealed.

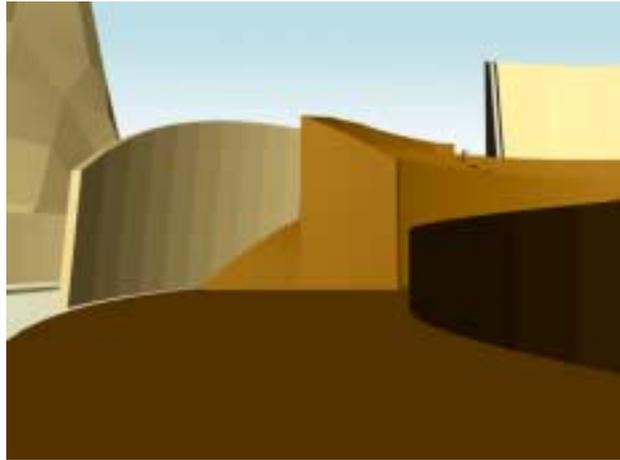


At the termination of the wall to the right, there is a change in the ground material. A brownstone surface marks the presence of an inner core.

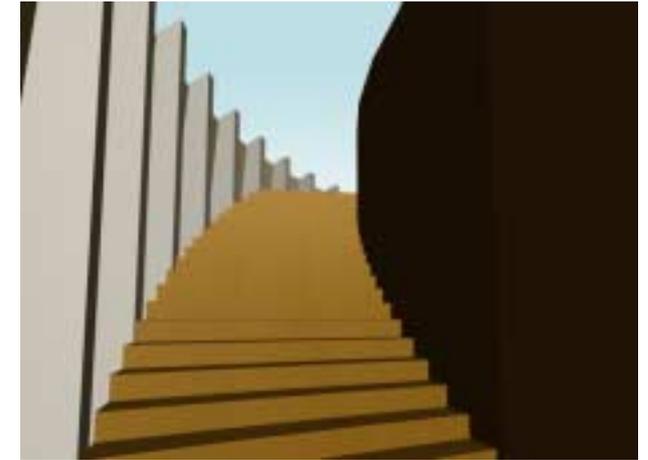
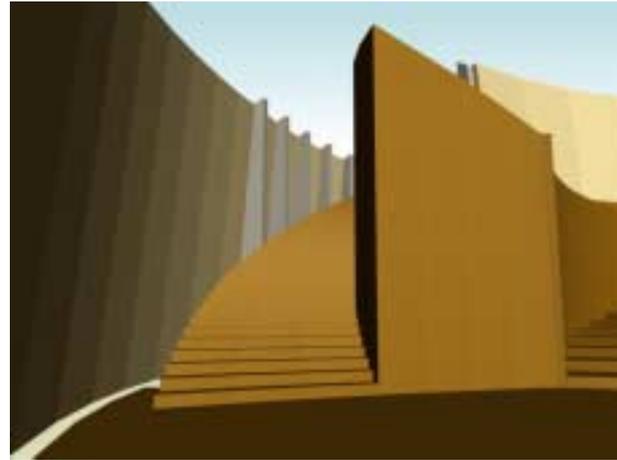


At this point, the visitor can either turn to the right and enter the seating area or continue behind the stage backdrop wall.

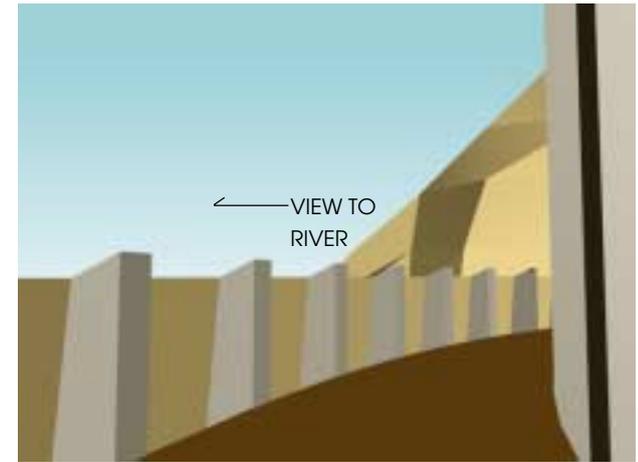
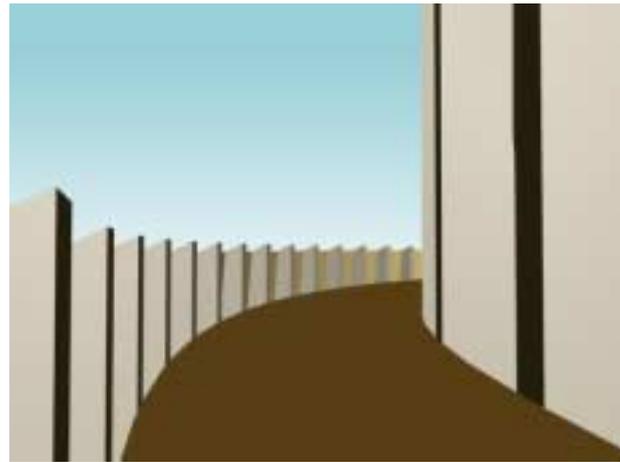




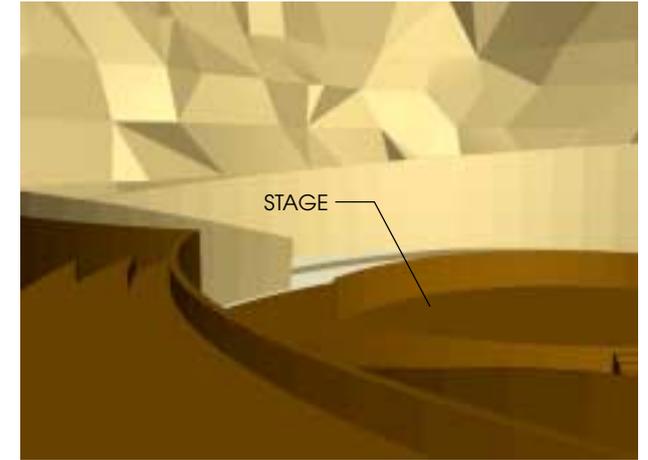
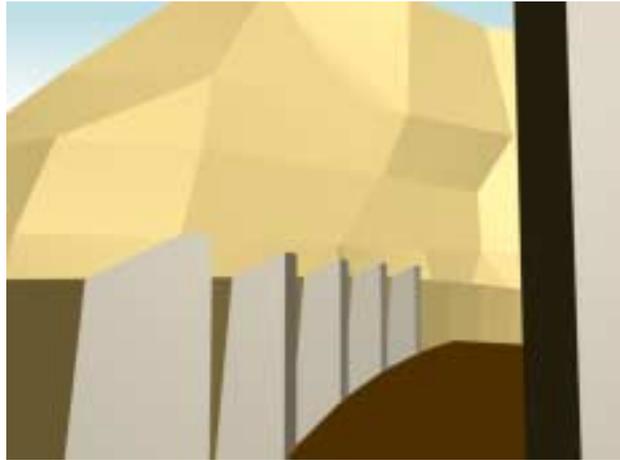
At the other end of the stage, a stair leads behind the seating area up to a lookout with a view to the New River and the surrounding mountains.



Along these stairs, the concrete columns that were presented at the ticket window show themselves once again.



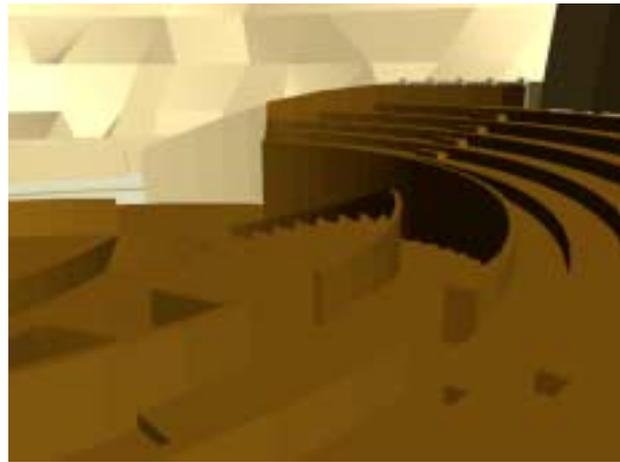
At the crest of the stairs, the river comes into view. The largest wall of the amphitheatre is directly to right of this lookout, blocking out much of the sound and activity occurring on the other side.



Continuing in the same direction, the large wall ends and there is a choice to descend another set of stairs or turn the corner and re-enter the amphitheatre from the top of the seating area.



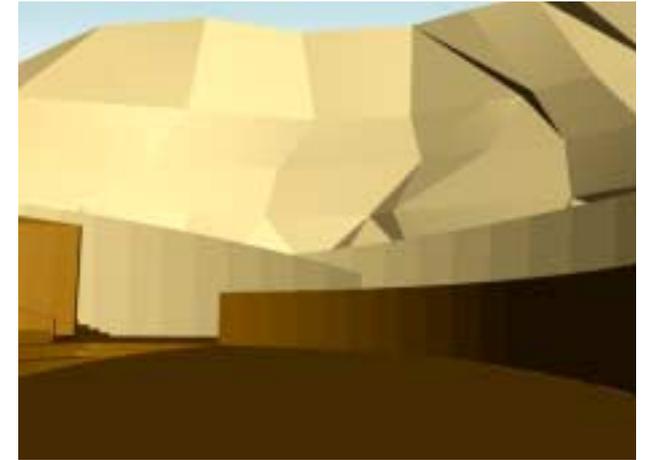
From this vantage point, the constructed walls of the amphitheatre are now much lower in perspective. The massive quarry wall becomes the perimeter wall of this room, while the constructed walls are undulations in the floor.



Descending another set of stairs, the constructed walls begin to conceal the lower portions of the mountain rock beyond.



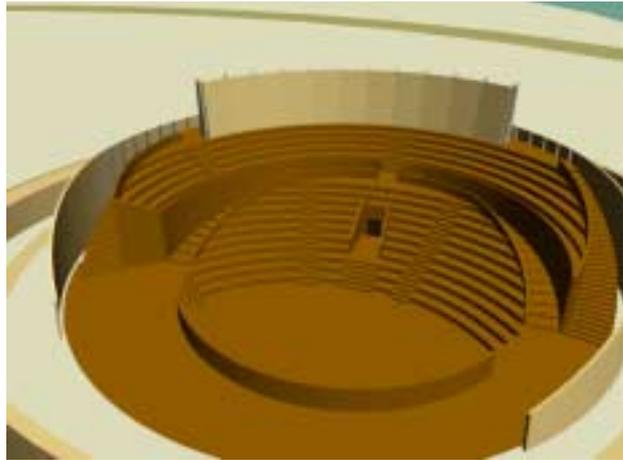
The stairs within the seating area follow the curves of the room, creating a fluid movement throughout the space.



The stage area is actually at existing ground level, with a small portion of ground in front depressed into the earth.



The portion of the amphitheatre that faces the mountain reveals the brownstone core. In the center of the seating area is the threshold where the performers emerge and make their way to the stage.



View showing quarry, amphitheatre, road, New River and surrounding mountains.



The sound of the music that would be played at the Pembroke Quarry Amphitheater would be unique in that the wall of the mountain would be an instrument itself. Music would be transformed when played in the quarry as the waves of sound resonate throughout the room. This place would demand an approach to music that allows for free flowing improvisation, where the musician listens to how the rock walls contribute to the piece. It is through the amphitheater that man and mountain speak.

Photo Credits:

The first photo in the introduction (pg 9) was taken from The National Audobon Society Pocket Guide to Familiar Rocks And Minerals of North America, Random House, 1988.

The remaining eight photos in the introduction (pp 11-25) were taken from These Rare Lands: Images of America's National Parks, New York, Simon & Schuster Editions, 1997. The photographer is Stan Jorstad.



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