

A POLITICAL LANDSCAPE:
INSERTIONS INTO THE
HIGHLAND VALLEY
COPPER MINE

by

MARTIN H. NIELSEN

B.A.Sc., The University of British Columbia, 1986

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MASTER OF ARCHITECTURE

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THE FACULTY OF GRADUATE STUDIES

School of Architecture

We accept this thesis as conforming to the required standard

THE UNIVERSITY OF BRITISH COLUMBIA

May 1996

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School
Department of Architecture

The University of British Columbia
Vancouver, Canada

Date May 13 1996

ABSTRACT

The natural landscape of the Highland Valley site has been permanently altered by open-pit mining activity that has taken place over the last 25 years. The current reclamation project (the result of Government legislation) is essentially a continuation of the man-made intervention that began when the mine first opened - at best an attempt to manicure or cover up the damage that has taken place and at worst a denial of the impact of open pit mining.

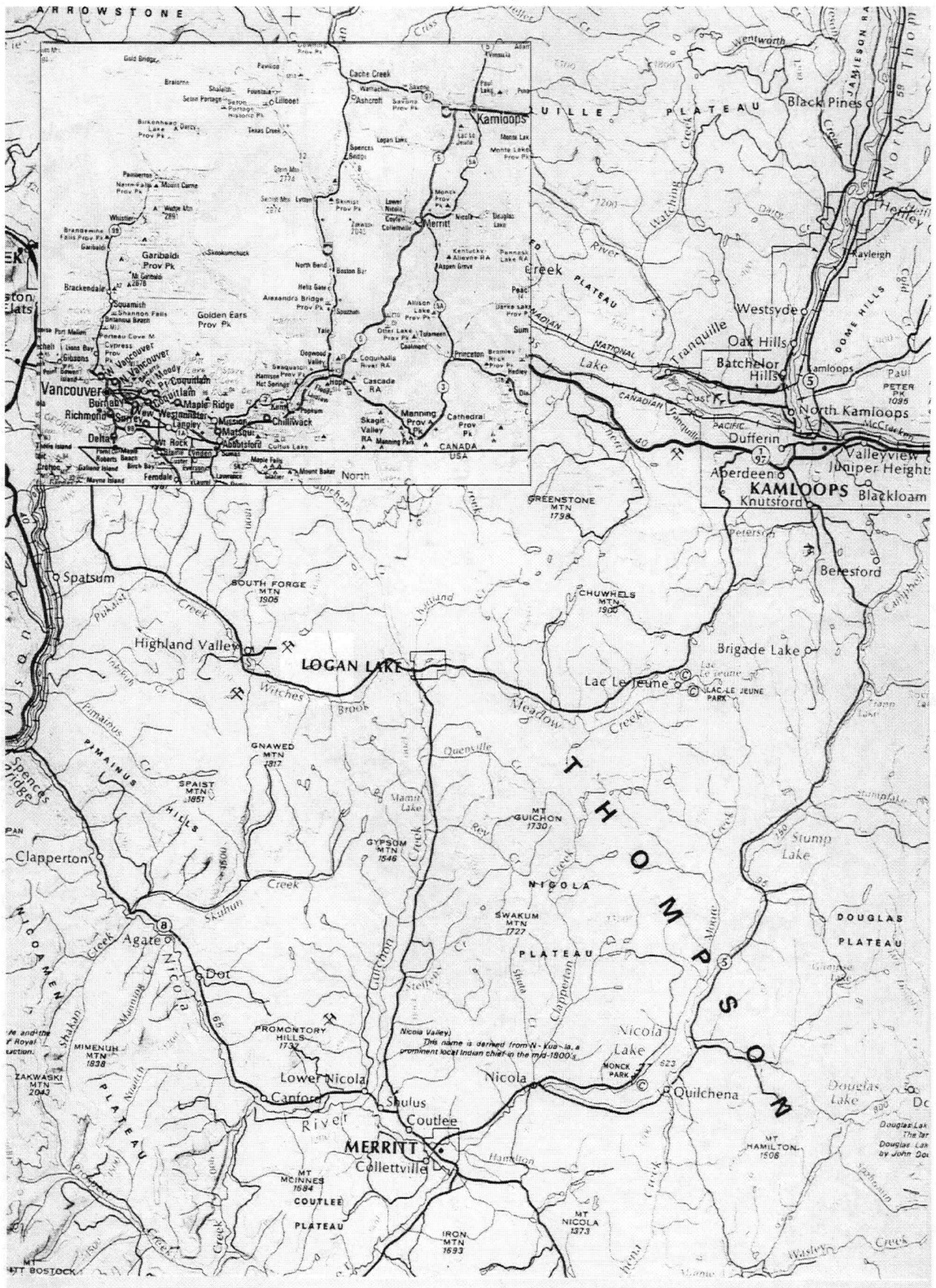
Although the mine is expected to have a remaining productive life of 20 years, a significant portion of the mine will become inactive within 3 years. This proposal intends to leave the abandoned areas essentially intact without significantly altering the existing terrain - counter to traditional reclamation methods that attempt to 'return the land'. It will then stand as both an example of what open pit mining entails and as a large scale ecological laboratory for scientists to study nature's own reclamation process. Furthermore, the deserted landscape will continue to benefit society as an educational and recreational area where direct experience of a controversial landscape would lead to a more balanced view of the issues that surround mining and natural resource exploitation.

The agenda for the site involves a series of insertions that, in part, provide for the direct experience and understanding of the mine landscape and the physical process that it underwent. Direct site experience will promote a more informed critique of the issues surrounding mining at both a local and global context by focusing on two diametrical narratives: the man-made process that shaped the site and the natural process that follows. The landscape is further reclaimed by the provision of facilities that support recreational activities such as fishing, hiking and mountain biking in summer and cross-country skiing in winter. The aims of encouraging tourism on the site is to draw a connection between society and nature, to expose the issues of the site to a broader audience, and, in particular to bear witness to the consequences of society's dependence on mineral resources.

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AREA MAP - SOUTHERN INTERIOR



SITE MAP - Scale 1:25000



PROGRAM

The program for the Highland Valley mine site is intended as a sequence of events that heighten the experience of the site and further lead to an understanding of the physical narrative that is taking place. A series of six local sites or nodes have been situated in specific types of landscapes that are part of or a result of mining activity on the site. These nodes, which have been placed in relation to active and inactive areas, attempt to expose, honour or mark the process of destruction and repair.

The process node is located in a waste dump that overlooks both the active pit and the mill that processes the extracted ore. This insertion provides a viewing platform and an exhibit area that relates to the mining process. By its very location, the structure draws attention to the staggering volume of raw material required and the resultant waste material generated in the production of refined copper.

The blasting node comprises a control station and public viewing platform. The elevated platform allows views both into the active pit and an overlook to the natural forest behind. Its location on the edge of the active pit wall provides a direct experience of the scheduled blasting ritual - an integral part of reordering the site. A series of survey markers indicate the movement of the pit edge as mining activity proceeds over the remaining 20 year life span.

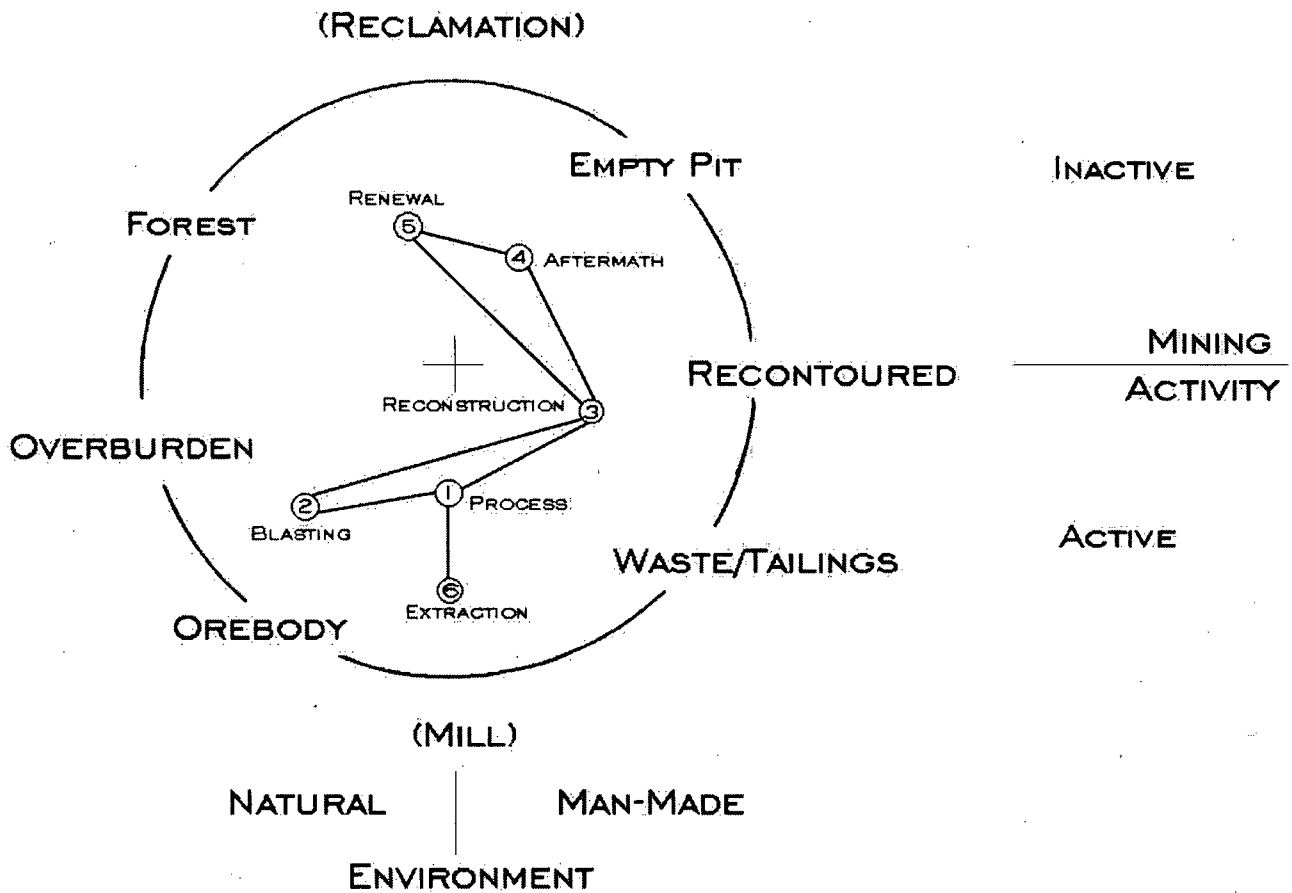
A third node reconstructs elements of the past landscape that existed before mining began on the site. Located at a point midway between the active and inactive pits, it marks the elevation at which the preexisting valley landscape and the terrain of the present topography coincide. Ground-water and surface run-off is collected in a channel that follows the path of the creek that at one time flowed through the original valley - now a reconstructed landscape that is in the process of forced reclamation. At a symbolic confluence of the preexisting and present landscapes the water is forced underground to reappear at the process node.

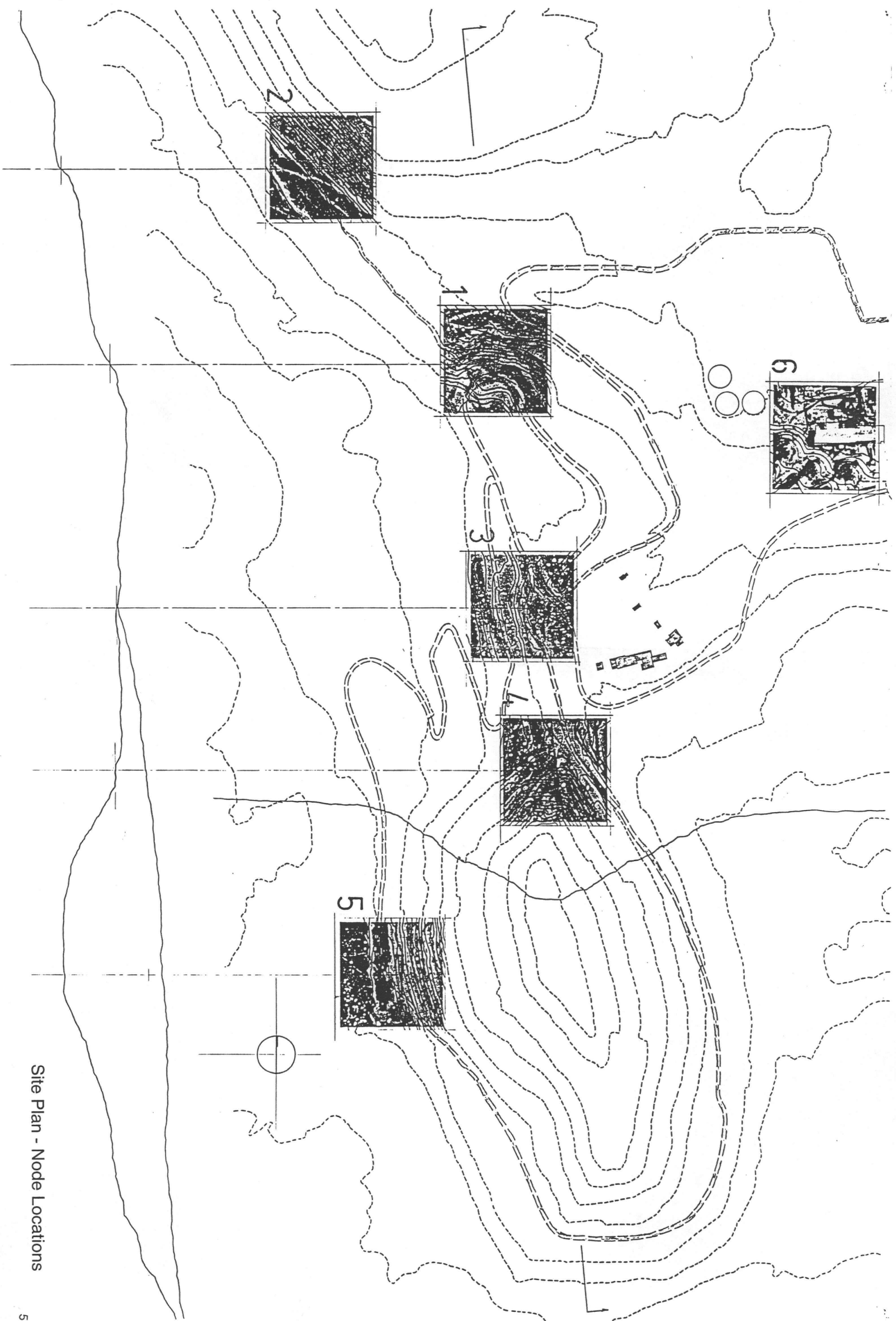
A fourth node connected by the upstream path of the ground-water channel is located at the throat and midpoint of the 400 meter deep inactive pit. A channel built of concrete sections and stacked stone anticipates the eventual overflow of the pit with ground-water and provides passage into the void of the empty pit. Steel ties that restrain the rock walls will over time corrode and allow the channel to fall into ruin.

A fifth node, sited at the highest point of the inactive pit wall, provides views of both the empty pit and the encroaching natural forest that surrounds the site. A built structure will allow access to the pit and will provide restroom facilities for nearby campgrounds and addresses the long term future of the site. The pit edge and the natural forest behind are separated by a pine bosque which has been planted in rows of 5 year age increments gives a visual indication of the time scale for re growth and renewal.

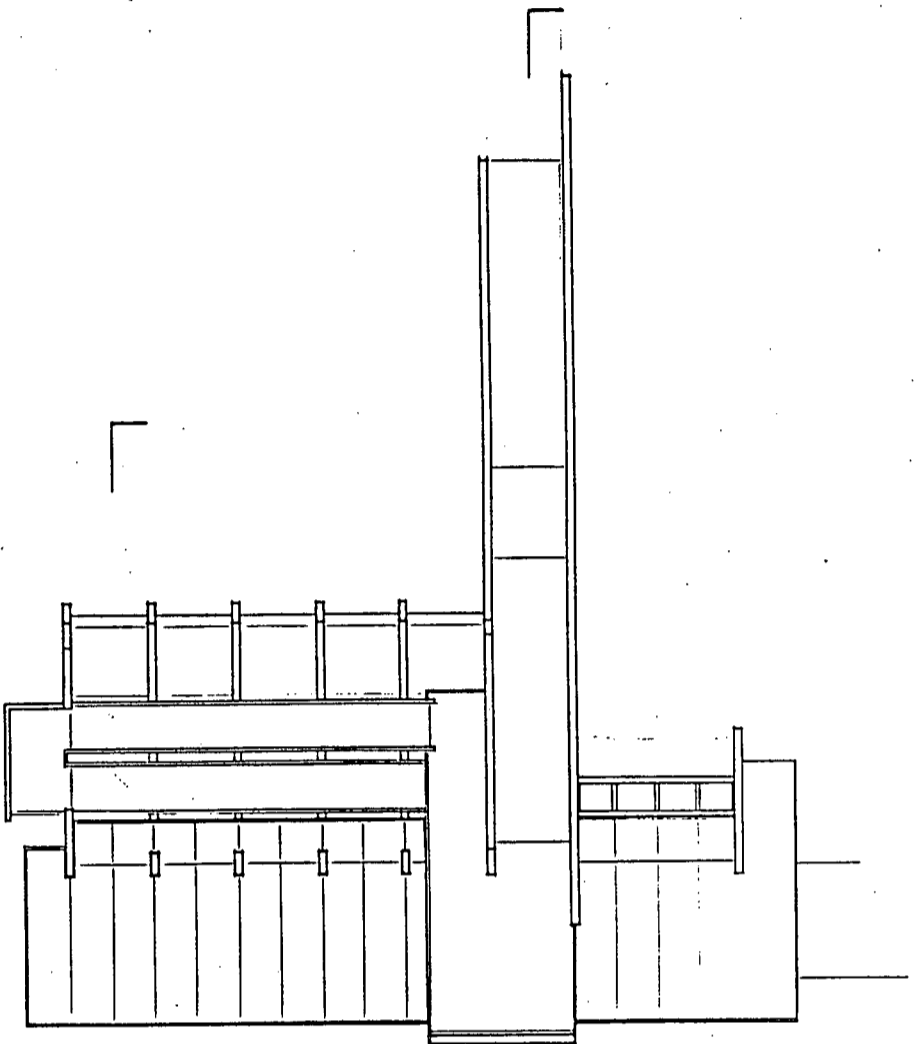
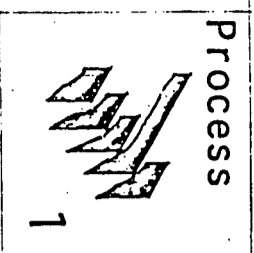
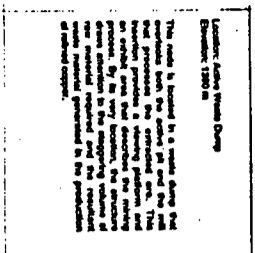
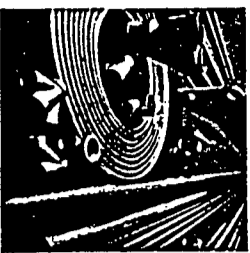
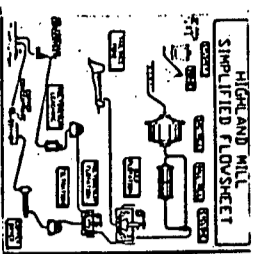
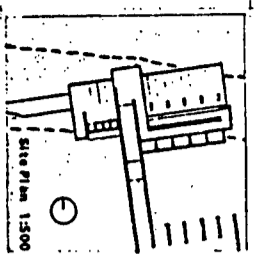
The final node, reached as one exits the site, is the mill where the ore is refined to a copper concentrate that eventually leaves the site. Although this node predates this proposal, and as such, is not a designed intervention, it is integral to the narrative of the site.

SITE TAXONOMY/NODE RELATIONSHIPS

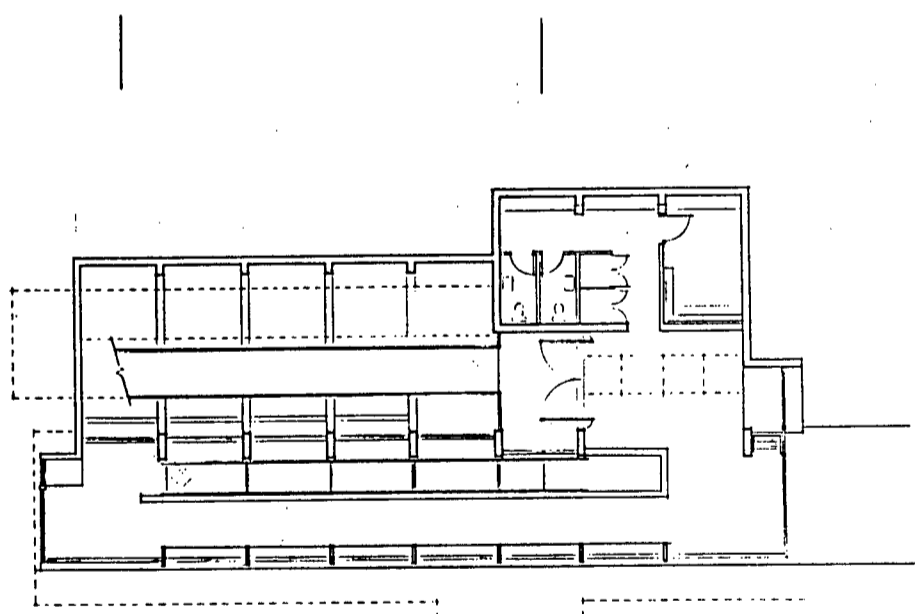




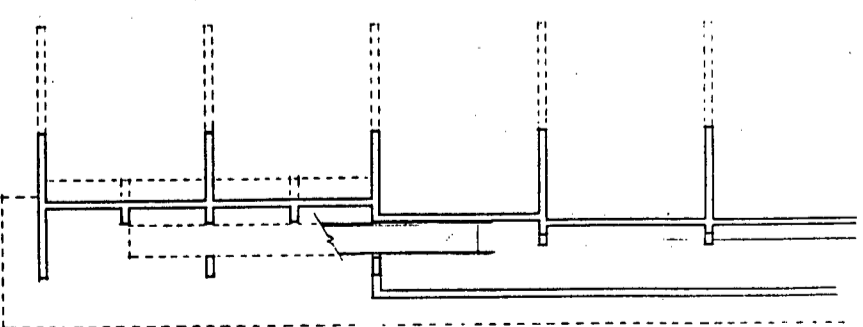
Site Plan - Node Locations



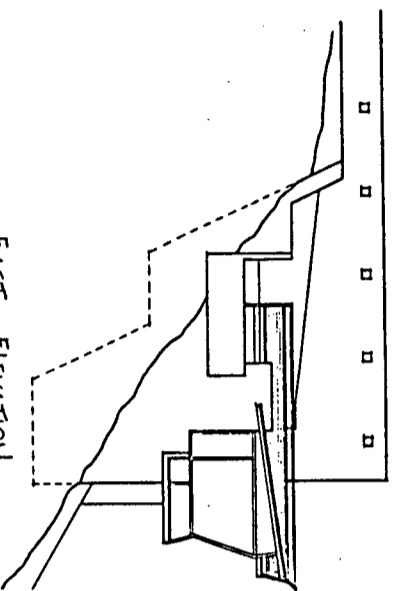
Roof Plan
Scale 1:100



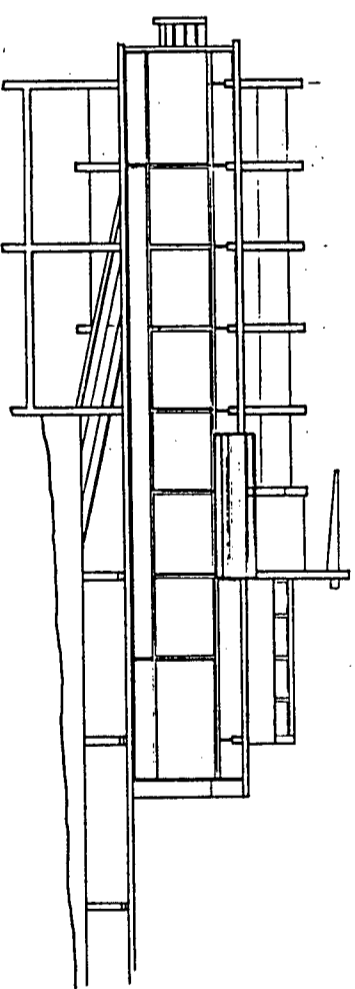
Floor Plan



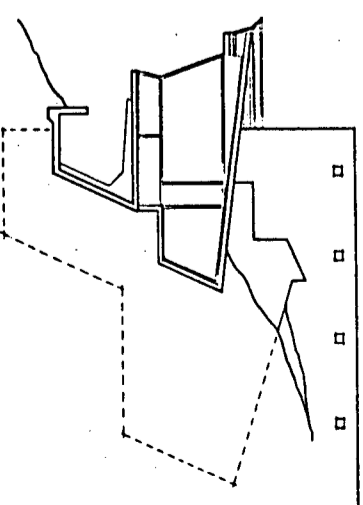
Foundation Plan



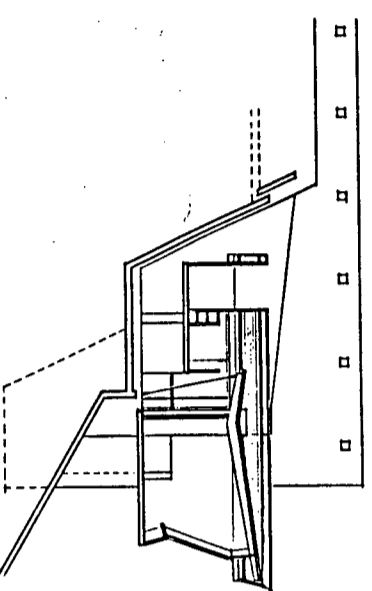
East Elevation
Scale 1:100



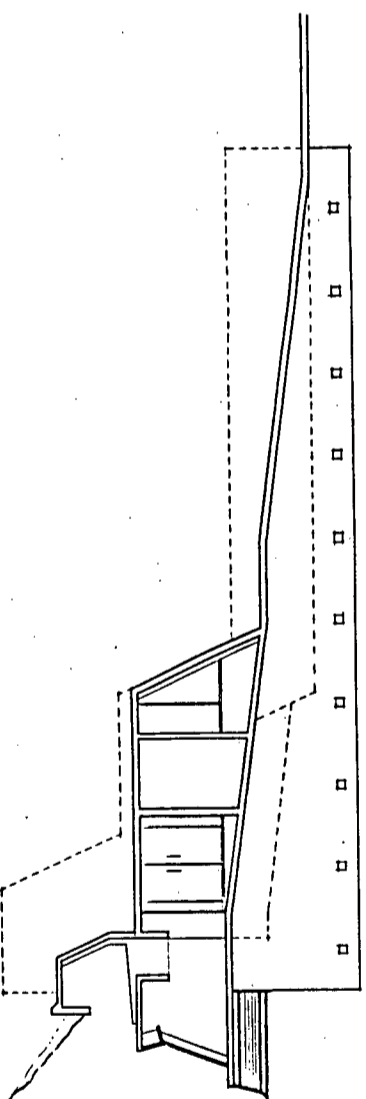
North Elevation



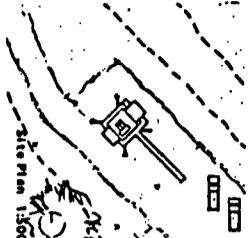
West Elevation



Section A
Scale 1:100



Section B

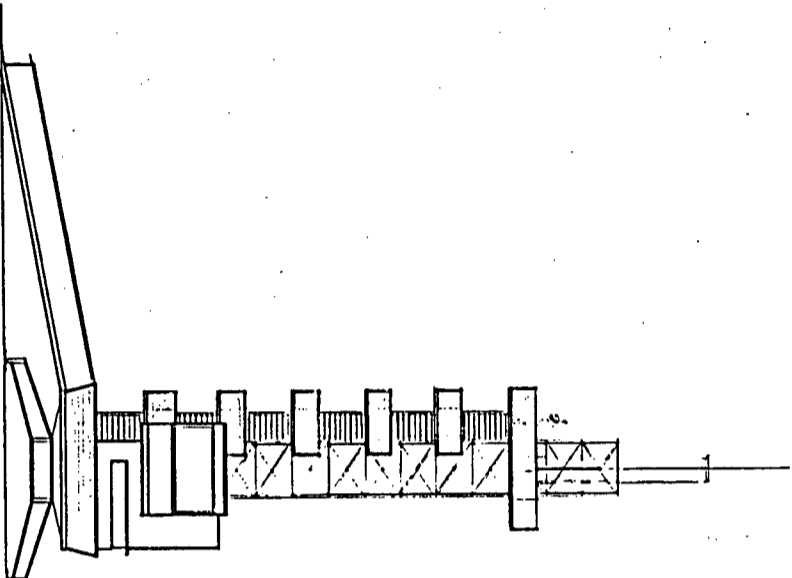
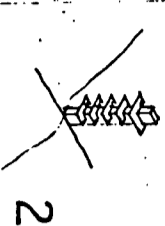


DESCRIPTION
The building is a multi-story structure with a complex internal layout. It features a central core with multiple levels of access and a large open area at the top. The design is modern and functional, with a focus on maximizing space and providing a clear path for movement.

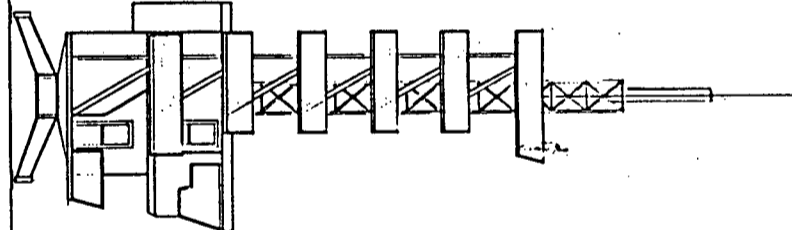


Location: Close to Edge
Distance: 100 ft
The site is located in a remote area, close to the edge of the property. It is surrounded by dense vegetation and is accessible only by a narrow path. The building is designed to blend into the natural environment and provide a unique experience for visitors.

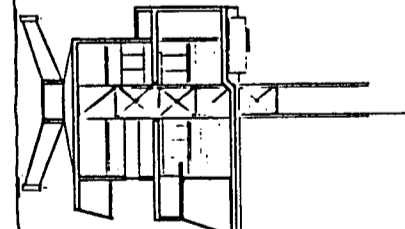
Blasting



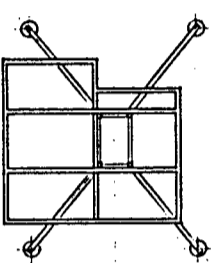
Front Elevation
Scale 1:100



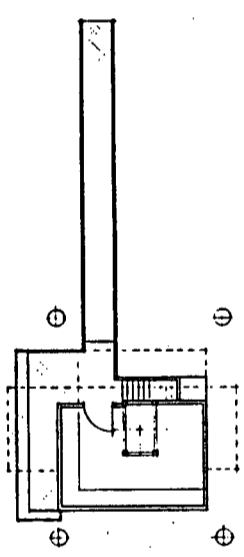
Side Elevation



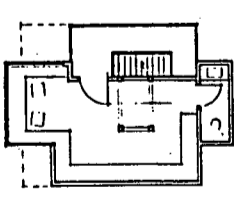
Section



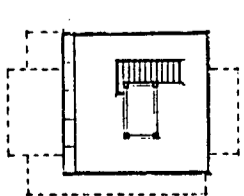
Structural Plan
Scale 1:100



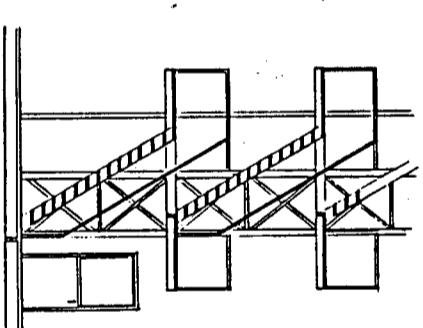
Ground Floor Plan



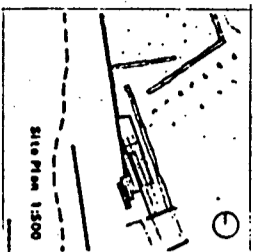
Control Room



Observation Platform

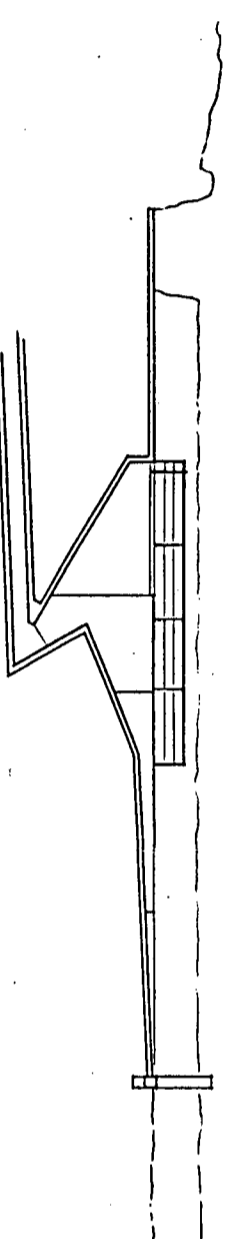
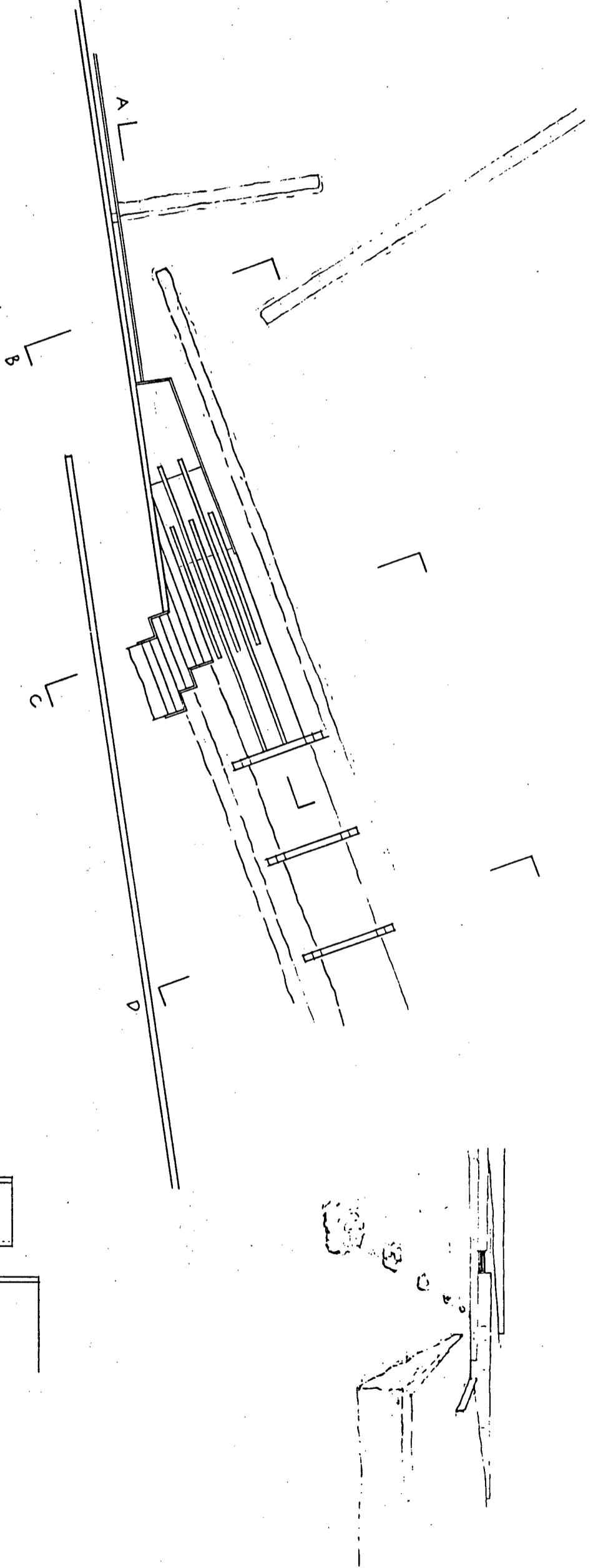
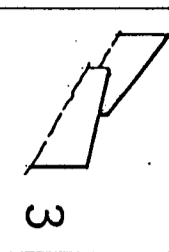


Stair Section
Scale 1:50

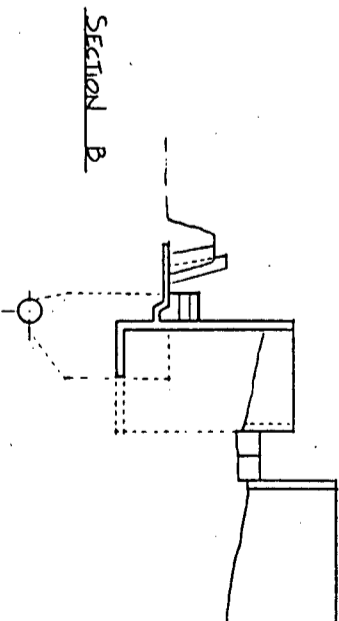


The study, based on a series of aerial photographs, maps, and other documents, was conducted by the author and the staff of the National Park Service, National Historic Landmarks Program, and the National Historic Landmarks Survey. The study was conducted in 1981 and 1982. The study was conducted in 1981 and 1982. The study was conducted in 1981 and 1982.

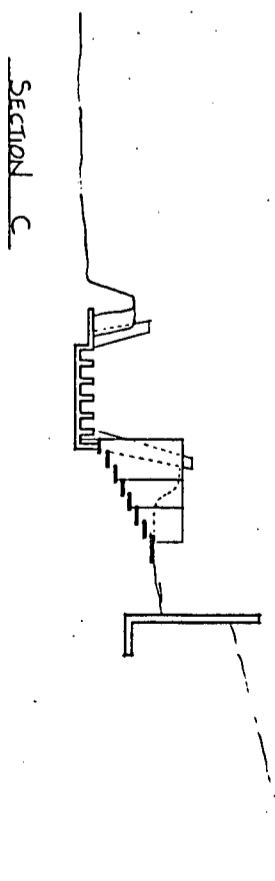
Reconstruction



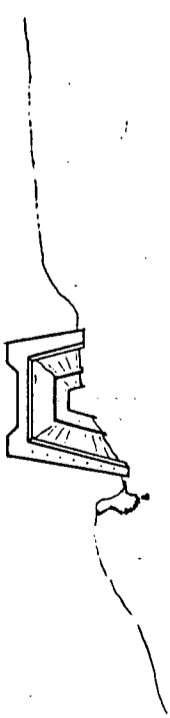
SECTION A
Scale 1:100



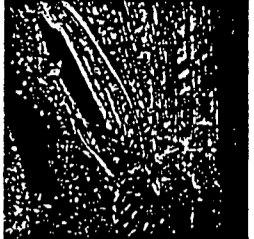
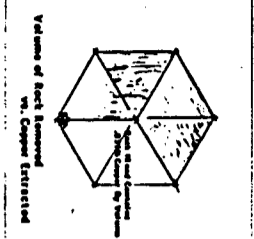
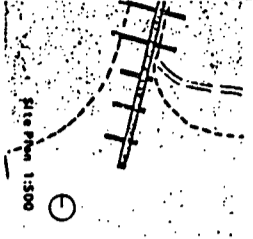
Section B



Section C

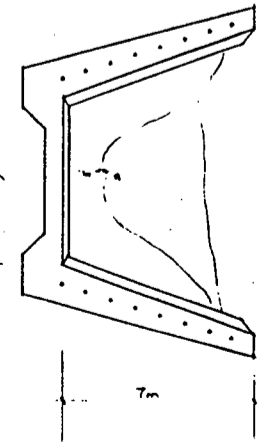
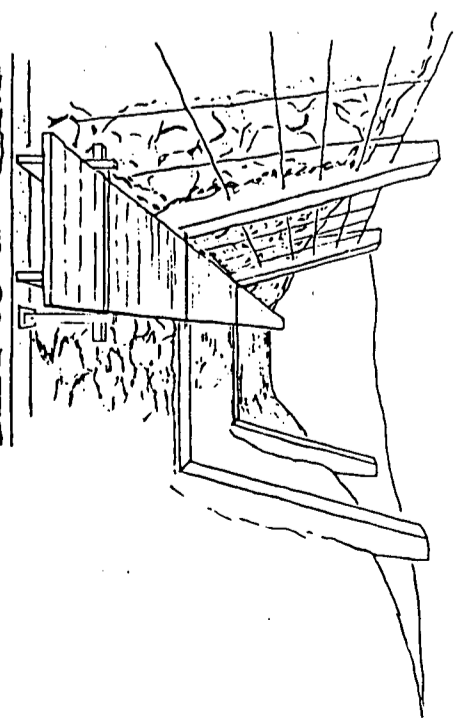
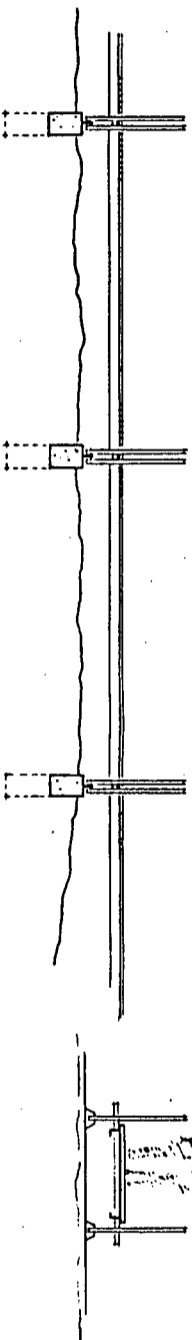
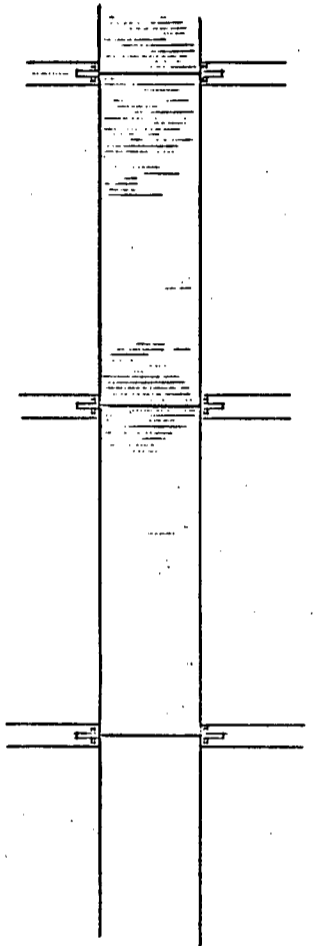
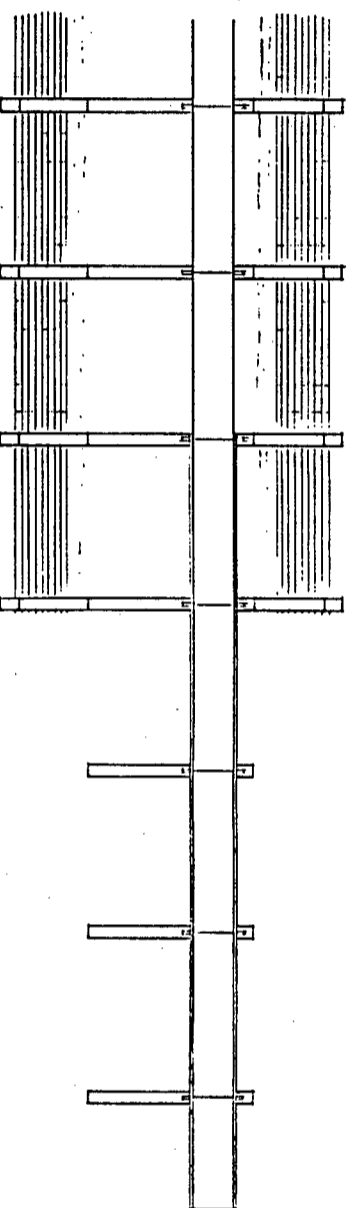
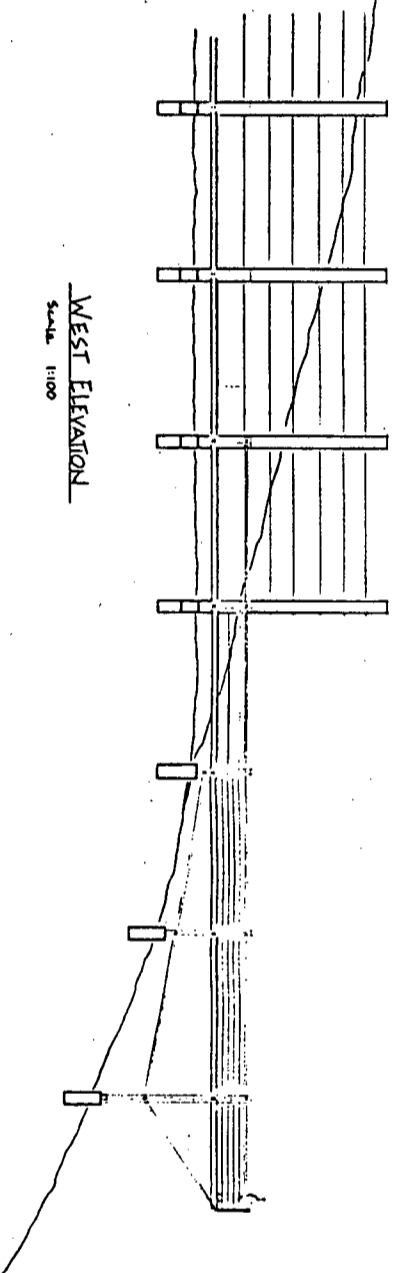


Section D

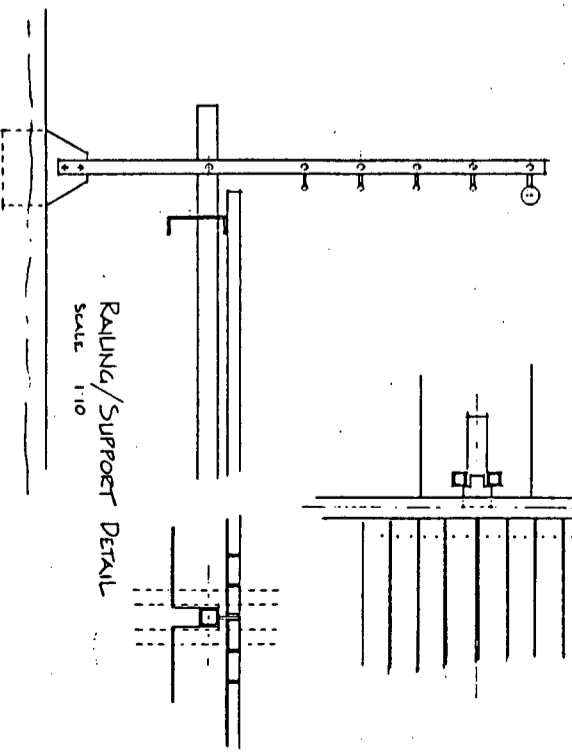
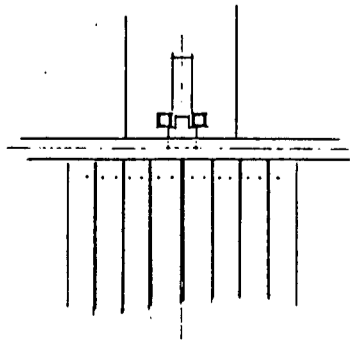


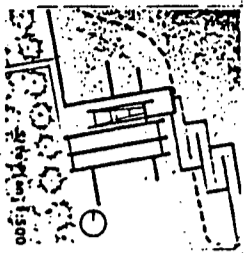
The rock, consisting of the upper part of the ...
 ...
 ...

Aftermath
 4



PRECAST CONCRETE STRUCTURE
 Scale 1:100

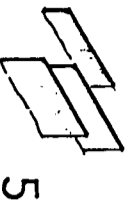




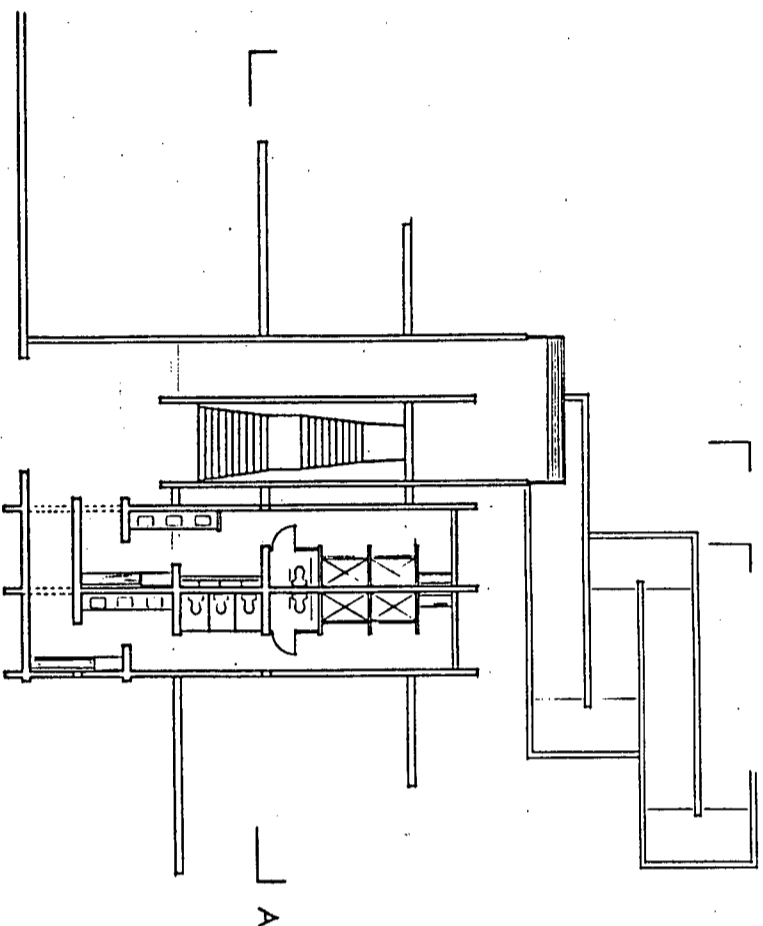
Location: Mount Pleasant, Ohio
Elevation: 1800 ft

The study, made at the request of the
National Park Service, was made
for the purpose of determining the
value of the site as a potential
National Monument. The study was
made in the summer of 1960, and
the results are presented in this
report. The study was made by
the National Park Service, and
the results are presented in this
report. The study was made by
the National Park Service, and
the results are presented in this
report.

Renewal

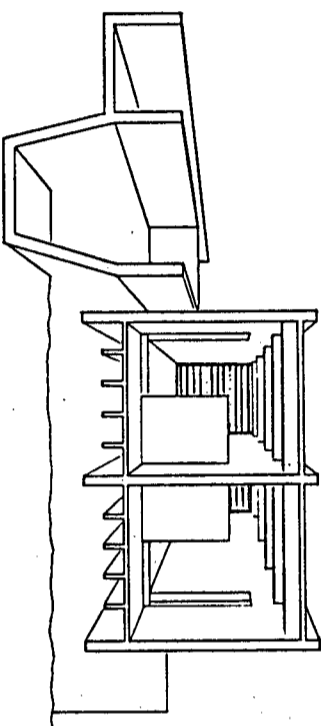


5

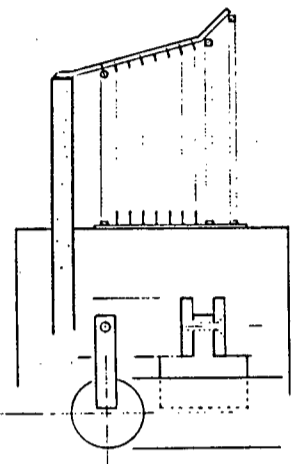


L L
B C

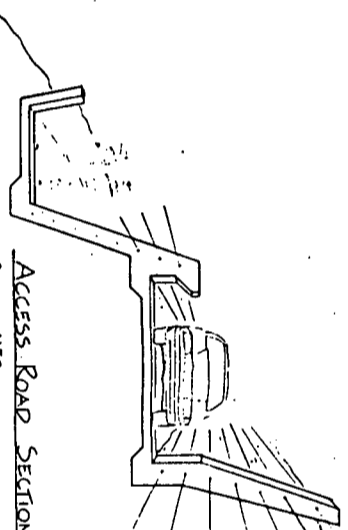
FLOOR/FOUNDATION PLAN
Scale 1:100



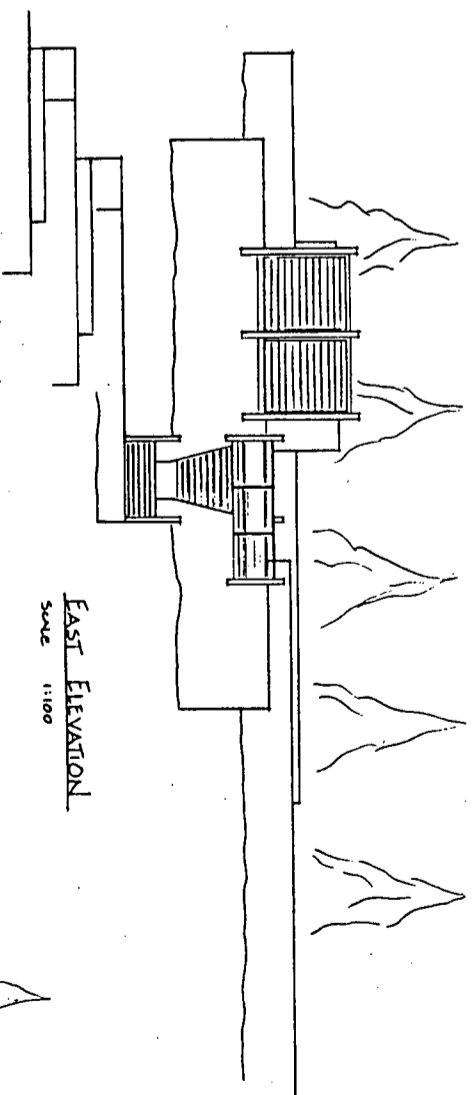
SECTION A
Scale 1:50



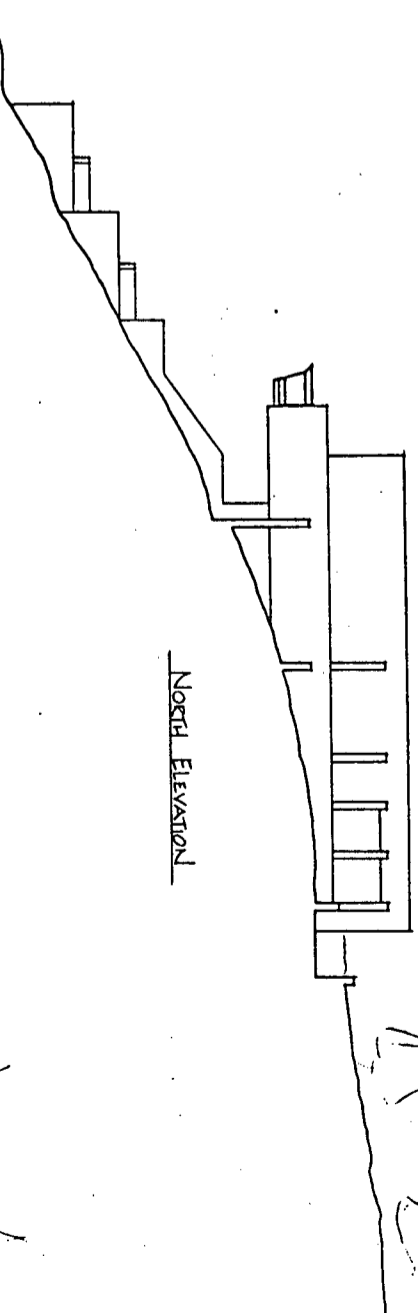
RAILING DETAIL
Scale 1:20



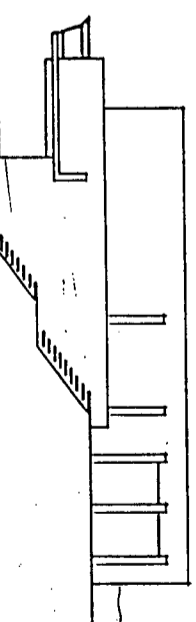
ACCESS ROAD SECTION
Scale 1:50



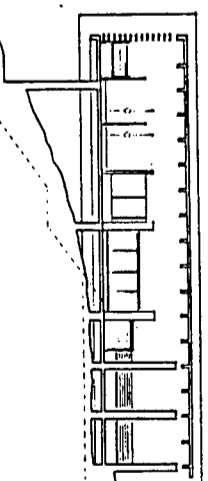
EAST ELEVATION
Scale 1:100



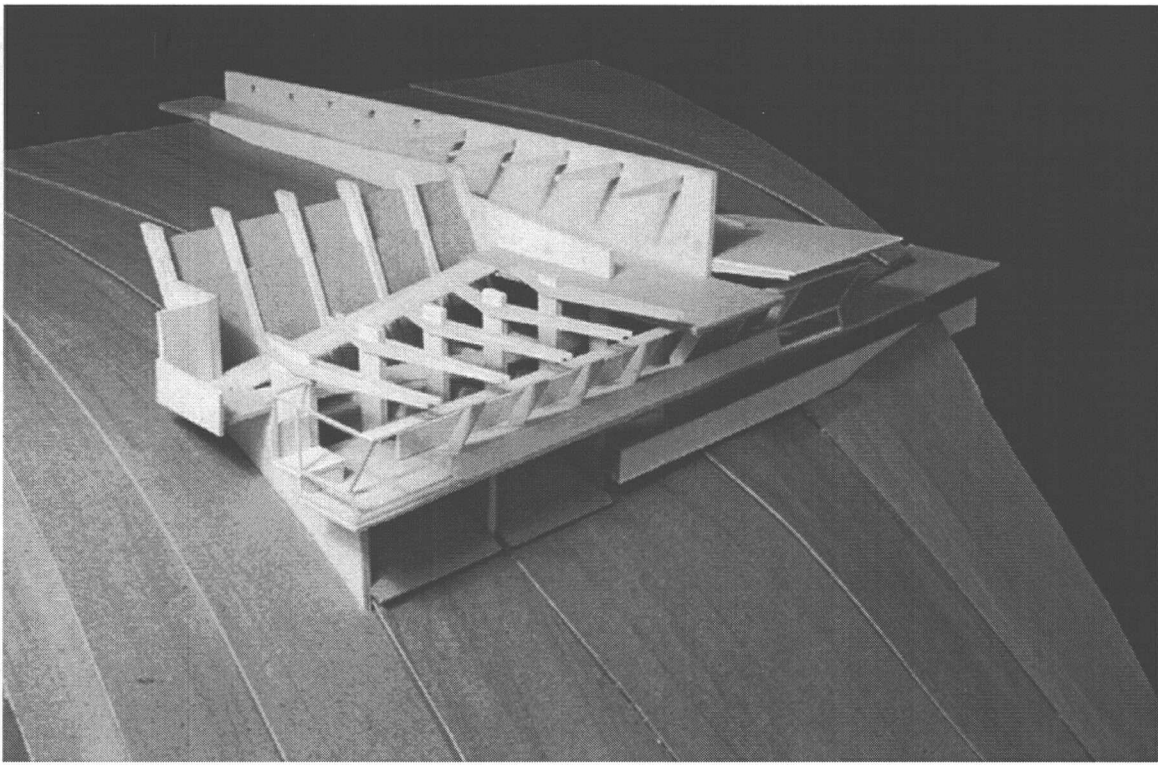
NORTH ELEVATION



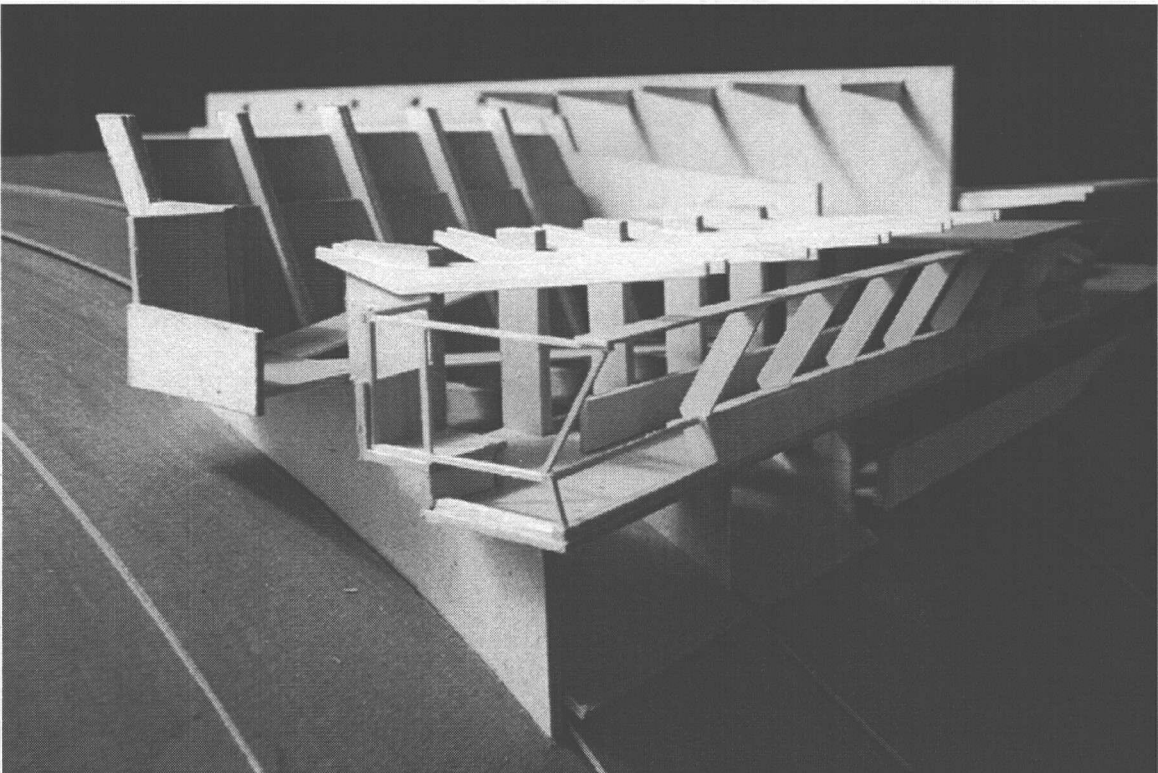
SECTION B



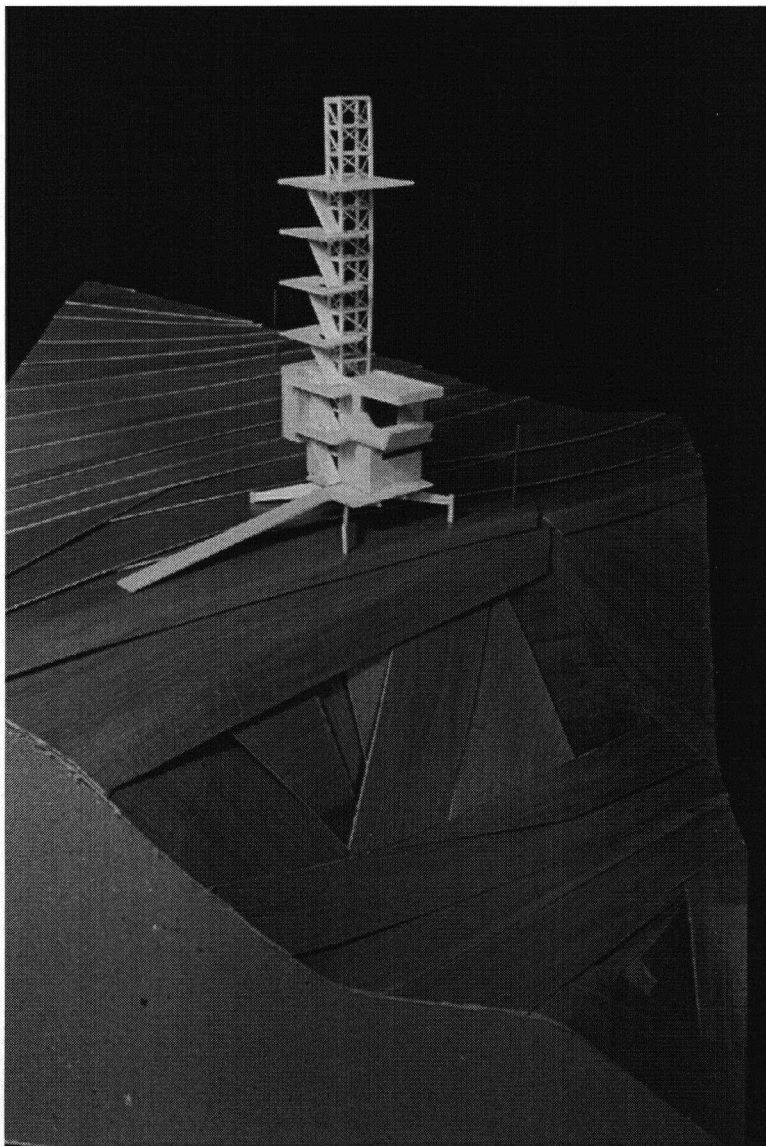
SECTION C



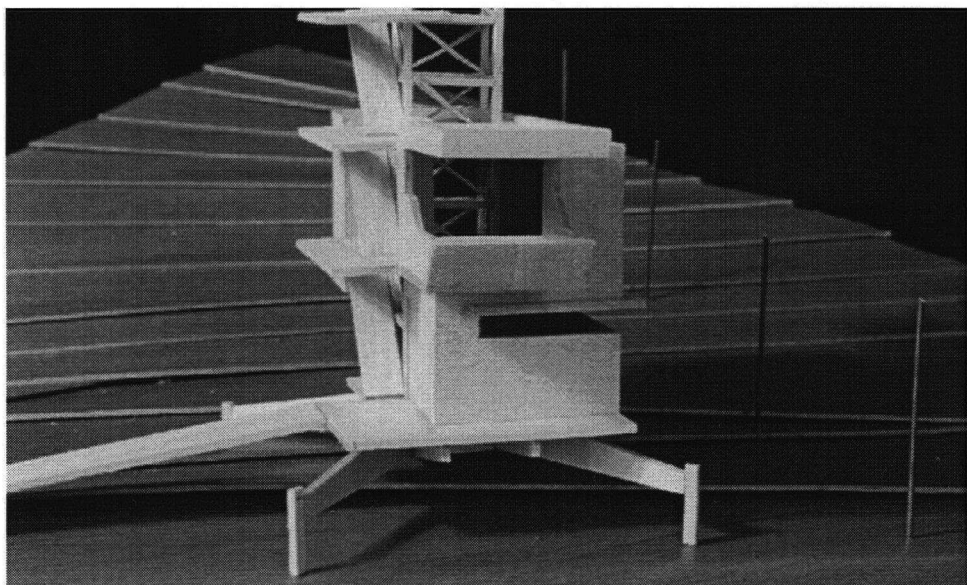
Model Photograph - Node 1: Process (Full View)



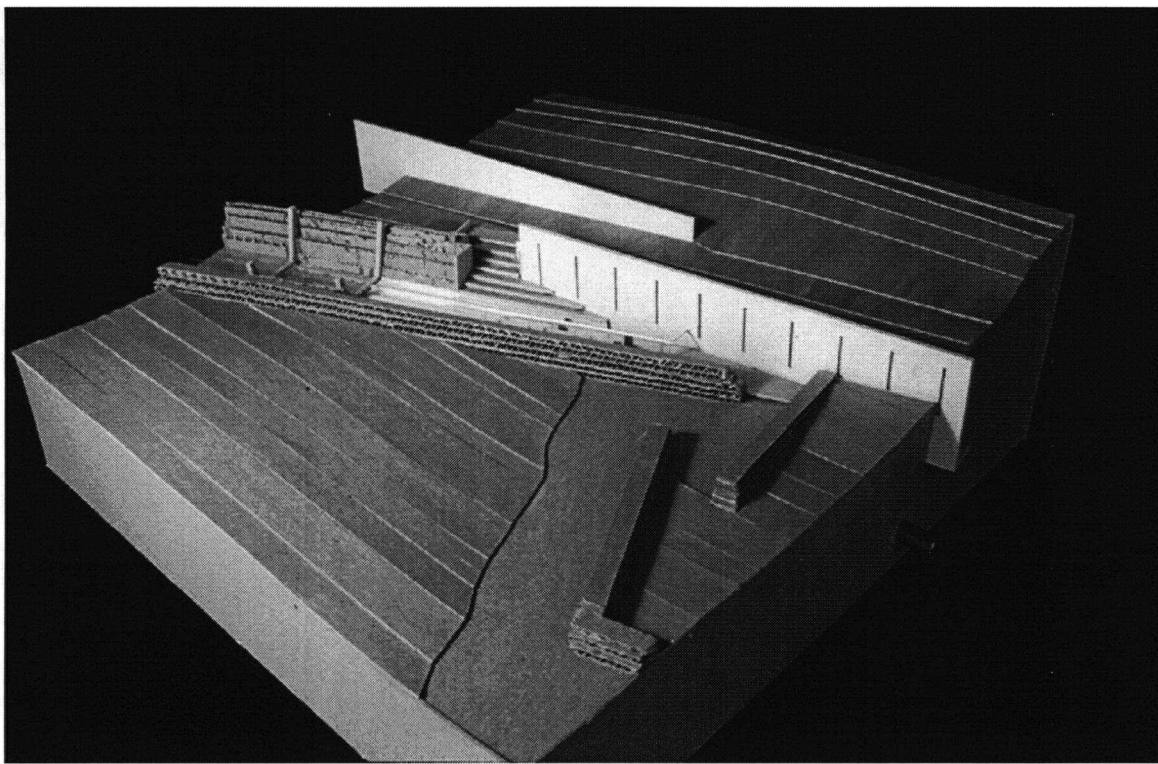
Model Photograph - Node 1: Process (Close Up)



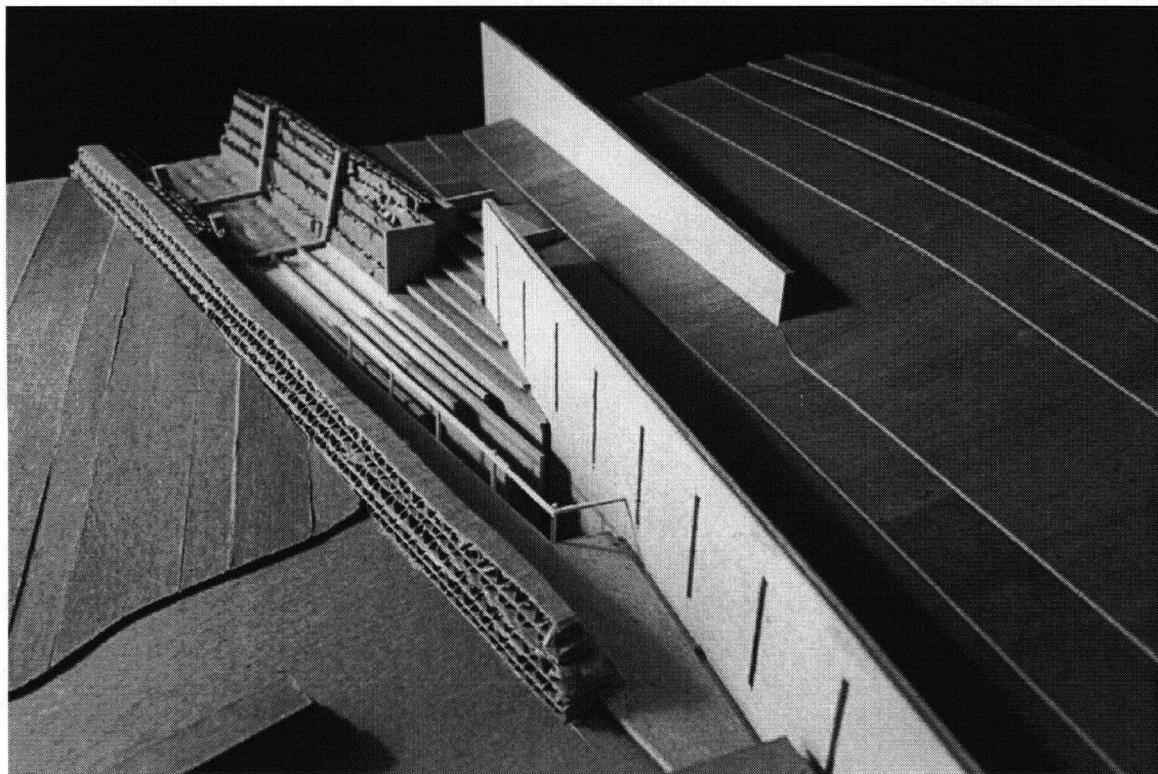
Model Photograph - Node 2: Blasting (Full View)



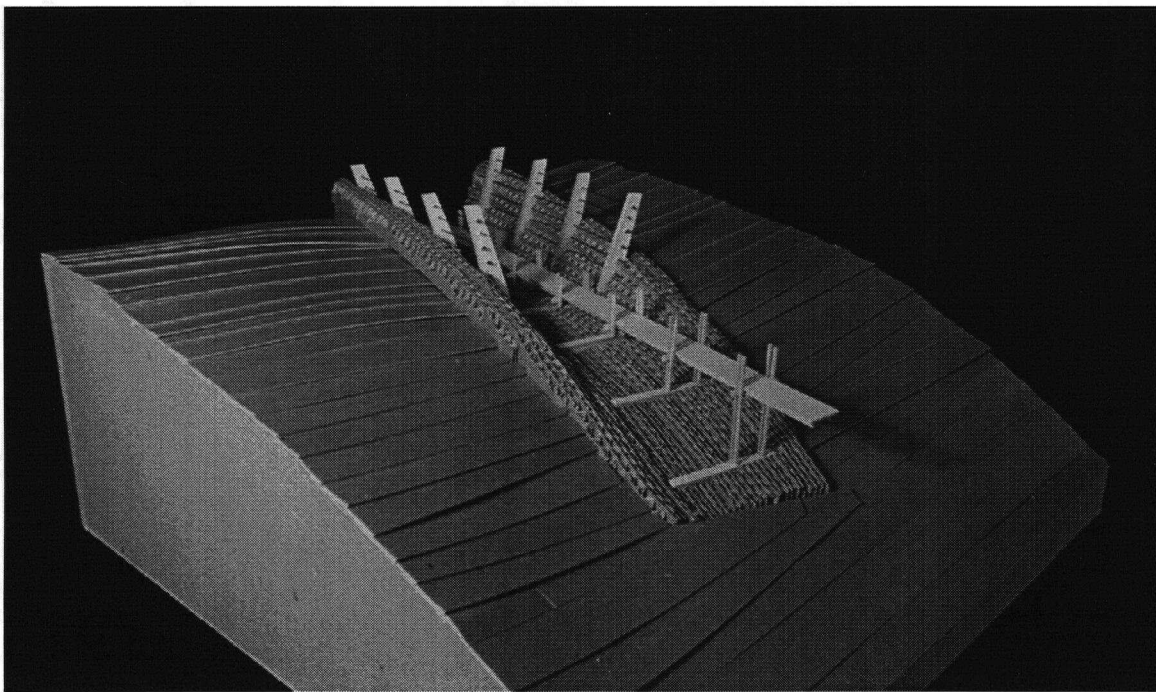
Model Photograph - Node 2: Blasting (Close Up)



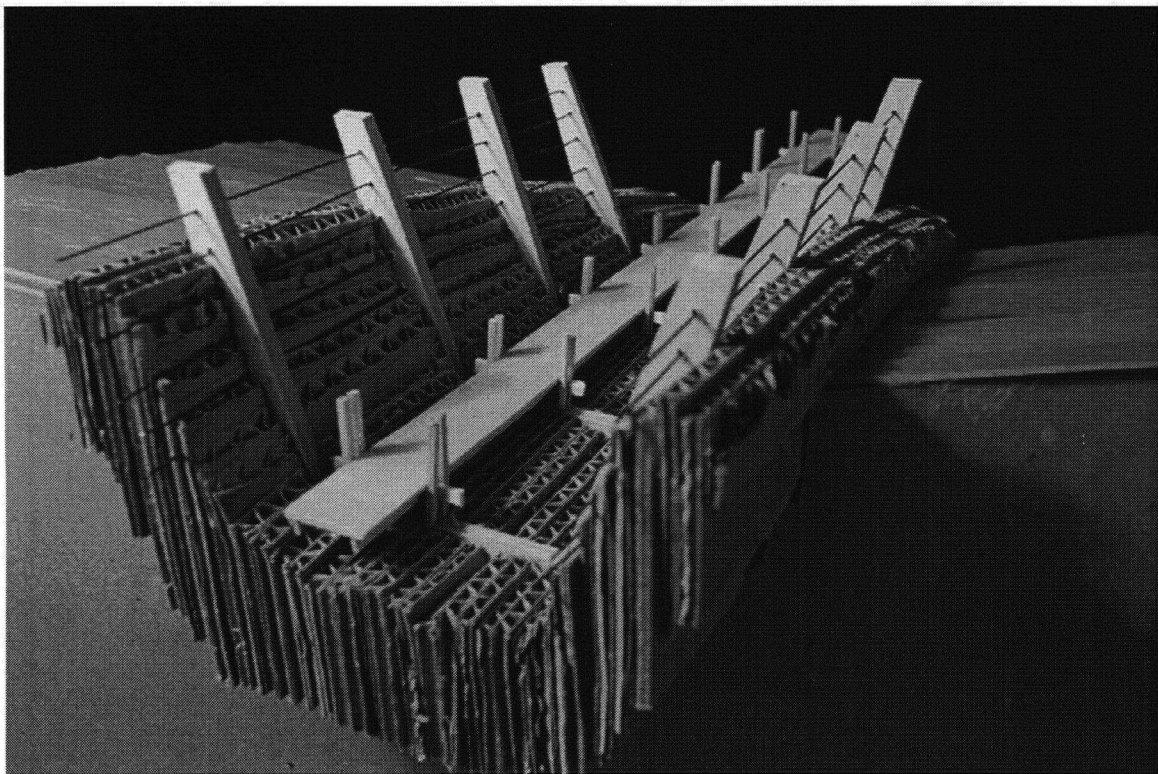
Model Photograph - Node 3: Reconstruction (Full View)



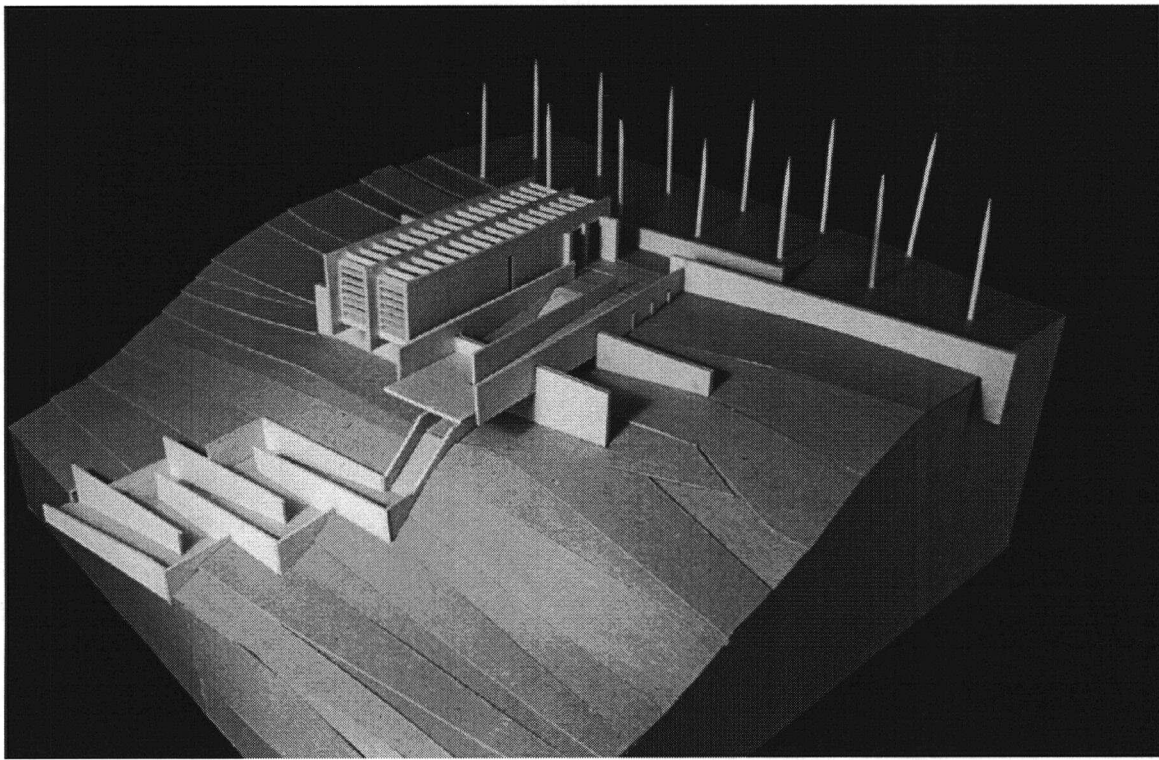
Model Photograph - Node 3: Reconstruction (Close up)



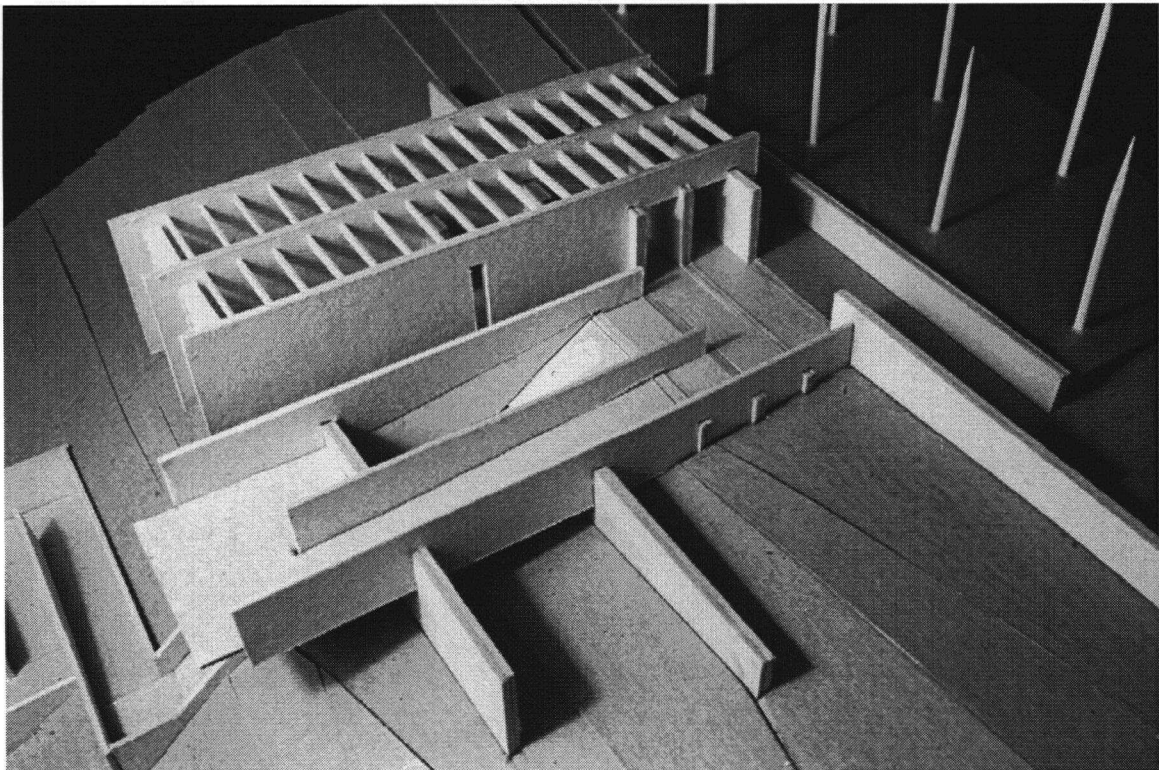
Model Photograph - Node 4: Aftermath (Full View)



Model Photograph - Node 4: Aftermath (Close up)



Model Photograph - Node 5: Renewal (Full View)



Model Photograph - Node 5: Renewal (Close up)