

Exhibition Center on Stone Quarry

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## Abstract

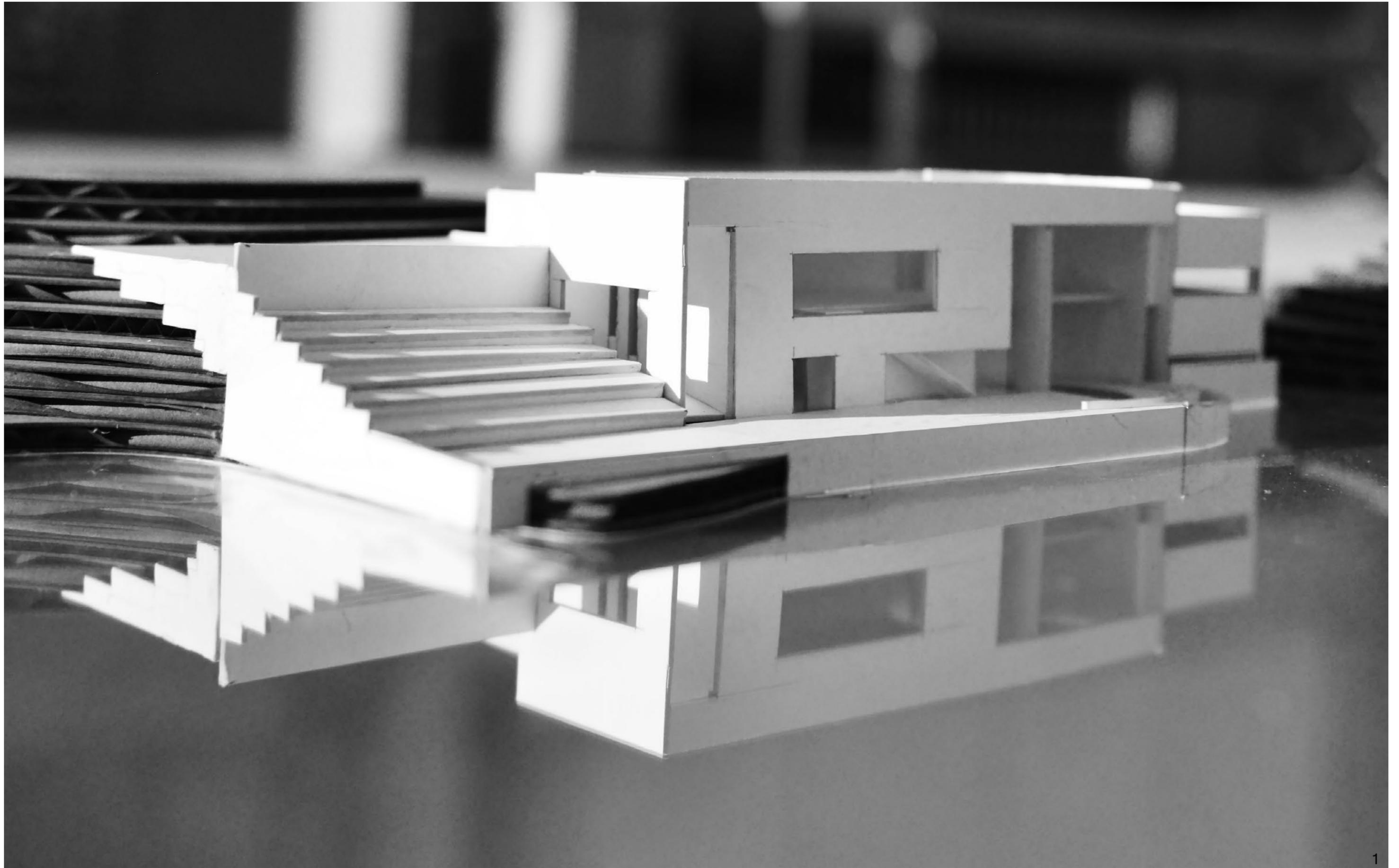
This thesis project came out of an idea that architecture can serve to understand the transformation and history of place. In other words, can architecture be interpreted to give opportunities for displaying glimpses of the past, almost like occasional flashbacks? Based on this idea, I designed a building to make this idea tangible and to test the veridicality of my intention. In looking for a site, I sought out interesting places and moments in nature that would convey this idea I was studying. A quarry in Blacksburg, Virginia, an open-pit mine where dimension stone, sand, gravel and slate were excavated, provided me with an opportunity to explore this idea. The building I designed would help to display the original state of this old quarry, now half filled with water. I started researching the history and development of stone quarries in order to understand essential and accidental connections associated with the present. The overall organization of the building forged a relationship with the surrounding nature and the contour of the mountains. The whole building was sunken into the edge of the cliff to reduce the appearance of the building's volume from the entrance. The slope was utilized to coordinate with the building. The water became a thread that articulates a person's progression throughout the building. The main entrance was at the top of the slope, with a path that leads down the slope along the building to a platform with a view of the site and temporary outdoor exhibits, which allows also for a more immediate interaction with the water. The building responded to the depth of the quarry, bringing it below the surface of the water. The shadow pool of water, trickling down below, draws attention to the curved staircase. Once reaching the bottom level, you can see the water running slowly along the vertical concrete wall. At this point, you enter the exhibits on the general history of stone quarries and the specific history of this stone quarry. Stone samples and tools used in the old times are also displayed on this floor. The second and third floor are collections of modern conditions of stone quarries as well as possible future technologies. The building was conceived as a composition of basic elements, with visual reference to rectangular and circular shapes, and interstitial space enclosures cast in concrete. The choice to use concrete was based on its ability to take flexible shapes and to be enhanced by repeated elements representing natural state of the quarry, as well as an approach to emphasizing light and volume.

## Acknowledgement

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## Content

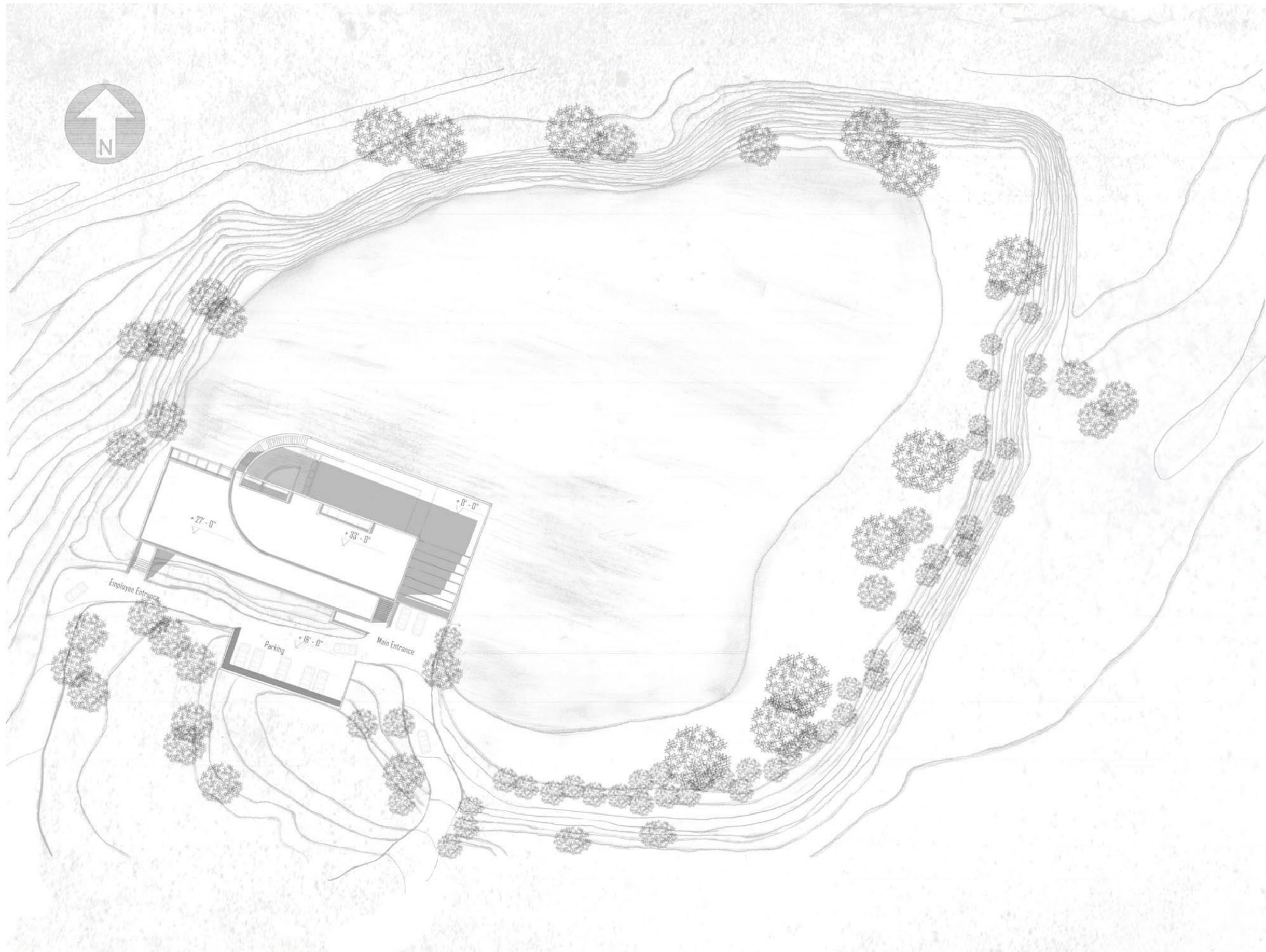
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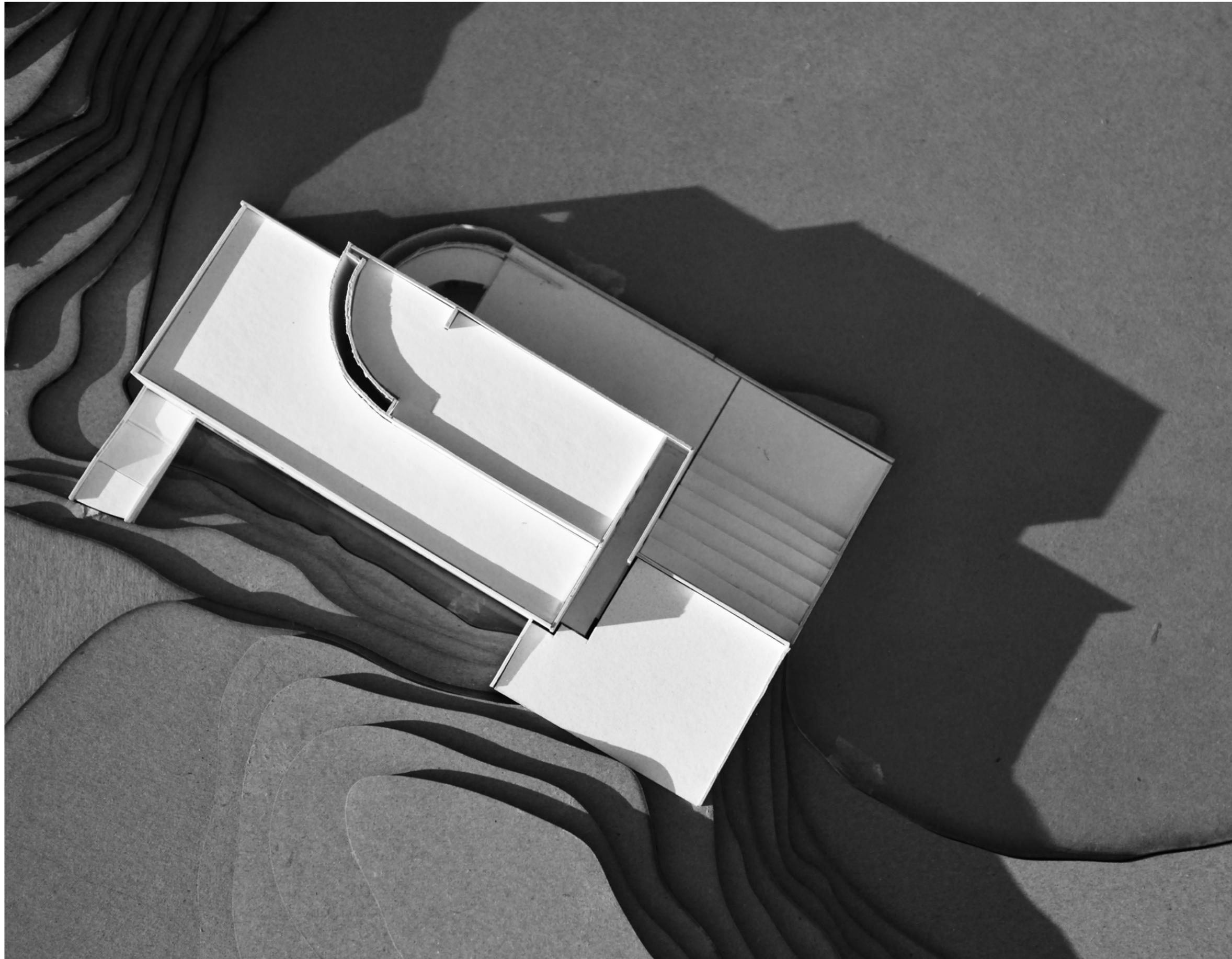


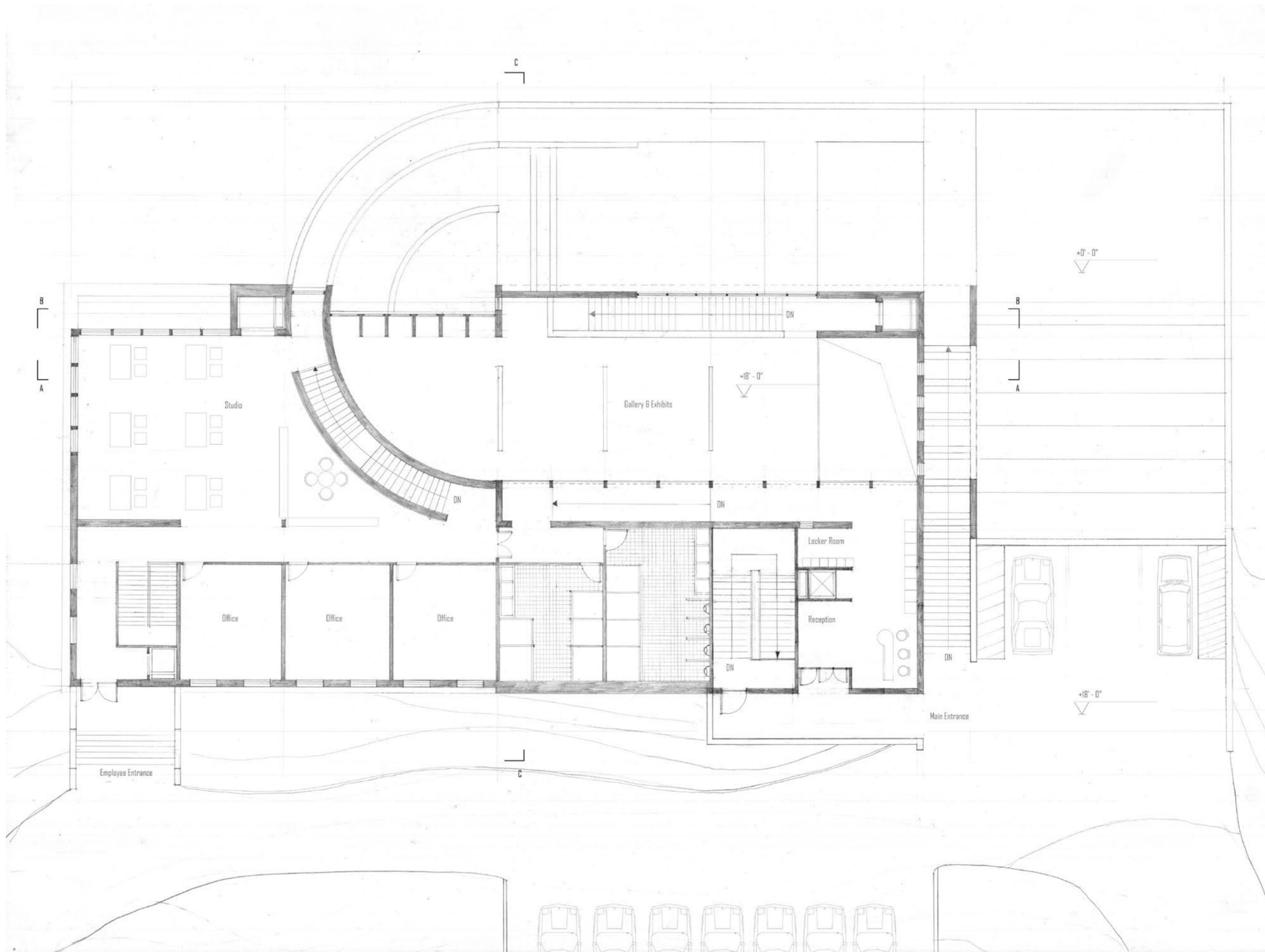


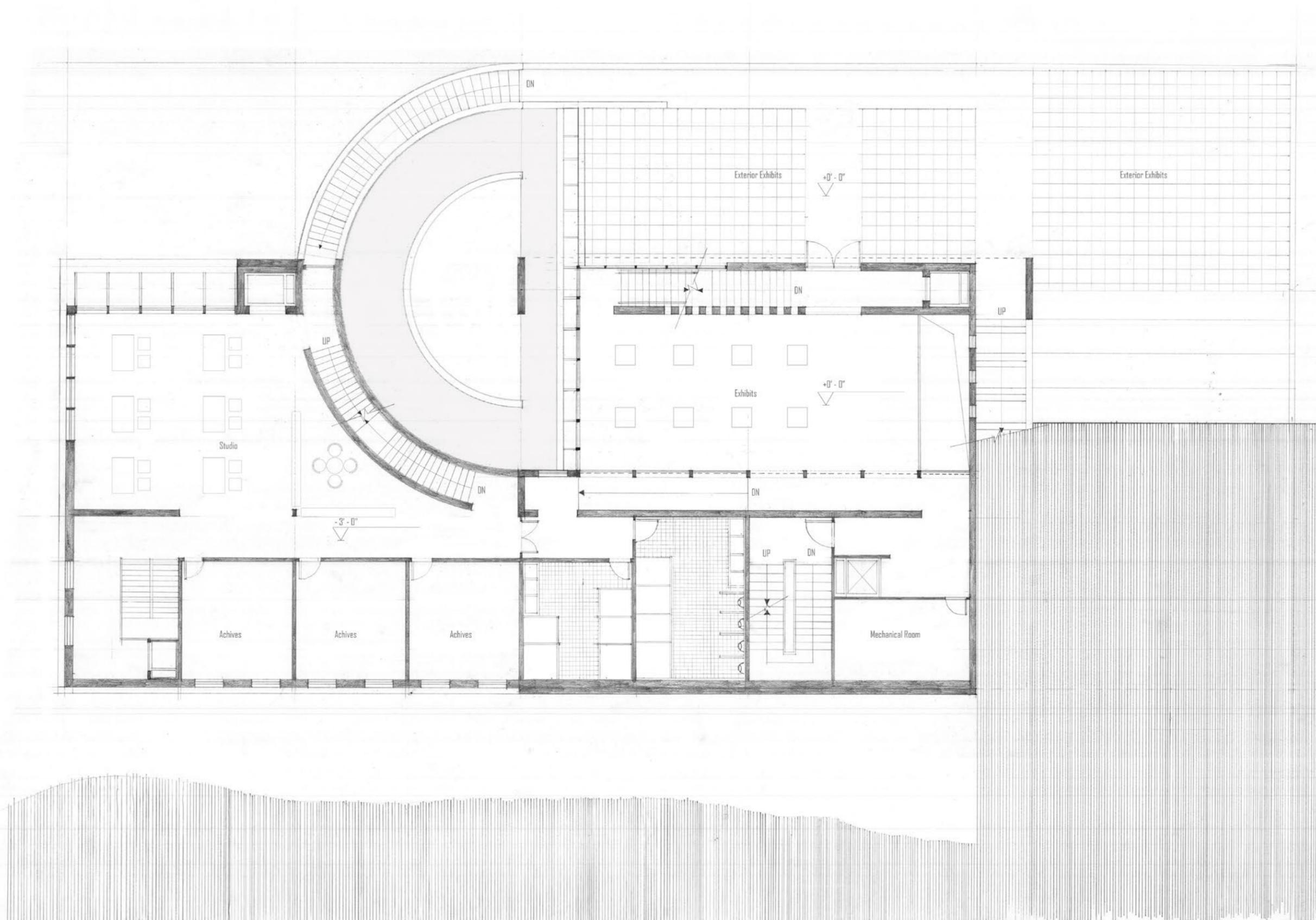
## Introduction of the Site

The site was chosen at an old quarry in Blacksburg, Virginia, now half filled with water. It has been abandoned since a long time ago. However, there are plenty of things that the rock face in the quarry can tell us about. It was imprinted with a certain order and our industrial methods. It has recorded changes of every moment with time passing by. Standing on top of the quarry with a grand view of still water and steep cliff, you can feel the transformation of the past and the present.

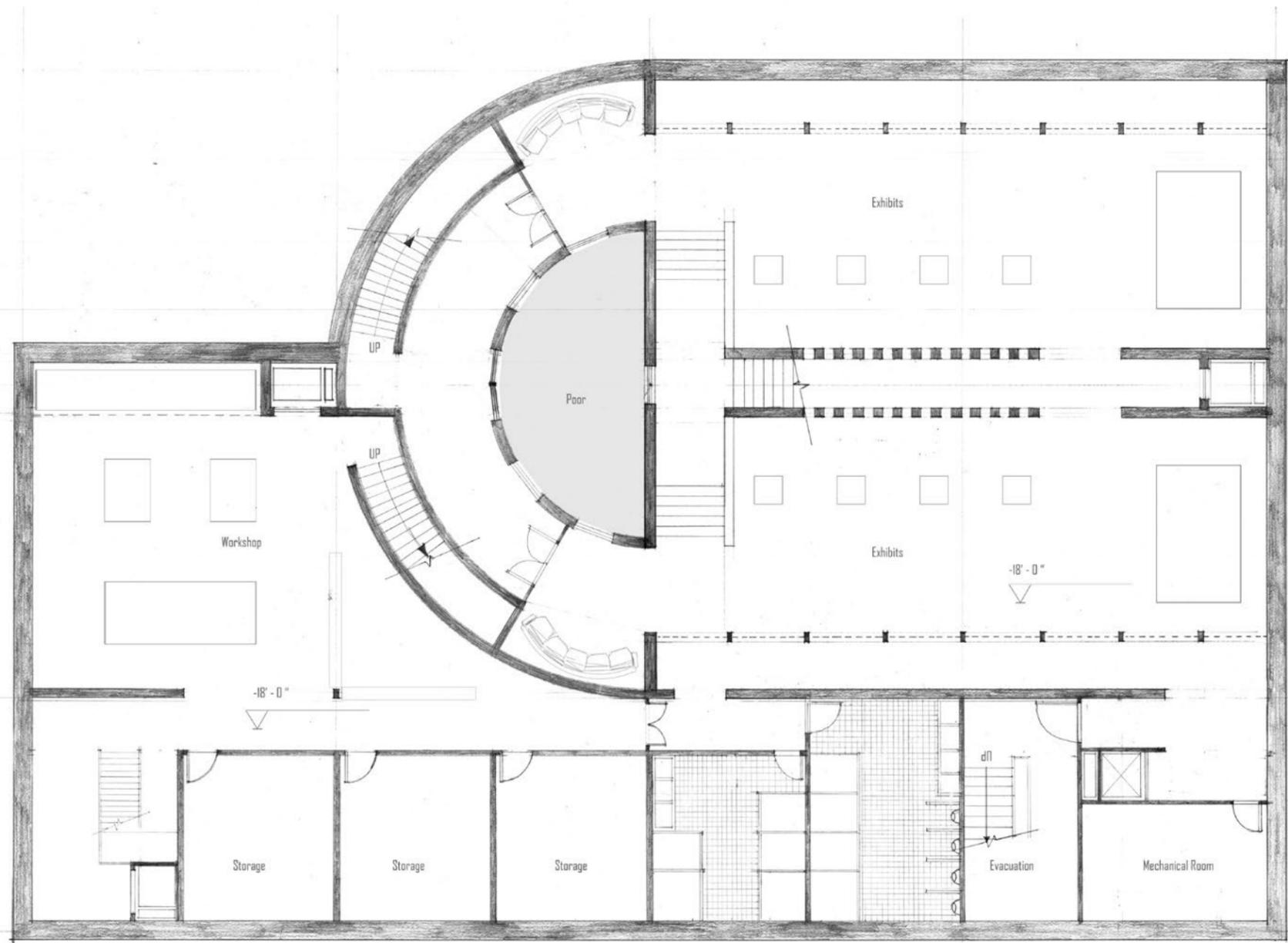


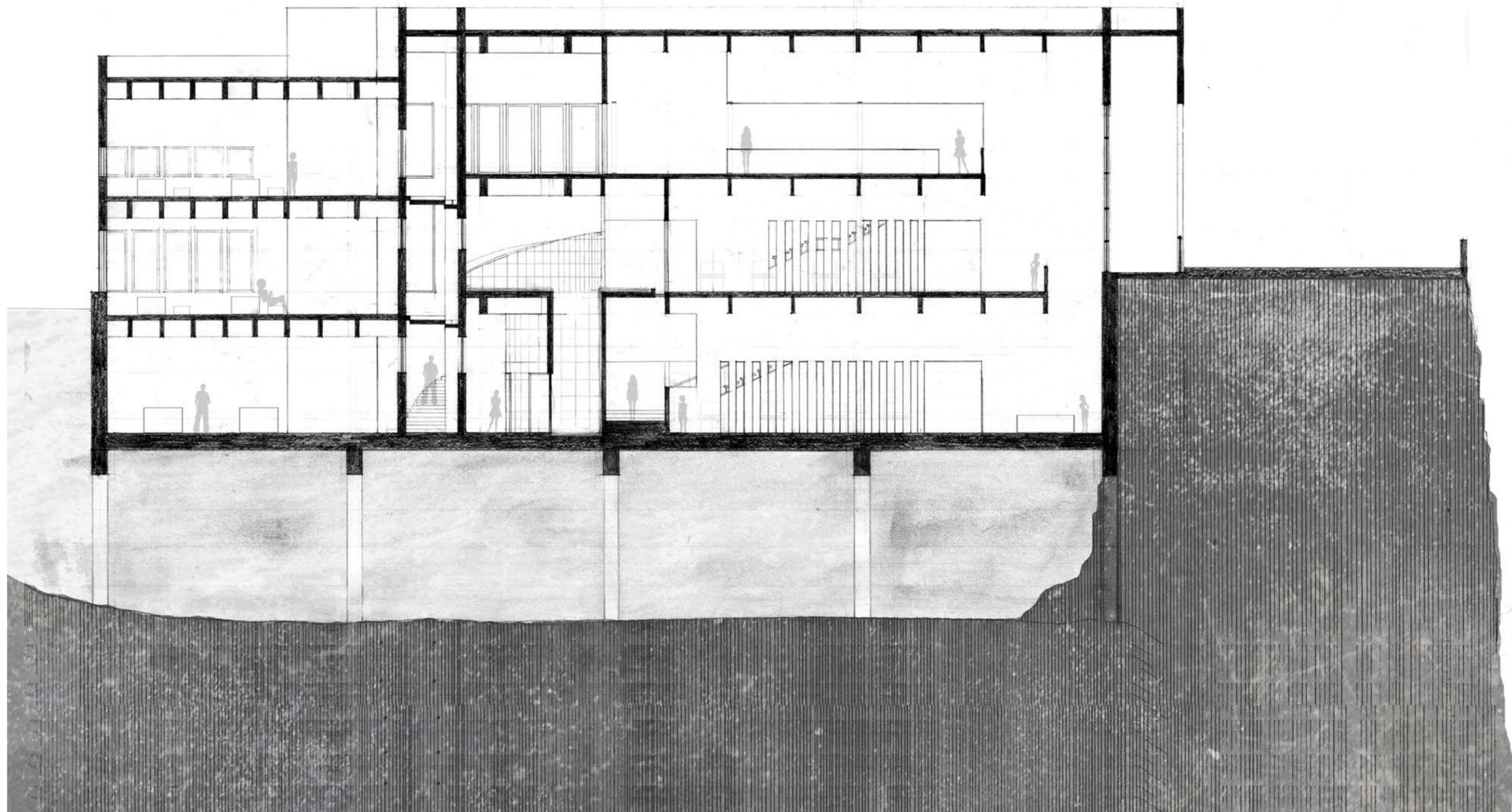


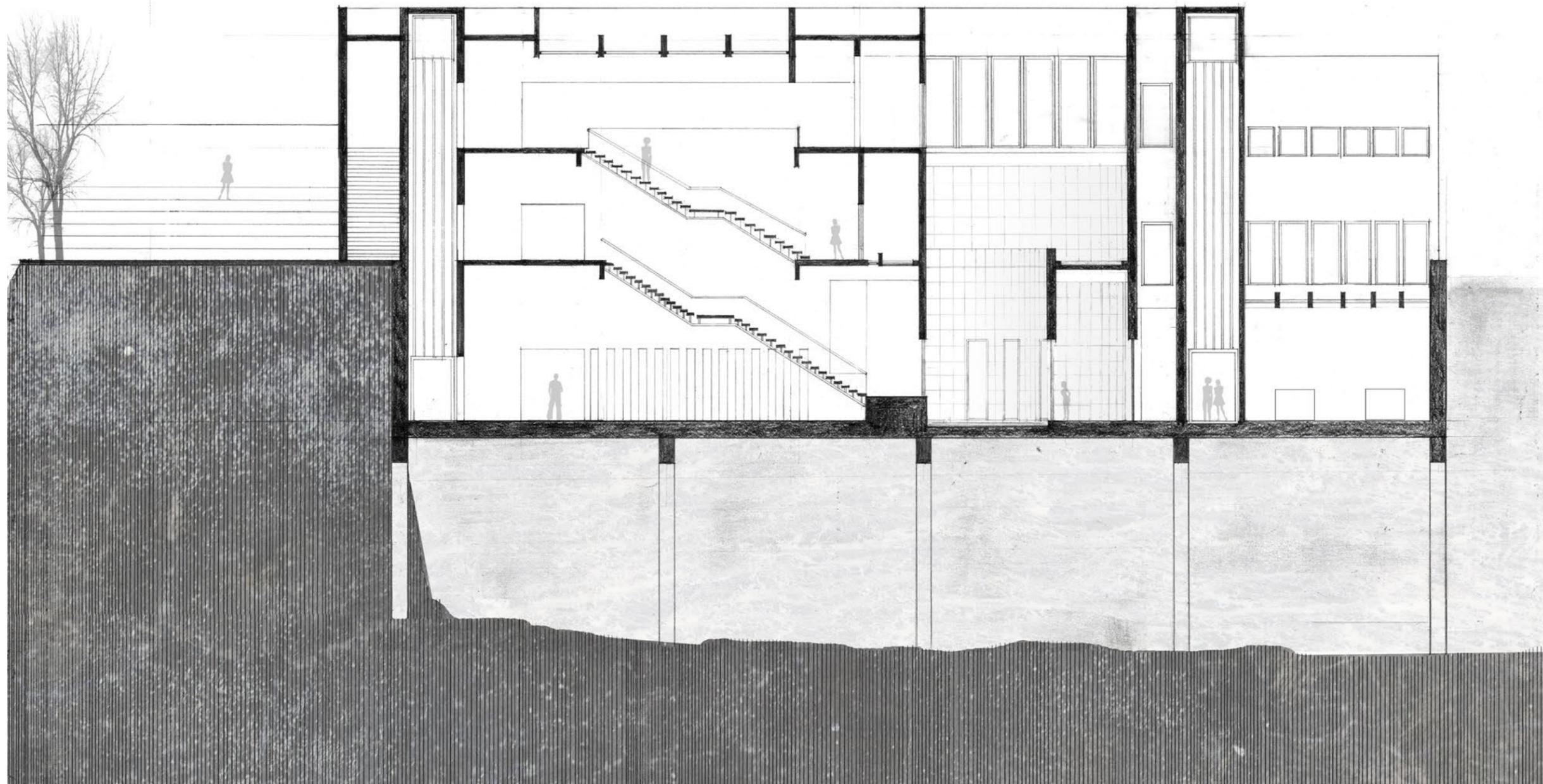


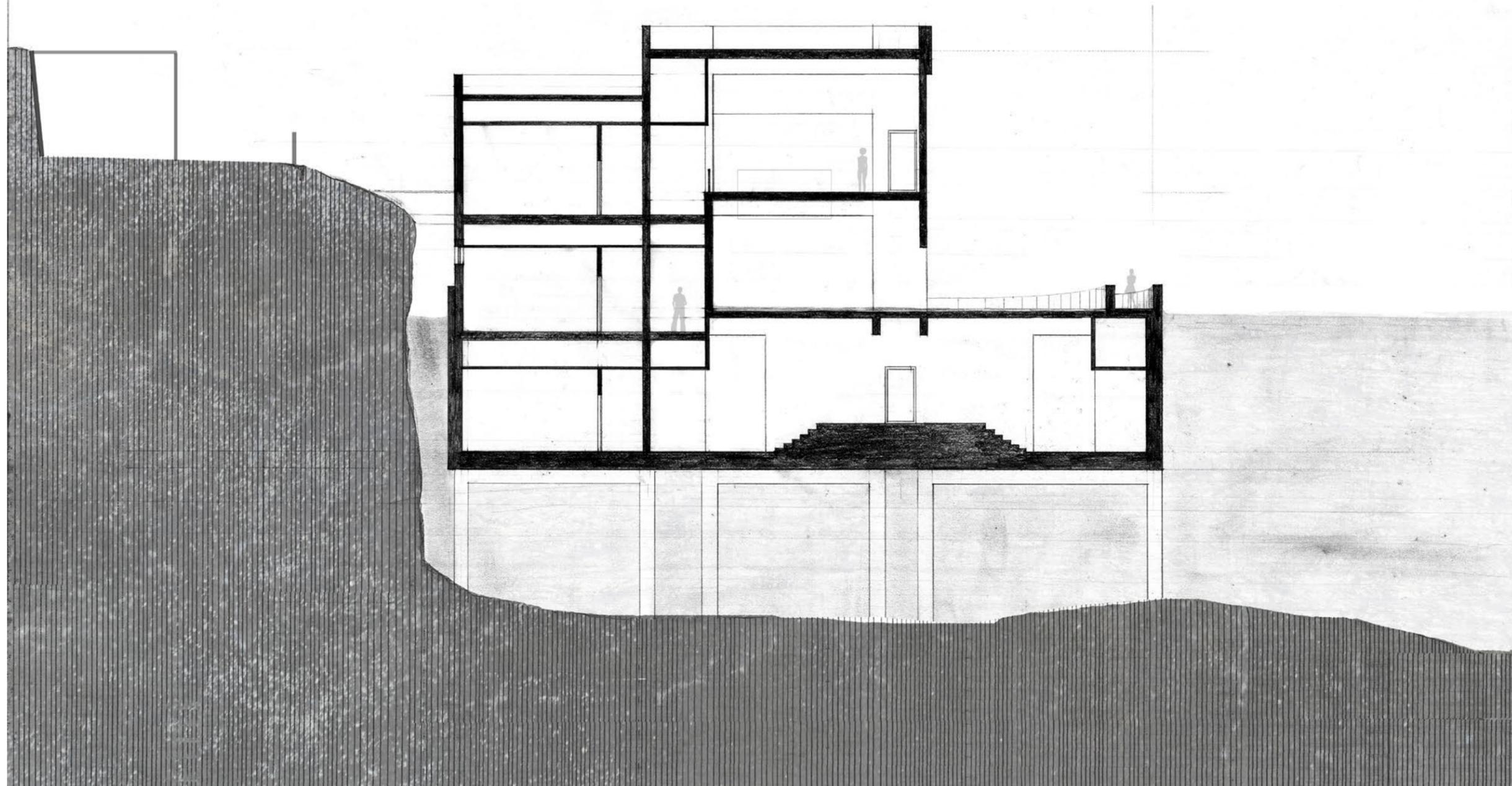


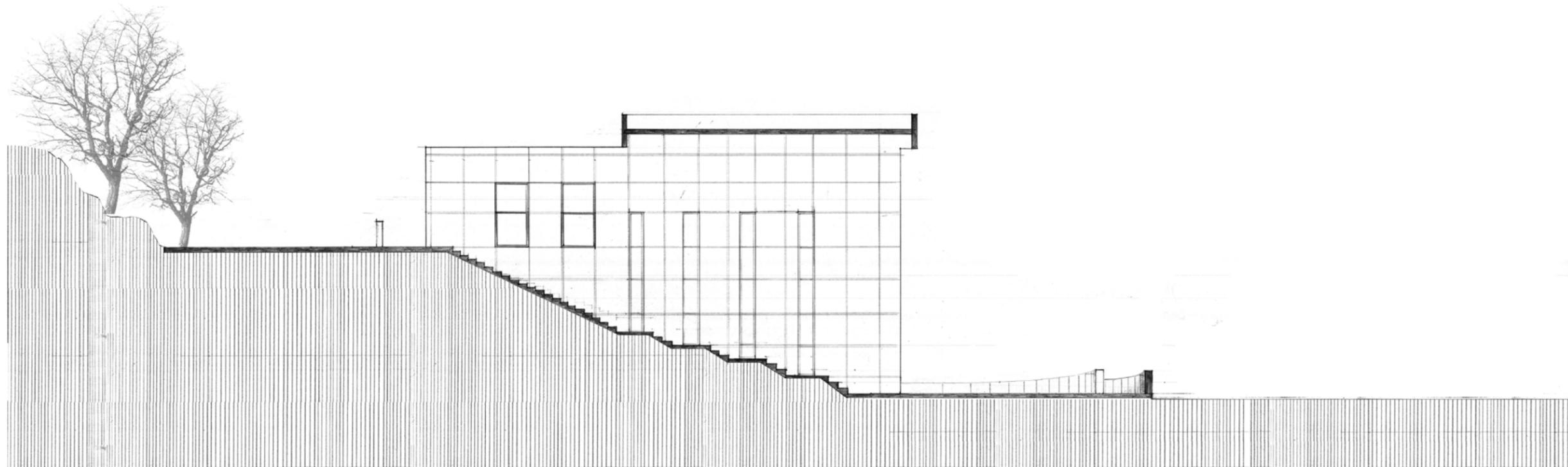
Level +3' - 0" Floor Plan Plan 6



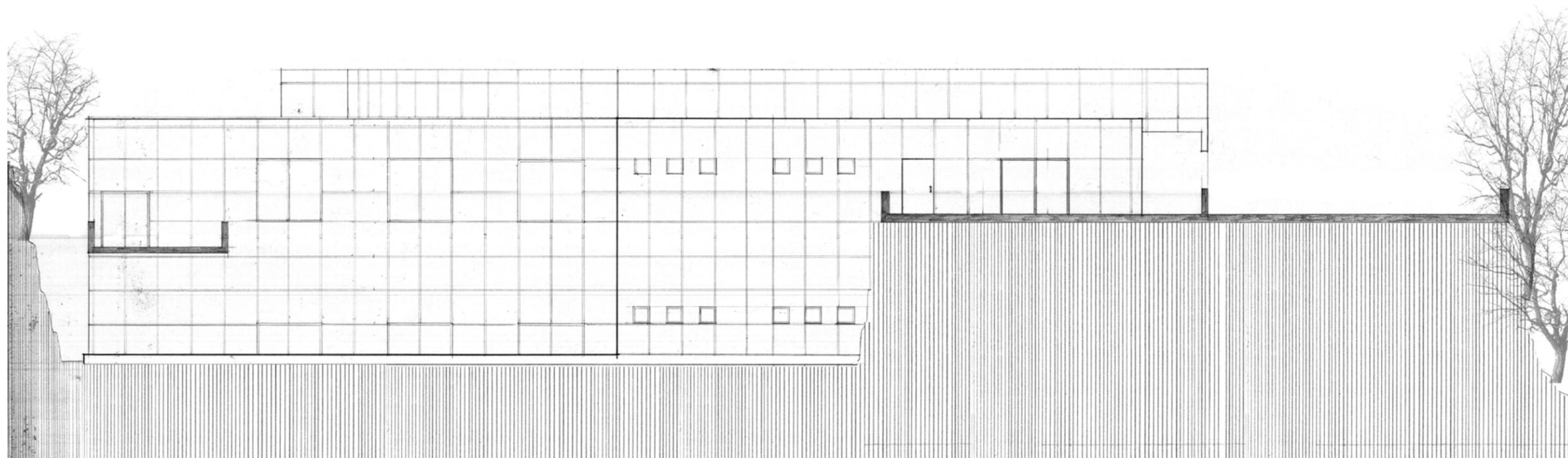




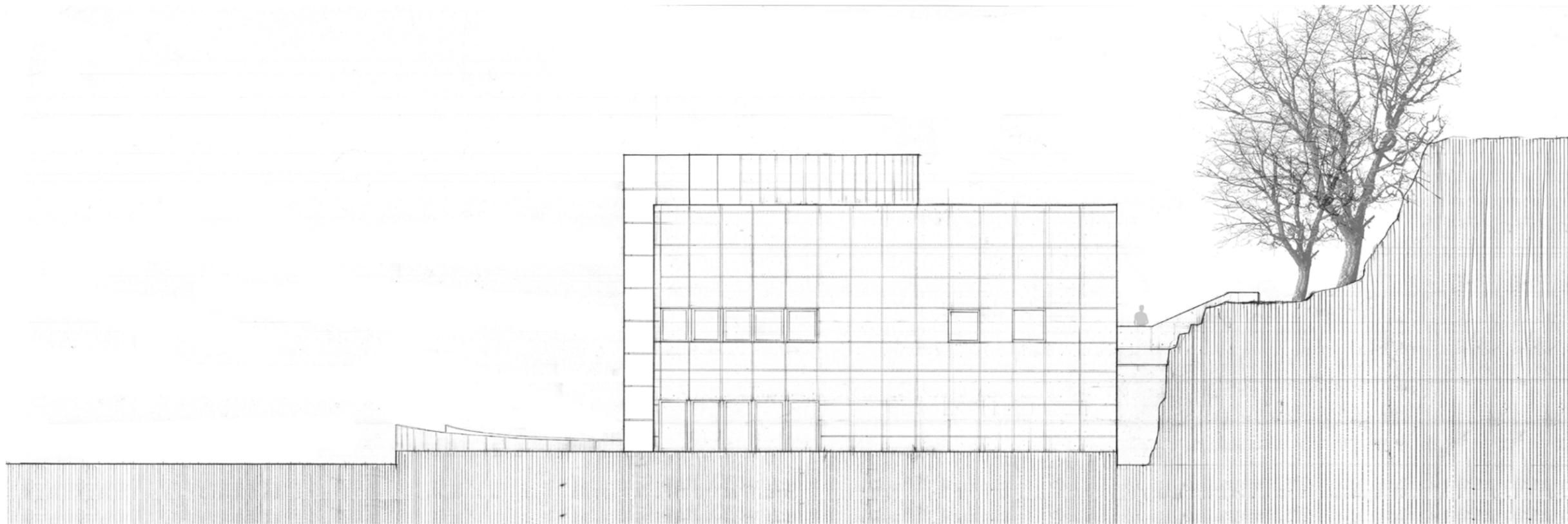




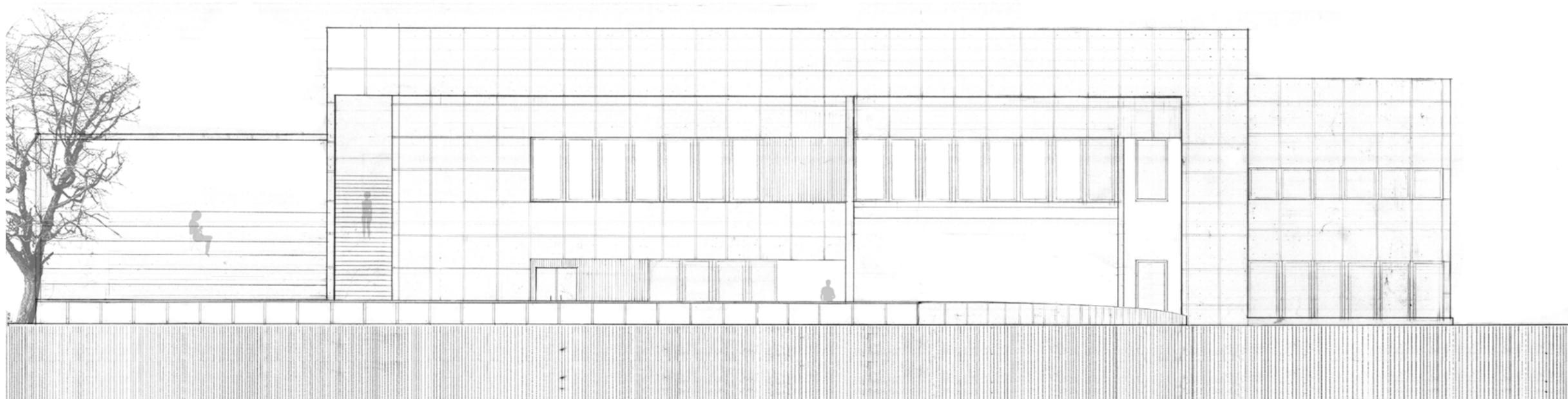
East Elevation



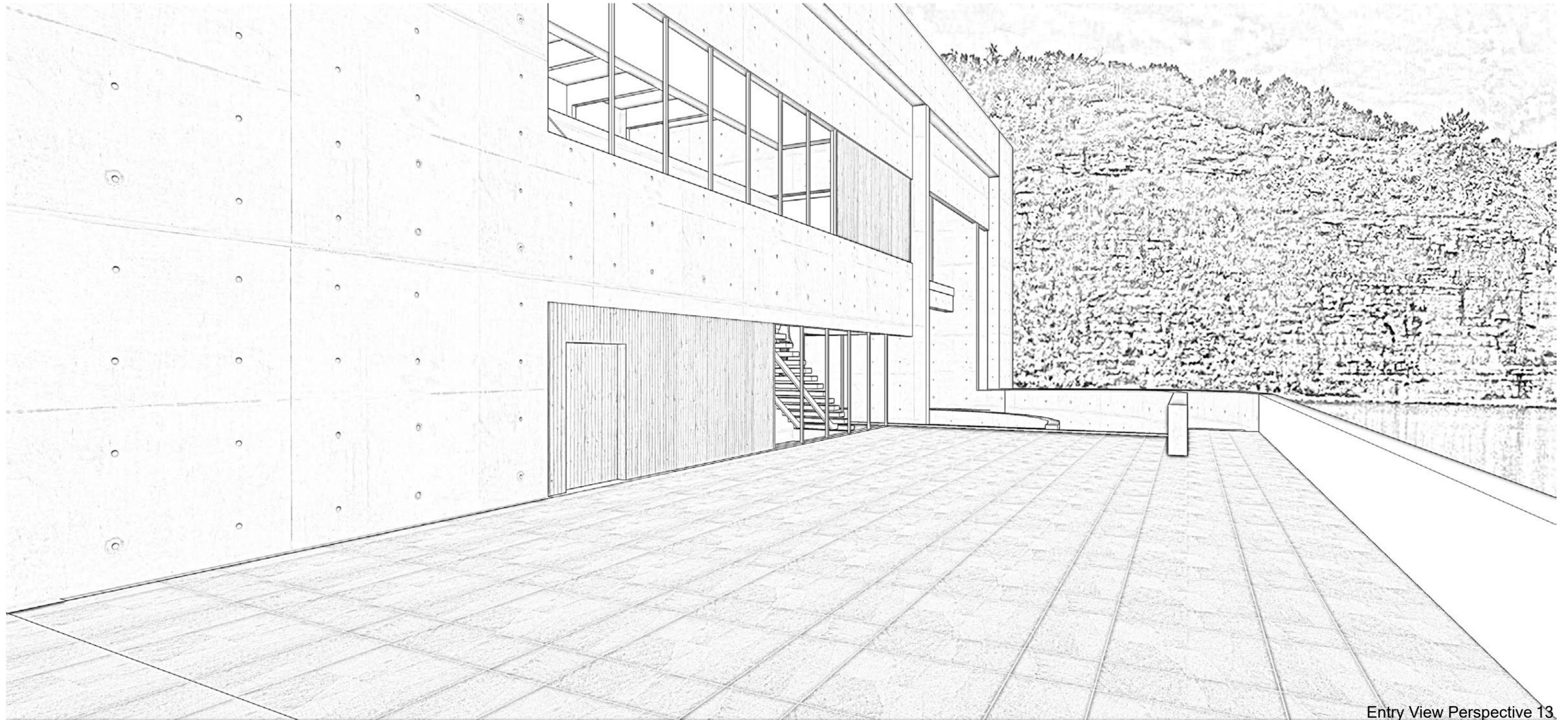
South Elevation 11



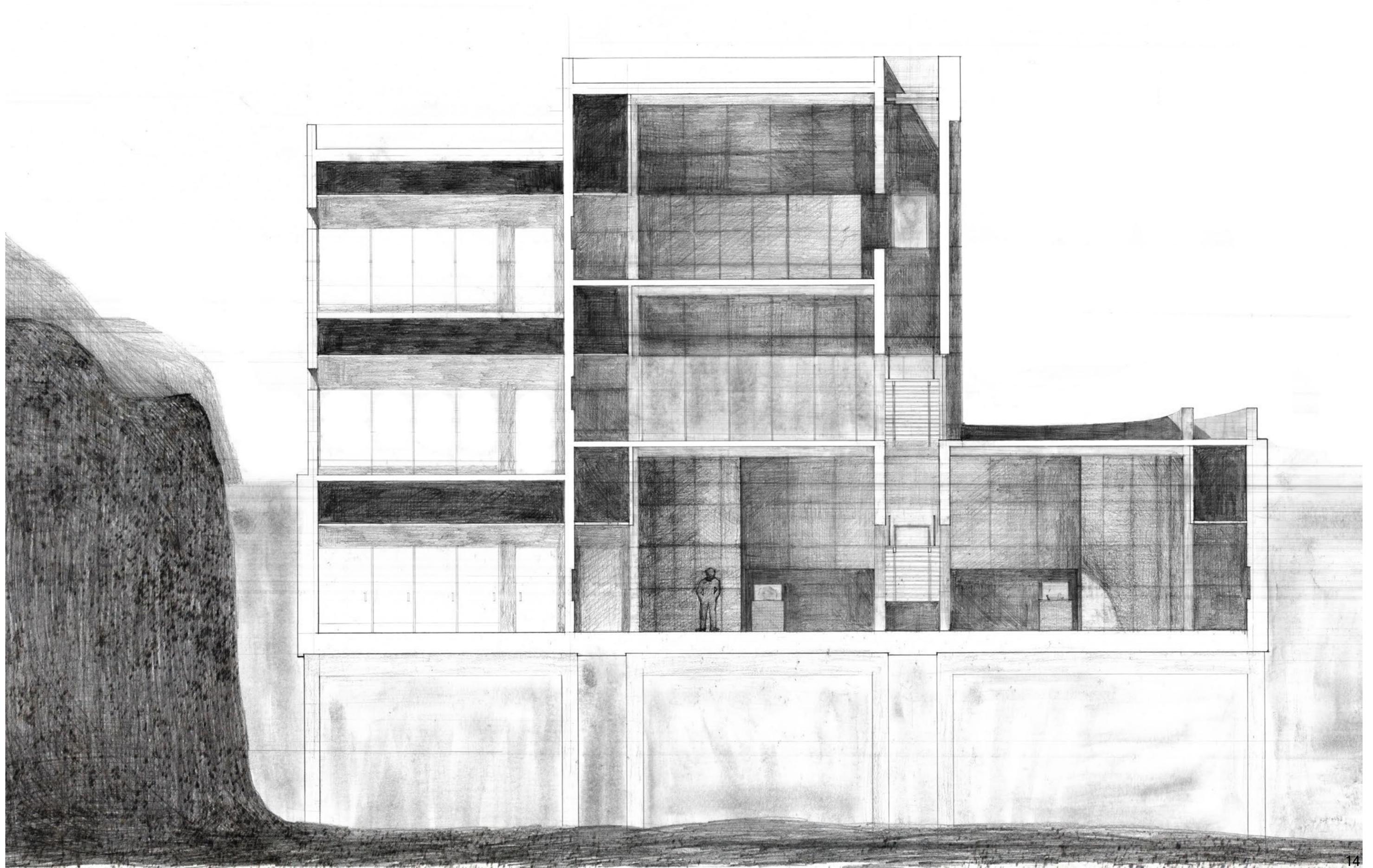
West Elevation



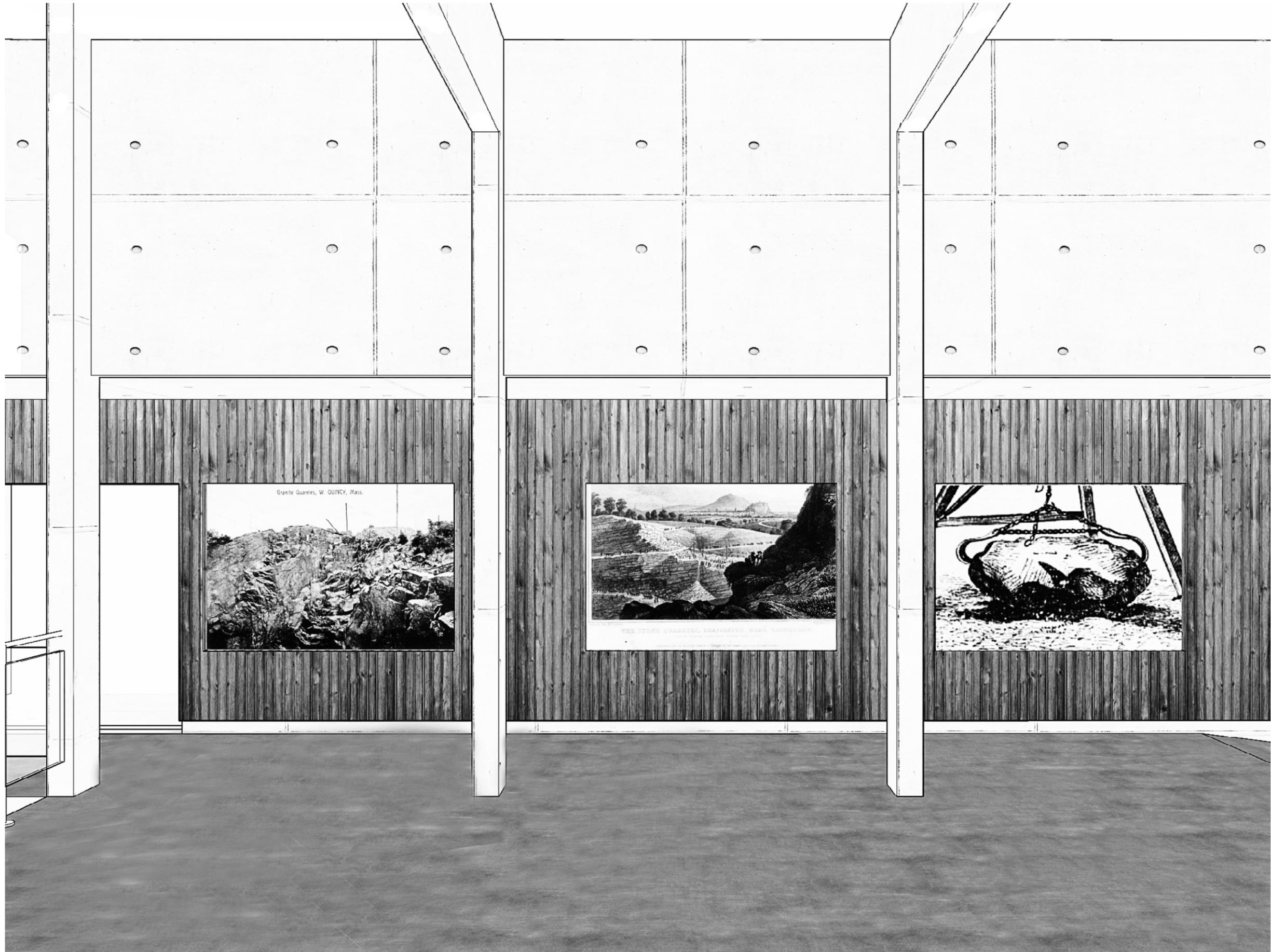
North Elevation 12



Entry View Perspective 13.





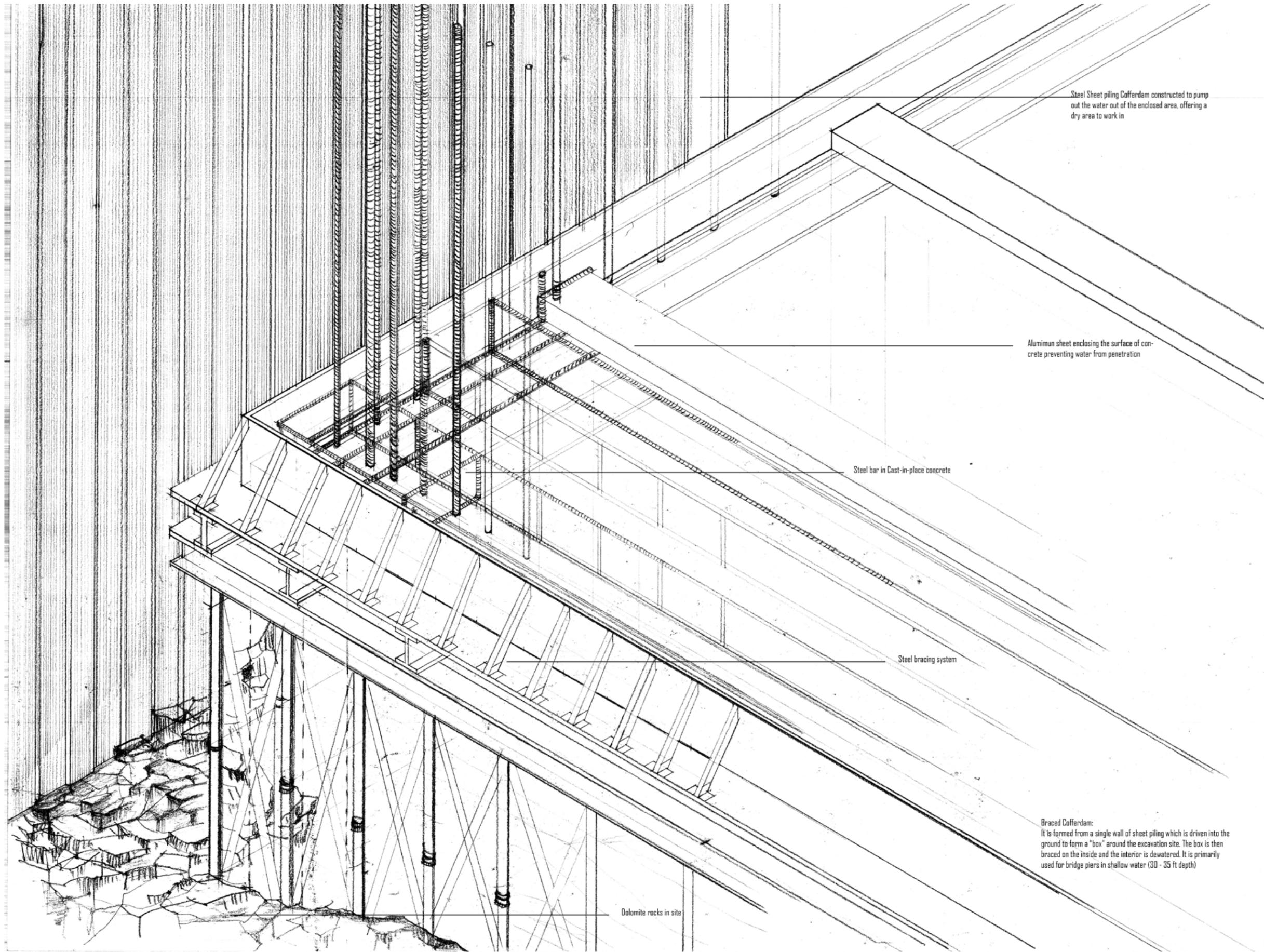












Steel Sheet piling Cofferdam constructed to pump out the water out of the enclosed area, offering a dry area to work in

Aluminum sheet enclosing the surface of concrete preventing water from penetration

Steel bar in Cast-in-place concrete

Steel bracing system

Dolomite rocks in site

Braced Cofferdam:  
It is formed from a single wall of sheet piling which is driven into the ground to form a "box" around the excavation site. The box is then braced on the inside and the interior is dewatered. It is primarily used for bridge piers in shallow water (30 - 35 ft depth)

