

CULTIVATING EARTHWORKS OF THE ANTHROPOCENE

A Laboratory for Land and Environmental Art in Lime, Oregon

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# CULTIVATING EARTHWORKS OF THE ANTHROPOCENE

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*For Waitng*

*For Art*

*Gundula Proksch*  
*Rick Mohler*  
*Ian Campbell*  
*Jena Restad*  
*Louisa Iarroc...*  
*Louisa Iarroc...*  
*My Parents*

## *Abstract*

Extractive landscapes provide a perspective into the rapidity of surficial geomorphosis occurring worldwide resulting from the human impact of resource mining. This perspective is often concealed and upon the depletion of the mined resource these landscapes are regarded as waste, rather than the necessary product and engineered geology of modern society. These earthworks have the potential to reveal the implicit polarity between the accelerated growth of the Anthropocene and the native growth of the landscape they occupy.

By addressing landscape through the frame of earthworks, this thesis seeks to cultivate these territories with the intent of generating a cultural awareness of their presence and value. This design investigation addresses a cultural response to resource extraction in the Anthropocene through the adaptation of such landscapes for artistic explorations, such as land art, material research, and photography. This approach generates a site for land art practice and an artist in residency outpost.

In developing architecture to serve the site and program, this thesis implements the spatial and material characteristics of land art in order to provide spaces that frame the surrounding context and respond to the latent site conditions such as climate, topography, and site history. The goal is to produce architecture that is both dependent on and a descendent of the landscape.



*1 Summer Dusk in Lime Oregon: Car tail lights illuminate the deep canyon.*

1  
*Introduction*  
*Prologue.*

*“Architecture is often considered through spatial perspectives, but its intersection with the Anthropocene - what the Anthropocene demands - is nothing less than a reconsideration of architecture’s temporal qualities. In an era where we see intense changes in weather, species, and geology at an unprecedented rate, the question of time is increasingly impinging on us.”*

-Etienne Turpin, *Architecture in the Anthropocene*

The Anthropocene, although a large and complex subject, has choreographed these principles concerning mineral resource mining. A mineral mine represents the radical temporal disjunction that defines the Anthropocene; once a mineral is depleted, it is gone for good. What took millions of years to produce is, within the course of a human lifetime, eliminated. It is easy to call these spaces scars and wastelands, but formidable to call it an opportunity for cultural remediation. With thousands of earthworks produced by the extractive industry, what defines their future in the absence of their monetary resource? As a product of the extractive industry, mineral resource landscapes represent an opportunity to better understand our impact in the Anthropocene while rewriting the histories of earthworks, cultivating a new resource through architectural intervention. Robert Smithson once said, “the best sites for ‘earth art’ are sites that



2 Delta Coal Port: Vancouver, BC, Canada: David Smith, 2009-10, photograph.

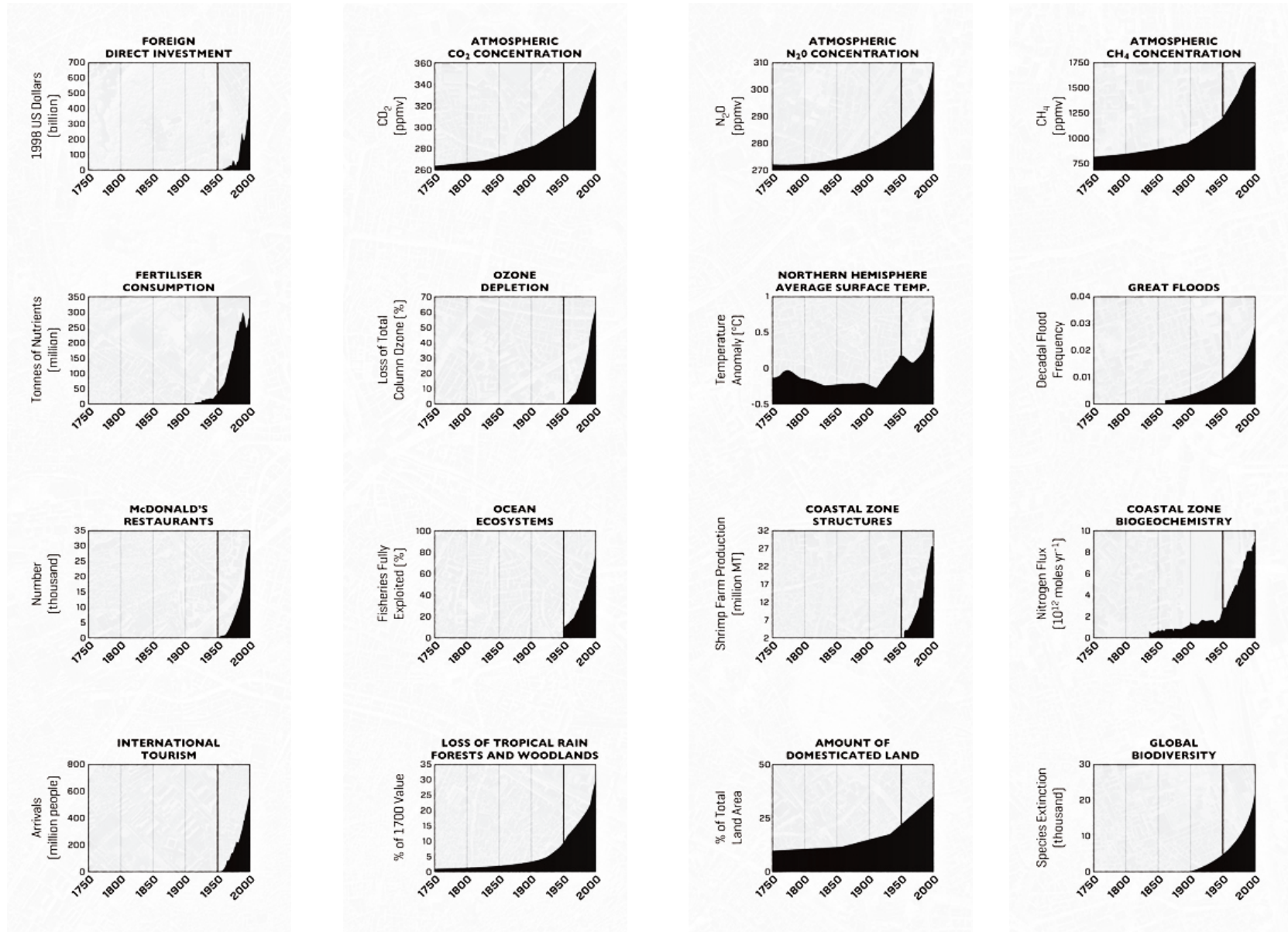
have been disrupted by industry, reckless urbanization, or nature's own devastation." It is with this attitude that this thesis addresses the cultural remediation of a remote limestone quarry through the establishment of a laboratory for practicing land art.

In 2002 the term "Anthropocene" was introduced to the scientific community as a geologic position on the changes occurring globally in climate, energy, and the land. These changes, described visually by the "Anthropocene indicators", are continuous escalations in population, damming of rivers, CO2 concentration, and loss of ecosystems, etc., etc. What is being indicated is impact, and the potential widespread effect of human-kind on all landscapes. The Anthropocene marks a new phase in geologic time, described as the period during which human activity has been the dominant influence on the environment. By 2016, "Anthropocene" will be the accepted scientific term for the geologic epoch that began with the emergence of organized agriculture in ancient Mesopotamia. Although conceived as a very broad scientific term used to summarize the immense human impact on the earth, the Anthropocene has generated a strong cultural response in the arts, technology, and built environments.<sup>1</sup>

The industries that profit from the extraction of raw earth

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<sup>1</sup> Turpin, E. Architecture in the Anthropocene: Encounters among Design, Deep Time, 4



3 Anthropocene Indicators

materials have had a particularly widespread effect on the natural and built environment. Mining, in particular, demonstrates a profound disjunction between the geologic rates of formation of mineral resources and the rapid rates of their extraction and depletion.<sup>2</sup> This gap of time and space reflects the acceleration of human ecological impact that is the defining characteristic of the Anthropocene and the central focus of this thesis investigation. These spaces that exist between the earth's natural geologic formation and human realms of consumption, provide opportunity for cultural investigation. Like the ruins of a lost civilization, abandoned mineral mining territories worldwide capture the accelerated formation of the Anthropocene. These depleted territories are constructed spaces that contain conglomerates of artifacts that reveal the polarities in time and speed between natural formations and the engineered. Inscribed within each territory is a rich narrative, recounting a bottomless natural history, a quantifiable human history and an opportunity to culturally remediate the gap through artistic intervention.

In the 1960s and 70s land artists in the United States explored the power of disjunction between natural earth processes and human construction in large-scale land art interventions.<sup>3</sup> The art movement,

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2 Keeling, Are, and John Sandlos. "Mining the Anthropocene." *Abandoned Mines in Northern Canada*. N.p., 10 Apr. 2014. Web.

3 Rigaud, Antonia. "Disorienting Geographies: Land Art and the American Myth of Discovery." *Miranda*, no. 6 (2012). doi:10.4000/miranda.2955.

an aggregate of multiple artistic responses to landscapes, was formally referred to as *Earthworks*. Site-specific installations like those produced by artists Robert Smithson, Michael Heizer, and Robert Morris drew a close relationship between construction and landscape. Their work illustrates the potential for unifying gradual shifts in the land with more abrupt interventions. These works are meant to be experienced as both a spatial navigation of and a cultural lens for the altered landscape. These often remote sites serve as an extension of galleries, to draw viewers into the landscape on a pilgrimage to augment a personal experience with the environment. The intention of the artistic interpretations is to blur the division between nature and human construction, allowing those viewing the work to comprehend the temporal presence of oneself amidst an inconceivable span of time and place. Using the strategies of land art, this thesis will investigate the role of architecture as an active agent in mediating between natural and human constructions in the Anthropocene.



*4 Engineered geologies: The Anthropocene is defined by engineered geologies, whereas the global city.....*



*5 Mining oil: is fueled by a parallel city, in a parallel time*



6 Dredge formation: *The Anthropocene is the island shaped by the dredging of rivers....*



*7 Nuclear Fallout, Chernobyl: And the landscape produced by a destructive engineered nature*



8 Mountain top removal: The Anthropocene is a terraced hillside that was once a fertile mountain....



*9 Spanish Limestone Quarry: and the grand staircase of a quarry whose reciprocal steps are found in in our most magnificent constructions*

*Introduction*  
*Design Proposal.*

Drawing upon a thorough understanding of the temporal and cultural significance of limestone mining in the Eastern Oregon, this design investigation will address a cultural response to resource extraction in the Anthropocene. The chosen site for this thesis is an abandoned limestone quarry and cement factory in Lime, Oregon. This remote and overlooked artifact of the extractive industry will become the site of an art park for the testing of environmental installations and large-scale land and environmental work. The project serves as a means to illustrate design practices that will focus on site material reuse, and landform architecture typologies, employing excavation techniques and the augmentation of existing constructed infrastructure. Through the reinterpretation of the site as a cultural landmark and a place for artistic investigations, the past and

present history of the site will be revealed, and a new resource introduced to a depleted landscape.

The project proposal is an outdoor laboratory, whereas the architecture will serve as a gallery, a flex space, a workshop-studio, and lodging for artists in residence. The laboratory will also include a public rest room and site entrance, associated with the exhibition gallery for art, photography, and sculpture constructed on site or regionally. The architecture of the complex will be a lens for viewing the landscape and the changes that occur as the artists accrue works on the site and forces of nature erode the territory. The project site will serve as a cultural center point for surrounding towns of Baker City to Ontario. The towns have a rich relationship with the history and expansion of the region, and have a close material relationship with the mine. The laboratory in Lime will serve as an extension to the cultural institutions of the surrounding context. The following research outlines the intersection of earthwork, land art, and architecture, providing the intervention in Lime with a set of criteria that illuminate this intersection through built works.

2  
*Fertilize*  
*Mineral Depletion Producing Place.*

*The miner who cuts into the land can either cultivate or devastate it... Depending on how conscious he was of nature in himself and the landscape. A mine could be as natural as wilderness.*

-Robert Smithson, *The Collective Writings*

The mining of Limestone, a sedimentary stone, has a long rich history within the construction of the Anthropocene. Ancient Egyptians built the Great Pyramids with massive limestone and granite blocks cut by hand from nearby quarries.<sup>4</sup> Writing around 25 B.C. Vitruvius references the mixing of lime to make concrete for both buildings and for use in underwater construction.<sup>5</sup> Indiana Limestone quarries scattered across the eastern United States provided the stone for the construction of the Empire State building

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<sup>4</sup> "The Egyptian Pyramid." Encyclopedia Smithsonian: The Egyptian Pyramid.

<sup>5</sup> Pollio, Vitruvius, Ingrid D. Rowland, Thomas Noble Howe, and Michael Dewar. Vitruvius: Ten Books on Architecture. 2.5.1-3



10 Tailings pond: David Maisel, photograph.



11 Bingham Canyon: David Maisel, photograph.

and the U.S. capital buildings.<sup>6</sup> Today limestone continues to be extensively quarried as masonry building material. In addition, the mineral Lime is extracted for use in concrete, a widely used construction material.

The resource extraction industry is estimated to move 57 billion tons of earth worldwide, an amount that parallels estimates of all natural erosion around the world. In her article titled “Still Digging: Extractive Industries, Resource Curses, and Transnational Governance in the Anthropocene” Stacy VanDeveer states:

*In other words, humans now move more earth each year, just for mining and quarrying, than the global hydrological cycle. It is simply impossible to comprehend modern societies without the products of the extractive industries.*<sup>7</sup>

But, VanDeveer argues, society must confront the environmental and social implications of this scale of human impact. Mining landscapes must be understood not as just the products of engineering but a distinct cultural site.<sup>8</sup> Rarely referred to as a “product” of the extractive industry, the quarry or mine represent among the most drastic and permanent

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<sup>6</sup> “Building Stones of Our Nation’s Capital: Washington’s Building Stones [4 of 4].” USGS. N.p., n.d. Web. 09 Dec. 2014. <<http://pubs.usgs.gov/gip/stones/stones4.html>>.

<sup>7</sup> VanDeveer, Stacy D. “Still Digging: Extractive Industries, Resource Curses, and Transnational Governance in the Anthropocene.” 3

<sup>8</sup> VanDeveer, Stacy D. “Still Digging: Extractive Industries, Resource Curses, and Transnational Governance in the Anthropocene.” Transatlantic Academy, 2013. Accessed June 25, 2014.



12 Mineral Resource Mining in the US: Active and abandoned mines and quarries

marks modern society has left on the landscape. As an Anthropocenic formation landscapes of extraction represents a new stage where natural and human forces are inextricably intertwined, constructing a space to cultivate a cultural resource. The act of extracting resources, such as lime, from the earth to advance technology leaves a void in its place, resulting in an artificial topography.

*The issue at stake is both material and symbolic. While it is undeniable that the extractive activities require the movement of earth and effectively the changing of landscapes, it is also clear that these changes could contribute to the creation of a new social and cultural order by rewriting the histories of territories.<sup>9</sup>*

As anthropologists Lorenzo D'Angelo observes, the reworking of these quarried landscapes transforms them physically and socially, creating a space from the destruction of a place. The transformation from natural to anthropocenic is to acknowledge the impact of humanity on their conversion of all landscapes. In this new epoch human interventions become nature and thus human activities like the construction of land art and architecture, that radically shape the earth, must be interpreted as both a process of geomorphic proportion and cultural reformation.<sup>10</sup>

These large movements of the earth - earthworks - begin to

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<sup>9</sup> D'Angelo, Lorenzo. "Mining, Environments, and the Role of Anthropologists." [Http://allegralaboratory.net/mining-environments-and-the-role-of-anthropologists/](http://allegralaboratory.net/mining-environments-and-the-role-of-anthropologists/). June 11, 2014.

<sup>10</sup> Ibid.

describe an important intersection, where the destruction of a space creates place. The place is neither a landmark nor a sculpture, rather an inscription within each intersection that contains a story and an opportunity for legibility.

*Fertilize:  
Earthwork as Cultural Indicator.*

*Earthworks map the intersection of human construction and geomorphology. They begin with land and extend through the complex social and ecological processes that create landscape.*

-Ellsworth, Elizabeth Ann Ellsworth and Jamie Kruse, *Making the Geologic Now: Responses to Material Conditions of Contemporary Life*

During the 60's and 70's, in the United States, a form of art emerged that would confront the encounters between human and nature through large-scale earth construction.<sup>11</sup> Many of these land art works responded to climactic and geomorphologic elements in order to reveal the temporal and spatial qualities of the vast landscapes of the American west. What differentiates land art from other forms of art is that it is a physical experience, which seeks to break free from the conformity of the

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11 Tiberghien, Gilles A. Land Art, 13



13 *Yucca Crater, Synthetic Earthwork, 2011: Ball Noguees Studio, High Desert Test Site, California, Recreational Pool*

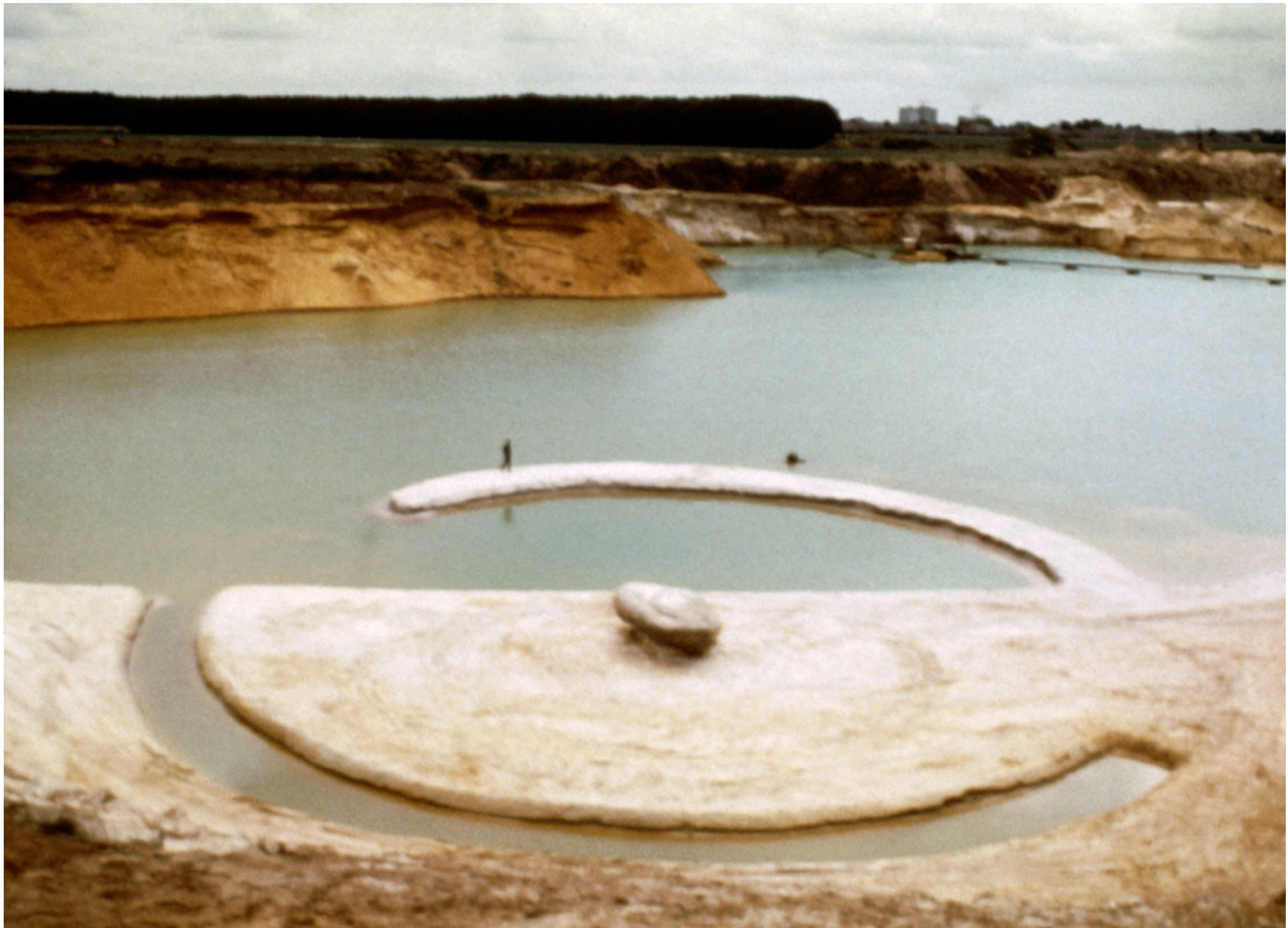
traditional gallery, extending the gallery walls to unconventional frontiers. To comprehend its full potential, these on-site installations demand a full bodily interaction, involving a pilgrimage to their physical location. Earthworks emerged as a form of art that relates more to the scale of other built interventions in the landscape, such as architecture.<sup>12</sup>

Robert Smithson, a well-known land artist of the late 1960's and early 1970's began to address the use of degraded sites such as mines and quarries for land art. Seeking to explore the relationship between the use and the reclamation of mines and quarries, Smithson saw both the artist and the miner as natural agents.<sup>13</sup> Smithson was the first to propose that the artist might serve as a mediator between ecology and industry. In his famed work Broken Circle, Spiral Hill, Smithson reveals a link between the mine in which the art placed and the greater history of the region by referencing the Dutch built dikes. This particular mine had provided the materials for several of the dikes. Although subsequently criticized for continuing the abuse of the environment, the artist did not claim to seek beauty in the state of the landscapes he worked with, however he did see their condition demonstrative of the transforming relationships between man and nature. Smithson sought to address mining landscapes from a

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12 Krauss, Rosalind. "Sculpture in the Expanded Field." October 8 (1979): 30. Web.

13 Smithson, Robert, and Jack D. Flam. Robert Smithson, the Collected Writings. Berkeley: U of California, 1996.



14 *Broken Circle. Emmen, Holland 1971: Smithson, Robert. Conceived as a "positive extension of earth into the water" where as the negative is the removal of earth for the dutch dikes*

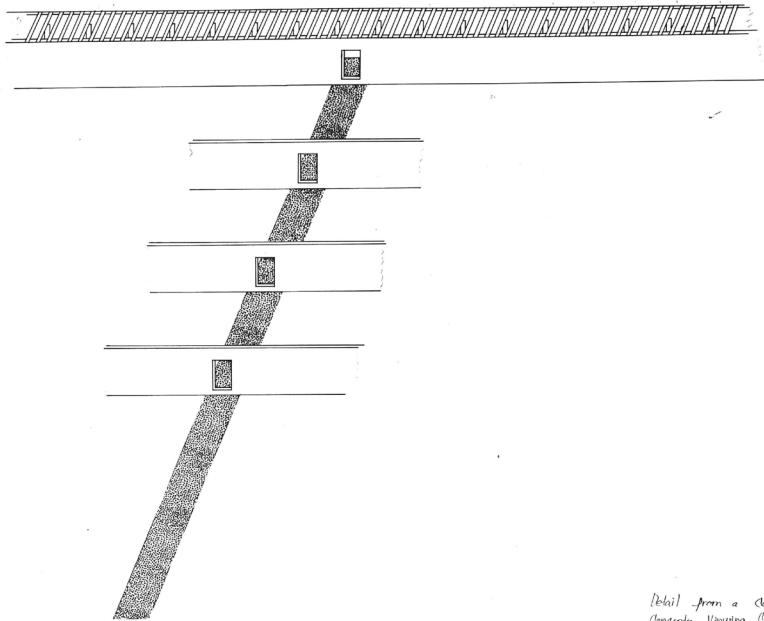
cultural perspective, allowing the site to be recognized as both culturally regenerative and resource depleted.<sup>14</sup>

King County, Washington emerged at the epicenter in the broader discussion of land art as reclamation. Several King county projects, both built and conceptual, were featured in a symposium sponsored by the King County Arts Commission between July 31 – August 18, 1979.<sup>15</sup> The work ranged in scale and complexity but all projects addressed the issue of using art to reclaim a broken landscape. A conceptual project by Mary Miss, a prominent land artist still practicing today, proposed the reuse of a strip of land on the edge of Sea Tac Airport. The site, an abandoned support space for Sea-Tac utilities, was strewn with concrete foundations, old roadways, and steep embankments shaped for the airport facilities. The proposal included several structures that allow users to connect the site with the airport, seen in her drawings of a concrete corridor and a wood courtyard. Miss conceived a minimalist park that utilizes existing elements as armature for new structures, revitalizing the park and both reconnecting the landscape to airport and to the natural landscape. The structures on the site were both complete and fragmented intended to either create seclusion from or view of the runway, Although unbuilt, the project

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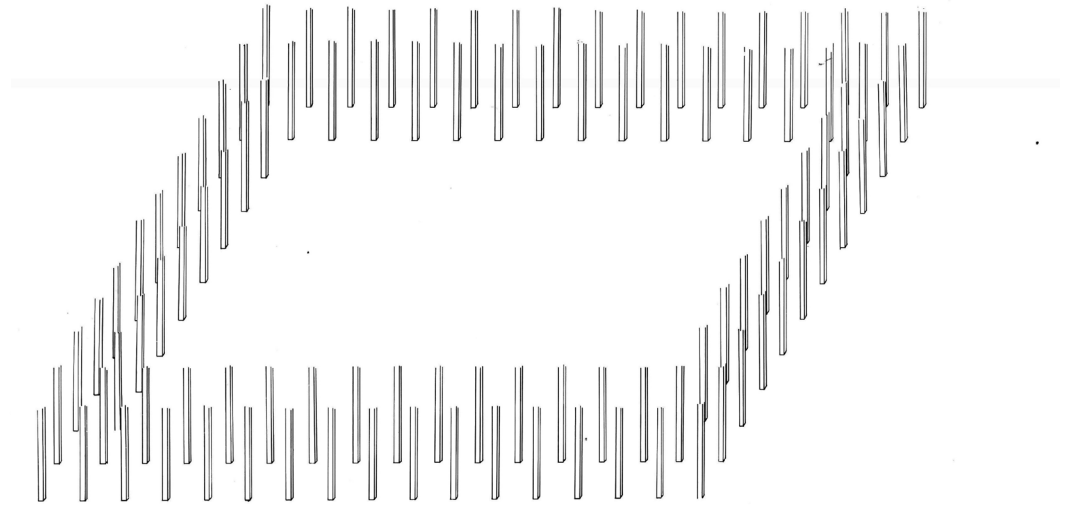
<sup>14</sup> Tiberghien, Gilles A. *Land Art*, 108

<sup>15</sup> Morris, Robert. *Earthworks, Land Reclamation as Sculpture: : A Project of the King County Arts Commission*. Seattle, WA: Seattle Art Museum, 1979.



Detail from a Construction  
 Concrete Veneer Corridor with  
 Entry Dells  
 Scale 1/4" = 1'  
 Seattle 1979 Mary Miss

15 Drawing of concrete corridor: Mary Miss, Sea Tac Earthwork Proposal



Detail from a Construction  
 (Brawl) (burl with Uxal Foots  
 Scale 1/4" = 1'  
 Seattle 1979 Mary Miss

16 Drawing of wood courtyard: Mary Miss, Sea Tac Earthwork Proposal

introduced a route for land art that critically looked at public interaction, and how it might be reflected both through materiality and in existing or new interventions.

The term *Earthworks* began as a formal description of this arts movement has gradually expanded over the last five decades to encompass any landscape where human construction and geomorphology have intersected, an earthwork. This includes mining landscapes, roadways and interstate systems, any construction that has transformed the natural history of a territory for the needs of humanity.<sup>16</sup> The producing of earthworks implies a spatial recalibration of a landscape that fuses construction and nature. In contrast, the modern built environment more often implies dissociation with nature, in which the man-made supplants the natural. But by applying strategies of land art to architecture, an approach to building is possible that minimizes the separation between construction and nature. However, rather than remaining with in the realm of temporary installations, this thesis extends these ideas to a more lasting occupation of these conflicted landscapes. An occupation where architecture is both providing an experience of the intrinsic nature of the site as well as a service to those working on the site, augmenting the landscape with interventions.

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<sup>16</sup> Taylor, Chris. "Casting Architecture in an Expanding Horizon: Atacama Lab: 07. 15-23.



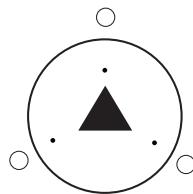
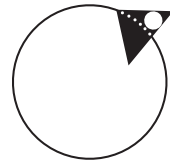
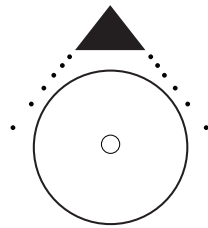
17 Furkapasstrasse, Switzerland, 2001: © Margherita Spilluttini

*Fertilize*  
*Land Art in Landscapes of Extension*

*The ambition of Land Art can be understood, structurally, by using the dynamic notion of going through space to define two approaches to space, the geographic and the planetary, associated with two Ur-forms, the labyrinth and the observatory.*

-Rigaud, Antonia. “Disorienting Geographies: Land Art and the American Myth of Discovery”

In her essay, “Disorienting Geographies: Land Art and the American Myth of Discovery,” Antonia Rigaud portrays land art as a frame in which to perceive the land. By entering into this space of frame constructed by the artist the viewer forced to reconcile their physical perception with the land and the surroundings. The viewer is forced to find their own direction, an exercise of navigation with the intent of finding new discoveries, or revealing truths about the location. In the landscape, “Our experience of the works is no longer based on knowing



18 *Periphery-Labyrinth-Observatory:  
The spatial poetics of land art*

but on finding.”<sup>17</sup> This structure of navigation is pivotal for the spectator to acquire as much knowledge as possible about the landscape in order to understand his or her place in it. Rigaud argues that land artists focus was predicated on their investment in the land and the art as a frontier for discovery, even in a period where the idealism and discovery of the American frontier had vanished. (with the exception of outer space exploration).<sup>18</sup> This thesis investigates the Anthropocene as a new frontier, found in fragments, discarded along the peripheries, a new formed territory for exploration.

Rigaud speaks of the spatial structure that land art exhibits, the first of which is the work as a labyrinth. The maze characteristic is not a literal spatial translation, rather it indicates the disorientation the art forces on the spectator. The disorientation is a strategy to strip the spectator of a visual sense and replace it with a physical sense, allowing the viewer to discover a new sense of sight and a new approach to the landscape.<sup>19</sup> Kenneth Baker describes this sense of visual disorientation in response to Walter De Maria’s “Lightning Field” figure 14,

*When crossing the first row of poles, the sensation of passing into something is unmistakable, yet it is not the feeling of entering*

<sup>17</sup> Rigaud, Antonia. "Disorienting Geographies: Land Art and the American Myth of Discovery, 35

<sup>18</sup> Ibid., 36

<sup>19</sup> Ibid., 37

*architecture. Although the Field's grid structure is visible from the outside, within it you see the resonance, the rapport among 400 elements that allows you to feel connected to the entire expanse of space the work claims, even when its limits are visually elusive.<sup>20</sup>*

The sensation Baker describes becomes a point of approach for the work. With all land art, the pilgrimage to the site always leads to a threshold in which the viewer is forced to consider where he or she is, geographically. The threshold or the periphery view is where the navigation and discovery begins.

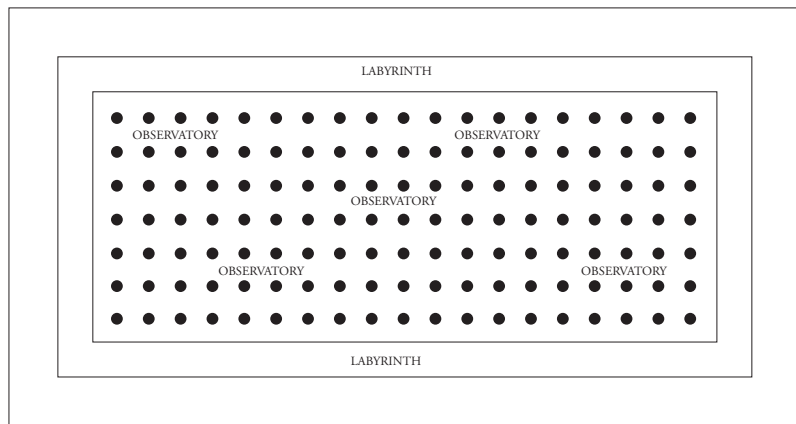
Rigaud expresses the observatory as the stage in which the viewer places themselves within a container of the time and location. The observatory, in term of spatial quality, provides the center and terminus for the maze, and the eventual cognizance of location in both the landscape and the earthwork.<sup>21</sup> The Sun Tunnels, a piece by artist Nancy Holt located in the Nevada desert, uses light measurement as an orienting technique and means of experiencing the structure of the observatory. The tunnels, while physical grounded objects, serve as locator's, while light bleeding through the multiplicity of holes provides a gauge for time.<sup>22</sup> Nancy Holt describes the experience of the locator's in artforum magazine:

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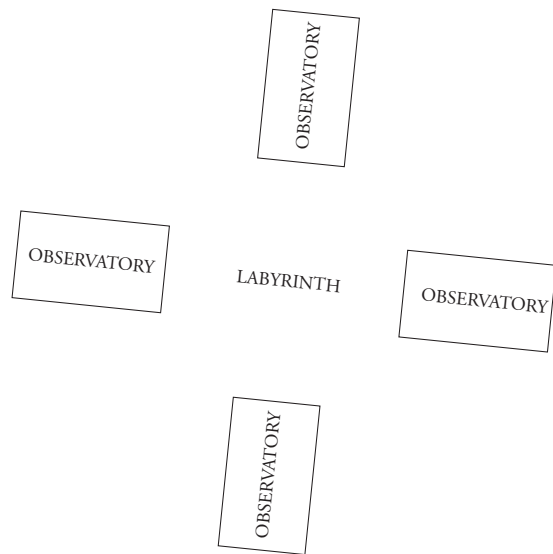
<sup>20</sup> Kenneth Baker. The Lighting Field. 13.

<sup>21</sup> Rigaud, Antonia. "Disorienting Geographies: Land Art and the American Myth of Discovery, 17

<sup>22</sup> Tiberghien, Gilles A. *Land Art, 200*



19 Mapping spatial operations: The observatory conceived as moments within a field



21 Mapping spatial operations: The observatory is the frame.



20 Lighting Field: Walter De Maria, 1977



22 Sun Tunnels: Nancy Holt 1976

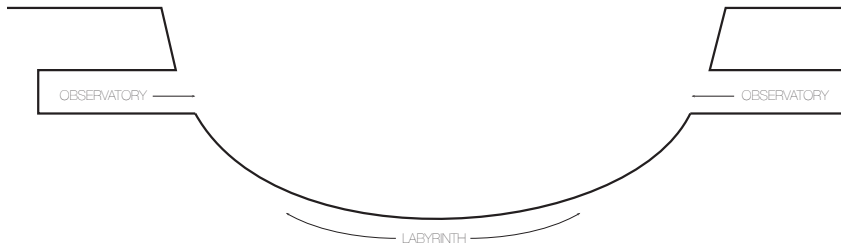
*The work is seen from several angles on the road in, at times two of the tunnels line up exactly head on and seem to disappear... From the center of the work the tunnels extend the viewer visually into the landscape, opening up the perceived space. But once inside the tunnels the work encloses, surrounds--and there is a framing of the landscape through the ends of the tunnels and through the holes.<sup>23</sup>*

The overall experience conveys three defining characteristics of land art, the periphery, the labyrinth, and the observatory. The periphery is defined as the way in which the work appears or disappears from a distance and how the vision of that piece changes as one move in the landscape. The labyrinth is the process of navigation in which one is encouraged to discover the site through the space, standing at the center, with an all-seeing eye, discovering the multitude of trajectories. Finally the observatory defines the space in which one is located, whether that be through framing, daylight conditions or materiality.

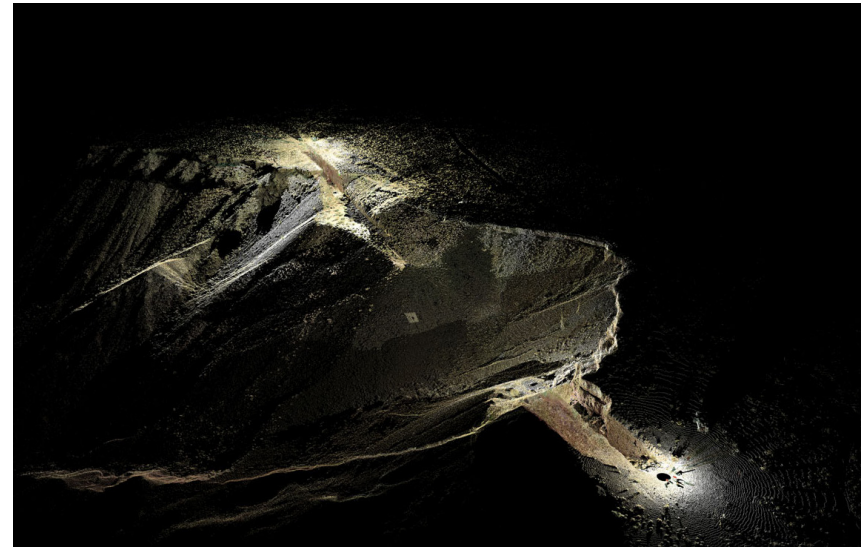
This thesis seeks to explore the capability of architecture to adopt the defining characteristics of Land art and structure them in such a way that the architecture is dependent on the landscape for locating itself on the edge of an encroaching geologic era. Serving as boundaries for investigation, the three characteristic, periphery (an exterior perspective), labyrinth, and observatory will provide guidelines for the design and analysis of site.

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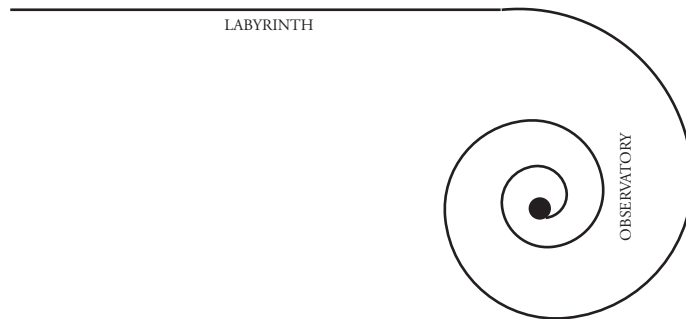
<sup>23</sup> Tiberghien, Gilles A. *Land Art*, 200



23 *Mapping spatial operations: The observatory is understanding scale.*



24 *Double Negative: Michael Heizer*



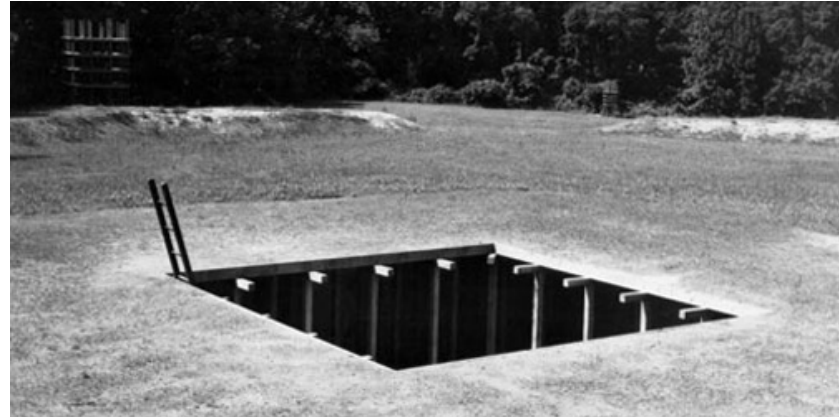
25 *Mapping spatial operations: The observatory is the ending of a path.*



26 *Spiral Jetty: Robert Smithson.*

*Fertilize*  
*Inspirations*

This thesis therefore explores the typology of building that is constructed as an extension of site itself, subsumed in native and constructed stratum. The analysis in each of the following case studies will address how the architecture engages with the landscape, in both space formation and the performance. The case studies also investigate response to climactic and lighting conditions, and in situ material use. As many of the case studies are in remote locations, the service of the architecture is to reveal intrinsic qualities of the site while providing an amenity that emerged through an exploration and discoveries of the site. Programmatic case studies shape a context for developing a program for an artist in residence. Each program discussed considers the needs of the residence as well as the services provided that connect the artist to the public.



27 *Perimeters, Pavillions, Decoys: Mary Miss.*



28 *Glenorchy Art and Sculpture Park: Room 11 Architects*



Photo: Iwan Baan

29 *Chichu Art Museum: Tadao Ando.*

*Mary Miss and Rosalind Krauss*  
*Perimeters|Pavilions|Decoys*

Mary Miss is considered a pioneer of land art, focusing her work on the experience of the individual moving through landscape. Miss's work often implements architectural materials in order to emphasize or draw out latent characteristics of site such as history, or ecology. *Perimeters/Pavilions/Decoys* constructed 1977-1978 is located at the Nassau County Museum in Roslyn, New York. The work consists of five interrelated installations: three vertical structures, an embankment, and a subterranean courtyard, each evoking some existing or former structure in the estate it is sited on. The interventions are built using vernacular construction techniques and materials, and the piece was intended as a temporary installation on the museum grounds. The interventions form a sequence, composing a narrative of "images in an extended scale"<sup>24</sup> and the holistic intention of the earthwork was to make the public uncertain to the "limits of space"<sup>25</sup> Weaving below and above ground, applying architecture, sculpture, and existing landscape, the work produced the affect of extending space beyond visible characteristics.

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<sup>24</sup> Lucarelli, Fosco. "Mary Miss's 1977-1978 *Perimeters/Pavilions/Decoys* -- SOCKS." *SOCKS*. N.p., 22 June 2014. Web.

<sup>25</sup> *Ibid.*, 22



30 *Perimeters, Pavillions, Decoys: Mary Miss*



*Room11:  
GASP! Glenorchy Arts and Sculpture Park, Tasmania*

The Glenorchy Arts and Sculpture Park is situated on the Derwent estuary system at Elwick Bay, in Glenorchy, Tasmania. The intent of the park is to respond to the local environment and lapping tides.<sup>27</sup> The local flow of tidewaters and produce an ever changing environment of mud flats and flooding, creating a diverse landscape of movement. The purpose of placing an art park in this locations is to feed the imagination of the artists working on site and stir the curiosity of those of those visiting. The approach of the architecture and public art is to avoid interfering or overwhelming the natural order of the place cherished by the locals. Land use is developed to generate a new and different way of seeing and sensing the environment. Romana Lilic and Mariano Arias Diez writers of the design travel blog LA76 describe the pavilions from a personal perspective. “Color and architecture have been used as a vehicle for re-evaluation and re-appreciation of place, creating unity between the bay and the experience.”<sup>28</sup> The sculpture part is being developed by Room 11 architects from Melbourne, Australia. Designed in phases, the project is constructed as a “ribbon” of structures in which the art will be planted.

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<sup>27</sup> "GASP, Glenorchy Arts and Sculpture Park." LA76 Design Travel Blog.

<sup>28</sup> Ibid

The structures commence with a public walkway, which connects two areas of shoreline. Two carefully placed pavilions enclose both ends of the walkway. The pavilions are built for shelter and contemplation of the surrounding landscape, oriented in such a way to frame the Tasmanian bay. <sup>29</sup> Located on a former industrial site, the project seeks to connect small peninsulas disconnected by industrial erosion.



*Tadao Ando, James Turrell, Walter De Maria:  
The Chichu Art Museum*

The Chichu Art museum is built directly into a southern portion of the island of Naoshima in Kagawa Prefecture, Japan, Figure 24. Designed by architect Tadao Ando with the help of artists James Turrell and Walter De Maria, the Chichu art museum opened to the public in 2004. The museum is composed of a complex of plain concrete rooms that house the work of Claude Monet, Walter De Maria and James Turrell. The architecture was constructed to rethink the relationship between people and nature. "Taking form as artists and architect bounced ideas off each other, the building in its entirety can be called a massive site-specific art work." The Chichu design strategy was to effect the scenic views of the island as little as possible by placing the whole facility below ground.<sup>30</sup> The museum is sited within a National Forest and a former salt field. To preserve the splendor of the surroundings, a majority of the buildings were placed underground, with the exception of a few skylights. The museum is comprised of five galleries. Flanking either side of the entrance ramp leading to the lobby are two walls at a six degree incline. The purpose of

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<sup>30</sup> Kwah, Meng Ching. "The Chichu Art Museum."



33 Site Plan: Chichu Art Museum

this architectural element is to create a mood of tension and suspense. Once inside there is a singular triangular court that connects the three artists galleries. The rooms and corresponding art pieces respond to the sky and light, while corresponding opening reflect the work and respond to the landscape.

The case studies described have sought to explore material relationships with diverse landscapes. The architecture, or constructions of these studies share a common bond, in that they are built in such a way so that they frame and draw meaning from the landscape. The relationship of architecture to the surface conditions of the site are symbiotic, the landscape provides for the architecture, bestowing meaning and intimate characteristics, while the architecture provides a reading of the landscape, made legible to the visitor.

*Artist in Residence Programs focused on Earthwork, Land, and Environmental art.*

The architectural intervention in Lime serves both as an experience of site as well as a resource for users. In order to better understand the program, this thesis examines existing land art programs that convey the basic needs of those who participate.

*LAAW Land Arts of the American West  
Atacama Lab: 07'*

The Land Arts of The American West is a program ran by Texas tech university. The program is typically a full semester course that takes students to major earthworks and land arts in the American southwest, such as Roden Crater, Chaco Canyon, Bingham canyon, and Double Negative. In 2007 the program provided the opportunity for students to travel to the Atacama Desert in Chile. Public events were held in Santiago to discuss the expanding definitions of earthworks and land arts. INCUBO a not-for-profit curatorial residency program hosted the workshop in Santiago. A ten-day field work session followed the workshop in Santiago. Students departed the city to explore terraforming in the Atacama by visiting sites of art, existing architecture, infrastructure, industry and made artwork in these places. The students, as well as

professionals, then returned to Santiago in order to document, discuss and display work and research done in the field. “While each participant will absorb a large and diverse body of information and experience, our success will be measured in the translation of that energy into new earthworks. We seek to create an active measure of landscape.” The new earthworks created by the students are documented and displayed online and for a short time were showcased in the INCUBO studio space.<sup>31</sup>

1. Space to display documentation
2. Camping resources
3. Transportation for material
4. Small studio or media lab for documentation

### *CLUI, The Center for Land Use Interpretation*

The Center for land use interpretation has four locations: Los Angeles, Wendover Utah, Mojave Desert California, and Lebanon Kansas. CLUI is a research and educational organization seeking to better understand the nature and extent of human interaction with the earths surface.

“We believe that the man made landscape is a cultural inscription, that can be read to better understand who we are, and what we are doing.” The

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<sup>31</sup> “ATACAMA LAB: 07.” EARTH\_WORKS\_LAB. Land Arts of the American West, 2007. [http://earthworkslab.org/atacama\\_lab/index.html](http://earthworkslab.org/atacama_lab/index.html).

Complex in Wendover Utah serves as an artist in residency and center for the program operations. The site is a former WWII airfield and base, and the town of Wendover was once the training program for the first atomic bombing missions. The Wendover complex is composed of several buildings that serve the center. The residence of the complex are based on this site, but work in the surrounding airfields and salt flats. Upon entering the site there is an orientation building, the recommended start point. The building serves as an informational and group meeting station. Located within the former barracks is exhibition gallery one. Serving as the most public gallery the space hosts the research and work done by CLUI. Within walking distance is the studio and exhibition hall two. The neighboring structure is the residence support unit providing residences with beds, showers and kitchen amenities.<sup>32</sup>

1. Exhibition Space
2. Orientation and Offices
3. Studio
4. Residences

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<sup>32</sup> "The Center for Land Use Interpretation." The Center for Land Use Interpretation. N.p., n.d. Web. 08 Dec. 2014. <<http://clui.org/>>.

### *ArtPark State Park- Historical and Present*

The Art Park State park in Lewiston New York was an important development site for emerging earth artists of the 1970's. The site, a reclaimed industrial spoils pile became the testing site for artists like Nancy Holt and Dennis Oppenheim. Established in 1974, one year after Robert Smithson's Death, the 200-acre now state park bolstered a well supported artist in residence program. Artist spread out across the site, some using the dramatic landscape of the gorge at the south end of the property, others finding plateaus to work with. Most of the work was temporary, today there are still fragments and eroded images of past works visible within the landscape. Artpark has evolved to include an amphitheater with a robust summer concert series, trail systems, an art gallery, and a summer residence program. Each year the artists construct temporary and permanent installations in the woods and surrounding plateaus to continue the long standing tradition of the Art Park.<sup>33</sup>

1. Amphitheater
2. Gallery
3. Offices
4. Restrooms
5. Trail infrastructure

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<sup>33</sup> "Art Park." The Center for Land Use Interpretation. N.p., n.d. Web. 11 Dec. 2014. <<http://clui.org/ludb/site/art-park>>.

3  
Map  
Site.

The thesis examines the larger issue of architecture in the Anthropocene through a design intervention on the site of the abandoned quarry in Lime, Oregon. In order to propose a new use that is appropriate to the reuse of this site, the historical and present mechanisms must be revealed and described. The site analysis conducted uses mapping and diagramming to document the natural conditions and reveal the man made forces that have shaped this depleted terrain. The analysis will focus on the edge conditions that separate the quarry from its surrounding natural elements. The site will be analyzed with a focus on how these mechanisms of evolution and extraction serve as the inspiration for a design intervention.

Lime is an unincorporated community in Baker, Oregon, located on US Route 30/Interstate 84, equidistant between Baker City



34 *Regional Topography: Continental Foothills, 50' contours*



200 MYA  
SUBMERGED UNDER  
PACIFIC OCEAN LIME  
STONE PRODUCTION



160 MYA  
MOUNTAIN RANGE  
FORMED



60 MYA  
ROCKS STRIPPED BY  
EROSION



40 MYA  
VOLCANIC ERUPTION  
EXPOSE MINERALS



3 MYA  
FOLDING FAULTING AND  
GLACIATION



10,000 Y.A  
NATIVE AMERICAN  
HUNT/GATHER



1811-1840 A.D.  
OREGON TRAIL  
ESTABLISHED



1884 A.D.  
RAILROAD  
CONSTRUCTED



1889 A.D.  
POST OFFICE AND  
MINE ESTABLISHED



1916 A.D.  
ACME CEMENT  
FACTORY FORMATION  
FOR OWYHEE DAM



1960 A.D.  
1.2 MILLION  
BARRELS OF LIME  
MINED PER YEAR



1980 A.D.  
LIME DEPLETED SITE  
ABANDONED

and Ontario, Figure 28. While the closest community of Huntington is located only 5 miles south, the once thriving industrial facility today gives the impression of a remote ghost town. Located in the continental foothills of the Blue mountain Eco-region, the topographic formation in this region of Oregon is primarily characterized by the fluvial drainage into the greater Snake River. Smaller stream systems have carved the landscape into east west oriented valleys and hills that have undergone prolific erosion from the wind and water flows as well as dramatic temperature fluxes.<sup>34</sup> The historic cement factory and quarry is sited within one of these naturally constructed basins flanking the escarpments and occupying the valley floor. Limestone deposits quarried in this region were formed over 100 million years ago and are considered an “exotic terrain” meaning they originated from another region and migrated here with tectonic movement. As fluvial erosion began to systematically carve the valleys, the ancient limestone surfaced, thus becoming accessible for quarrying and industrial use.

The combined masses of the Cascade Range and the Blue and Wallowa mountains block any influence in this area from the maritime atmosphere, creating a continental climate, resulting in considerable temperature swings. While the temperature in Lime is on average, between

<sup>34</sup> “Introduction to Eco-regions.” Bureau of Land Management (n.d.): 30-32. BLM. Web. 9 Dec. 2014. <<http://www.blm.gov/or/districts/prineville/plans/johndayrmp/files/JDB/AMS/CH3-ecoregions.pdf>>.



36 Locating Lime, Oregon: The center of a 70 mile stretch between Baker City and Ontario

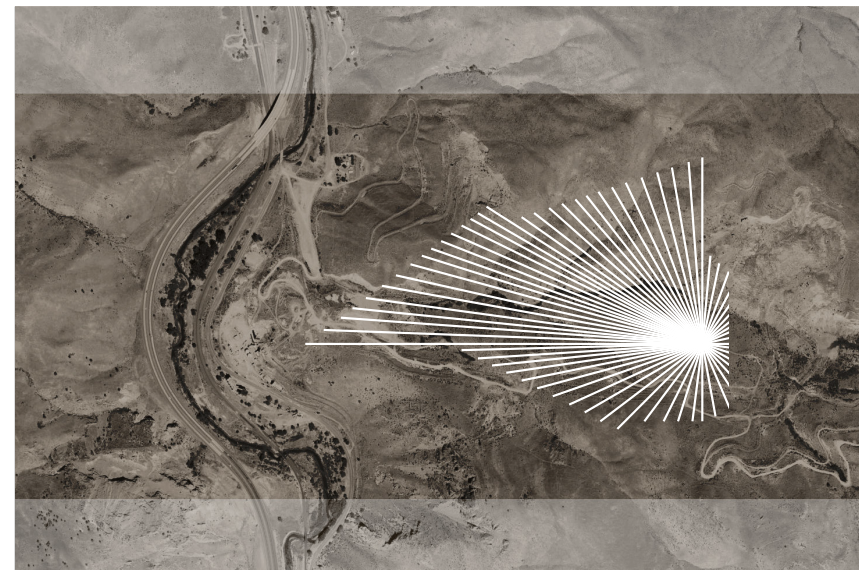
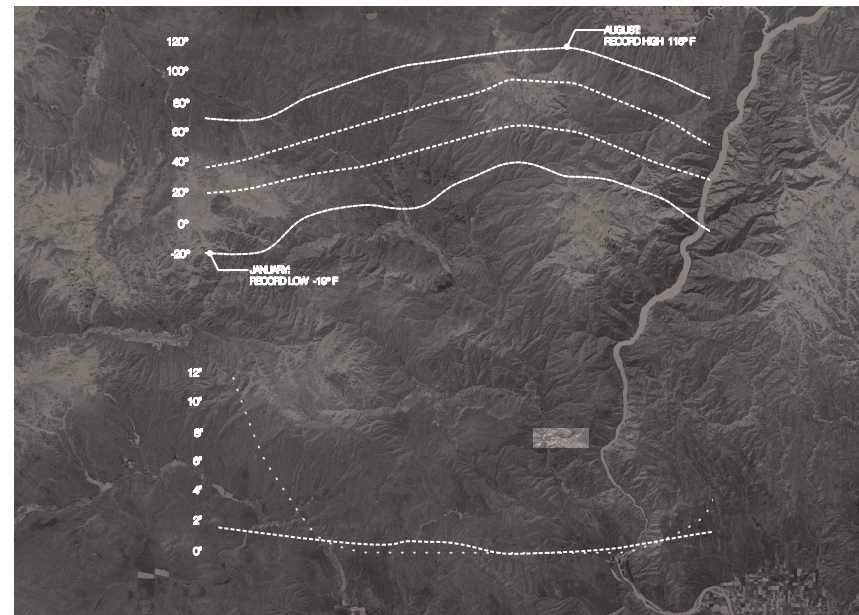


*37 Terraforming Lime: The mining operations produced stepped formations.*

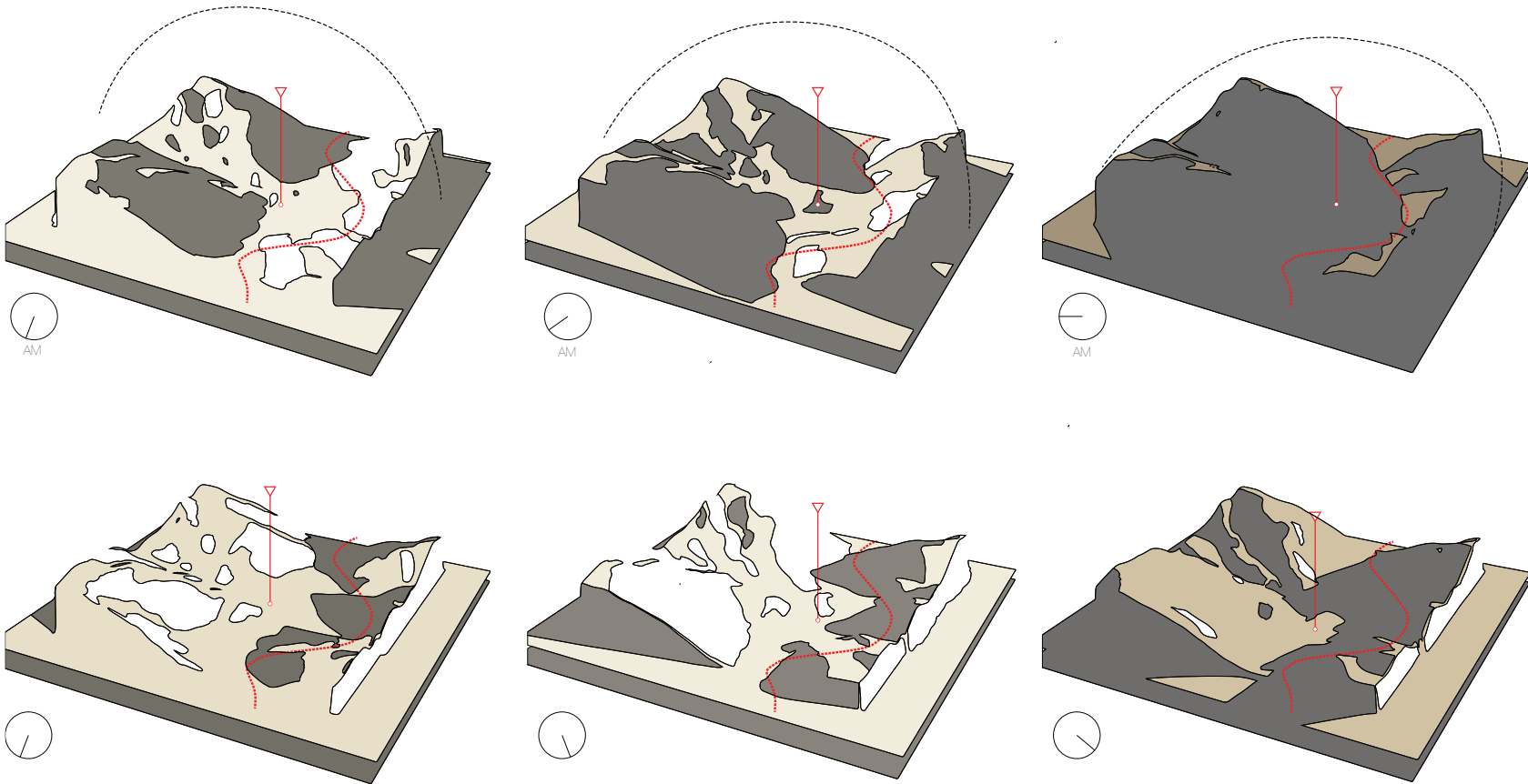
20 degrees Fahrenheit and 95, on occasion it will drop well below 0 degrees and rise above 100. The winds are predominantly oriented west-east with speeds varying between five and seven knots depending on the season, figure 30. The elevation of the site ranges from 2200 to 3600 feet above sea level allowing for a distribution of desert shrubs that vary with soil depth, texture and elevation. The region is classified as a high desert, due to its generally high elevation and low annual precipitation.<sup>35</sup>

Quarrying in Lime began at the turn of the century; the first record of human occupation in the area is the establishment of the Lime Post office in 1899. The deposits of limestone quarried on site were manufactured into lime that supplied a large area of eastern Oregon and western Idaho. By the turn of the century the Union Pacific Railroad passed through the site providing transport for materials being quarried from the site. In 1916 the Acme Cement Plaster Company built a plant to produce plaster on site and in 1921 the plant and quarry were sold to Sun Portland Cement Company. At this time an additional facility was built on the site for producing Portland Cement for construction on the Owyhee Dam, located in the adjacent Malheur County. Five years later, after the completion of the Dam, Sun Portland merged with the Oregon

<sup>35</sup> "Introduction to Eco-regions." Bureau of Land Management (n.d.): 30-32. BLM. Web. 9 Dec. 2014. <<http://www.blm.gov/or/districts/prineville/plans/johndayrmp/files/JDB/AMS/CH3-ecoregions.pdf>>.



38 Climactic Conditions: Temperature, Precipitation, and Wind



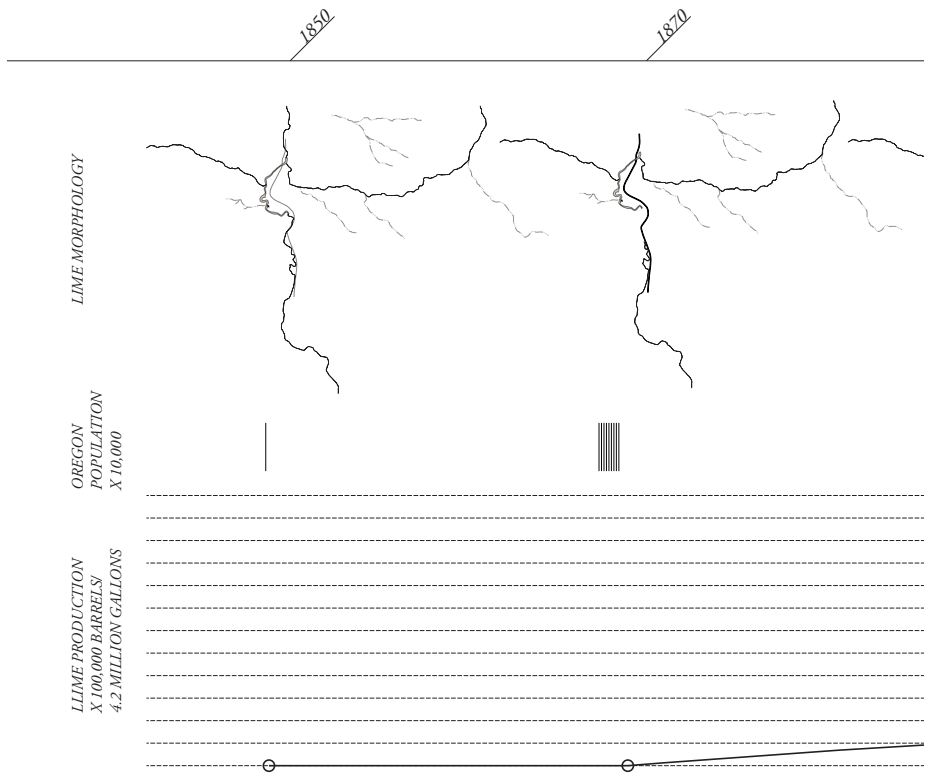
39 Solar Exposure: Sun studies during the summer and winter solstice, and the fall equinox

Portland Cement company based out of Portland. By the 1960s the Lime facility was producing 1.2 million barrels of lime per year. As the nearby deposits of the mineral were depleted, limestone began to be shipped from the Nelson Deposit located 12 miles northeast. In 1979 a new plant was built in Nelson, and the Lime plant closed in 1980. In 1983 the cement company in Nelson merged with Ash Grove Cement Company, the largest cement manufacturer in the United States. Oregon Portland Cement Company began to bulldoze the buildings and had intended on clearing the land but the loss of financing and back taxes put an end to the demolition. The abandoned facility is now owned by Baker County who foreclosed on much of the property, so it stands today as a ruinous artifact of the once thriving cement industry.<sup>36</sup>

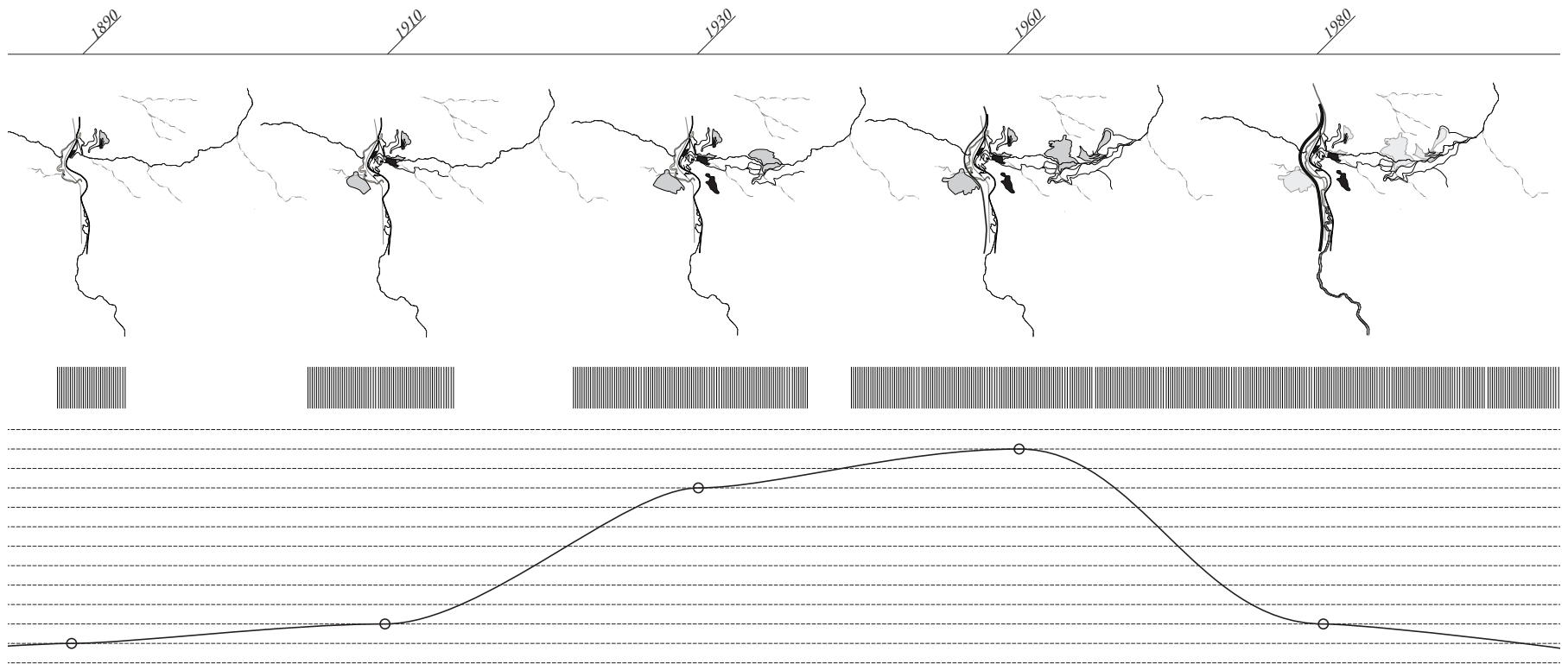
In 2000, the Baker County Board of Commissioners requested a targeted brown field assessment to investigate the possibility of site contamination. The testing revealed the presence of low levels of potentially explosive organic compounds, as well as other dangerous industrial produced contaminants, including petroleum and arsenic. The assessment concluded that while the contamination of the soil did pose some threats to human health, the ground and surface water did not. It was recommended that soil be removed in specific locations.<sup>37</sup> Since 2000

<sup>36</sup> Targeted Brown field Assessment, Former Lime Cement Plant, Baker County, Oregon

<sup>37</sup> Targeted Brownfield Assessment, Former Lime Cement Plant, Baker County, Oregon



41 1946 Mining Operation: Aerial Photograph



40 *Lime Morphology: Natural Landscape to earthwork in 100 years*



42 *1965 Mining Operation: Bird's Eye Photo*



43 *Current condition: Google Earth Image, 2014*

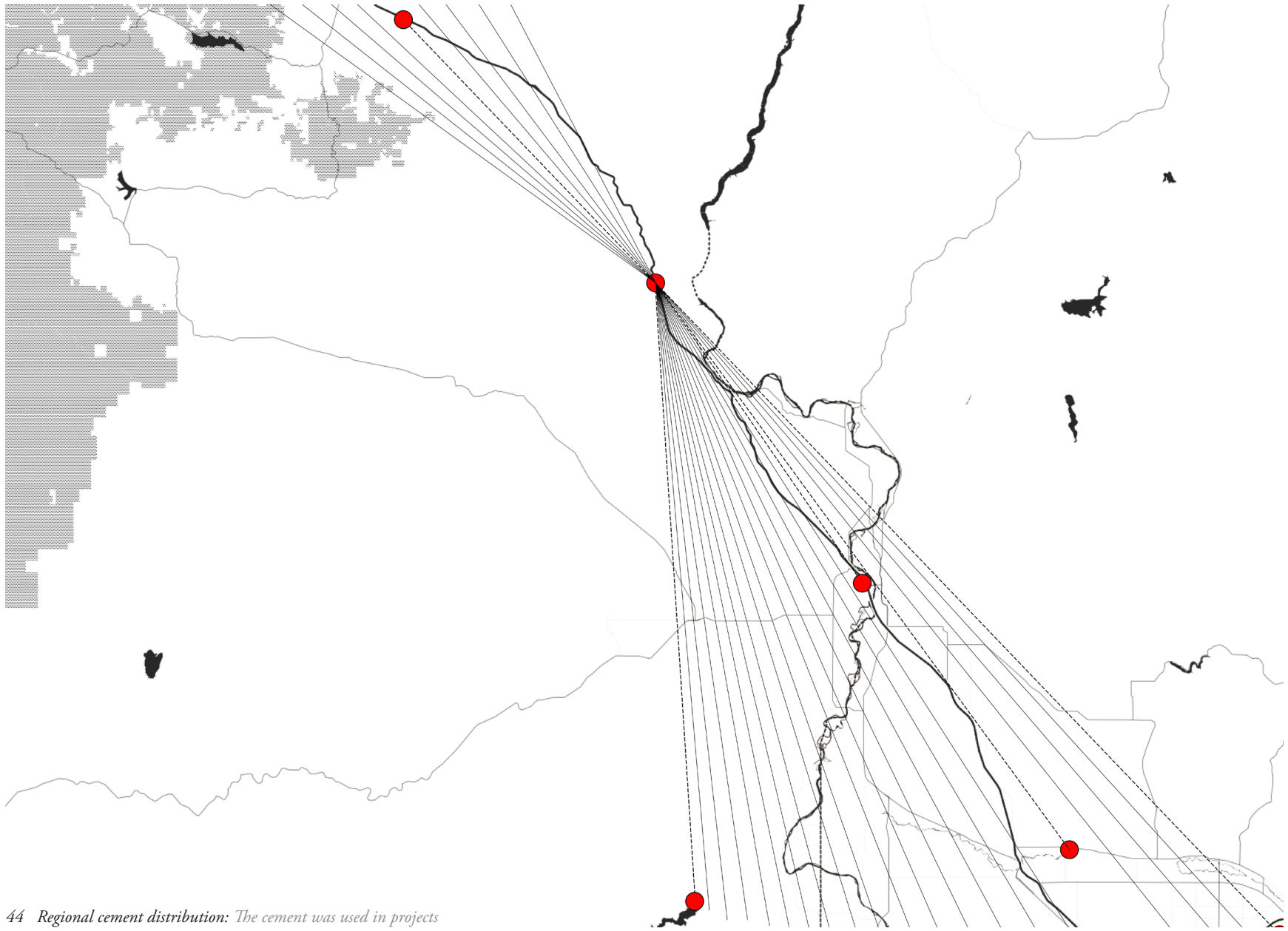
there have been various proposals for the remediation of the site and its reuse for community uses, industrial reuse, and/or green space. Since 2012 Steven Goleib, of PLC corporation in Provo Idaho has actively pursued the redevelopment of Lime as an eco-town experiment.<sup>38</sup> So while requiring targeted remediation efforts, the site still holds great potential for future development.

The completion of Interstate 84 between 1976 and 1980 has coincided with the slow abandonment of the Quarry. Following the old Oregon Trail that led to the Pacific Ocean, the freeway, originating in Portland and terminating in Ogden, Utah, is the only means of accessing Lime. While the factory and some portions of the quarry are visible from the freeway, the site stretches over a mile and a half east towards the Snake River. Only one access road connects the freeway to the larger quarry, which also provides access to the small wind farm located 2.5 miles southeast of the cement factory.

What remains in Lime besides an altered landscape and an abandoned factory is a visual reminder of a productive yet environmentally devastating history. The intention of this investigation is not to reuse or replace this past, but rather to identify with and participate in the evolution of the landscape through time. The cement plant which is first

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<sup>38</sup> Cockie, Richard. "Grand Idea to Turn Eastern Oregon Eyesore into Utopia Sparks Skepticism but Also Sliver of Hope."



44 *Regional cement distribution: The cement was used in projects ranging from western Oregon to Southern Idaho*

visible from the interstate serves as an entry point to the site and a visual record of its past place and time. A majority of the factory structures are still intact, including the crusher, the main mills, and the silos. While the natural process of decay has ravaged the vacant cement factory, it has also transformed it into a place of artistic discovery. The derelict structures have served as an inspirational informal subject for artists. Lime has also served as a pilgrimage site for amateur photographers who have documented the abandoned industrial complex. The built ruins that are the sediment of this engineered landscape have been broken down by the same processes of erosion and weathering that have shaped the geologic landscape producing a territory of the Anthropocene that is both natural and created by humans.



45 John Flemming, Lime Oregon, found objects



46 Informal graffiti art



47 Informal graffiti art



48 Informal art

## Map Program Development

### USER:

Five typologies of users surfaced from observations on site, study of multiple artist residency programs as well as investigations of related land art laboratories.

- User 01: Rest Stop
- User 02: Recreational
- User 03: Workshop
- User 04: Artist in residence
- User 05: Residence

### DURATION OF STAY:

The duration of each users stay becomes a critical dimension for siting each programatic element and providing for their needs.

- User 01: One hour or less on site
- User 02: One hour to five hours
- User 03: One or two days, depending on workshop, larger groups
- User 04: One week to three months, Possibly medium size groups
- User 05: Three months to one year, dedicated artist staff

### PROGRAM:

The program emerges as a result of various user needs and existing program studies. Each space serves the needs of the user, but kept distinct and identifiable as an element that would construct an experience for every user.

*Public Program Total: 8,750 sq.ft.*

Trail Infrastructure  
Covered Pavillion: 2500 sq.ft.  
Gallery: 4500 sq.ft.  
Offices: 850 sq.ft.  
Public Restrooms: 400 sq.ft.  
Equipment: 400 sq.ft.  
Circulation/Lift: 500 sq.ft.

*Commons Program Total: 2,400sq.ft.*

Flex Space: 1200 sq.ft.  
Kitachen/Dining: 800 sq.ft.  
Storage/ Equipment: 400 sq.ft.

*Workshop Program Total: 4,700sq.ft.*

Storage and Parking: 1200 sq.ft.  
Shop and Studio: 2400 sq.ft.  
Restrooms: 400 sq.ft.  
Storage and Equipment: 700 sq.ft.

*Residence Program Total: 2,600 + sq.ft.*

Single Long term residence (1): 600 sq.ft.  
Artist in Residence (3): 2000 sq.ft.  
Residence constructed as single units, more added to site as program grows

Daily short term visitors  
 Freeway stops, Restroom Break  
 < 1hr

Recreational user  
 Freeway Stops  
 1hr - 5hrs

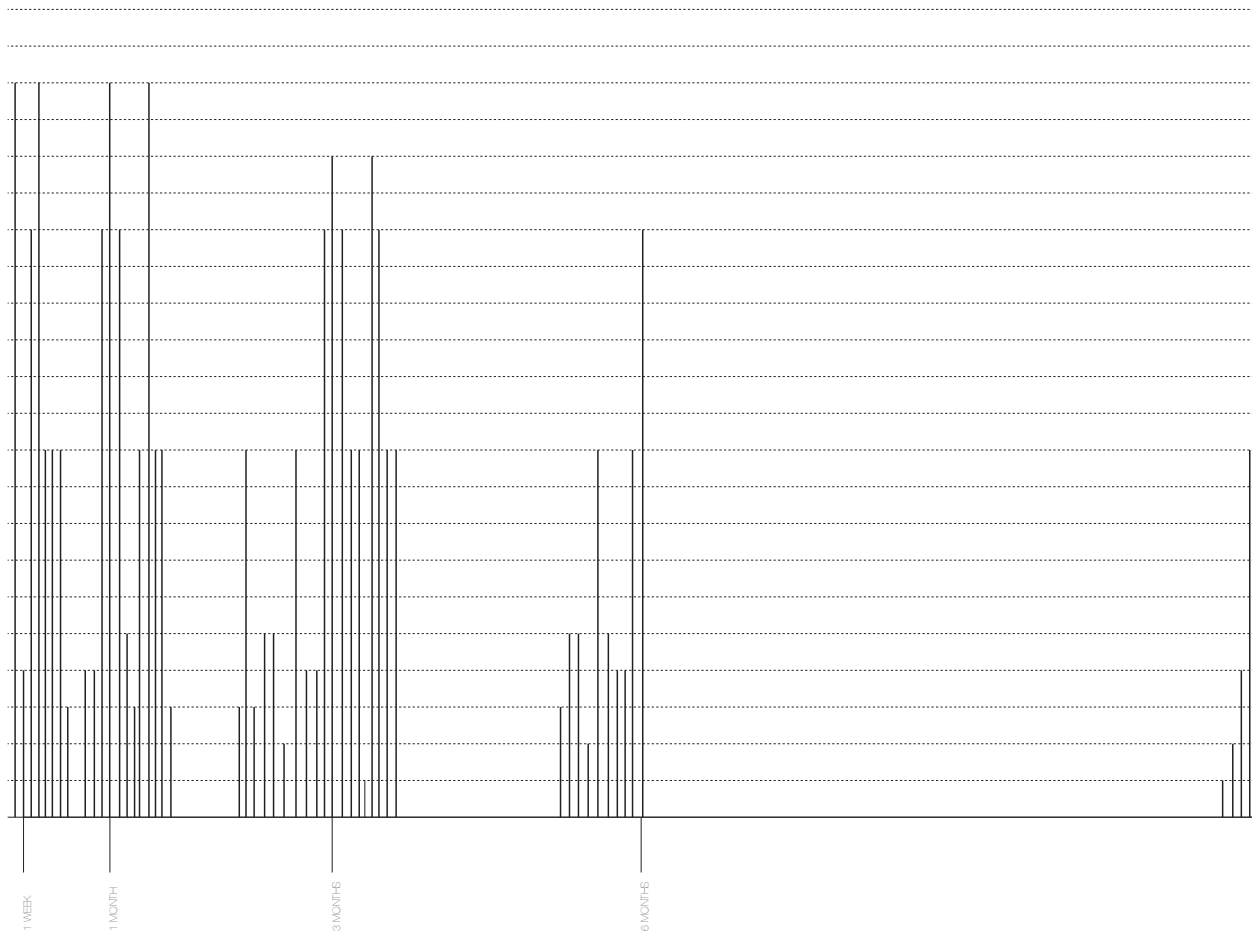
Day Class  
 Overnight Workshops  
 1-2days

AIR  
 1wk-  
 3mo

Resident  
 3mo- x

High frequency  
 Low Duration

Low frequency  
 High Duration



49 Duration & Program Requirements: User duration and needs define criteria

## Map Design Criteria

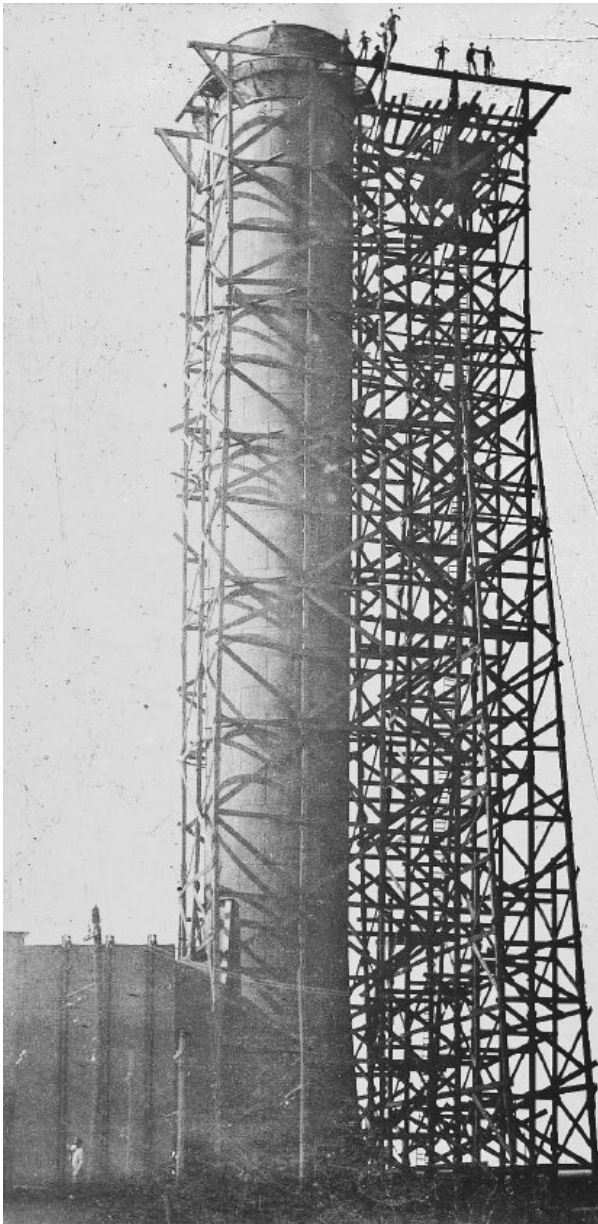
Joanna Lefrak, an artist and lecturer, held a discussion in Santa Fe, New Mexico concerning the 3 P's of Land art: Principles, Poetics, and Politics. These "3 P's" will serve as a substructure for extracting design criteria.

### *1. Principles*

Land art intervention in landscape engages in two ways, land as armature or land as medium. In *Double Negative*, Heizer looks to the desert landscape as a medium in which to create space, as an experience of surface. In comparison, Walter De Maria in *The Lighting Field* uses the land as an armature to engage the surface with the radical climactic conditions of the site. As an underlying principle, this thesis seeks to engage the site as an armature for intervening versus a medium. The purpose of this exploration is to develop architecture which provides



*50 Lower terminal and dump shoot of aerial tramway.*



51 Baker County Library, Smoke Stack.



52 Existing Vernacular

for artists and engages a sensitive landscape. In treating the site as armature, the medium is left for the artist to transform. Although, in defining of the site as a formation of the anthropocene, the site serves as both an armature and a medium.

Land art is a minimalist discipline, encouraging a rich engagement with very specific aspects of site, in doing so engaging *every* aspect of site. This thesis tests an engagement with anthropogenic constructions and the historical roots of the formation. The design scheme will implement historical vernacular and processes to draw a connection between the temporal qualities of the site and the permanence of construction. As seen in the historical images to the left, the language developed between materials and means of constructions begin to reveal what objects were intended as permanent and what remains temporal.

## 2. Poetics

Poetics, a reference to emotion and experience, implements the orienting experiences as defined by Antonia Rigaud. The Periphery is an exterior perspective, what is not in plain sight but known to be present. A remote intervention, such as this arts campus, can participate in the periphery poetic because it is supported by both a

dramatic topography and public access via I-84 . The goal of periphery in this context is to hide and reveal the intervention within the landscape elements, in an effort to allow the landscape to indicate the presence of new embedded constructions.

The experience of the observatory in congruence with architecture as a construction will be implemented through the framing of moments and vistas. This framing must respond to both program and location, and most importantly connect moments and vista to the work being completed over the expanse of the site. The Labyrinth, as an experience of disorientation, is located between the periphery and the observatory, in the spaces that neither can be framed nor seen in plain sight. The experience of disorientation, in response to an industrial process, is in the act of placing the user in new construction, a historic process, and a transformation of existing infrastructure, all in the same moment. The trails and connection occasionally serve as the observatories but most often create the sensation of disorientation, pushing the user to move forward and discover the site.

### *3. Politics*

What does it all mean, what is the intervention representing, and how can it transform place? These are the reoccurring questions in defining the political space of land art. As discussed in previous chapters the meaning is found in the act of cultural reclamation, but



*53 Aerial tramway.*

how is it represented architecturally and how will it transform territories?  
Architecture that references land art, carries both a statement and a function. The political representation relies on the efficiency of the function. The site scheme must integrate and move with the needs of the guests as well as the principles and poetics of the intervention. The basis for the political representation lies in the efficiency of the individual moments operating as a whole. To cultivate means to prepare the land for production, it is the intention of this thesis to examine architecture as a cultivator, in order to prepare and divide the garden into fertile galleries:

*The strata of the earth is a jumbled museum, embedded in the sediment is a text which contains limits and boundaries which evade the rational order and social structures, which confine art.<sup>39</sup>*

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39 Smithson, Robert. A Sedimentation of the Mind: Earth Projects, 89

# CULTIVATING EARTHWORKS

A Design Investigation

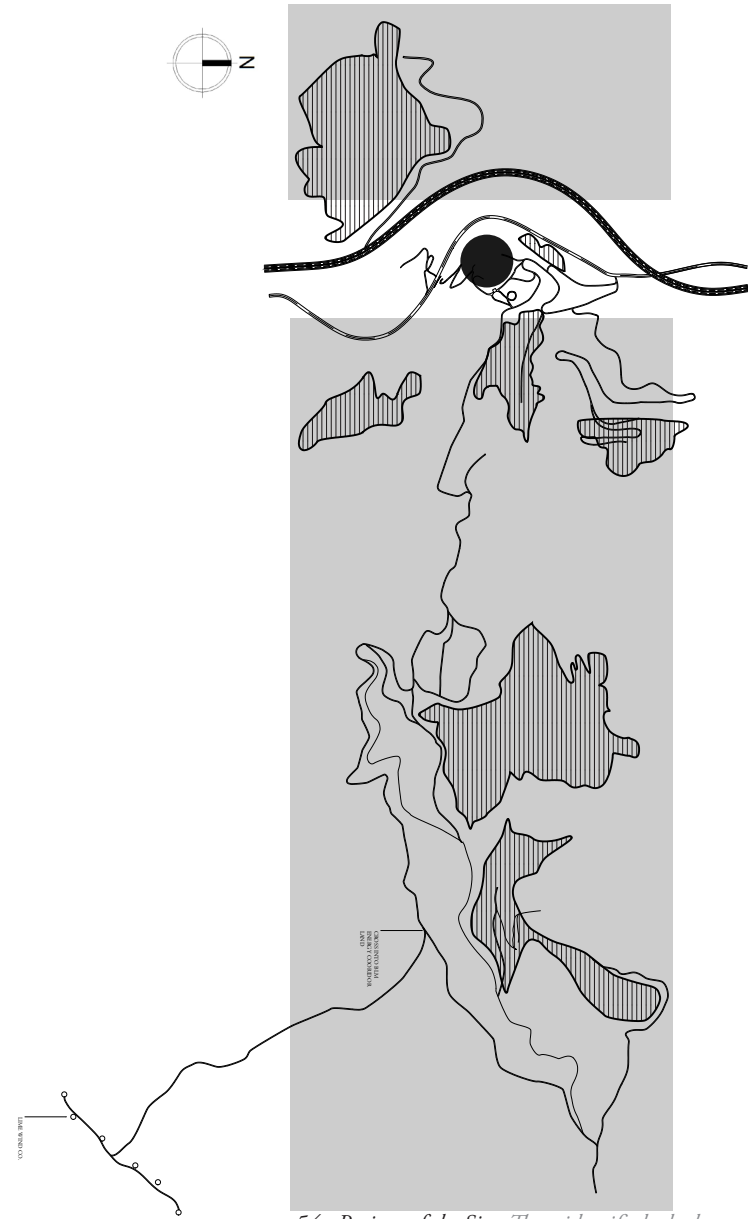




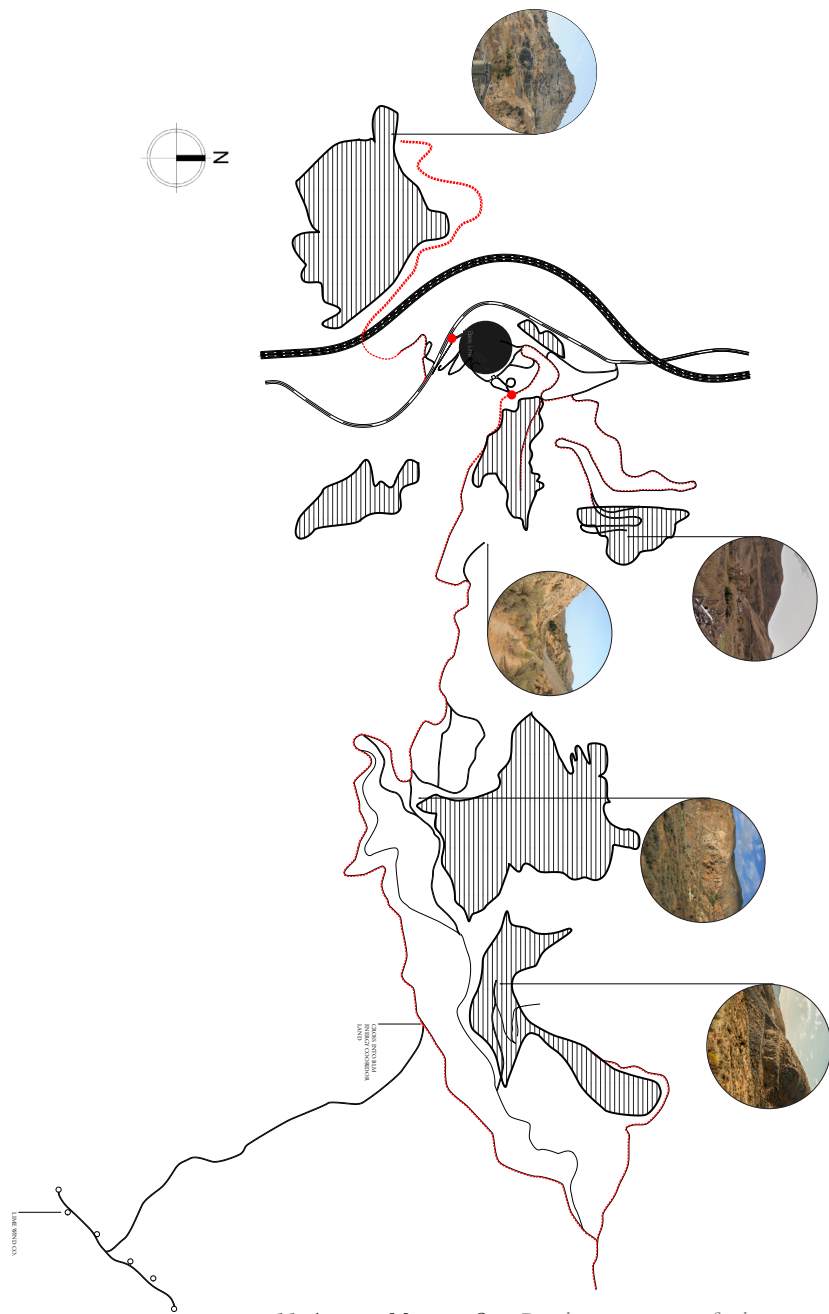
4  
Cultivate  
Site Strategy

The site can be analyzed through a complex set of layers. The study of these layers will provide places for a potential design intervention that can reveal the relationships between layers of historical accumulation that form the stratified landscape. The layers are formed from the merger of present human use, the existing infrastructure and artificial landscape that emerge as a result of quarrying activities.

The descent into the burnt river valley where Lime is located is nothing short of spectacular. Flanking either side of the freeway is steep hills carved by deep ravines. The exit for Lime is roughly one mile before entering the abandoned mining town. The exit leads to highway 30, the historic Oregon Trail Highway which heads directly to the cement plant. Lime emerges from behind the hills as a city belonging to a different time. The city is but a gate to the larger site, which stretches two miles

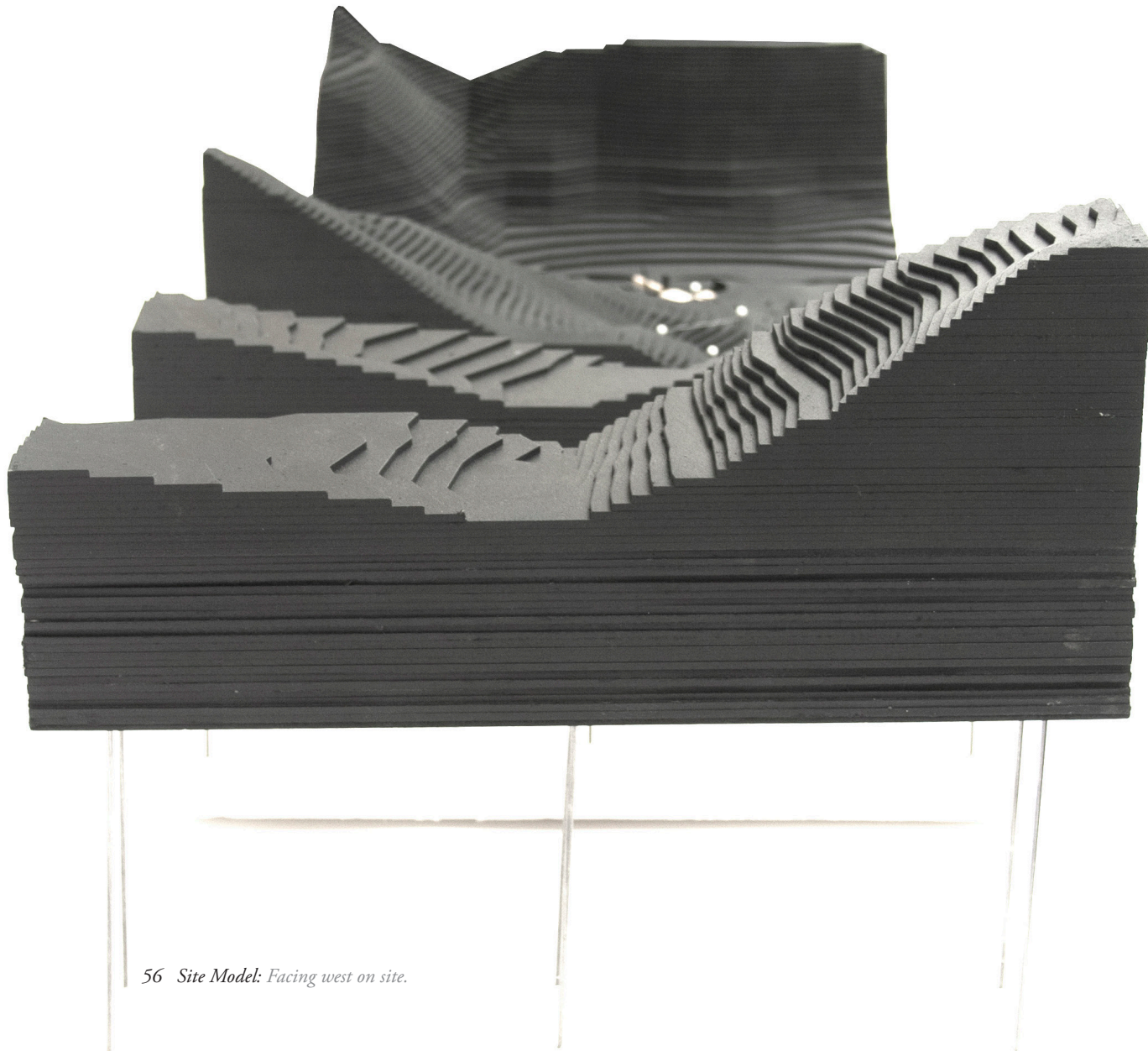


54 *Regions of the Site: Three identified- the base site, the east site and the west site*

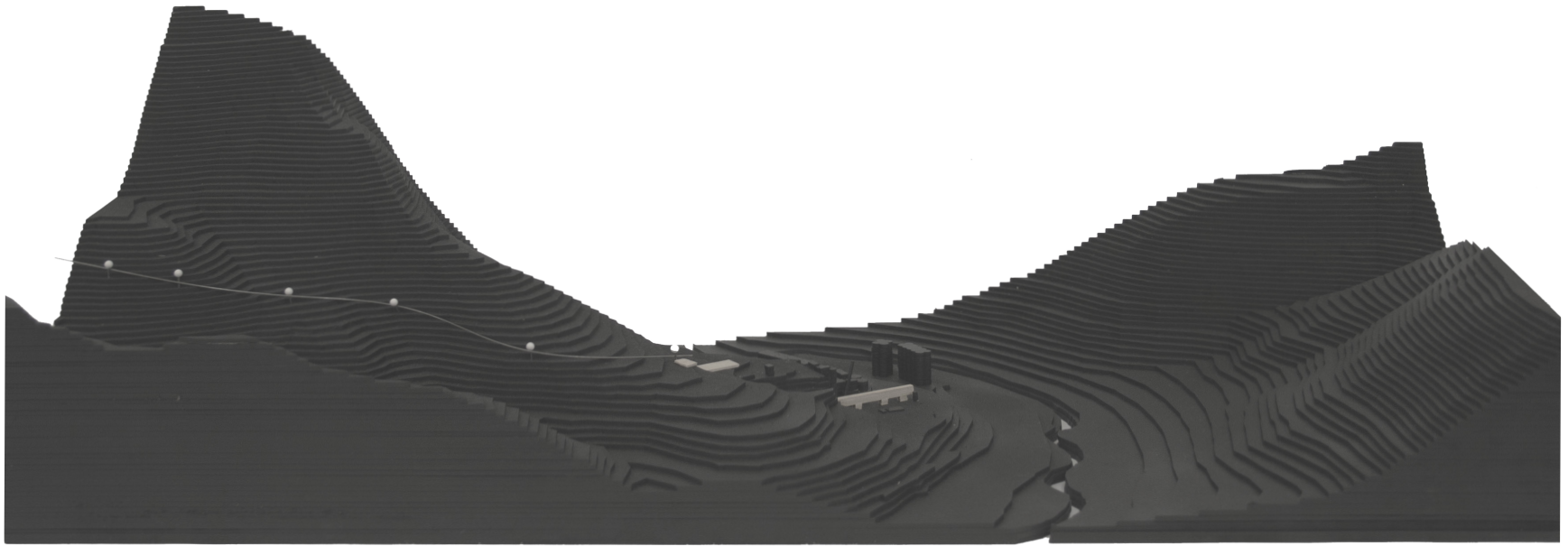


55 Access to Mines on Site: Develop intervention for base site

east, accessible by one gravel road. The larger site can be divided into three segments: the west site, the base site, and the east site, Figure 46(a). The west site contains the largest and longest mined hillside on the site, but is rendered completely isolated by the freeway. The east site is composed of four additional mines and a wind farm, accessible by the gravel service road as seen in figure 44. The base site will be the focus of this investigation, the rationale for this decision is in the centrality and access of the base site from the freeway and the east site, and it is the location of the cement plant, the place in which all materials were transformed from natural stone to cement powder. Reserving the mined landscapes as a medium for those creating works on the site is a principle of the design criteria.



56 *Site Model: Facing west on site.*



57 *Site Model: Facing south on site.*

## Cultivate Program Strategy

The program placement strategy was determined by three criteria:

1. The historical layout in response to the processes and movement of material on site. These structures were placed in response to topography and ease of moving material, the placement of the program has the opportunity to utilize the logic behind the structuring of the existing site to better serve the new use.

2. The historical and present movement through the site. Observing locations of entry and intersections where people, vehicles, and material meet begin to construct an order for engaging with the landscape while retaining an efficiency of movement through the site. The paths of movement indicate the access points for new interventions.

3. Several structures on the base site have long been removed or eroded over time. They live on through their foundations and footings. Using the concept of landscape as armature, the new interventions will employ these structures, stabilizing their material and conceiving adaptations to grow from existing elements.



58 Mining the site: Structures were placed based on efficiency of moving material

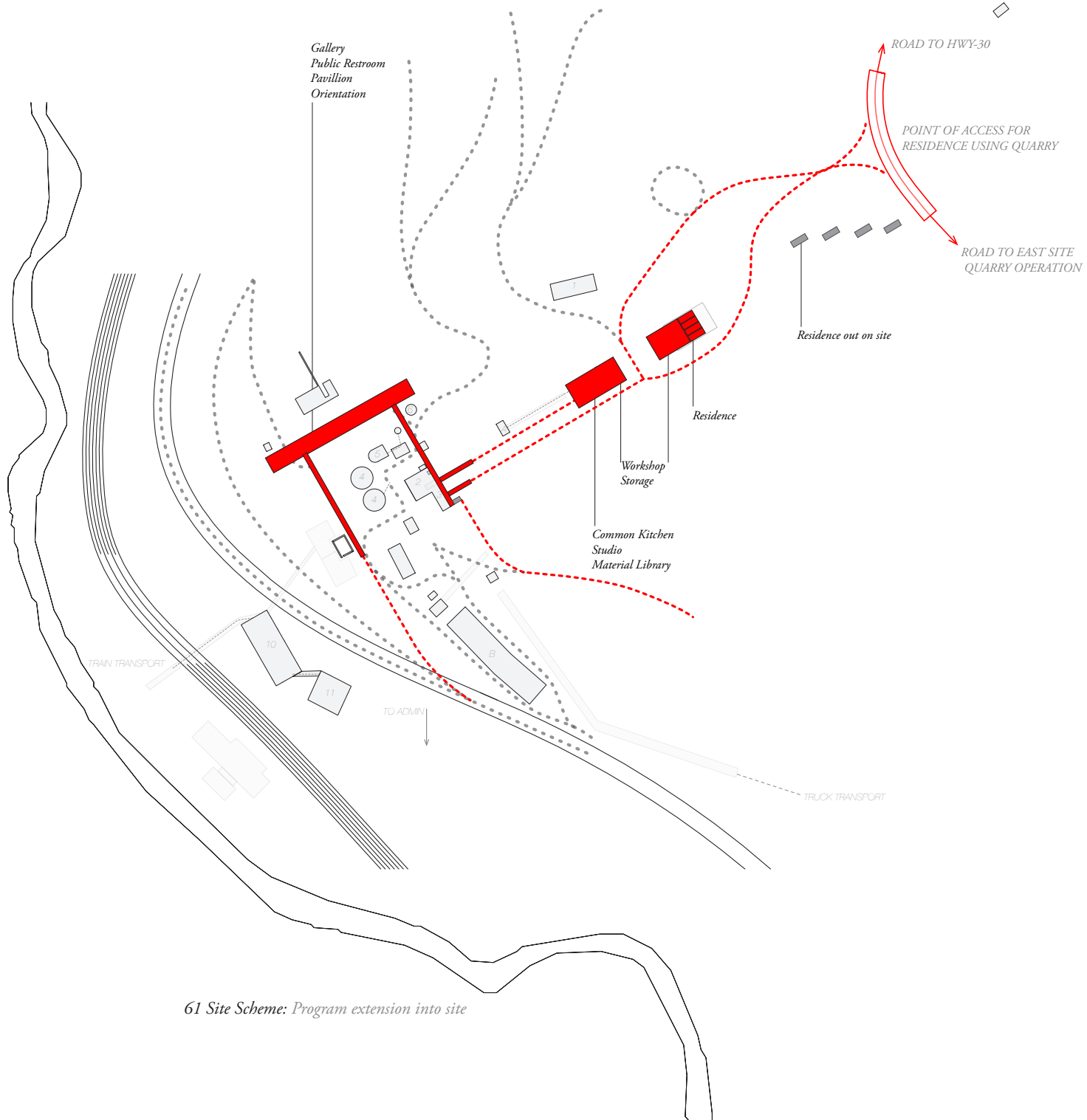


59 Mining the site: Paths were worn as a result of the placement of the building and a means of traversing the hilly terrain



60 Mining the site: Buildings removed over time, structures are survived by their foundations

The resulting site scheme was developed to incorporate all the program criteria and create regions within the site. The diagram of the site scheme communicates the new constructed interventions in solid red and the enhancement of existing paths in red dashed lines. The entry to the site improves upon an existing road that begins on highway 30. The ramp leading up to the gallery and public amenities is the interstice of two existing site walls. The public amenities are located closest to the road and most easily accessible by ramps. The gallery sits atop the foundation footings of the kiln that was removed three years ago. Access to the second ramp is located within the gallery. The second ramp leads to the backside of the crushers, between a site wall and the existing foundations of a former storage structure. The commons and workshop are divided to allow the existing access road to run between them, this road will provide crucial support to anyone working on the east site. The commons space and roof are fixed to the foundation wall of the former gondola, and the workshop spaces are located below ground, utilizing the (reinforced) existing foundation pad for the rock dump as a roof structure. The residences sit on top of the foundation pad, while those located further into the east site rely on the remaining infrastructure of the stone conveyor to hold them.



## Cultivate Design Strategy

The architectural strategy references the criteria as discussed in Map:  
Design Criteria The three facets of design moved into the focus of this  
design process were form, structure, and material

### 1. Form: Framing site and experience through movement

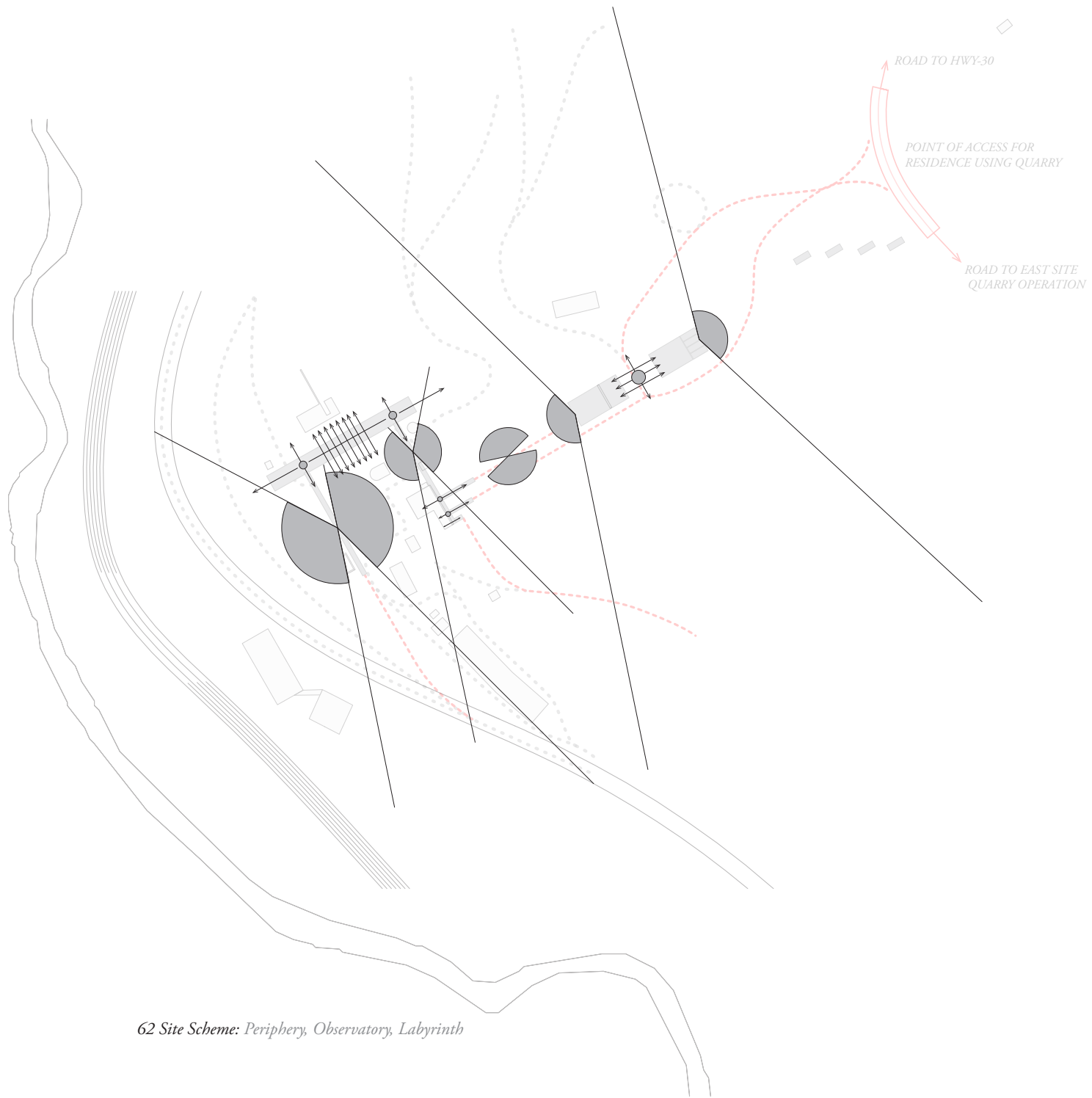
The form of the architectural interventions is determined by both the  
program needs and the site history. The kiln gallery, for example, was  
most effectively conceived as the same dimensions as the historic kiln.  
This allowed for incorporation of all the public amenities and achievable  
structural spans between existing footing foundations. The form, derived  
from the historical structures and placement, also hosts the experience of  
periphery, observatory, and labyrinth.

### 2. Structure: Spatial Scaffolds

In Rosalind Krauss's Kline Group diagram, the spatial scaffold serves as  
the mediator between Architecture (frame) and sculpture (object).<sup>40</sup> The  
spatial scaffold is neither pavilion nor tectonic experimentation. This  
thesis translates the spatial scaffold as a repetitive roof structuring element.

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<sup>40</sup> Krauss, Rosalind. "Sculpture in the Expanded Field." October 8 (1979): 30. Web.



62 Site Scheme: Periphery, Observatory, Labyrinth

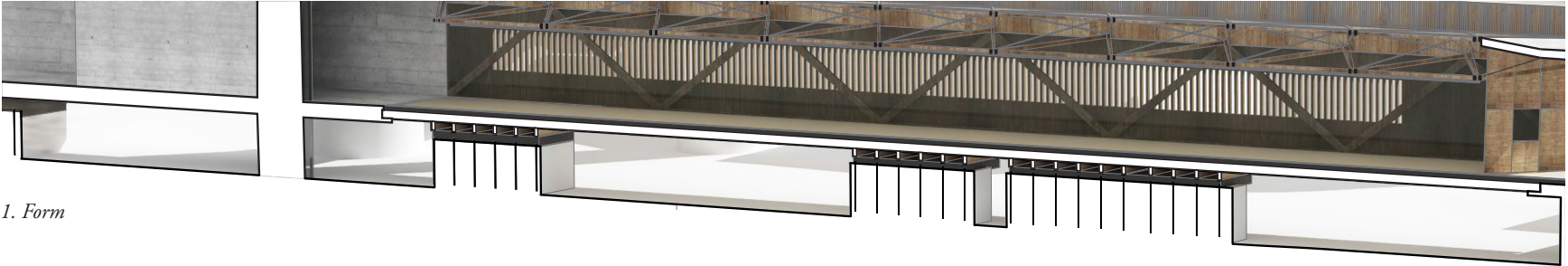
Used in each program, the roof element produces relationships only seen from interior perspectives or Aerial views. The “spatial scaffold performs the duty of both a visual element and an architectural frame. The roof is a constructed of wood compression members and steel tension members, while ETFE panels provide natural daylighting to limit the costs and complexities of lighting on site. The orientation of the buildings are parallel to wind flow seen on the site plan in figure 50, allowing the roof structure to pull air into the spaces. There are two layers of panels in which the interior panels are replaceable by more opaque panels if darker spaces are necessary.

### 3. Materials: Permanence and Temporality

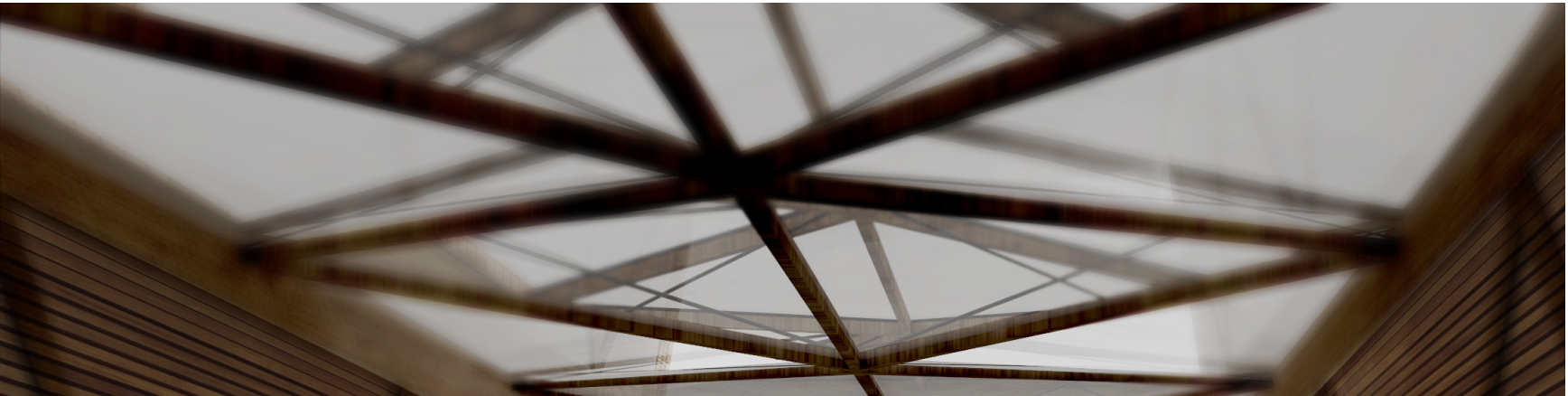
Drawing from historical vernacular and the concept of scaffolding structures, the language of the architecture began to confront the subject of permanence and temporality through materials and juxtaposition. The aerial rebdering demonstrates the different application of materials. As the wood and roof framing members decay, the concrete objects remain. The concrete members are then used as a frame, so in the absence of the wooden members the concrete can still represent what was once present.



*63 Perspective Model: Hydrocal, plywood, and brackets, preliminary experiential explorations.*



1. Form



2. Structure



3. Material

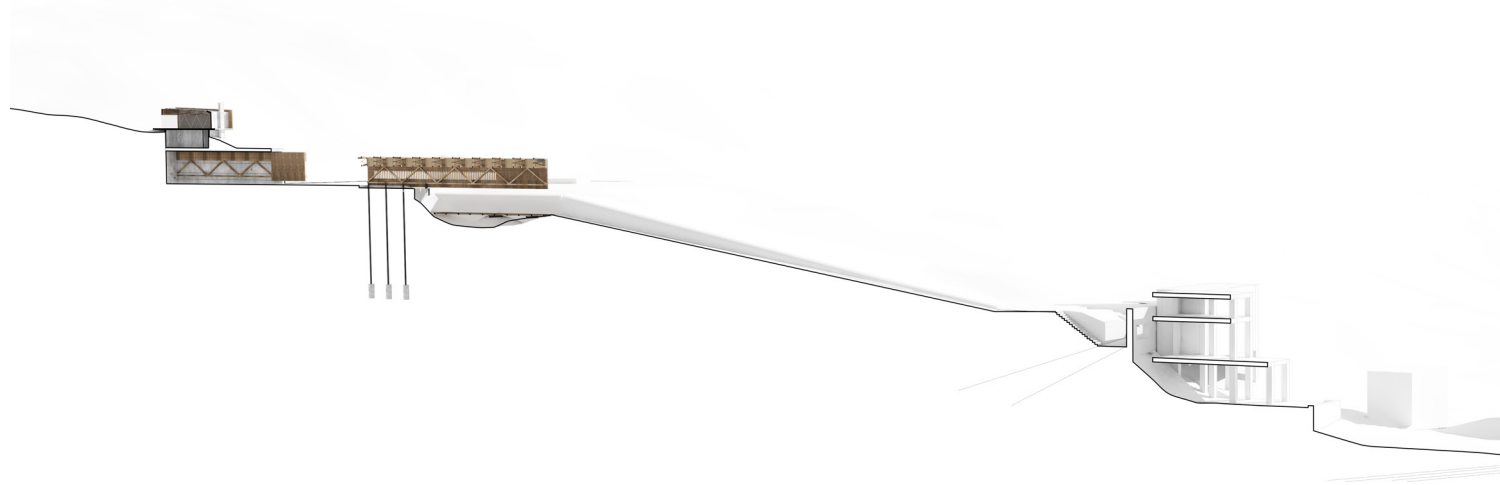


64 *Site Plan: Demonstrating orientation and final organization of the site*

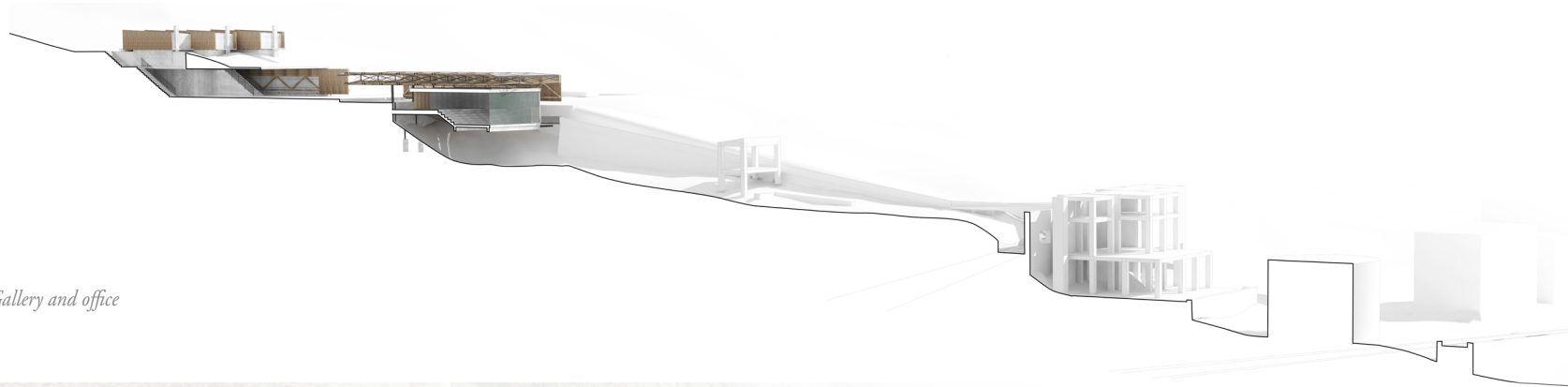


65 *Aerial Plan: Demonstrating juxtaposition of materials and relationship to the ground*

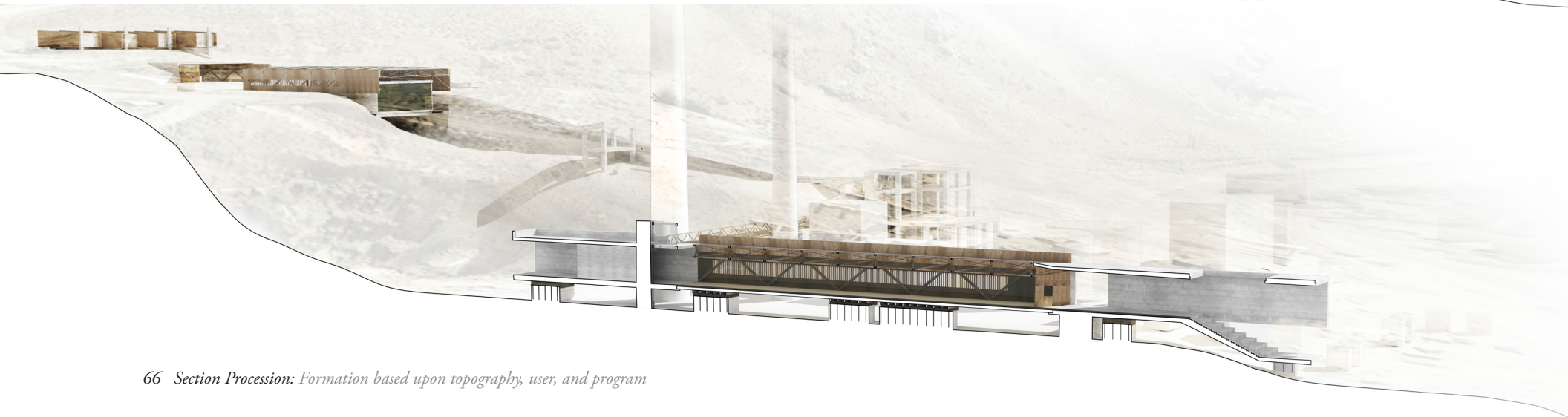
*Section C:  
Southwest to Northeast. Workshop and Residences*



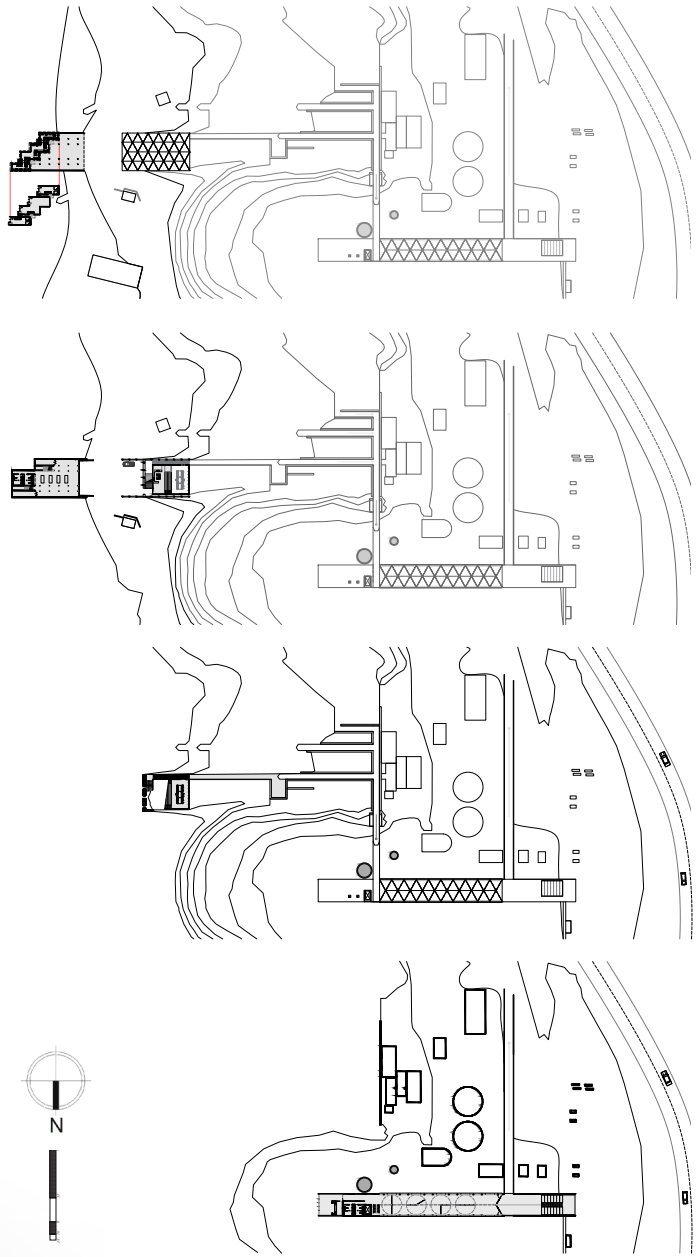
*Section B:  
Southwest to Northeast. Workshop and Commons*



*Section A:  
Southwest to Northeast. Kiln Gallery and office*



*66 Section Procession: Formation based upon topography, user, and program*



## Cultivate

### An Experiential Narrative

This thesis examines the capacity of architecture to implement methods of crafting and experiencing land art. The union of art, architecture and landscape begins to describe an experiential movement through the work that reveals intrinsic character of the site in various ways. The movement also describes a dynamic relationship between the structure and the landscape.

The site sections shift from public amenities within the Kiln Gallery in section a. to the residential units housing the more private user in section c. These sections describe the tectonic relationship between the new constructions and existing elements serving as armature. The paths are a series of connections and moments of Labyrinth and Observatory.

The plans procession demonstrate the buildings symbiotic relationship to the topography. As the programmed structures push further east into the site, the structures become embedded into the hillside adapting to the existing armatures.

The following series of perspectives, sections, and enlarged floor plans perform a narrative in the experience of architecture/landscape/land art, providing a lens in which one views a site of mineral extraction and material transformation.....

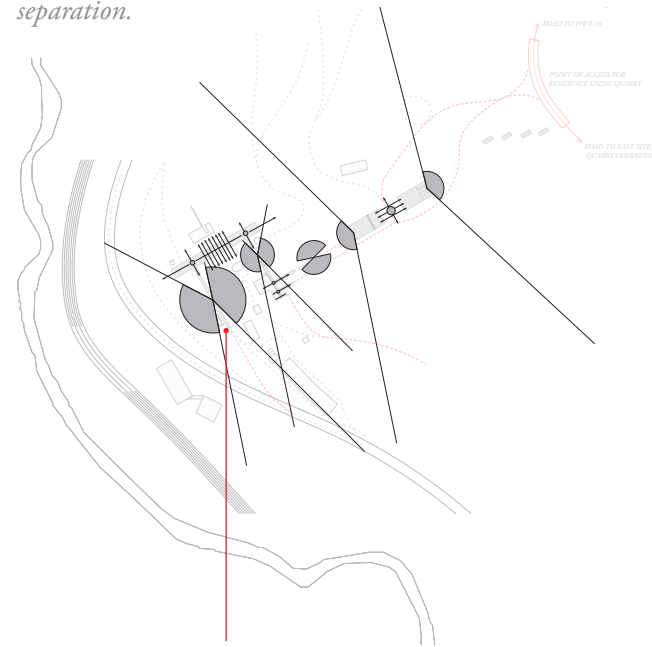
67 Plan Procession: Formation based upon topography, user, and program

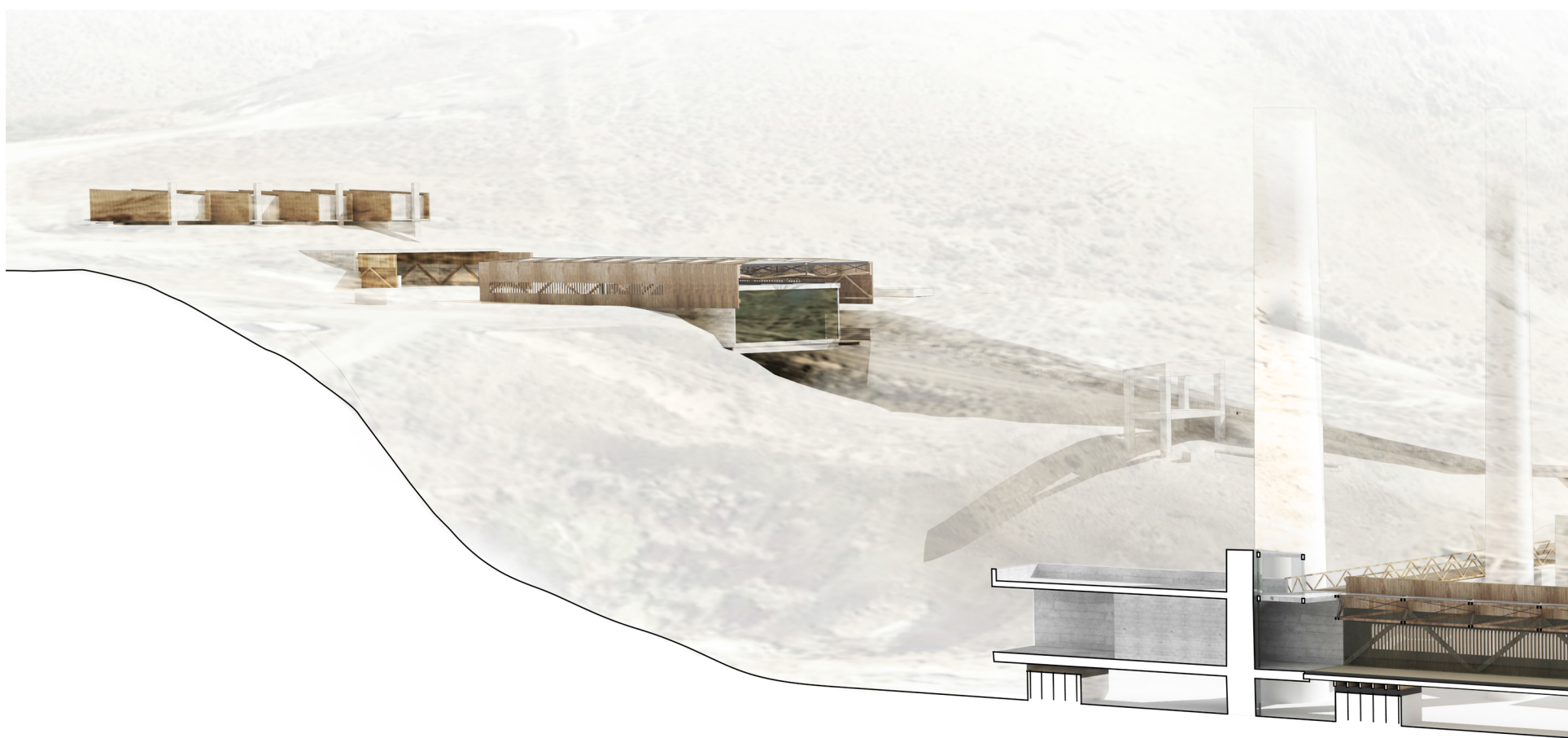




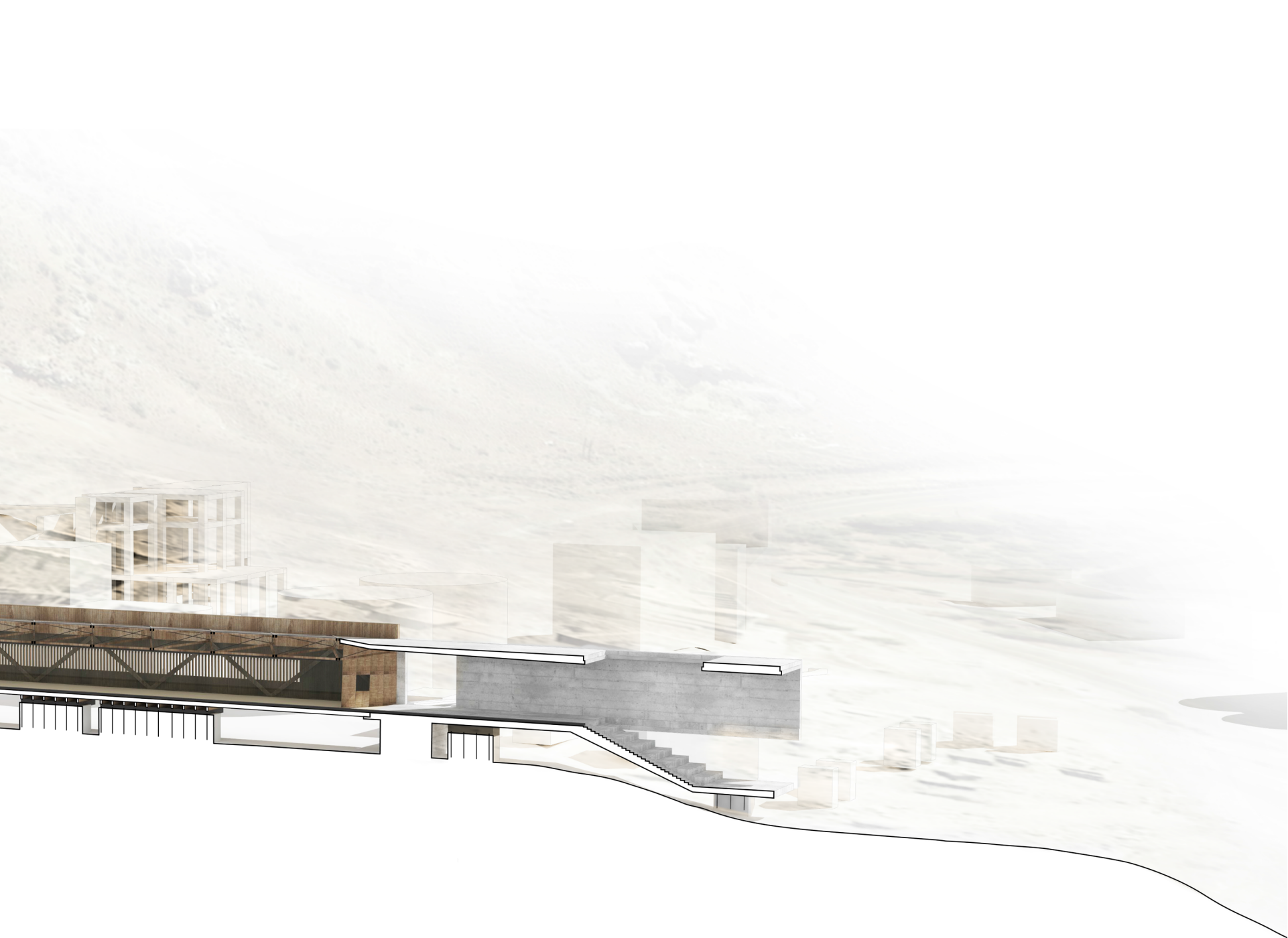
68 *Exterior perspective facing north:*

*The ramp leading to the kiln gallery is composed of existing site walls. The new ramped path becomes the site wall. Approaching the kiln gallery the user is capable of viewing the outdoor gallery to the east and dramatic mined landscape to the west, a structured disorganization through separation.*





69 *Enlarged Section a: Gallery interior*

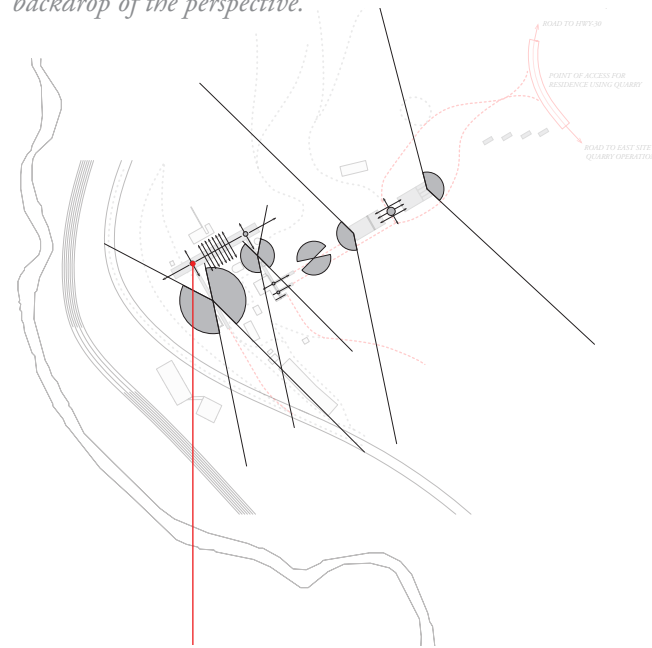






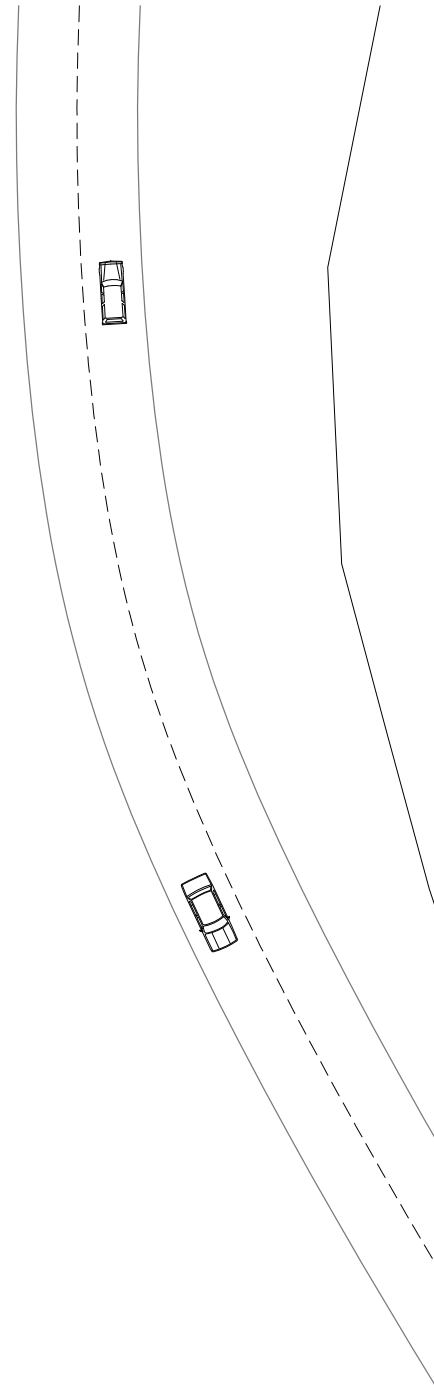
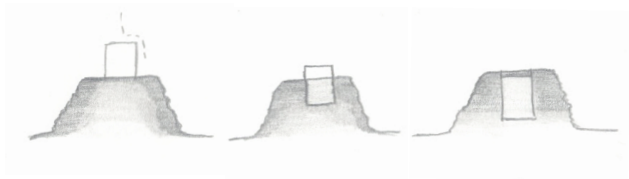
### 70 Interior Perspective of Kiln Gallery:

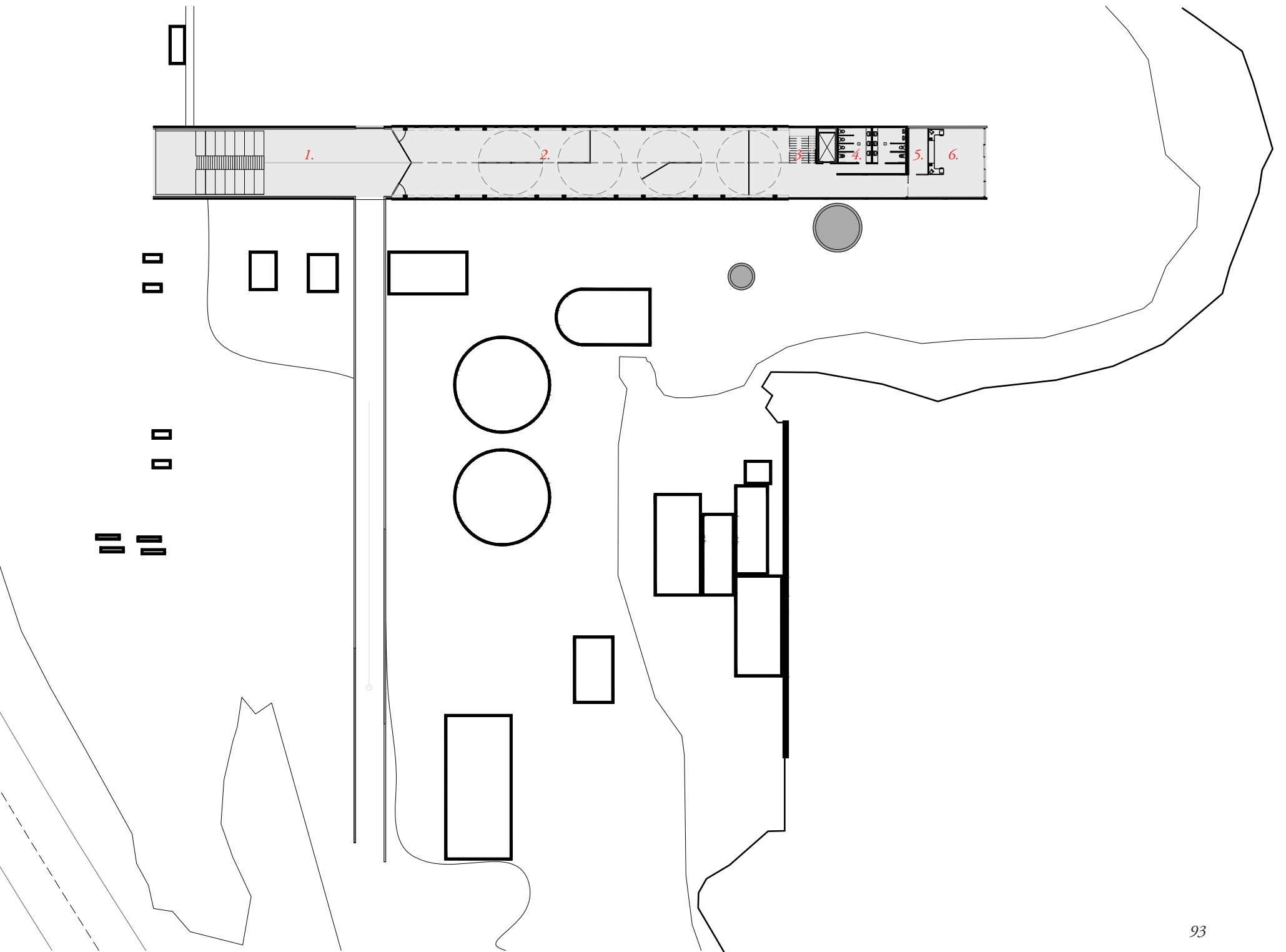
*Upon entering the gallery, the space is experienced first through the frame of a concrete structure, whereas the juxtaposition of materials becomes the foreground of the perspective. A track leading through the center of the gallery provides a flexible carriage for photographs and documentation. Wider openings in the wall structure create a visual connection between documentation and cement plant. The stairs leading to the gallery roof compose the backdrop of the perspective.*



*71 Enlarged Kiln Galley Plan:*

- 1. Unconditioned entry pavilion*
- 2. Gallery*
- 3. Stairs/Lift to remainder of site*
- 4. Public Restrooms*
- 5. Storage*
- 6. Office Space*



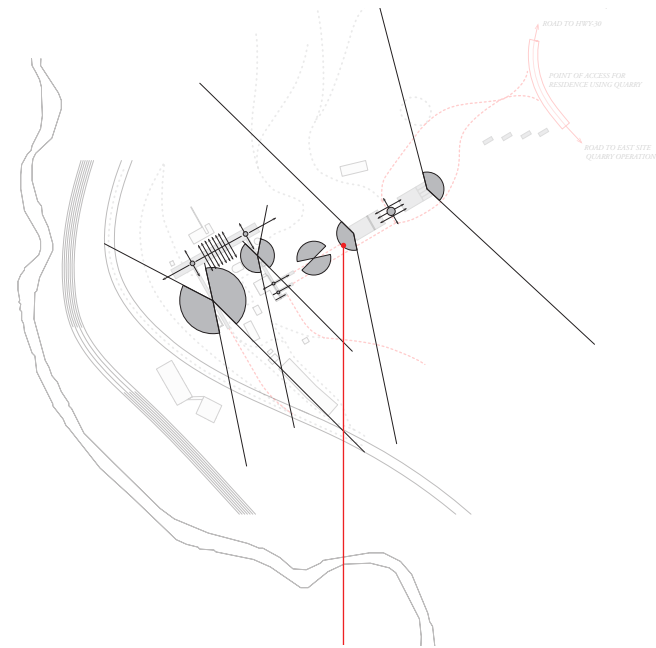






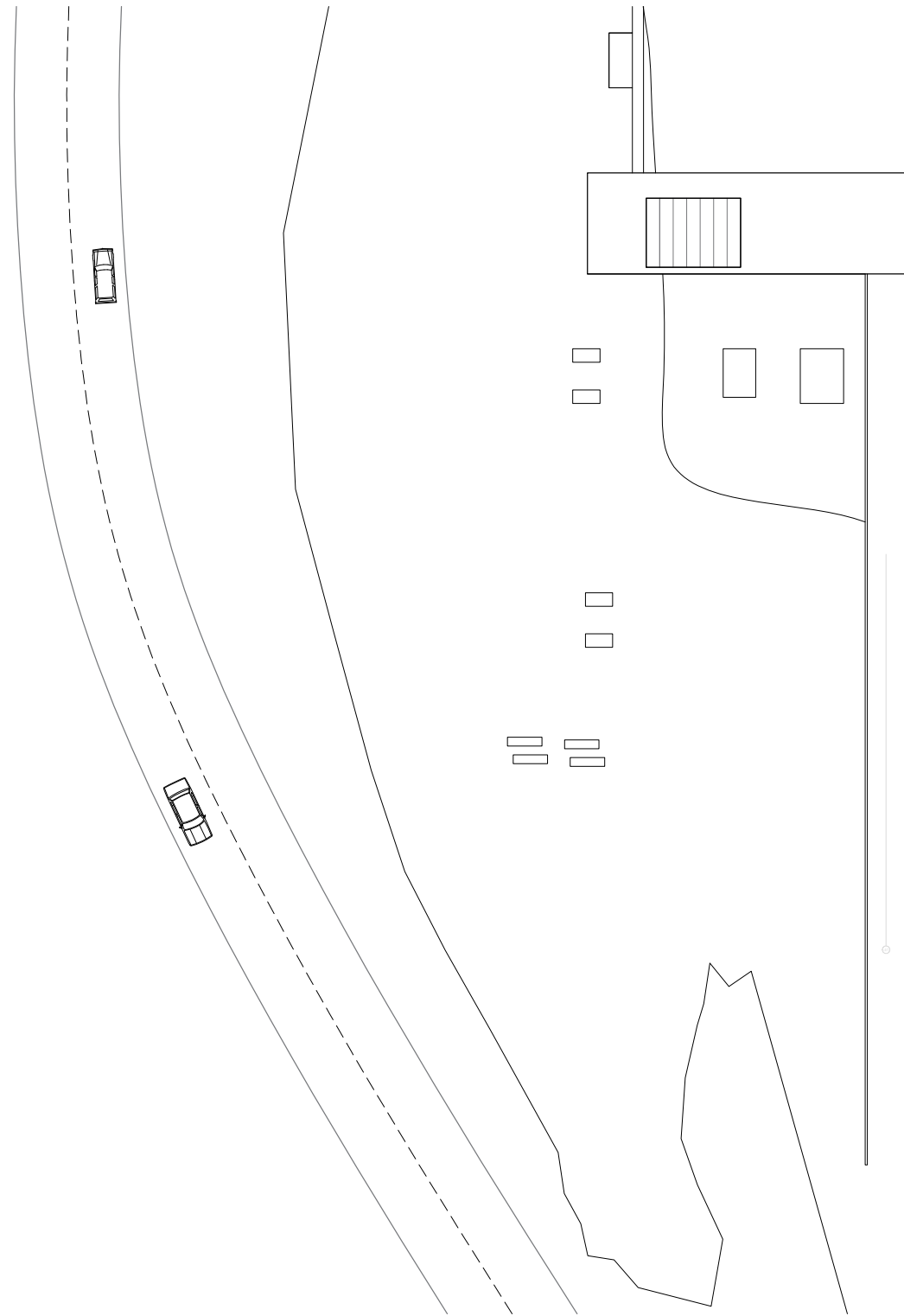
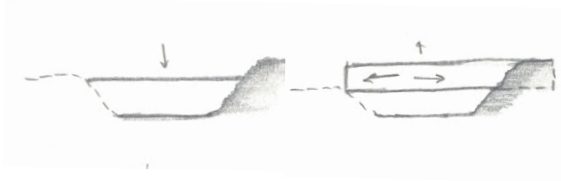
72 *Exterior Perspective of Commons Facing East:*

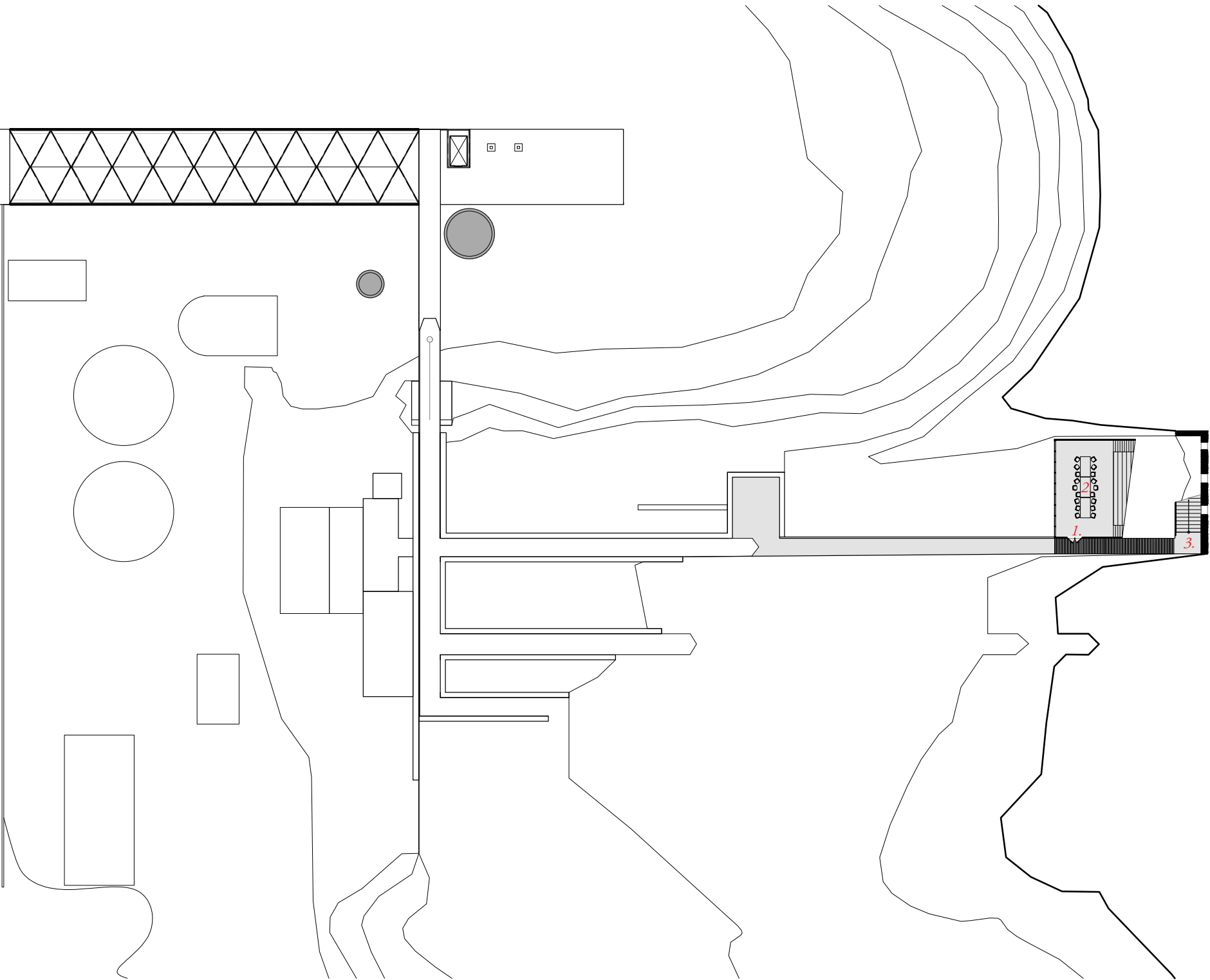
*The ramp leading to the commons space is both landscape and construction. Nestled within the curvature of the landscape this is the means in which the user traverses between lower site and commons. The purpose of the scaffolded roof is unclear, the user knows neither what it supports, or what supports it.*



73 Enlarged Lower Commons Plan:

1. Lower entry
2. Flex space hosting:
  - Artist studio display
  - Events
  - Dining
  - Classes
3. Access to upper site



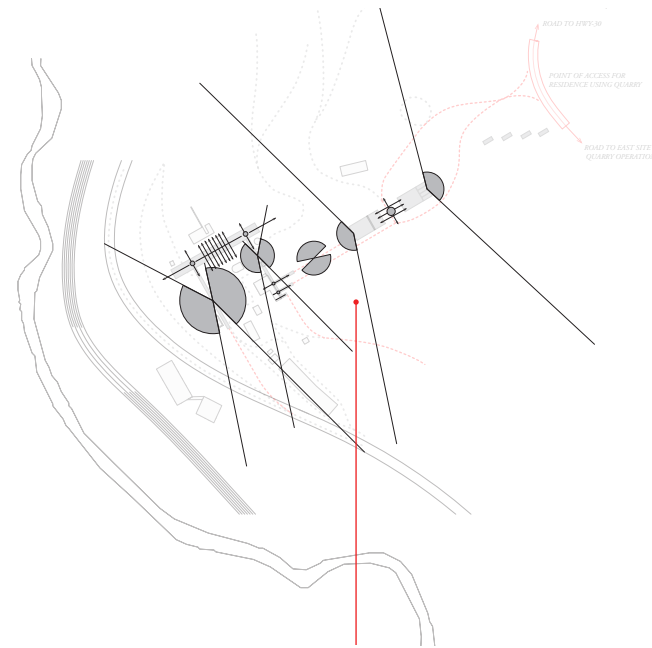


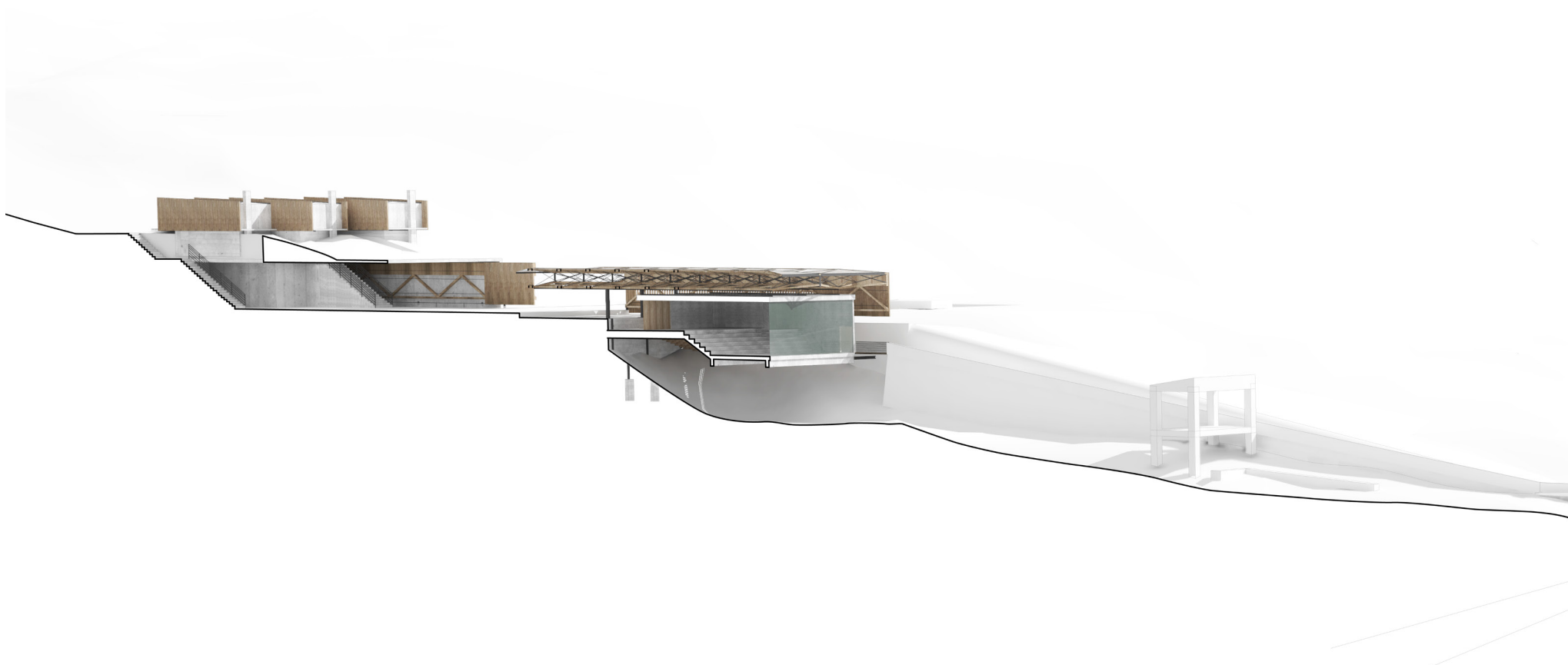




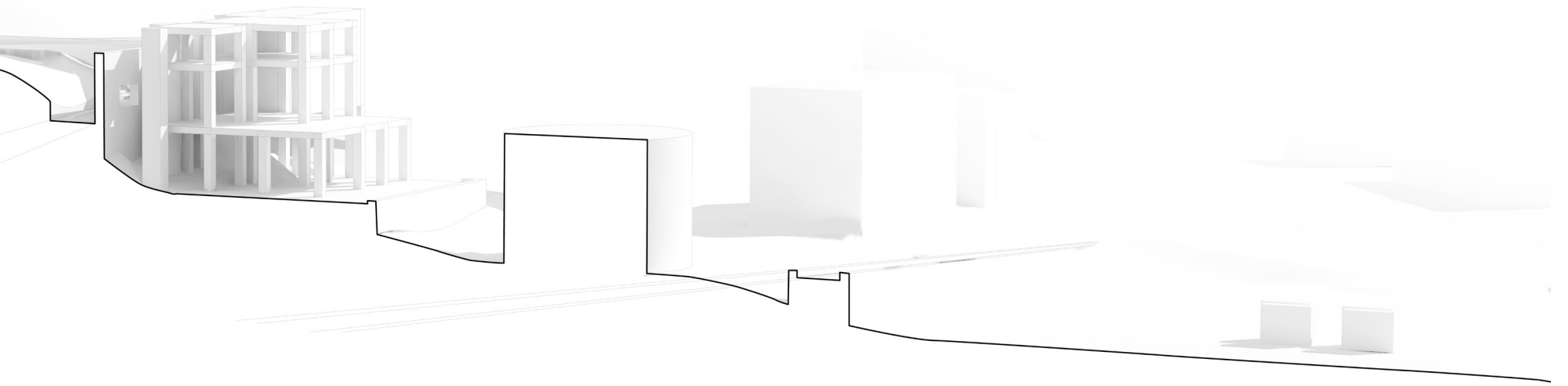
74 Exterior perspective facing north east:

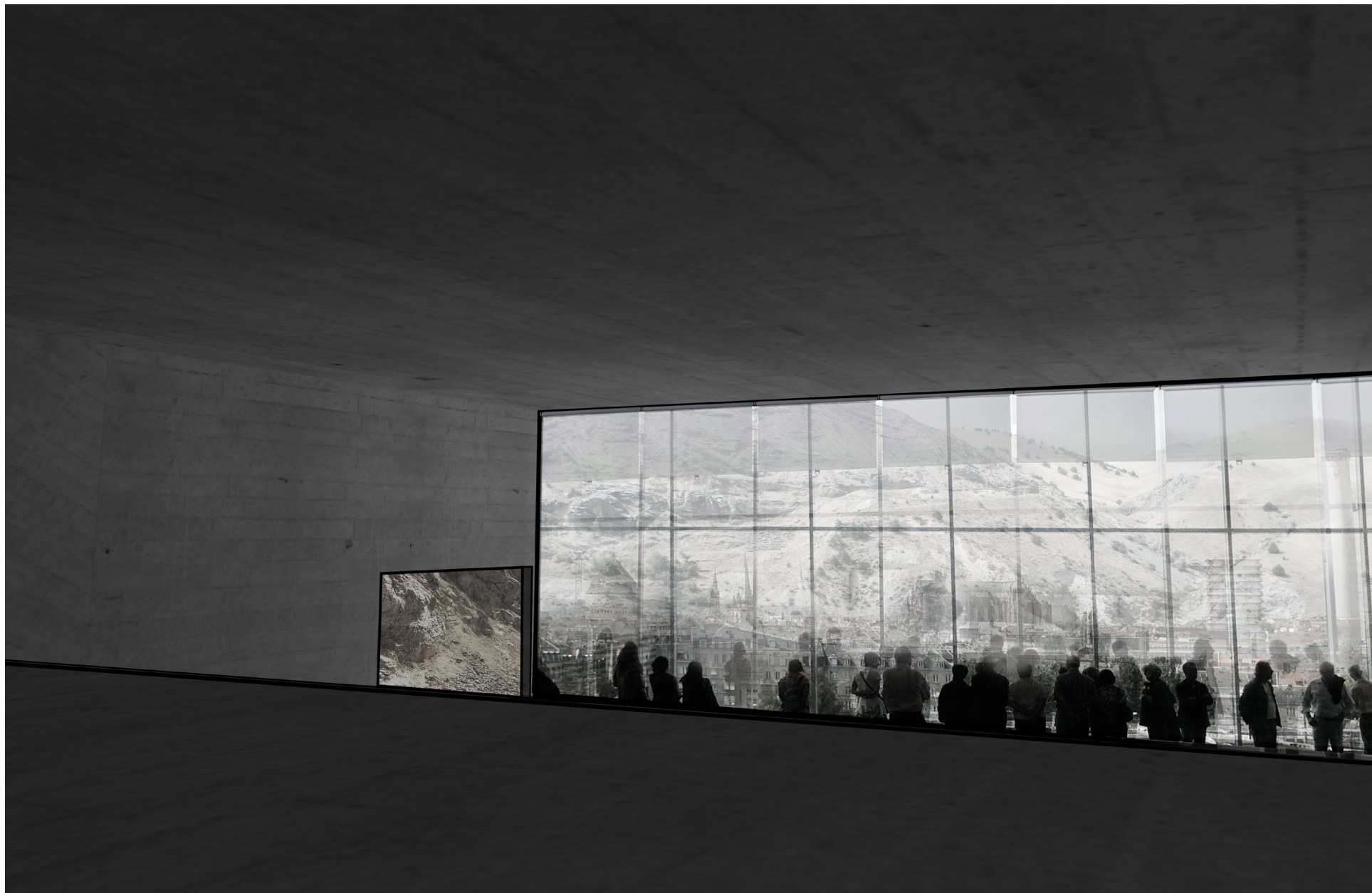
*From the periphery, the user cannot see the path leading to the entry of the commons, one can only see the emergence of a structure from the earth and the relationship of the three programmatic elements, commons/workshop/residence. Privacy of the residences is accomplished through turning their entry to face the east site.*





*75 Enlarged Section b. Commons and workshop interior. The commons augment the space created when the gondola was constructed.*

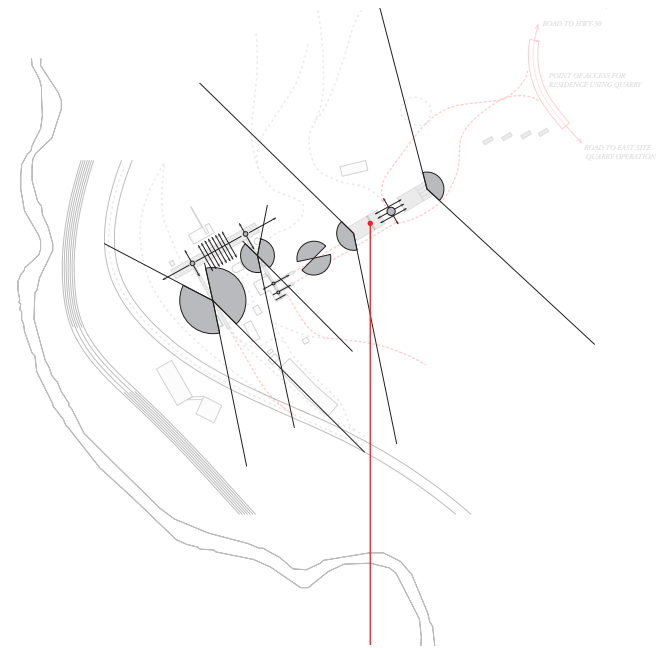






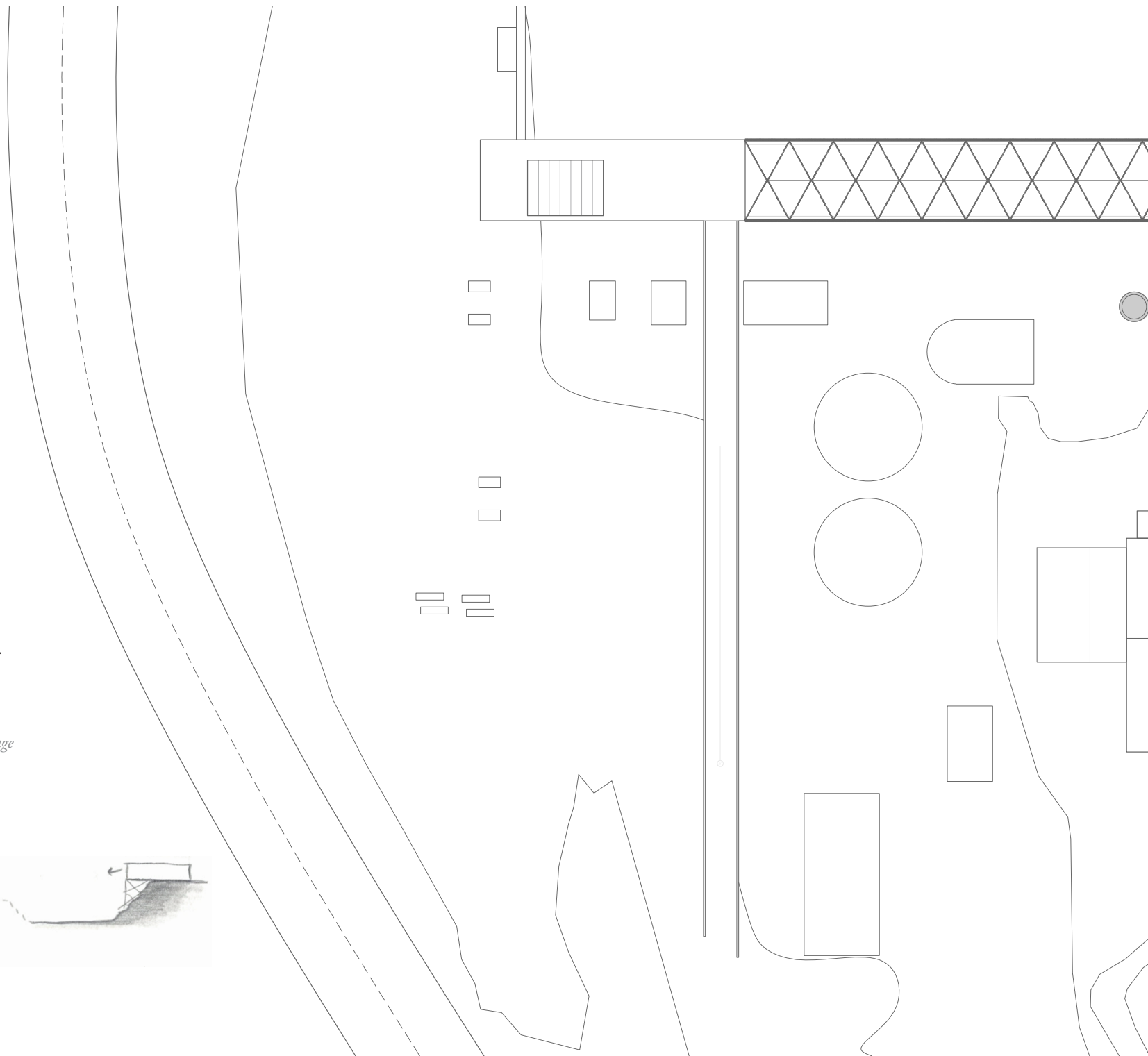
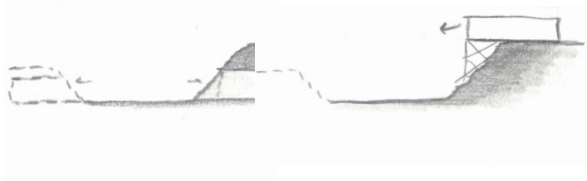
*76 Interior perspective of commons:*

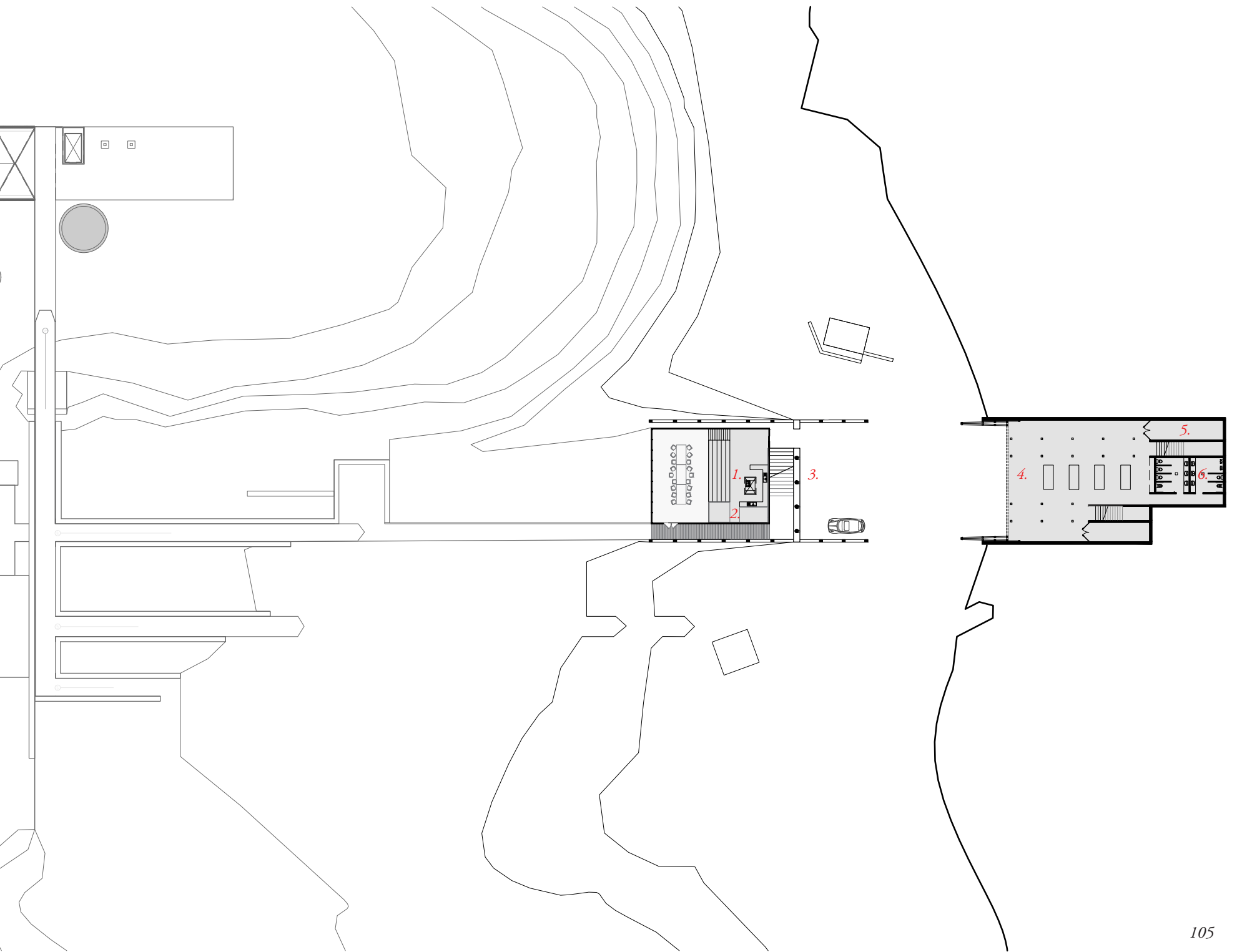
*The commons is a concrete structure augmenting the ravine it occupies. It is the place of gathering and a moment of observatory where the west site and cement plant are framed together as one.*



77 *Enlarged Commons Plan:*

1. Kitchen
2. Storage
3. Parking and workshop storage
4. Workshop
5. Flex office/storage space
6. Bathrooms



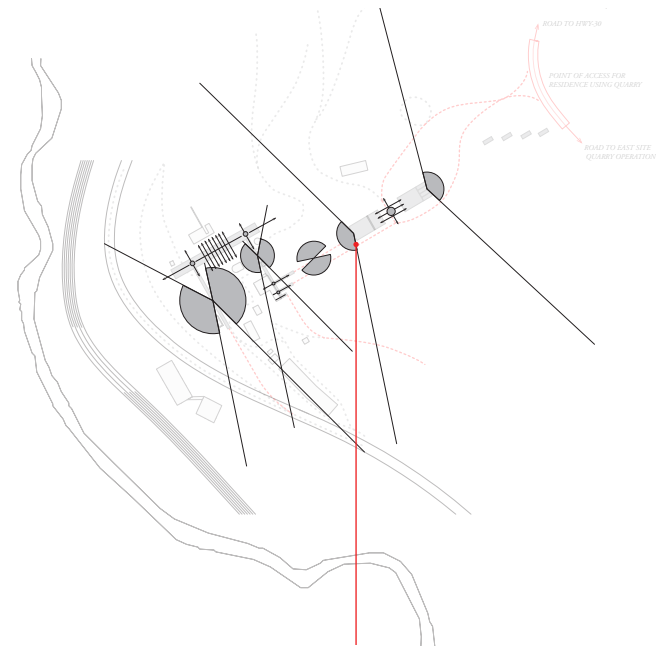






*78 Perspective facing west:*

*There exists a place between construction and landscape  
that is both sculpture and architecture, orienting and  
disorienting.*

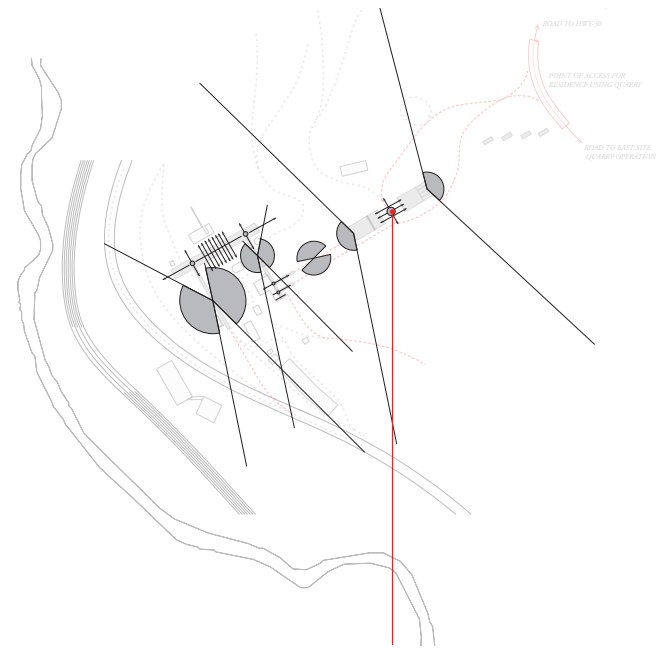


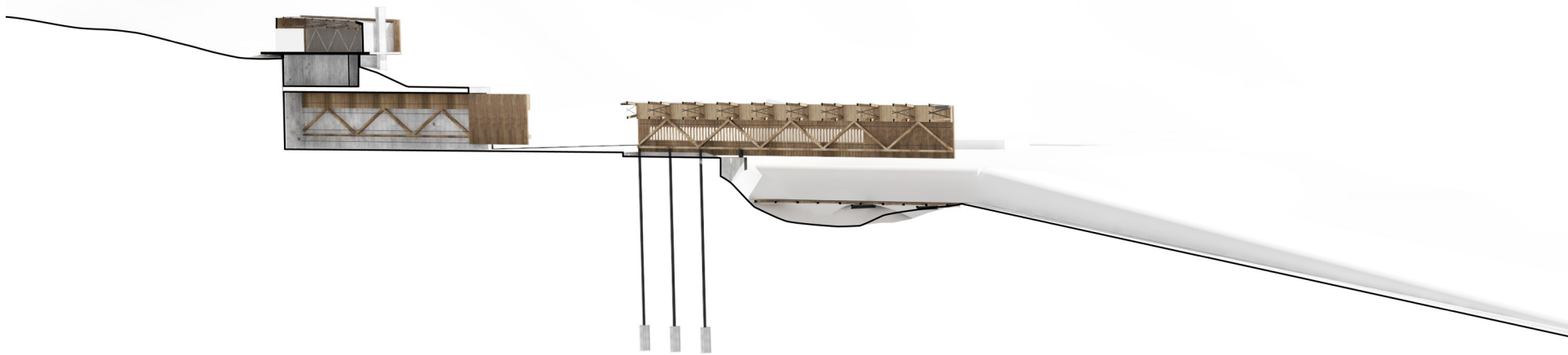




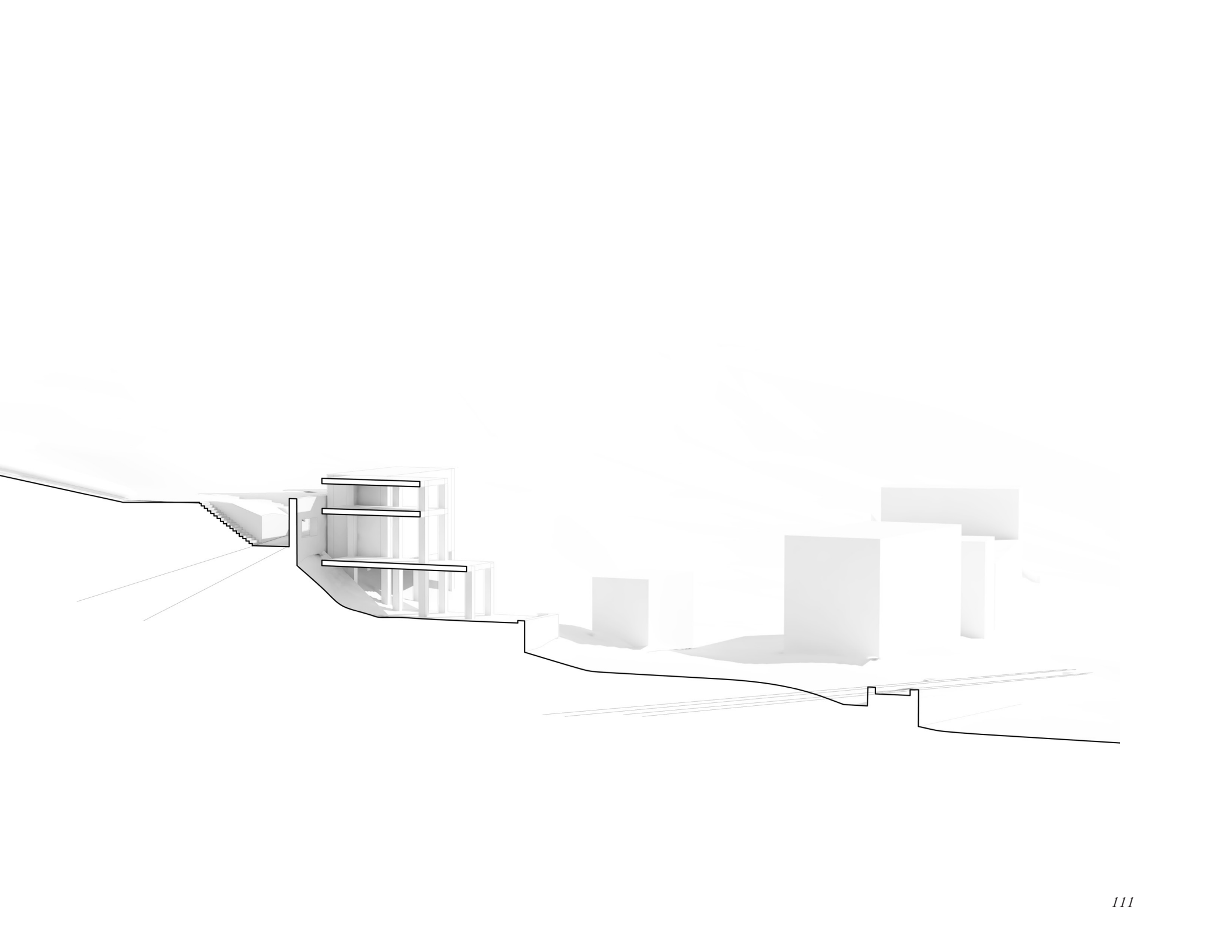
*79 Perspective from workshop to yard and storage:*

*The scaffolded roofscape extends to host a storage and parking area for the artist equipment, whether it be a shovel, a tractor, or a paintbrush.*





*80 Enlarger Section c. Section perspective shows tectonic relationship to site and site wall, tie downs for roof and stabilization of existing site walls occur below ground. The close proximity of workshop/studio to residence allow user an easy shift between crafting and sleeping.*

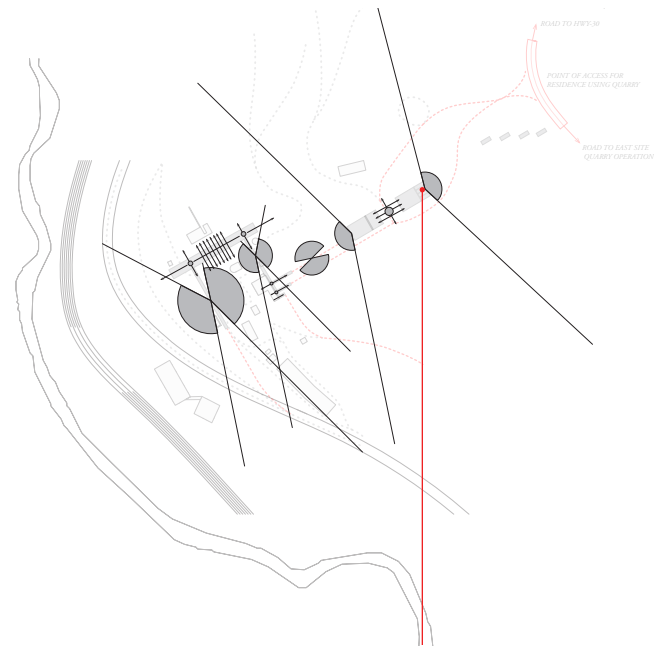






*81 Interior perspective of artist quarters:*

*The resident looks east, mapping out the next site to work with. The living space is minimal, as many artist will come and go from this place, leaving behind their mark on the site.*



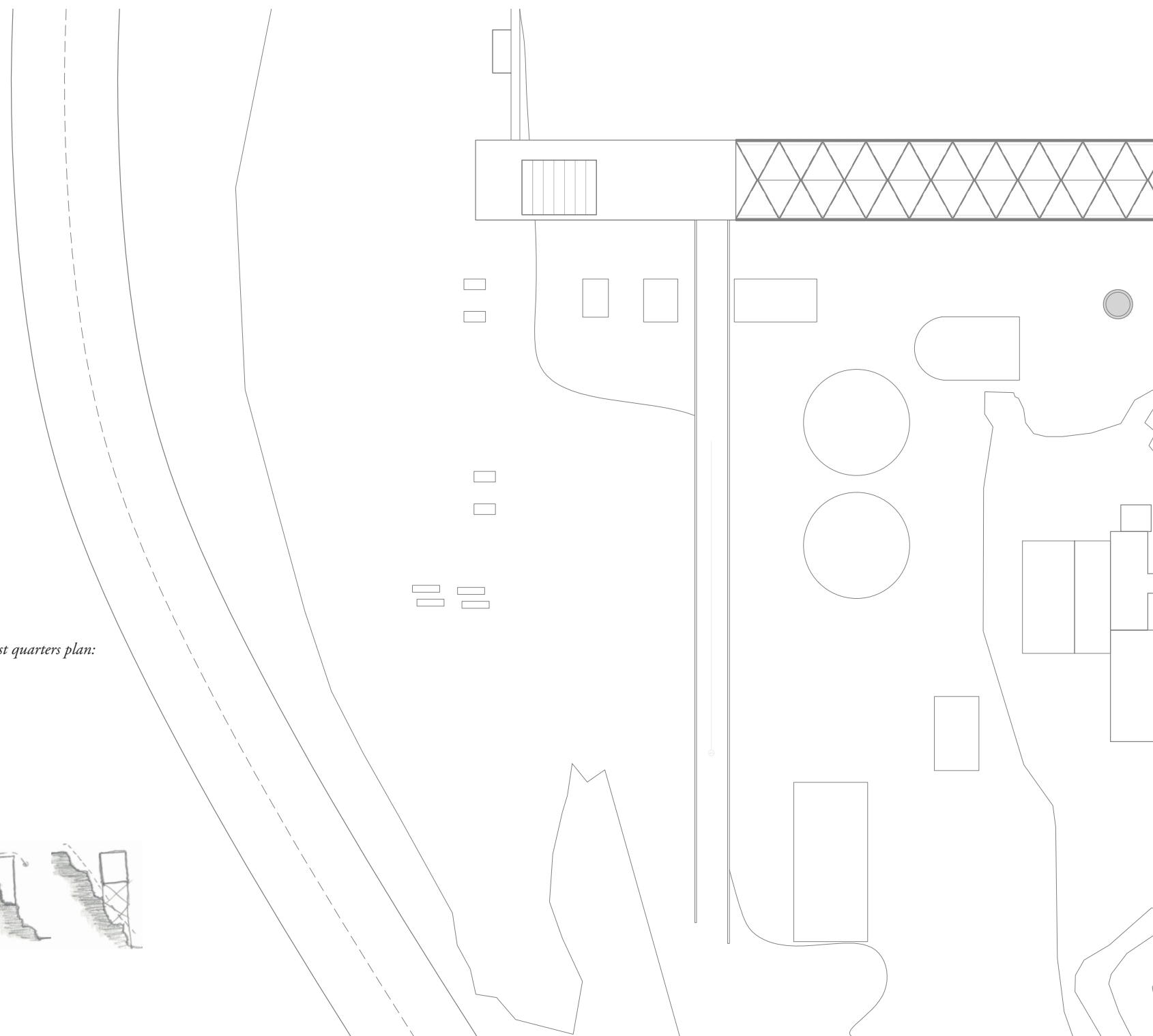
82 Enlarged Typical artist quarters plan:

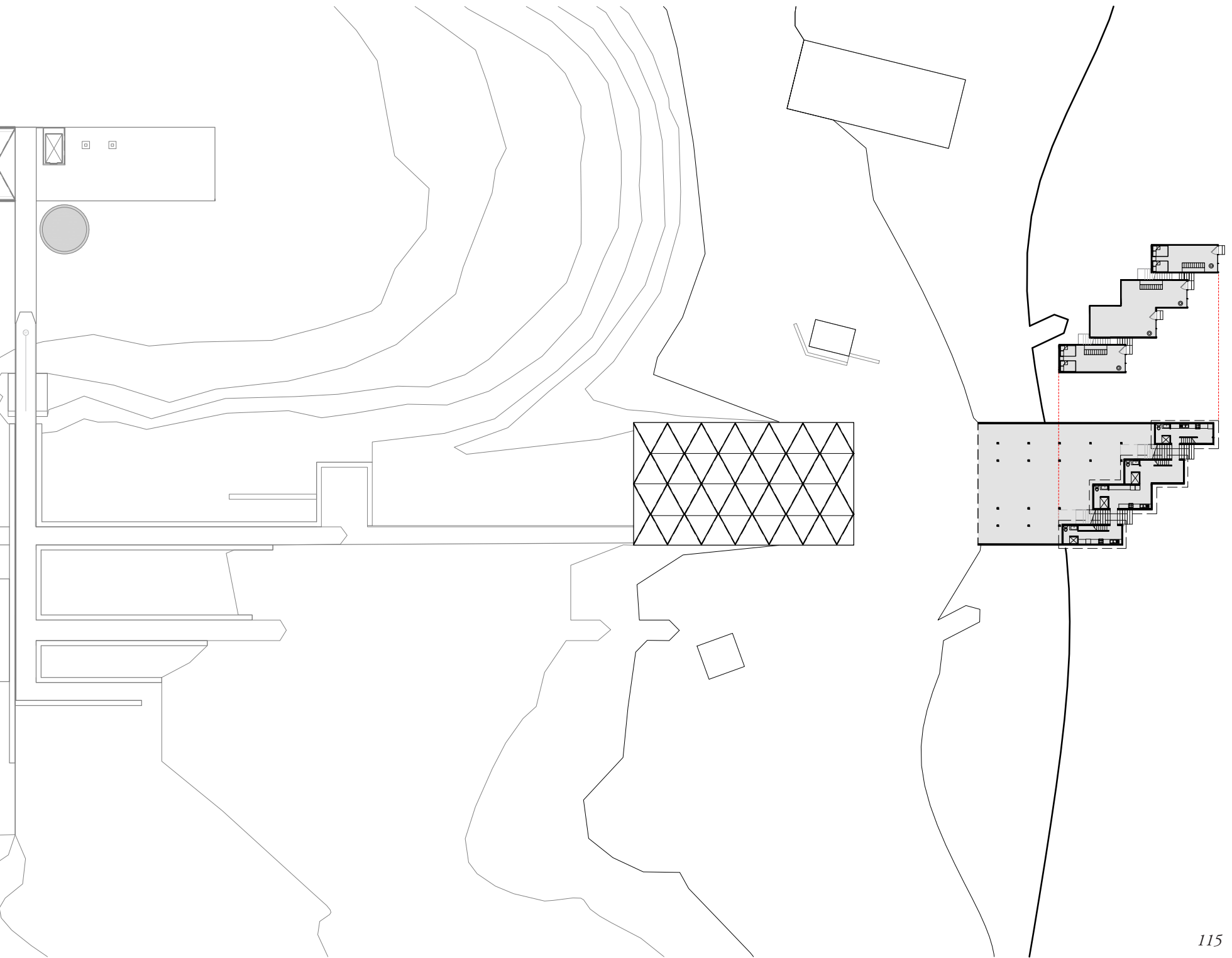
Single Bathroom

Small Kitchen

Gear storage area

Flexible bed/living space



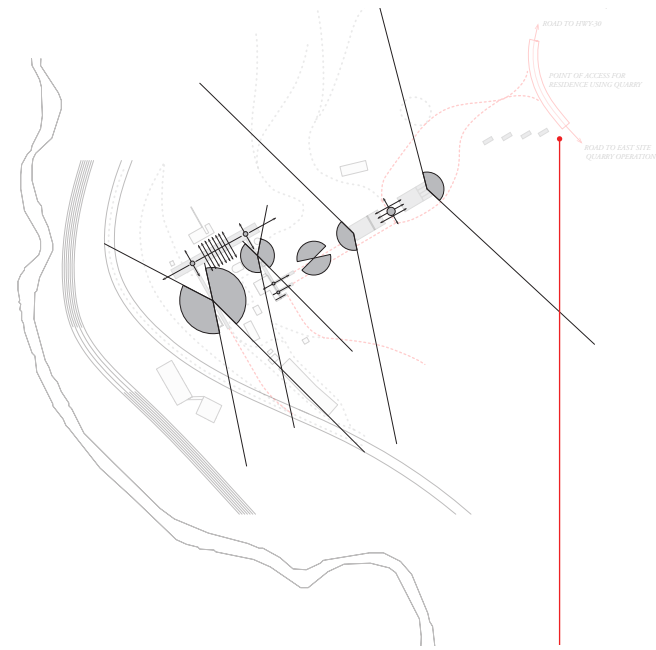






83 Exterior perspective of artist quarters and site:

*Looking back, looking forward, where we come from and where we go. The daily promenade to discover a new medium, and construct the anthropocene.*



5  
Conclusion  
Epilogue

Lime, Oregon and similar abandoned mineral mining landscapes stand at the intersection of natural and anthropogenic. Because they straddle both domains, these landscapes will forever serve as an indicator of the irreversible human impact. The theory that humans serve as a fourth geologic force must be recognized for its potential, rather than its demise. Stripping landscapes of resources will continue as long as humanity exists. What is most important at this stage is the recognition of such places, and their contribution to this new man-made geologic layer. National parks, forests, and monuments conserve unique natural landscapes, not to be touched by the hands of industry. Memorials are established in locations of battles or wars to acknowledge the horrific acts against humanity that occurred there. Landscapes such as Lime have sacrificed a piece of their natural history to construct new places and provide for humanity. In the Anthropocene, this should be celebrated, not as a memorial, or conserved in such a way that erases the presence of industry and a productive past, but as an opportunity for augmentation and reuse. The Lime facility represents the prospect that our impact can be fruitful, not wasteful.

The purpose of this thesis was to test a means of adapting an industrial mining landscape for a new use, land art. Because land art has historically and successfully reclaimed sensitive industrial landscapes, it was important to apply methods of constructing and experiencing land art to this type of architectural intervention. The overall scheme revealed the rich history of the site, utilizing historical methods of construction within the dramatic topography. Using the existing site as armature was a foundational design method and became the cornerstone for the entire scheme. Each intervention, whether it was a path, a building, or a stair took a piece of the anthropocene to construct a new space.

The larger site context presented many challenges such as topography, access and existing conditions. A decision had to be made early on in the design process that chose either the mines or the cement factory as the site of intervention. The choice to intervene within the factory grounds presented the chance to give all other mined areas to the artist's work. Adapting existing forms and footings to carry a new use allowed the architecture to follow a historical path. The experience

of walking this path both embraces history and engages a new resource. Each interior space contained views for framing specific moments in the landscape. These moments of observation acknowledges the growth of a new resource on the site. The interventions provide artists with the amenities they need in the most efficient locations, connecting to existing infrastructure such as roads and trails.

The final design product is a minimalist, low impact, approach to site reuse. The complexity of the spaces were intended to be simple, allowing for a more significant connection between landscape, construction, and poetics of space. The juxtaposition of materials, wood structure versus concrete, serves as an indicator of future conditions. The spatial scaffolding serves its purpose, when the wood structure is removed, the concrete is left to tell the historical narrative, just as it does today. To cultivate is to prepare the land for production. What is planted and what grows is the decision of the gardener; the laboratory in Lime is just the first phase of a long growing season.

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## *Appendix*

### *Thesis questions*

1. How can architecture be defined in regards to land art?
2. What role can land art play in the rejuvenation of post-industrial sites?
3. Can land and environmental art be discussed in terms of sustainability in the context of post-industrial landscapes?
4. Does land art have the ability to incorporate the historical, experiential, and ecological aspects of remediation or reclamation?
5. How does land art challenge our understanding and perceptions of waste landscapes?
6. How can the principles of land art be applied to architecture to enhance perceptions of landscapes?
7. Where is the intersection between intervention art and architecture, that are both spatial and sculpture?