



# Architecture As Mediator

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# Architecture as Mediator

Lindsay K. Edwards

## Abstract

Having grown up abroad, the topic of architectural mediation has often made me pause. The world abounds with differences, and with today's globalization, many of us are being faced with cultural, social, and a multitude of physical differences/conditions. This thesis seeks to explore the role of architecture as a mediator and seeks designs that transition successfully between differing entities.

The project is an orphanage in Nairobi, Kenya. The program is comprised of young orphans and the project explores how the structure that they occupy can effectively accommodate their specific needs. Challenges which need to be mediated include consideration of two scales, one for the child under the age of 6, and the other for the caretaker who has adult proportions. The building also will need to reconcile cultural stigmatization and attitudes towards orphans while also providing a safe environment. And lastly, the specific social needs of the orphan need to be tended to. The design and experience within the spaces will need to convey feelings of security, affections, and hope.

## Acknowledgements

I would first like to thank the gentleman who visited my kindergarten class as part of the parents sharing their profession program. Thank you for letting me take your blueprints home with me and for inspiring me to pursue architecture as both a career and a passion.

I would like to thank Theo Van Groll for all of his guidance and for caring about his students through and past graduation. You have been one of the finest teachers I have ever had.

Thank you to my committee. You have been very supportive in my endeavor to tackle an issue that has challenged me and continues to challenge me. Thank you for your contributions, your challenges, and for helping me develop as a designer.







# m e n d i n g w a l l s

*Before I build a wall / I'd ask to know / What I was walling in / or walling out  
Portion of Mending Walls  
by Robert Frost*



## Introduction

In today's world of globalization, cultures and traditions no longer have distinct physical boundaries. There are many building types which must address contradicting dynamics.

Architecture is always mediating differences.

- At its most basic role, architecture mediates between physical elements, providing a livable space for people.

- As an example of a more specific application, the design of an international embassy mediates between conveying concepts of openness (if, for example, the country would like to convey concepts of a democracy) while also having to remain secure. Embassies also portray a culture different than the one where they are physically located.

The premise of this thesis is to explore the role of architecture as a physical, cultural, and social mediator. In particular, this thesis addresses young orphans in Nairobi, Kenya and how the structure that they occupy effectively accommodates their specific needs. The building must serve many functions, including relating the scale of a child to that of the adult caretakers' scale, bridging social and cultural stigmas that are held against orphans, provide a secure environment for the children while simultaneously appearing connected to the neighborhood and society, and provide an environment of stability, yet allow for those who are adopted to be emotionally prepared to leave.

A mediator is defined as: an intermediary between parties. The goal of this thesis is to show how architecture can be designed effectively to mediate extremes to the degree which it acts as an ambassadorial element. Ambassadors are defined as those having a temporary mission and for negotiating. In the same way, the Children's Orphanage is a temporary solution. It is meant to be a place to learn, grow, and be loved, but ultimately prepare for leaving the place.

## me•di•ate [1]

1. to lie or occupy the space between two things, times, etc.; to be transitional between.
2. to function as an intermediary or link.
3. to moderate, mitigate; to lessen, reduce.
4. to intercede on behalf of.
5. to intercede or intervene.
6. to settle (disputes, strikes, etc.) as an intermediary between parties; reconcile.

There are many ways in which this project has adopted this concept of mediation in terms of design. The following will be investigated:

- Topography and retaining walls as mediating
- Curved site line
- The wall and hands
- Residences
- Walk through and approach
- Accommodating the child
- Water collection system, food production, market area

## Notes

[1] Oxford English Dictionary.

## Mending Walls Essay

*Because the slope of the site was one that immediately had to be addressed, the notion of the wall, and in this case the retaining wall, and how it mediates was explored. As the design of the orphanage progressed, it was found that in other instances, the wall played a vital role yet used varying methods.*

*The following explores the idea of 'wall' through architectural treatises from Vitruvius to present day architects and theorists.*

I have always watched with awe the performance of a pantomime. In his routine, the mime defines an invisible line by limiting movement and motion to the point of his imaginary boundary. He never allows his body's motion to cross it. Although there is not a physical wall, the mime appears to be confined by one. In August Schmarsow's, The Nature of Architectural Creation, he states that, "Architecture's first concern is always to enclose the subject's space." [1] It is worth noting that the pantomime accomplishes this enclosure without any physical matter.

The role of the architect as a profession has changed throughout history. The first architects were master carpenters and closely connected to craft and the building site. During Roman and Renaissance times, the architect's role shifted to one having more of a liberal education and was seen as slightly divorced from craft and more focused on theoretical topics pertaining to the built environment. Today, the architect exists somewhere in between theory and practice, not nearly as physically connected to the site and methods of construction as in the past, but also not solely married to theory. If the architect has gone through changes in terms of connection to the site and advances in technology of building, how have the elements of architecture themselves been affected? Maybe they have also undergone a transformation. One of the most important architectural elements, the wall, will be analyzed to reveal its changing nature. In particular, a focus on the walls as an enclosure or surround will be discussed. Likewise, this paper will discuss how the architect imagines it, plans for its existence, and finally constructs the wall, all of which has shifted throughout time.

The definition of a wall must first be established to trace its subsequent evolution. According to Alberti, the origination of the wall came about in order to solve the need of social distinction. Distinctions were created with the construction of a wall, dividing space and creating an order. In his book, On the Art of Building in Ten Books, Alberti establishes the primary components of architecture stating, "The elements of which the whole matter of

## Notes

- [01] Schmarsow, 187.
- [02] Alberti, 8.
- [03] Alberti, 8.
- [04] Semper, 102.
- [05] American Heritage Dictionary.
- [06] Oxford English Dictionary.
- [07] Neumeyer, 241.
- [08] Vitruvius, 24.
- [09] Vitruvius, 51.
- [10] Neumeyer, 241.
- [11] Vitruvius, 21.
- [12] Vitruvius, 22.

building is composed are clearly six: locality, area, compartment, wall, roof, and opening" [2]. The wall, being one of the six categories encompassing every part of the building is explained by Alberti as,

All that structure which rises from the ground upward in order to support the weight of the roof, or which acts as a screen to provide privacy for the interior volumes of the building [3].

Alberti's definition includes structural qualifications and/or functions of privacy. This varies from German architect and art critic Gottfried Semper who established four elements of architecture in comparison to Alberti's six. The first includes the hearth, and following the hearth is the roof, the enclosure, and the mound. He writes,

[The hearth] is the first and most important, the moral element of architecture. Around it were grouped the three other elements: the roof, the enclosure, and the mound, the protecting negations or defenders of the hearth's flame against the three hostile elements of nature [4].

For Semper, the wall was more about protection than of structural properties. The hearth is likely understood as the spirit of the building which would include the inhabitants. Various definitions of a wall and its purpose is evident throughout history; some of which apply to the more structural nature, function, and purpose of a wall (Alberti's view) and others which view the wall as a symbol and ideal like protection (Semper's view). One modern definition of the term "wall" is described as,

Any of various permanent upright constructions having a length much greater than the thickness and presenting a continuous surface except where pierced by doors, windows, etc.: used for shelter, protection, or privacy, or to subdivide interior space, to support floors, roofs, or the like, to retain earth, to fence in an area, etc. [5]

The Oxford English Dictionary defines wall as,

A continuous vertical brick or stone structure that encloses or divides an area of land; a protective or restrictive barrier likened to a wall; or to block or seal a place by building a wall [6].

There are vast differences in the definitions. In Alberti's explanation, it is interesting to think in terms of typical construction and structural concepts today. For example, the idea of a curtain wall, where the curtain wall does not support the roof would, not qualify as a 'wall' under Alberti's definition because Alberti describes it as a component which supports the roof. Yet by today's common knowledge there is no disputing it, qualifying a curtainwall as a wall. There is also no wording which would include half walls or knee walls in Alberti's description. It seems as if only those which extend up to the roof and support it qualify. Despite the word 'wall' as part of the nomenclature of curtain walls, knee walls, or retaining walls, they indeed do not qualify as an 'Alberti wall' even though it hangs from the roof.

The second half of his description referring to the wall as a screen brings in to question a glass interior partition. Would this fall under Alberti's categorization of a wall? It would only provide privacy if it was frosted or obscured. The wall then, no longer just pertains to its existence and vertical orientation, but also to its materiality and transparency. Perhaps for Alberti, the term "wall" had become overused and had lost the special architectural quality that it previously embodied.

The modern descriptions of the wall bring up just as many questions. The first deals with permanence. How can any wall truly be permanent? Consider what materials prove permanence. Even quality structures have life spans of around 50 years. According to the above definitions, it seems the wall has to be made of stone instead of cardboard for it to be truly classified as a wall. Japanese architect, Shigeru Ban, would surely disagree. Shigeru Ban is well known for his innovative use of building with paper products including recycled cardboard. For example, Takatori Catholic Church was considered a temporary project in

response to an earthquake in 1995; however, the structure was moved to Taiwan in 2005 and still exists today. Although Shigeru Ban utilizes temporary materials, the creative organization of parts and assembly results in solid architecture. Permanence, therefore, is another vague aspect of the definition.

Analyzing the assembly further, the modern wall is seen as a thinner ensemble consisting of multiple layers, while the traditional wall is thick and singular, like a solid masonry wall. The thickness and mass allows slow movement of air between inside and out, while modern buildings rely more heavily on mechanical equipment to help maintain desirable temperatures inside, and therefore the mass of wall is no longer necessary to create a thermal barrier. Fritz Neumeyer tributes this change to the modernist movement. "The modernist obsession with air and light made the opening the actual subject of wall design. The logical consequence of this was that the wall was anatomically dissected into individual layers, each divided according to function" [7]. By today's conventional wisdom, the definition of a wall is hard to simplify, but it seems as if Alberti's has less fallacies than today's definition. However, two commonalities do exist, 1) an intended permanence in construction and materiality, and 2) an upright structure.

Returning to Alberti's description for a wall, the first part of the quote seems to imply that any vertical structural piece is considered a wall. This would include, columns, studs, cables, trusses, etc. Under our conventional understanding, the wall is understood not only as the stud, but the insulation, the drywall, and the final finishes. In Vitruvius's Ten Books of Architecture, no solution was universally prescribed in terms of materiality: "With regard to the material of which the actual wall should be constructed or finished, there can be no definite prescription, because we cannot obtain in all places the supplies that we desire. Dimension stone, flint, rubble, burnt or unburnt brick, -- use them as you find them" [8]. Maximizing use of local resources is not only economical in terms of initial construction costs, but also in maintenance and repair work. His wording also is eloquent in that it does not exclude any of our modern materials today.

Instead of stipulating what is necessary for the construction of walls, he redirects the question to the architect who is to select from what is available. It is interesting, therefore, that his list includes materials that will endure, including stones and bricks. Vitruvius later encourages that buildings, "Should be constructed of the smallest stones, so that the walls...may hold together longer," [9] again reiterating building for duration. Again, intended permanence is a commonality historically and in current wall design today.

The placement of walls is one of the most critical and primary design aspects initiated by an architect in formulating a building's design. Neumeyer poses,

What would architecture be without the wall, probably man's most important invention for creating an enclosure and a spatial conclusion, combining the functions of bearing, enclosing, and opening? [10]

For Vitruvius, the city walls are one of the initial steps to the construction of the city, before any other building occurs. He states, "After ensuring on these principles the healthfulness of the future city..., the next thing to do is to lay the foundations for the towers and walls." [11] Walls, and in particular, perimeter walls, are seen as important structures throughout history. Prior to Vitruvius's writings, Hadrian's Wall (122-410 AD) is seen as a colossal example of the construction of perimeter walls. British Emperor Hadrian ordered the construction of the wall to define the Northern Boundary of his empire which stretched 80 miles. The first 41 miles were to be built of stone with a width of 2.96 meters (approximately 9 feet) and a height of 4.4 meters (approximately 13 feet). A walkway along the top of the wall existed for surveillance. Even for Vitruvius, as he wrote in his Ten Books of Architecture, walls for fortification purposes were important aspects in which he addressed. Vitruvius recommended that perimeter walls should be constructed at a thickness where two men could pass each other. He wrote, "The thickness of the wall should, in my opinion, be such that armed men meeting on top of it may pass one another without

interference.” [12] Even poet Robert Frost makes reference to this dimension in his poem “Mending Walls” in the line, “And makes gaps even two can pass abreast.” [13] The stone portion of Hadrian’s wall had two outer faces of stone and contained a center of rubble. Hadrian’s Wall is noted as not being outrightly built for defensive purposes, but rather to control movement as evidenced by the numerous gates and milecastles. Over time, the wall actually began to encourage settlement due to trade because of the boundary landmark created. But regardless of the reasons for its initial construction, or how the space around the wall evolved, one thing was clear, there was a distinct space that was within the Roman Empire and everything beyond it was outside. One architect explains,

Walls both act symbolically and help to structure civic life, and while the two may intermingle, they are not necessarily the same. As much as ancient and medieval walls were necessary for defense, and certainly cities resembled fortresses, the wall had a constitutional role as well. One’s right to reside inside offered the freedom, and the responsibility, to participate as a citizen.

Since Hadrian’s Wall, many other constructed walls marking political boundaries have been constructed aimed at achieving similar goals. Well known constructs in today’s society include the Great Wall of China, the Berlin Wall, and proposed walls, such as those for Iraq and those between the U.S. and Mexican border, all of which intended to protect, provide surveillance, and physically define a boundary. It is for this reason, walls “speak loudly” in our society. Interestingly enough, Alberti also understood the value of fortification walls and notes that some walls would even be different if the ruler was a tyrant. It demonstrates yet another commonality in wall architecture between the past and current design in that walls can mitigate political and societal extremes depending on the level of conflict.

In terms of definition of space for the interior and exterior, it is interesting to look at Mies Van der Rohe’s plan for Landhaus, (The

#### Notes

- [13] Frost.
- [14] Pullman, 118.
- [15] Bible. NIV. Proverbs 25:27-28.
- [16] Klausmeier, 10
- [17] Klausmeier, 11.
- [18] Klausmeier, 11.
- [19] Klausmeier, 12.
- [20] Neumeyer, 240.
- [21] Pullman, 17.
- [21] Semper, 127.

Brick Country House). Only two documents remain from this unbuilt project; a plan and an exterior perspective. The line which divides the exterior from the interior is vague, and only the relationships between the walls allow an understanding of the plan. There is no continuous edge, but the ensemble of all walls as a whole creates a clearer understanding of the public delineation of the exterior to the private interior.

Walls at the empire and large-scale level (as seen with Hadrian's Wall) or at a smaller (individual's residence, for example), are still striving to achieve similar goals, to define an invisible boundary. Some political boundaries do follow natural conditions such as mountain ranges, changing topography or water features, and history has shown that these boundaries are less likely to 'require' a wall because they are already apparent. "The concept of the wall plays a no less central role in the vocabulary of architecture...The wall provides community, it enables us to live alongside and with each other, it divides and combines in a single act." [14] Perhaps Alberti's statement for the origination of the wall is accurate, as humans we desire order amongst the chaos of other humans. Proverbs 25:27 states, "Like a city whose walls are broken down is a man who lacks self-control." [15] Order was the justification for the construction of the wall that divided the city of Berlin into four zones. The Berlin Wall serves as a very intriguing example of the psychological effects a wall can have on a population. Although there were great political forces which erected the wall, it is still worth analyzing because politics and architecture exist in tandem. It is interesting to compare the concept of the Berlin wall with both how Vitruvius describes city walls to protect the inhabitants, and also the concept of Hadrian's Wall built during the time of near Vitruvius's writings. Historian Alex Klausmeier has a different perspective regarding the Berlin wall,

Every Berliner and every visitor to Berlin assumes two things about the Berlin Wall: firstly, that this structure is a physical manifestation of the Cold War which kept the world in terror for forty years. And secondly, that it has been almost completely erased from the face of the

city. Both assessments are, however, incorrect [16].

Huge efforts were made in 1990 and 1991 to erase all border fortifications of the Berlin wall. Klausmeier states that, "One could not simply remove this Wall which had shaped the lives of many people so painfully and for such a long time and pretend nothing had happened" [17]. The affect of the wall wasn't limited to merely a scar on the landscape, but also on the people. "Unplanned and unwanted as it is, there is nevertheless a scar which runs right through Berlin's urban fabric from north to south: a landscape of memory full of remnants and traces of the border fortifications" [18]. It is interesting though to see how the same wall can be viewed in such contrasting manners. Klausmeier explains that, "The physical remnants display the reality of a border which was hailed by one side as the 'Anti-Fascist Protection Rampart' while the other side denounced it as the 'Wall of Shame'" [19]. This is explained by Neumeyer as not being related to the wall itself, but the relationship of the space between particular walls. He states that,

It is only when the space between the four walls becomes too cramped for the mobile subject, when the walls jostle us and make it difficult to breathe that the wall metaphor starts to show its negative side. Security becomes confinement, the wall becomes a torment [20].

Therefore, the wall itself is not a negative element, but the relationship of the spaces created by the walls and their relative scales are important components in achieving a successful wall. Wendy Pullman, a renowned architectural theorist, further explains that "certain lines of division should never be fully realized" [21]. In the case of Baghdad, the opposition to the construction of the wall actually united people in their common stances; a New York Times article during that time was entitled, "Frustration Over Wall Unites Sunni and Shiite."

Even though the term 'wall' has likely morphed as time and technology have changed, the methods of constructing walls

are still similar to methods used in ancient times. Although there are more advanced wall construction systems, the common methods are consistent. Walls that appear more transparent are considered more democratic. For example, typical embassy designs in the middle of the century included glass walls that were seen as more 'open minded.' Of course security concerns have now eliminated the majority of them and architects have returned to solid construction.

It has only been recently that Americans are again facing issues of walls as security elements. The National Capital Planning Commission (NCPC) has a set of guidelines on how street elements, aside from the typical understanding of 'wall,' may act as security barriers with hopes that opaque walls are not the future for the nation's capital or representative structures abroad. Walls are now being created by street/urban furniture and planters.

Finally, the last step in finishing a wall is investigated. In terms of pure architecture, nothing shall be applied to the wall, but the exterior shall read as an expression of its true materiality. But as formerly discussed, this layer is often included in today's description of the wall.

The wall should never be permitted to lose its original meaning as a spatial enclosure by what is represented on it; it is always advisable when painting walls to remain mindful of the carpet as the earliest spatial enclosure. Exceptions can be made only in such cases where the spatial enclosure exists materially but not in the idea.

Semper further recommends that,

The material [should] speak for itself; let it step forth undisguised in the shape and proportions found most suitable by experience and science. Brick should appear as brick, wood as wood, iron as iron, each according to its own statical laws [22].

For the pantomime, once the performance is completed, the boundary is breached and the seemingly tangible wall

immediately disappears, with nothing marking its previous existence. Unlike the pantomime, the wall, even if demolished leaves remnants not just from the demolition, but social conditions, cultural histories, and impacts on the environmental landscape. Although parts of the wall have evolved through history, the power of the wall has always remained dominant and its supremacy probably underestimated. It is for this reason walls should be assembled with warning. In times of growth or out of need, often decisions to build and what to build are done with haste. Certain building systems today support this change in pace. If a building is going to take an extended duration, the designers should ensure its appropriateness.



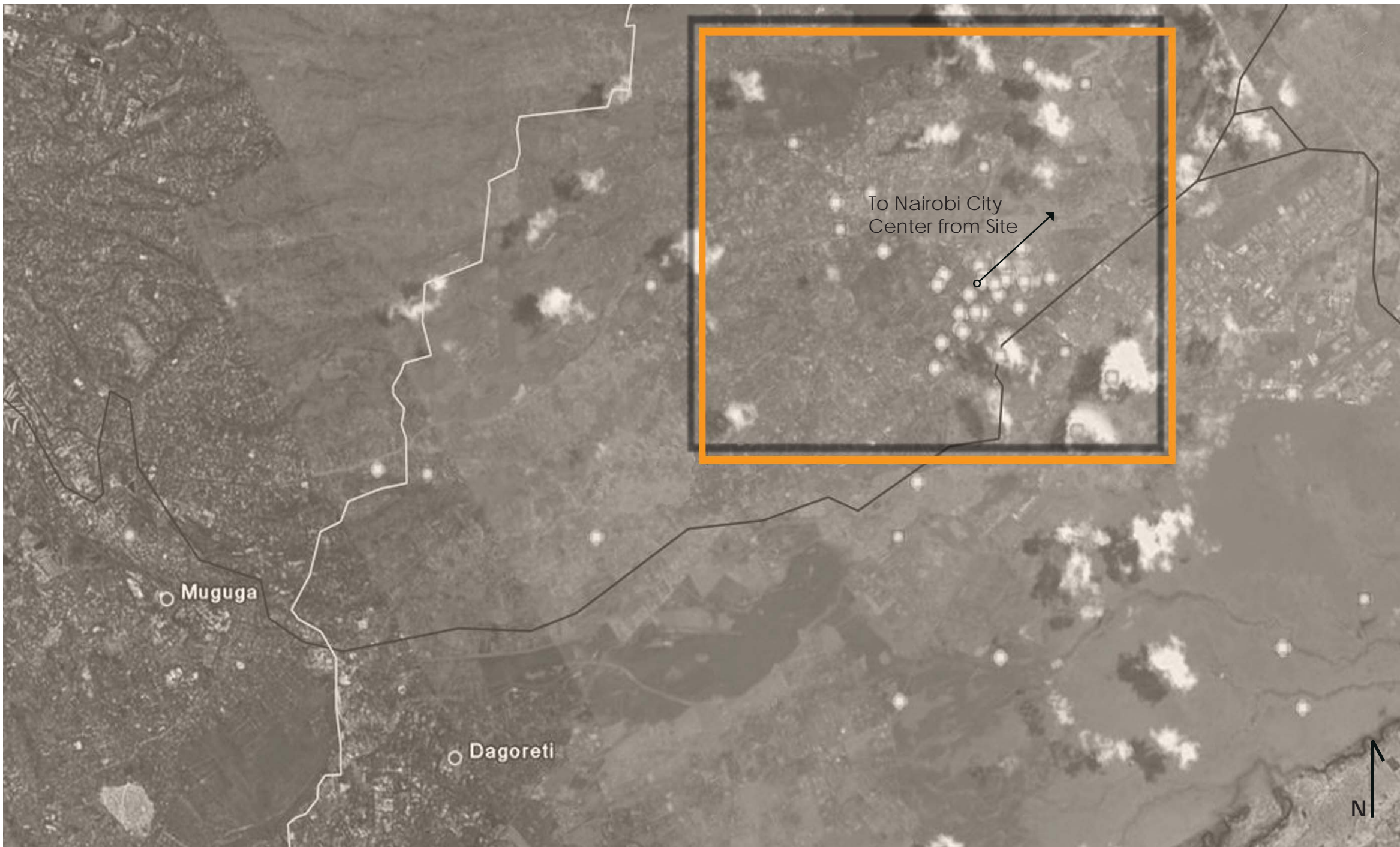


**p r o c e s s**



Property Line





**Site: Nairobi, Kenya**

1S, 36E  
Elevation 5980 feet

Set south-west of the city center of Nairobi, the site occupies approximately two acres and is located on a corner of a main street and an arterial one, Macharia Road. Currently, on the East boundary an impromptu market is set up where locales buy and sell produce and other necessities. The site is strategically located in an area where districts of the lower, middle, and upper class all come to single point.

One of the greatest challenges and opportunities of the site is its location on a hill side. The initial design moves, therefore, where focused on how to divide up and bring together the topography.

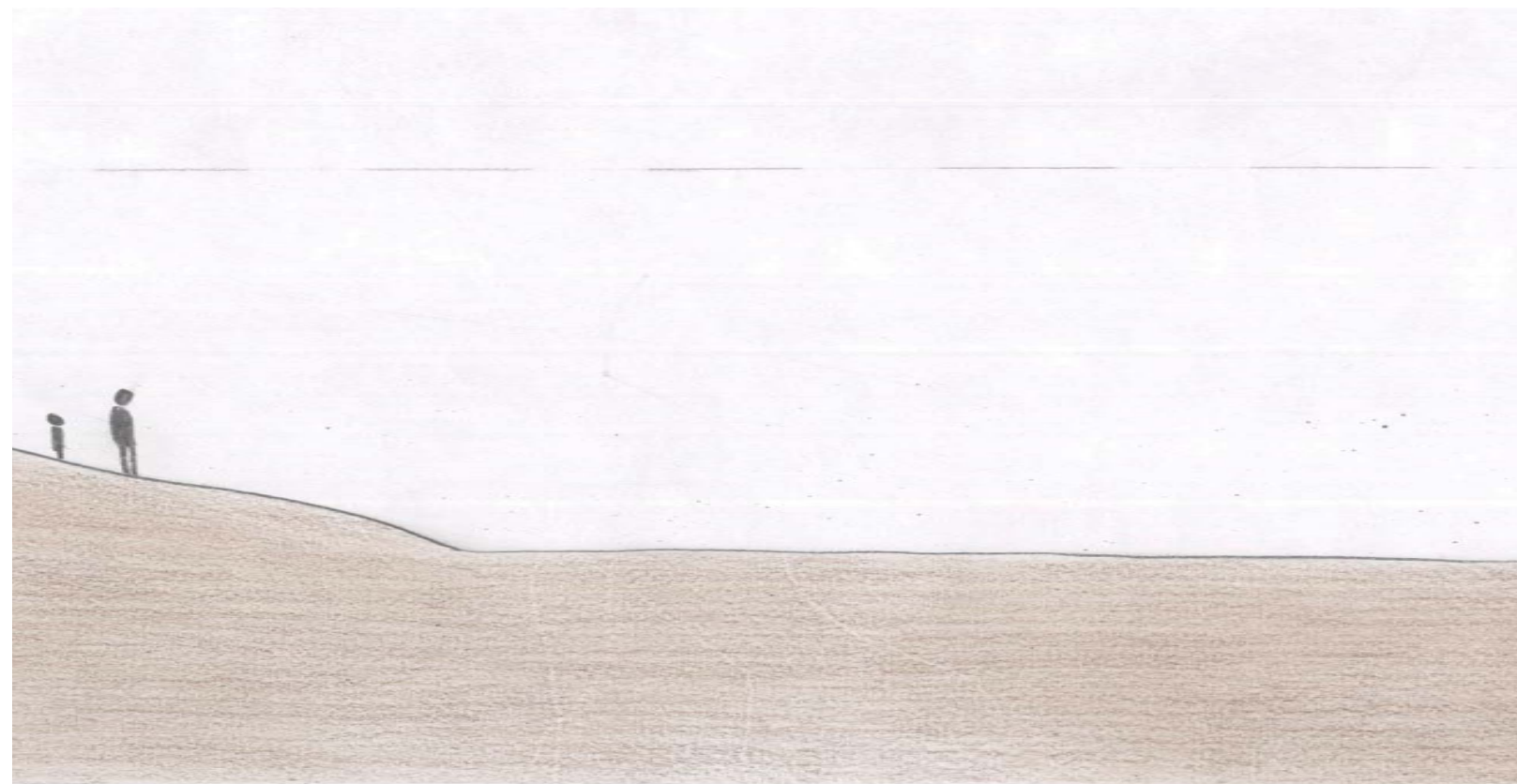
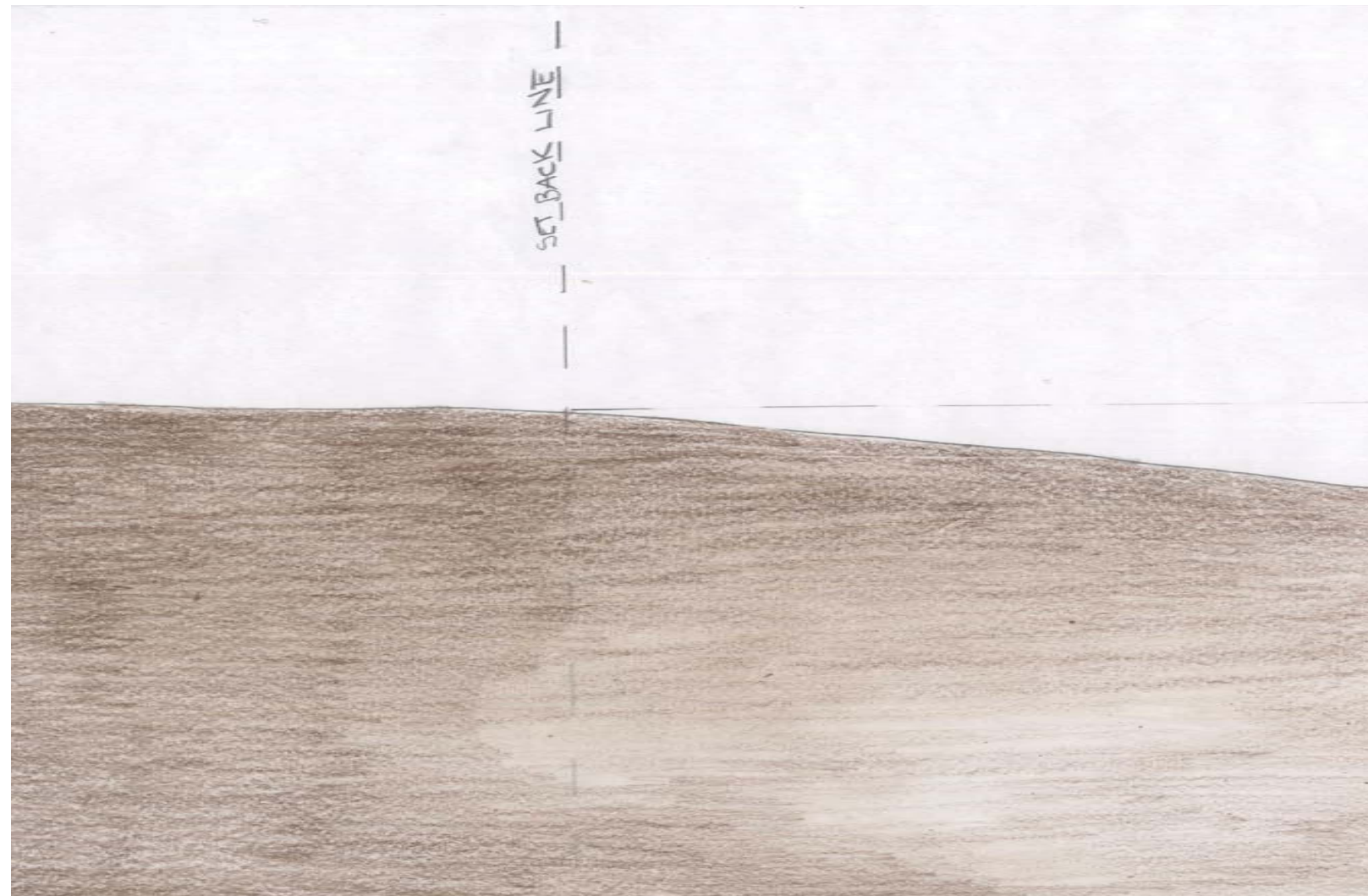
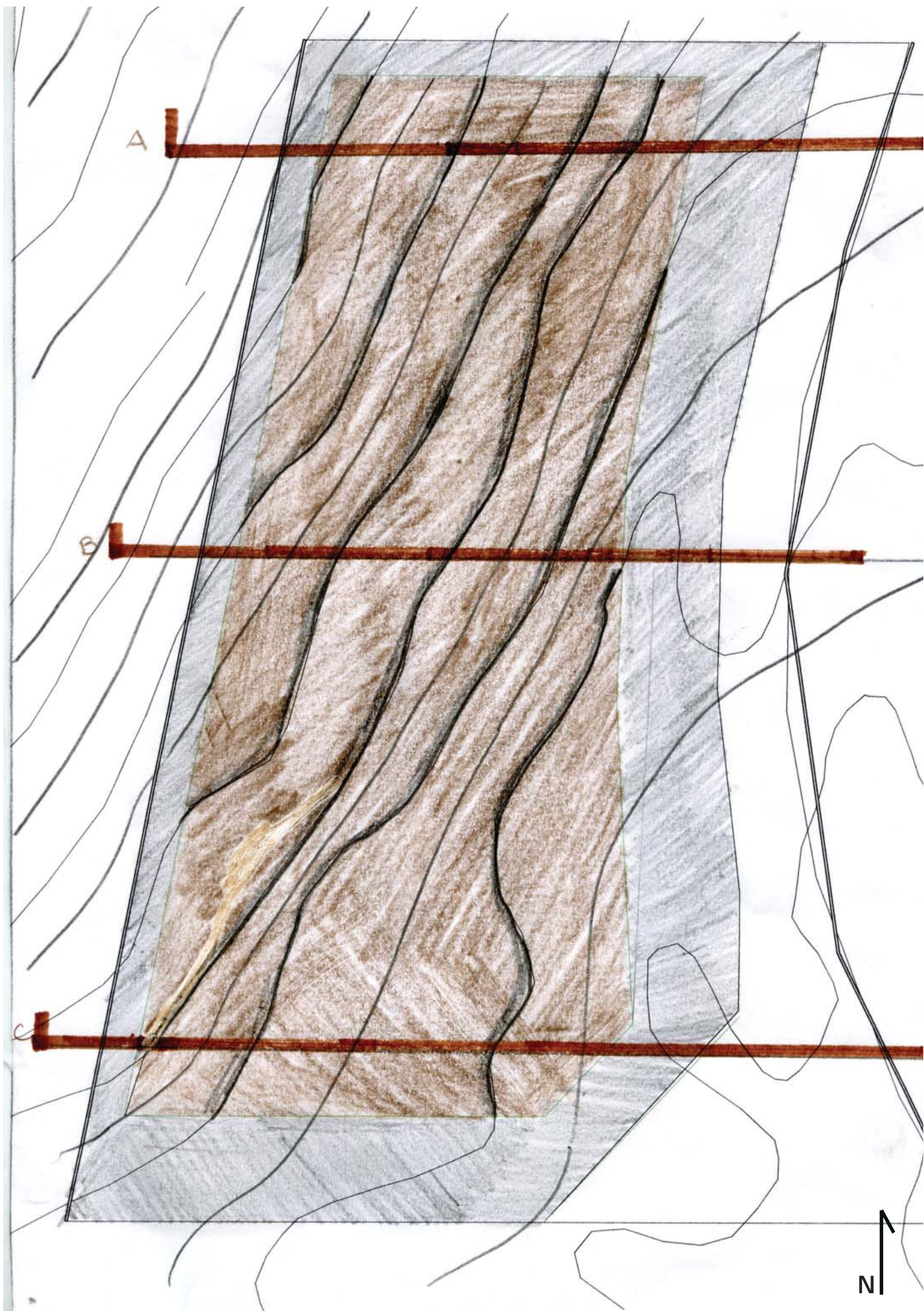
Aiming to maintain a close connection with building and land, the retaining walls act as walls for buildings in some cases, while at other moments take on additional functions.



**Opposite Left:** Zoomed-in image of site.

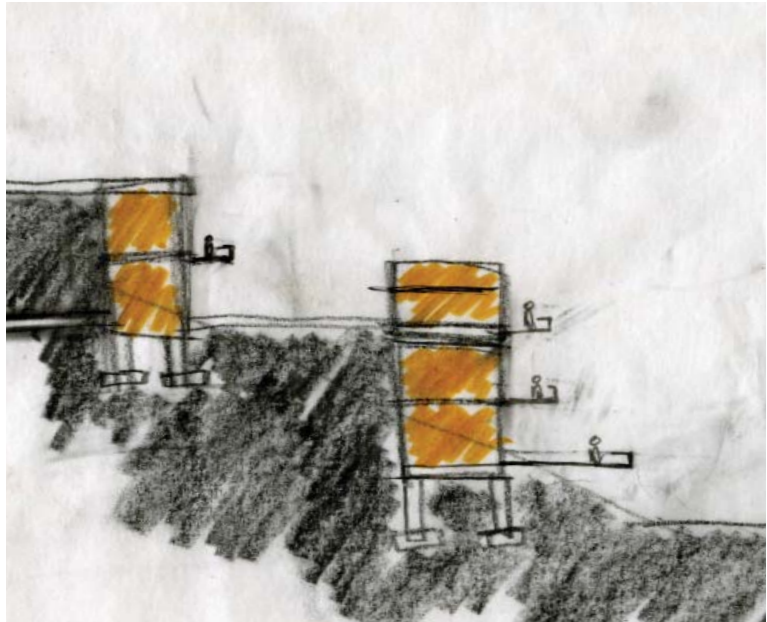
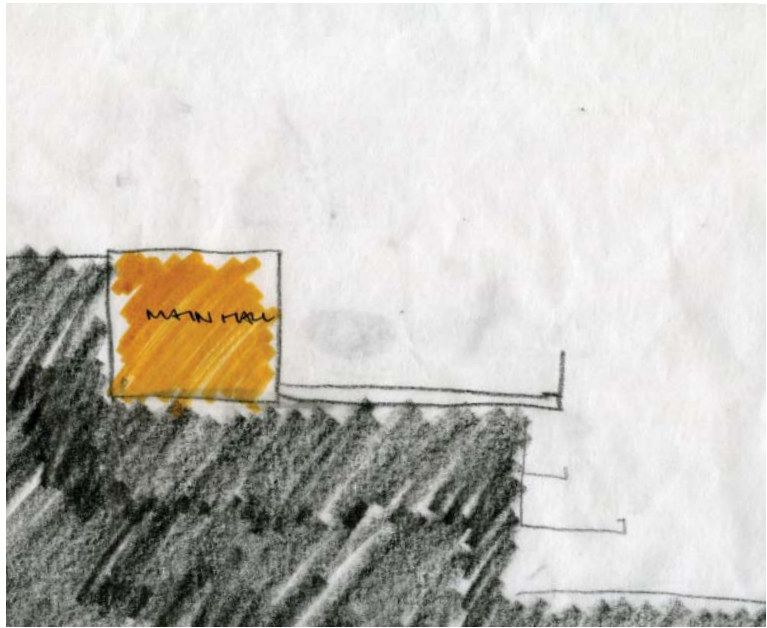
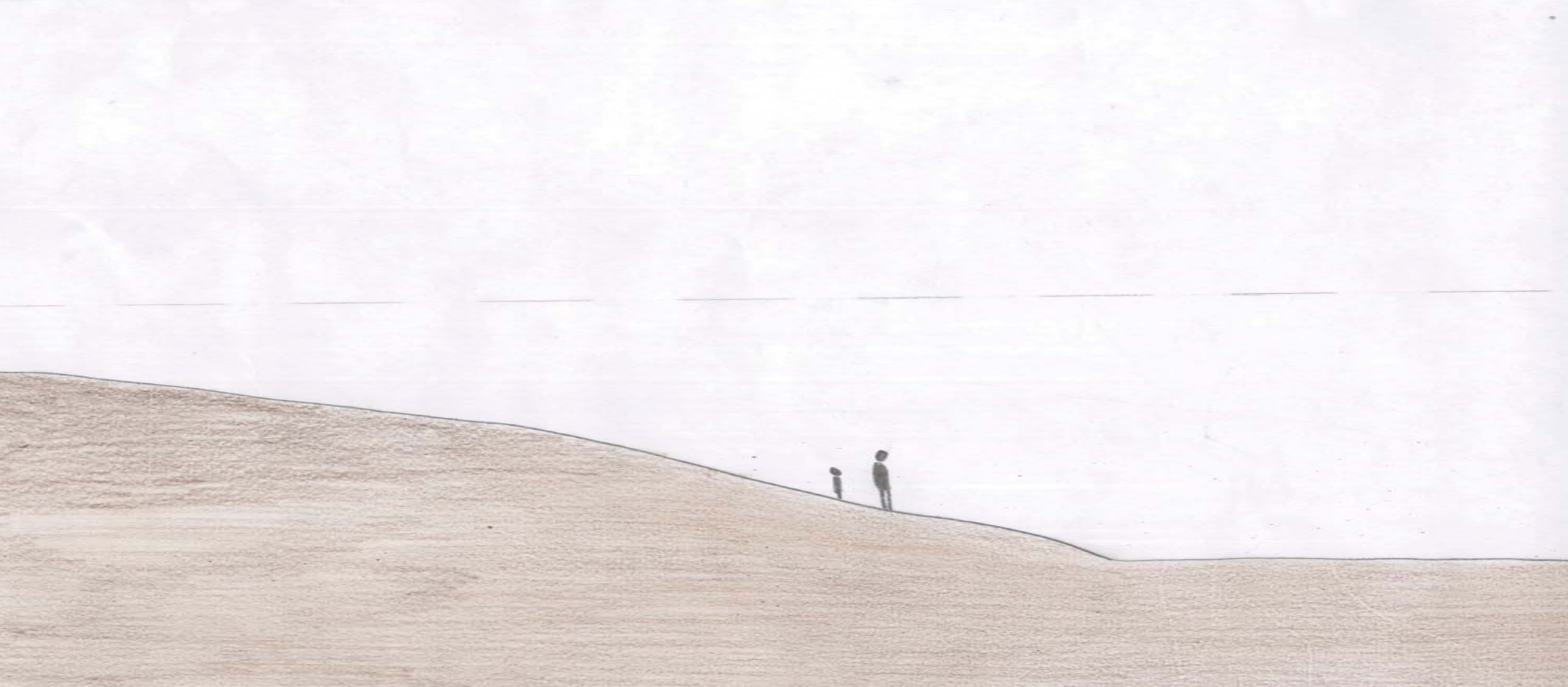
**Above Left:** Aerial view of site ten miles south west of Nairobi.

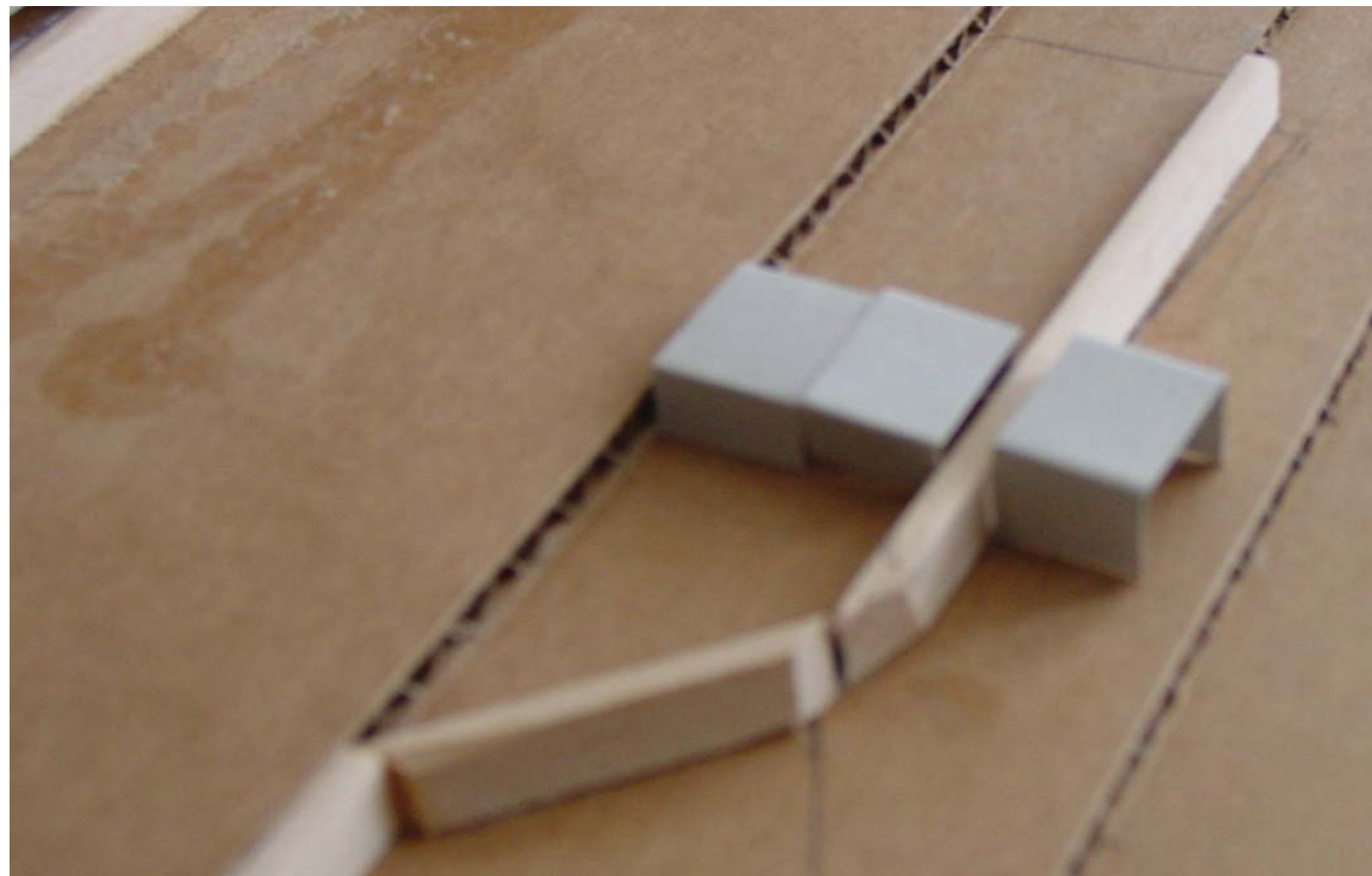
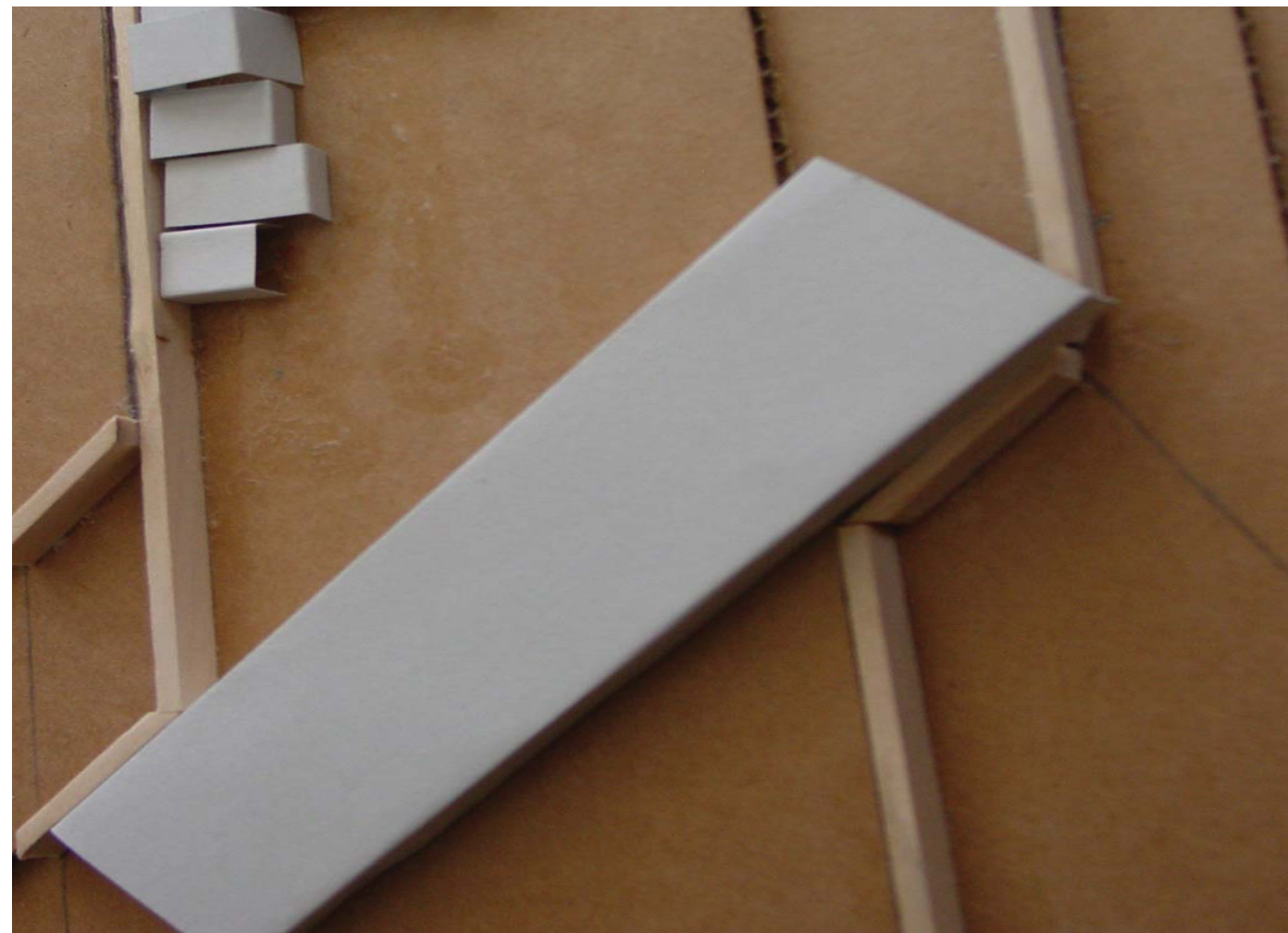
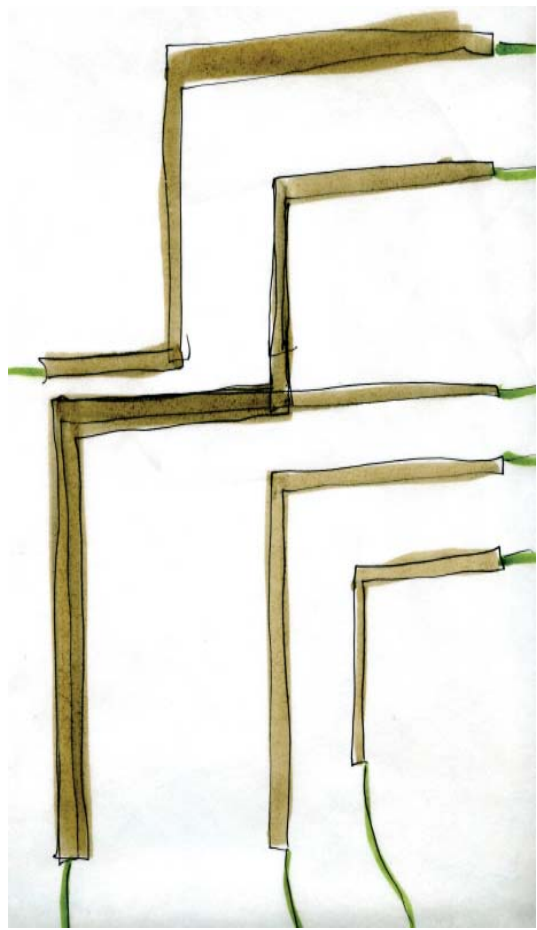
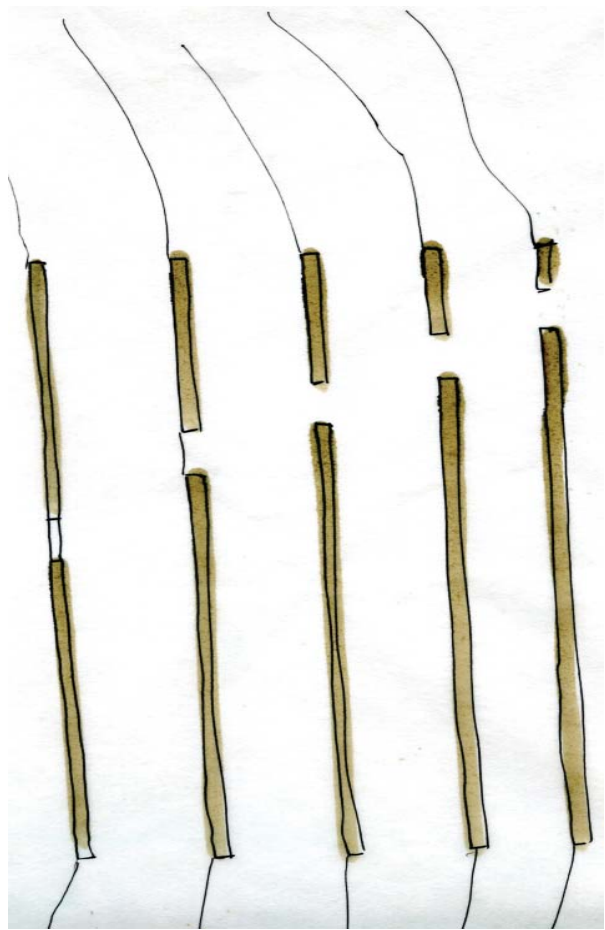
**Surrounding Photos:** Images of the site.

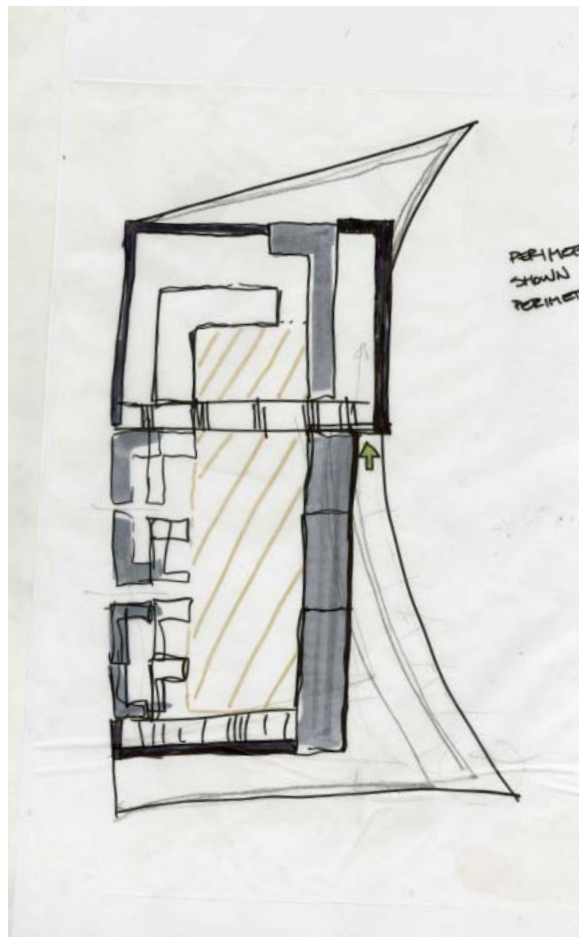
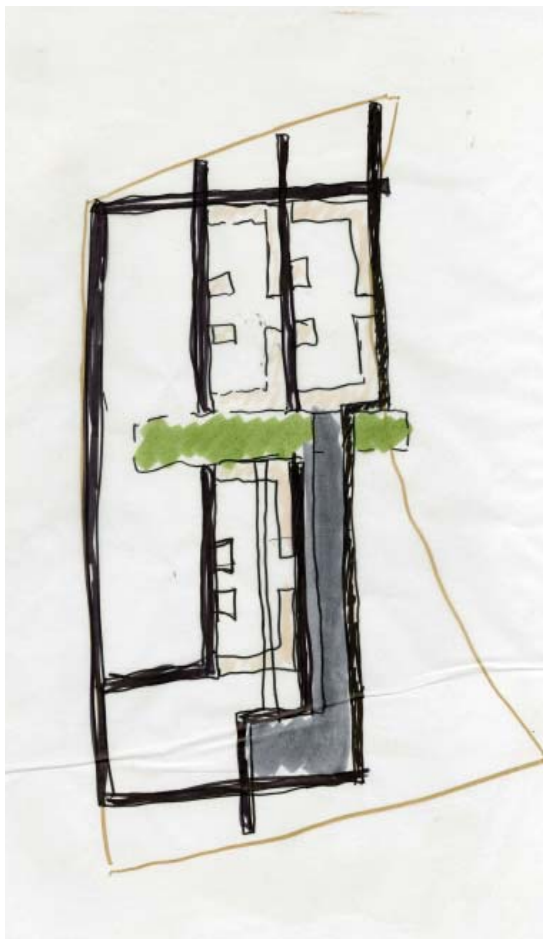


**Site: Nairobi, Kenya**

Two site sections (A and C) show the slope of the site descending from the East to the West. There is also a more gradual slope occurring from the Northwest Corner towards the Southeast corner. Therefore the highest point of the existing topography is the Northeast portion of the site. The greatest distance from the highest to the lowest point is 23 feet. The impromptu market stand is shown in Section C at the East end of the site.





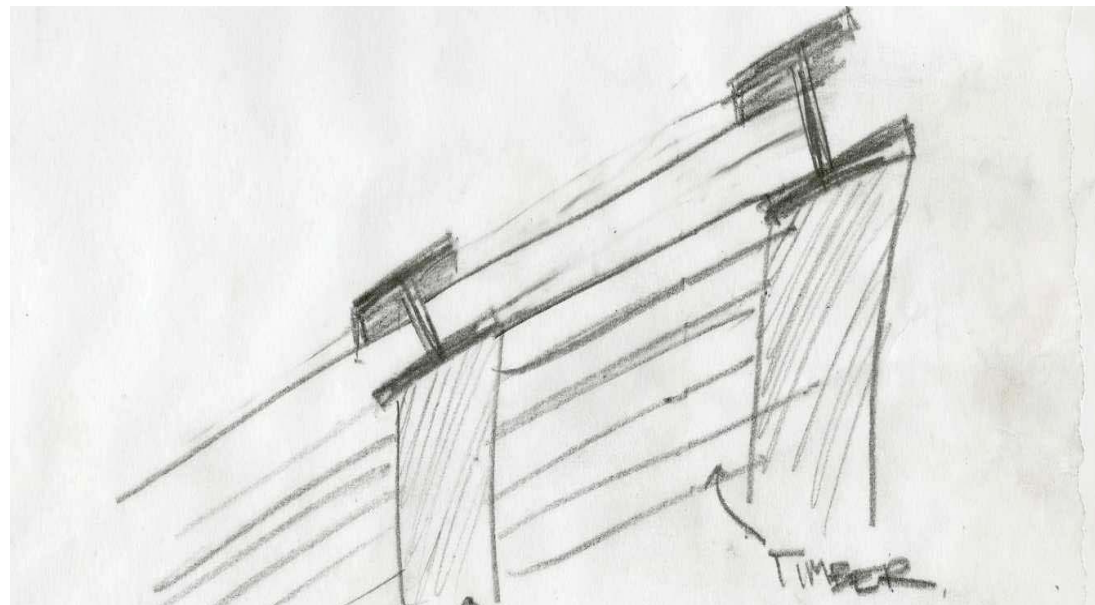
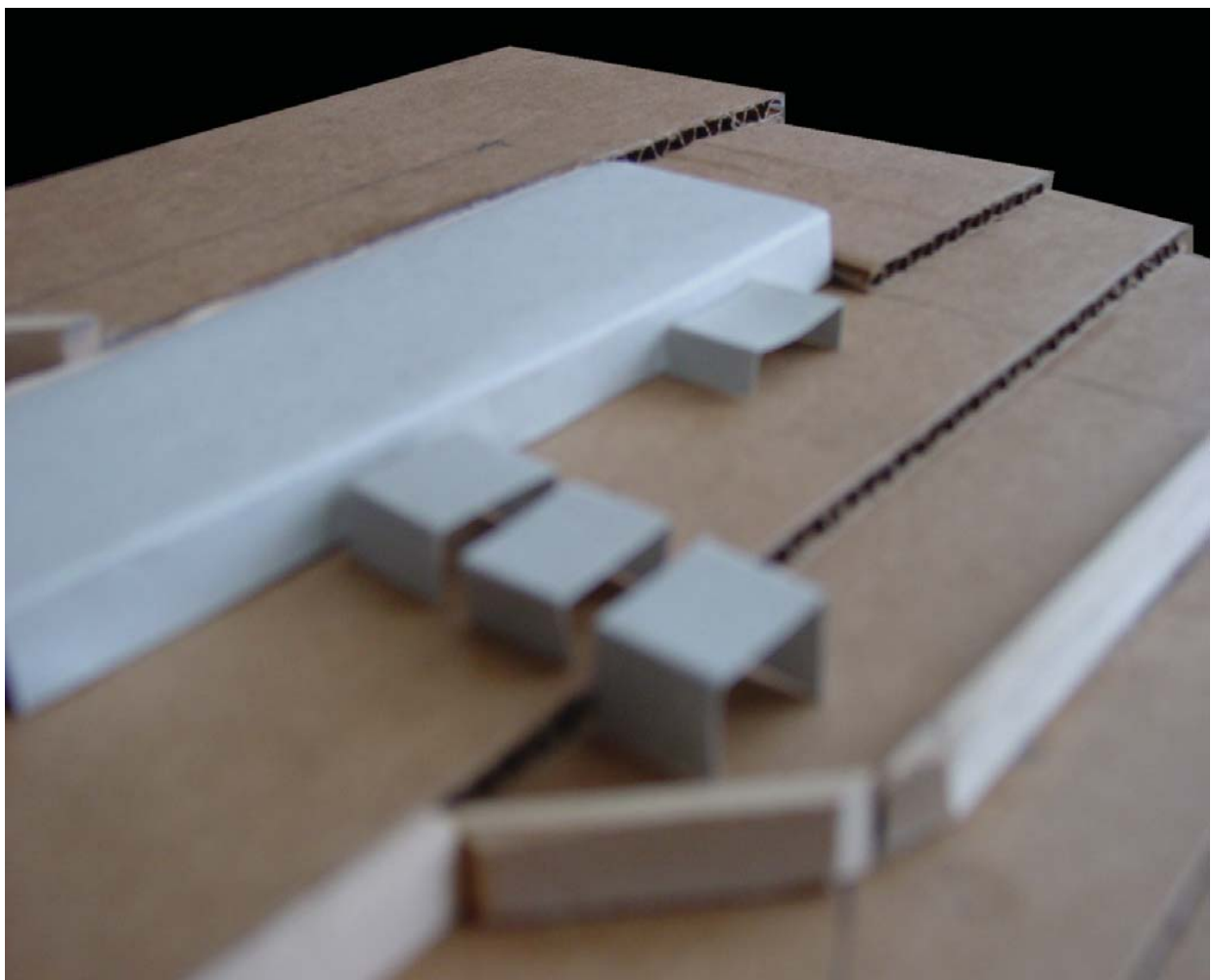


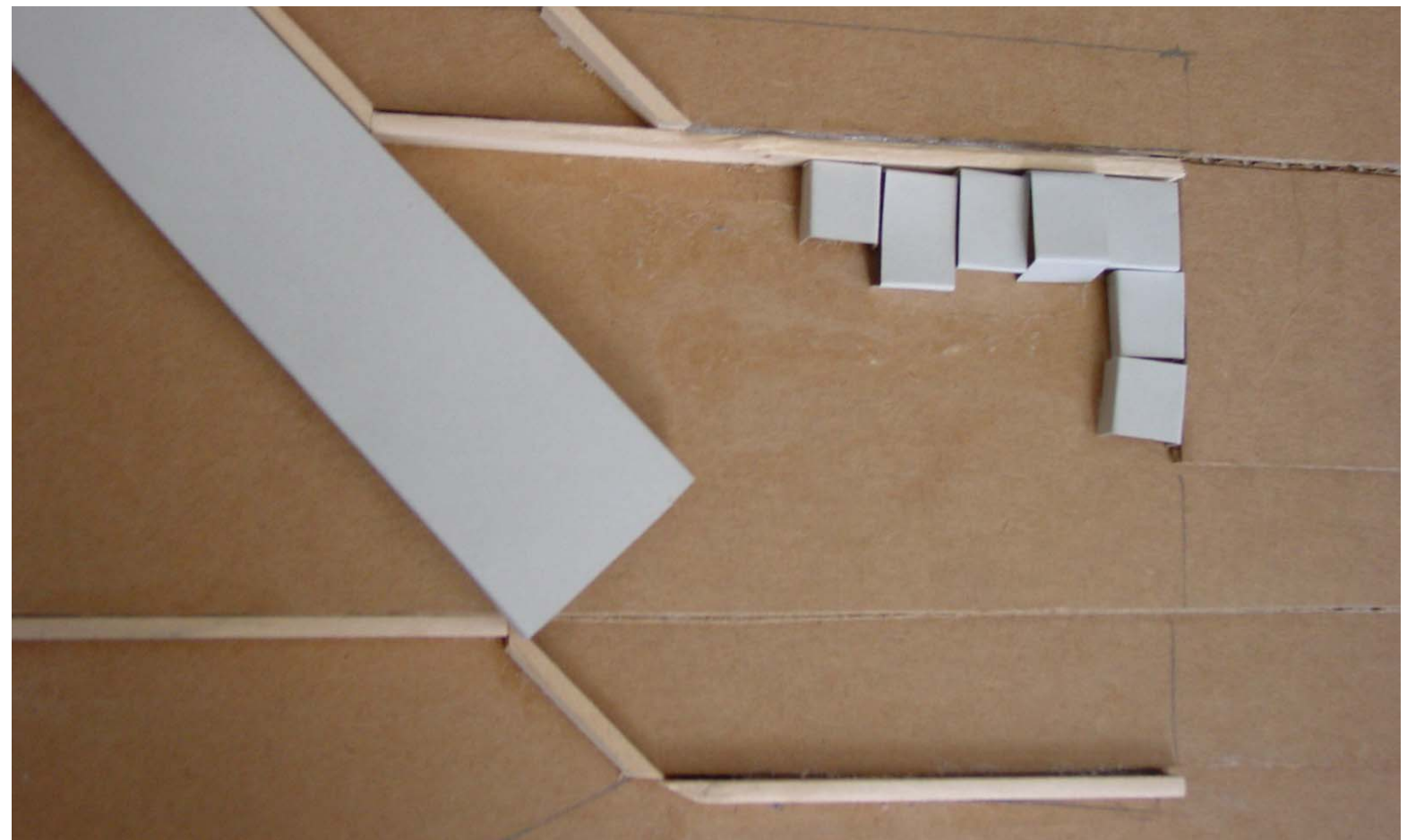
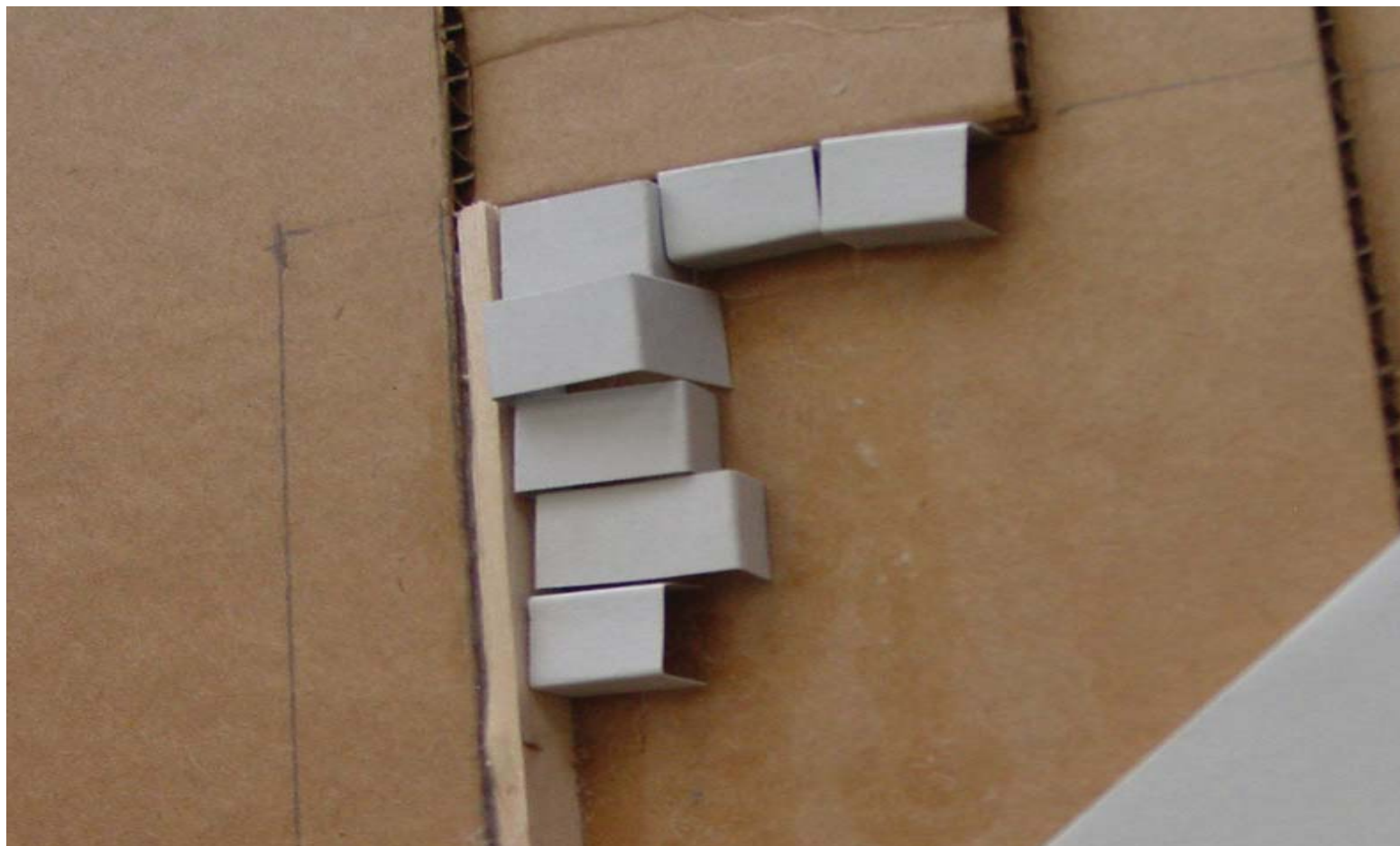
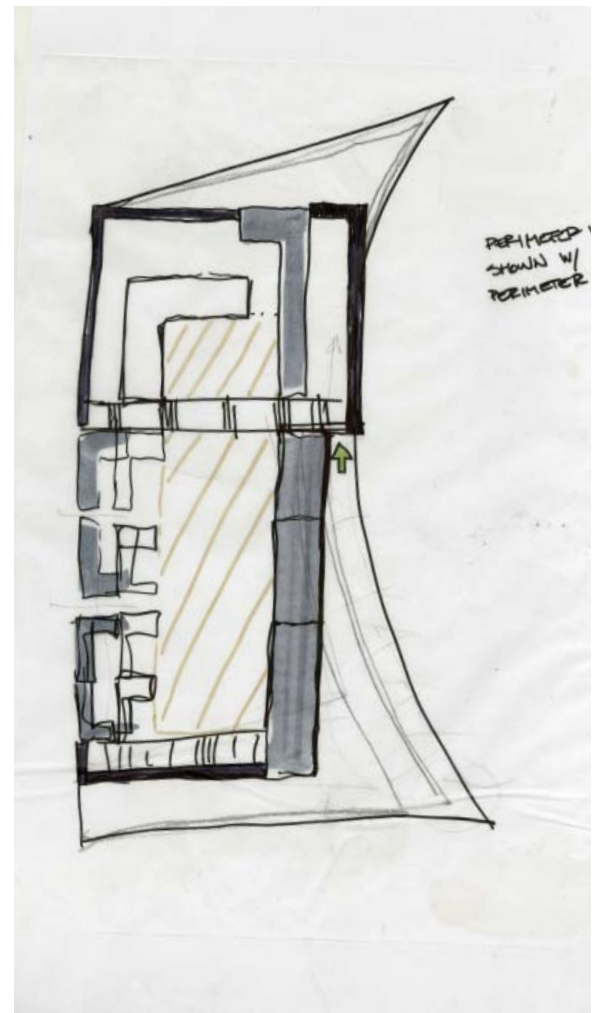
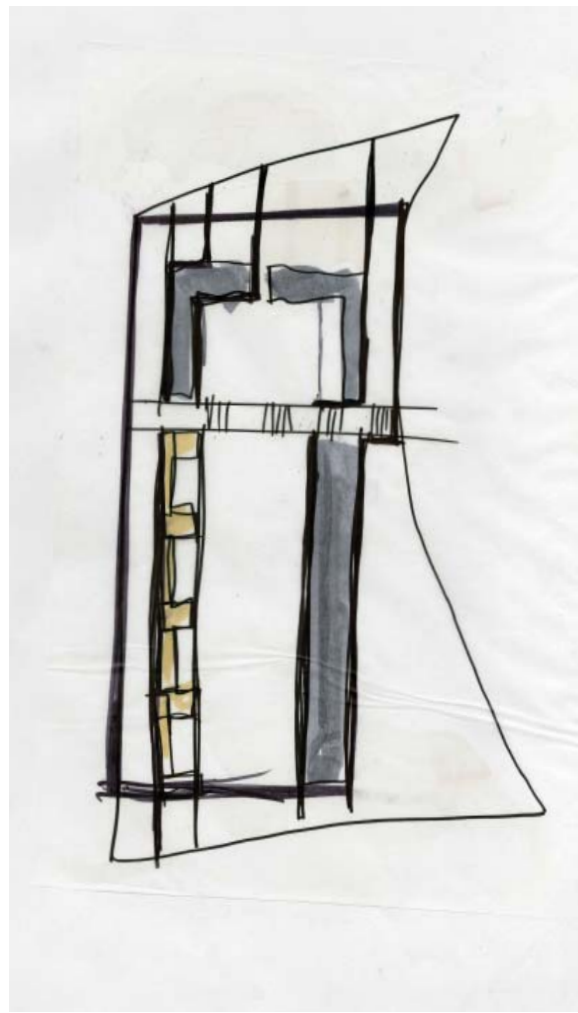
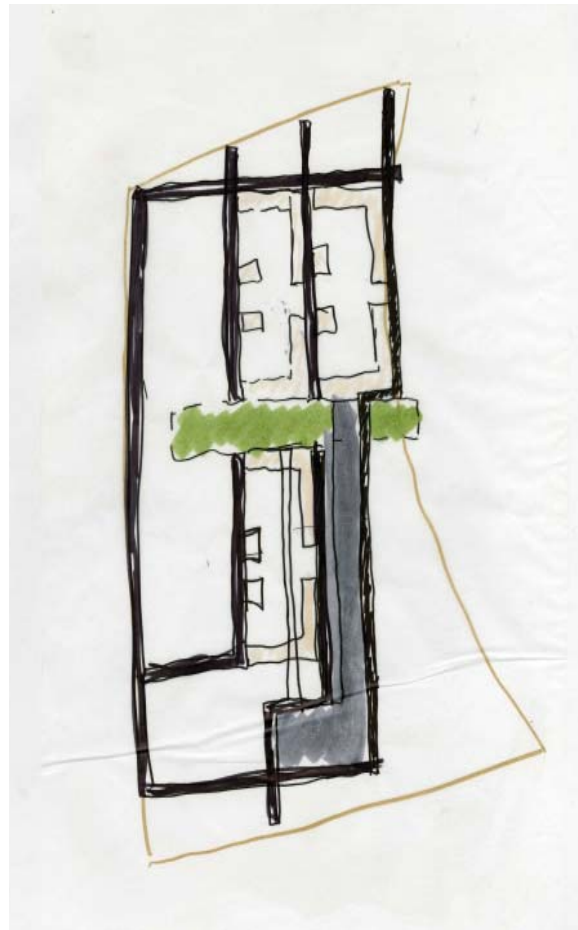
### Site Plan Development

Series of site plan development. Main components include living areas, large outdoor spaces to house a football pitch, and a garden, classrooms, main circulation, and the boarding area.

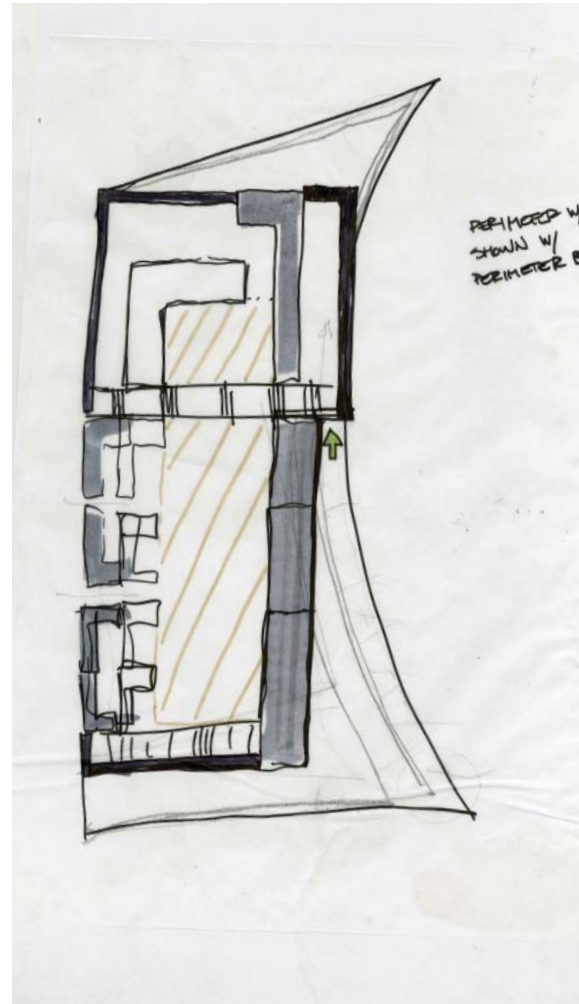
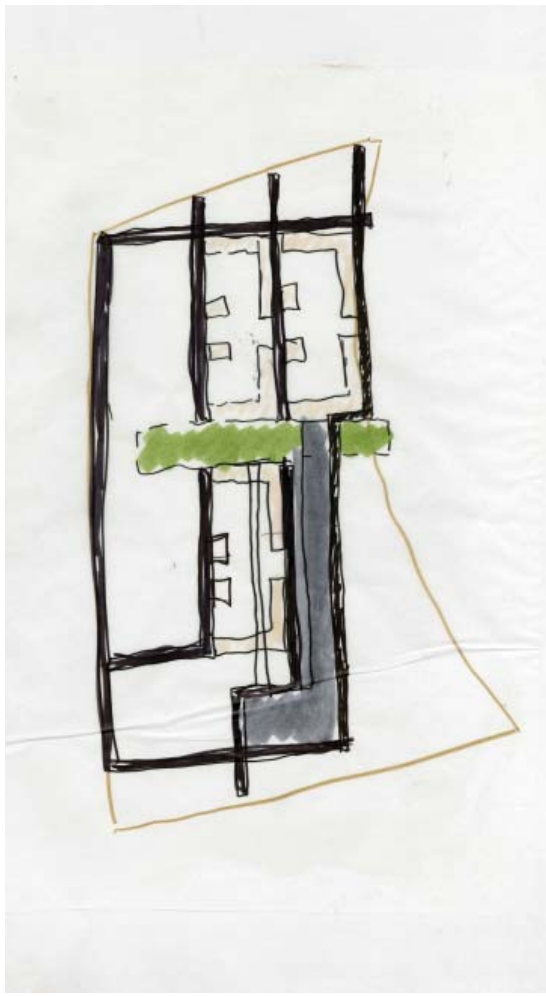
The main focus was how to break up the changes in elevation to create 'liveable' terraces while relating to the city and providing a protected environment.

The series of sketches was developed concurrently with modeling how terraces and the retaining walls create various spaces.





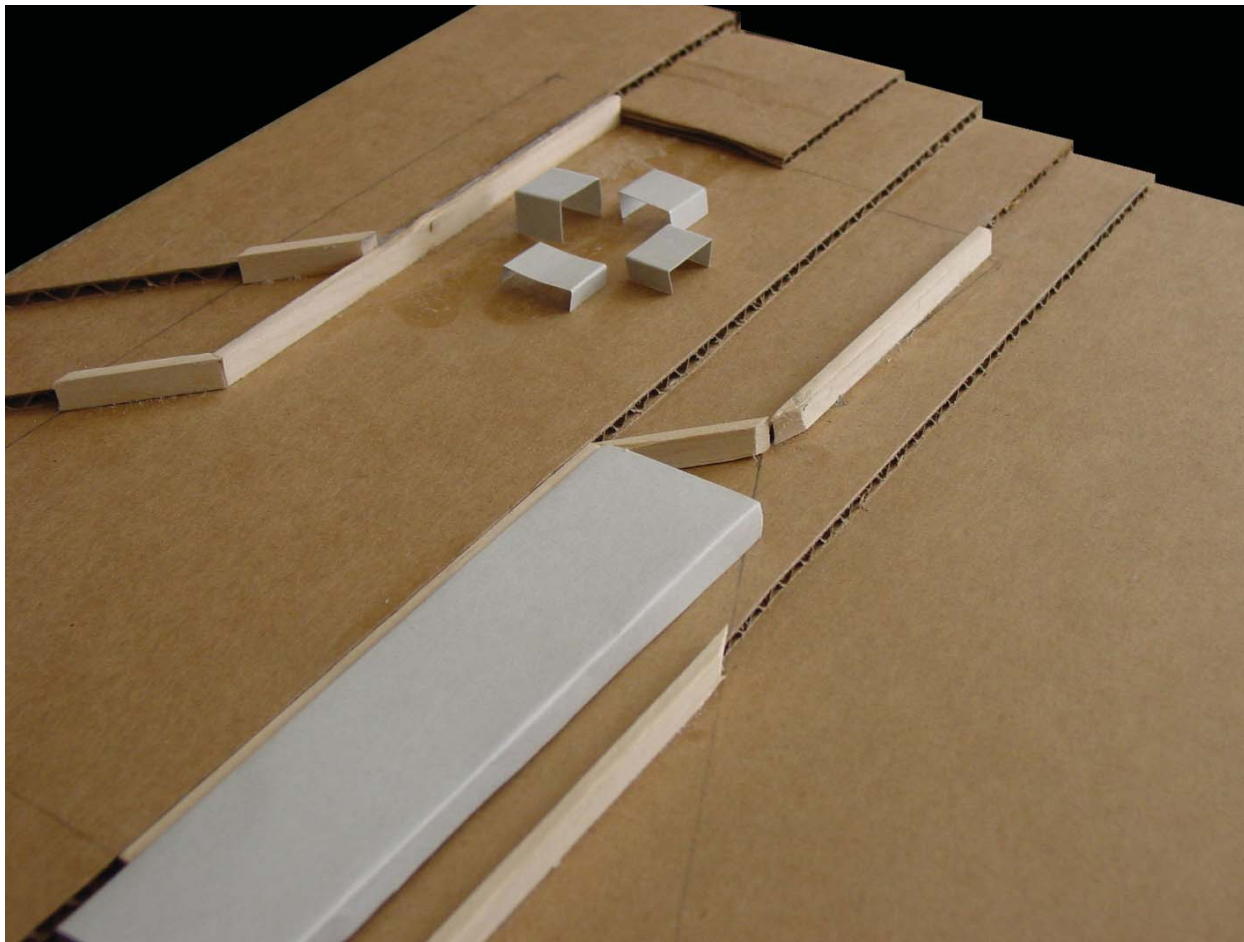


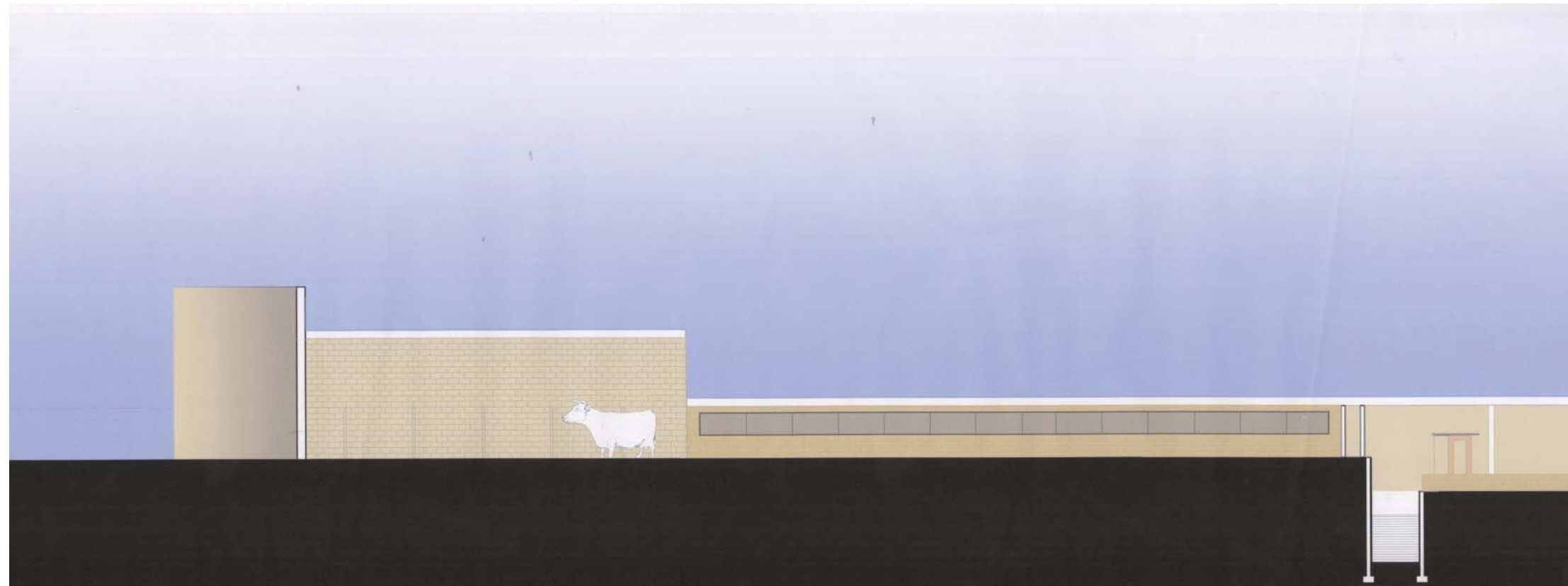


## Site Plan Development

Continued development and studies of site and how retaining walls break up the changes in topography. In order to provide a secure environment, a perimeter wall of varying heights encloses the property. The building itself, however, takes on the role of the wall at some instances.

The main East/West component represents a main stair that will lead the visitor and orphan from the street, through the main building, and ascend to the main terrace and living quarters area. The lower gray bar represents the main building with the offices and classrooms. The upper bar represents the stable area for the cattle. After some shifting of the location of the residential area (often expressed as the small "L"), the final location seemed to anchor itself on the West side of the site at the highest elevation looking towards the city.





## Development of Outdoor Spaces

Part of the site plan development focused on locating and sculpting outdoor spaces. Outdoor spaces are almost equally occupied in Nairobi as much as the indoor spaces due to the high elevation resulting in minimal mosquito activity and pleasant temperatures.

### The Pitch

The size and location of the field is to emphasize its importance to the children. It is here that the area makes up 1/2 the size of a full size football pitch. The area is directly accessible from the living quarters and the hill side residences also act as stadium seating.

### The Garden

Outside of the teaching area is the garden area, where herbs and vegetables are grown for the orphanage.

### The Pasture

A single 'african' cow produces in any range from 20-40 liters of milk per day. If the 96 children each were allocated 2 servings of milk, then two cows could produce the amount of milk needed. Any access milk produced can be sold in the market.

Two cows determines a spatial need for grazing and care for the animals. This helped define the third main green space, the pasture.

**Opposite Left:** Schematic perspective showing entry into orphanage.

**Upper Left:** Schematic perspective of main stair and pitch.

**Left:** East elevation of main building from football pitch.



1 Football Pitch



8 Classrooms



1 Infirmary



1 Community Center



96 Children



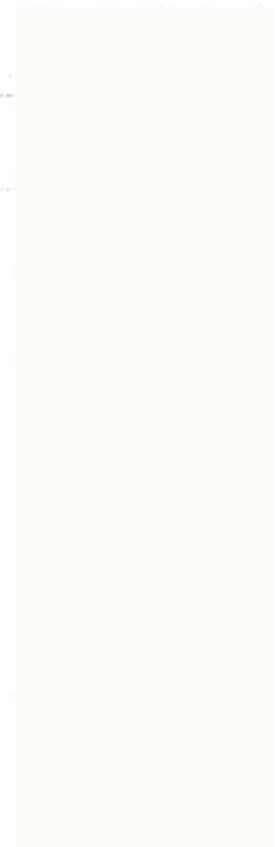
8 Care Takers



20 Staff



2 Cows



## Program

The following represents the determined program to be housed on the two acre site. The public area (offices, classrooms, lobby, infirmary, common spaces, and the community center) are located on the East side of the site to reinforce the buffer between the city and the orphans. The North portion of the site is reserved for the chickens and cows which provide the children with eggs and milk. Staff accommodations on site are only for the eight caretakers. Their housing is integrated with the children on the West side of the site.



**Opposite Left:** Determined programmatic requirements.

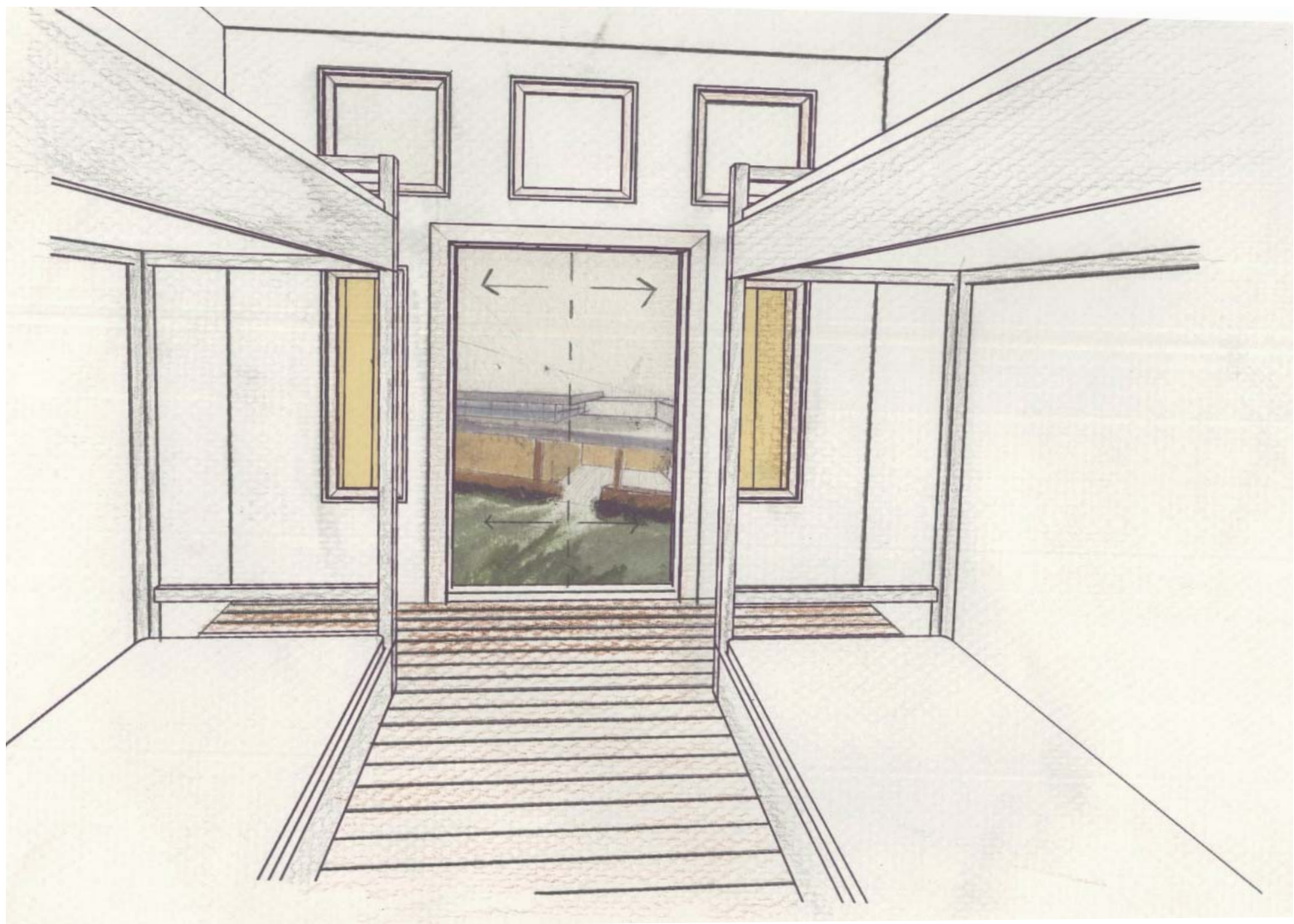
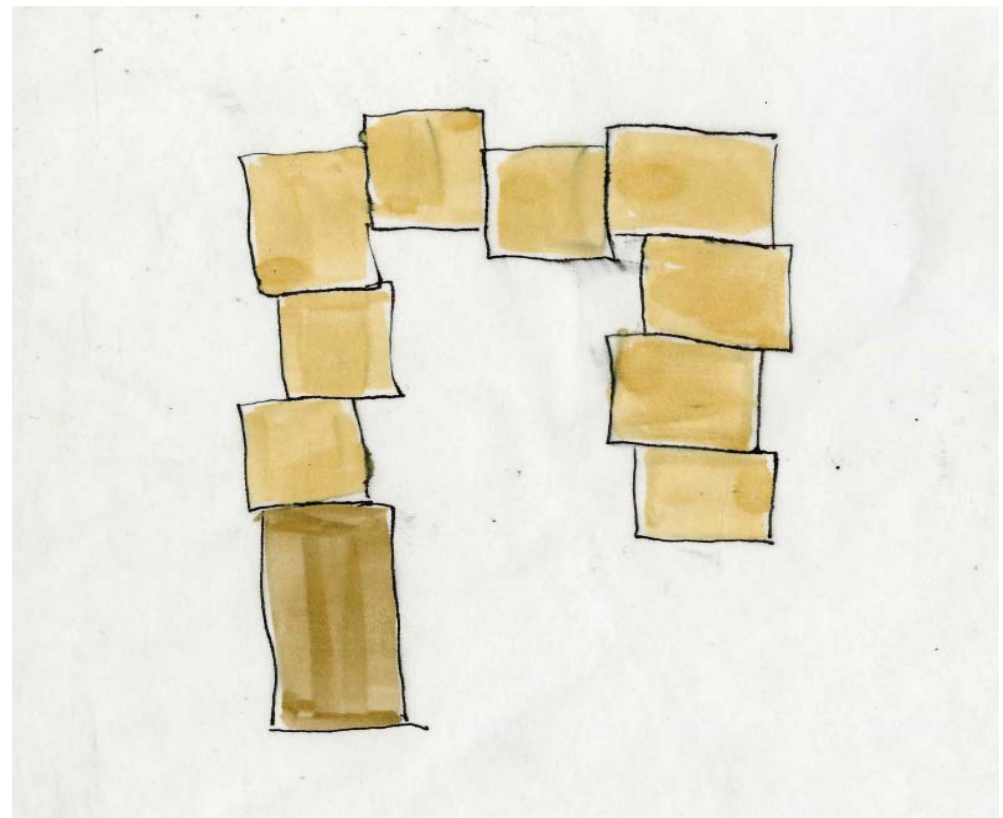
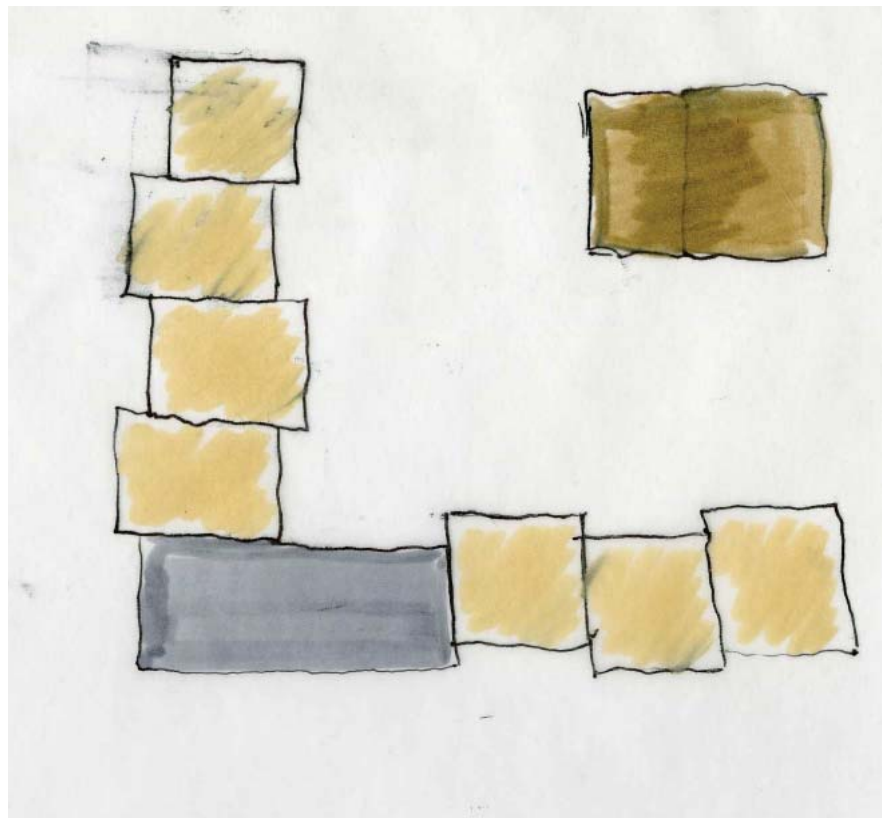
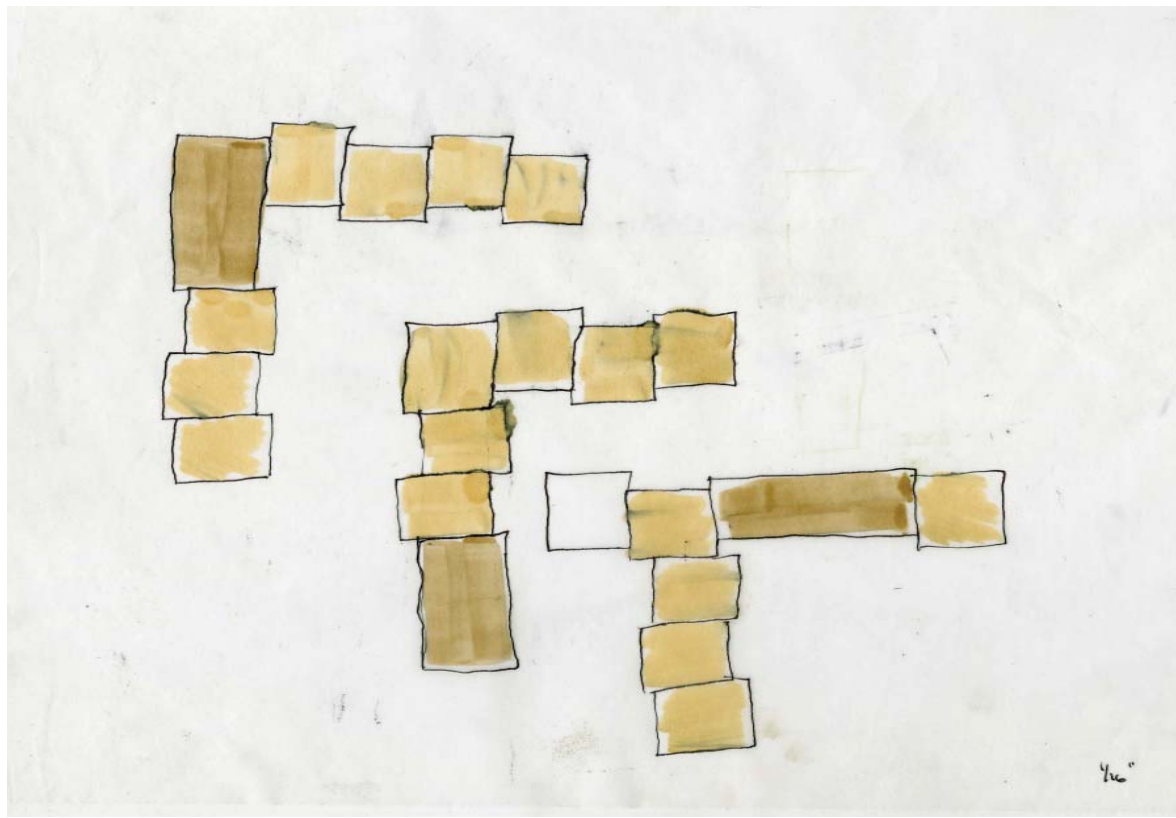
**Left:** Schematic perspective, view from living area across pitch looking North.

12 Chickens



4 Vegetable

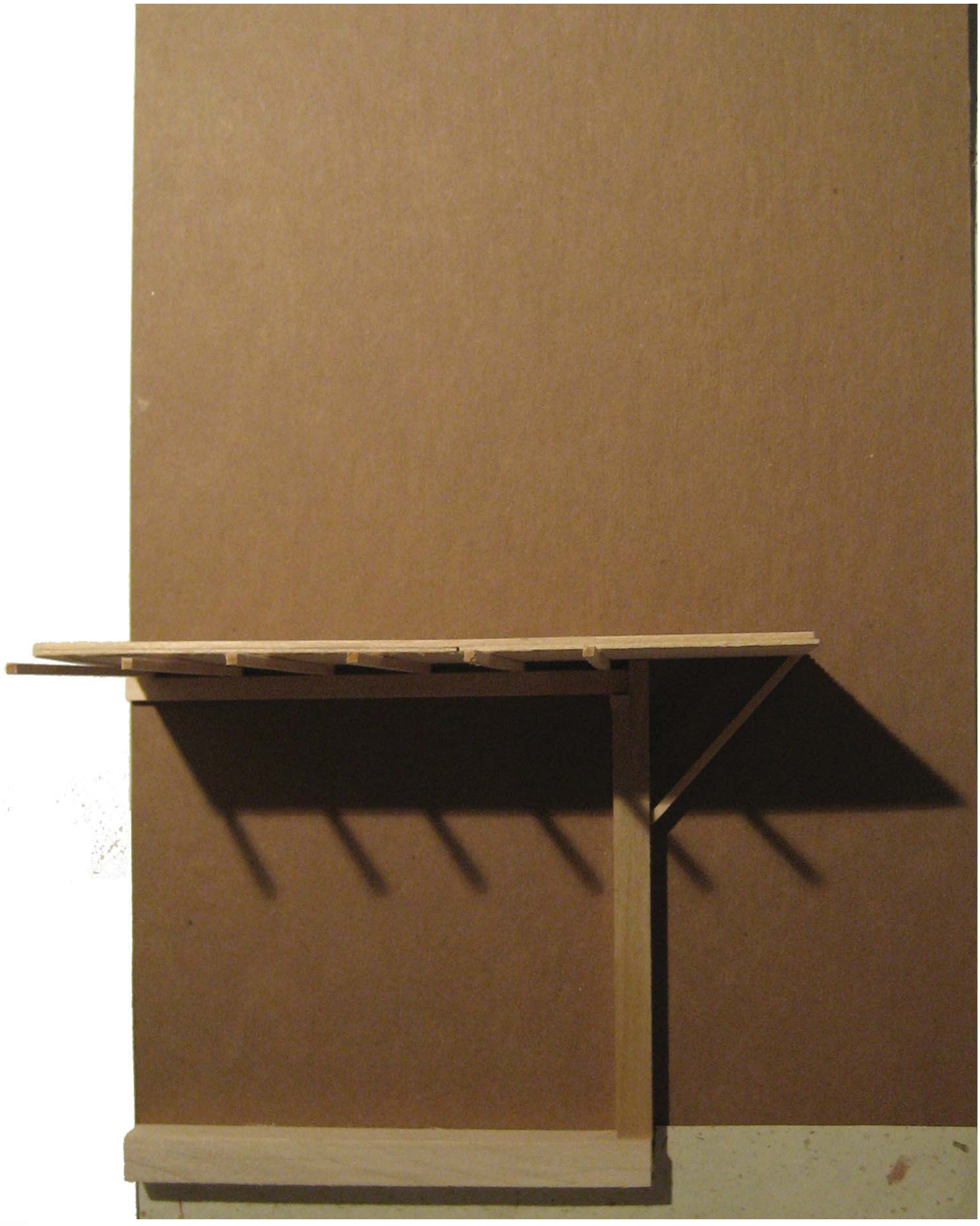






Schematic sketches of early building design and research.



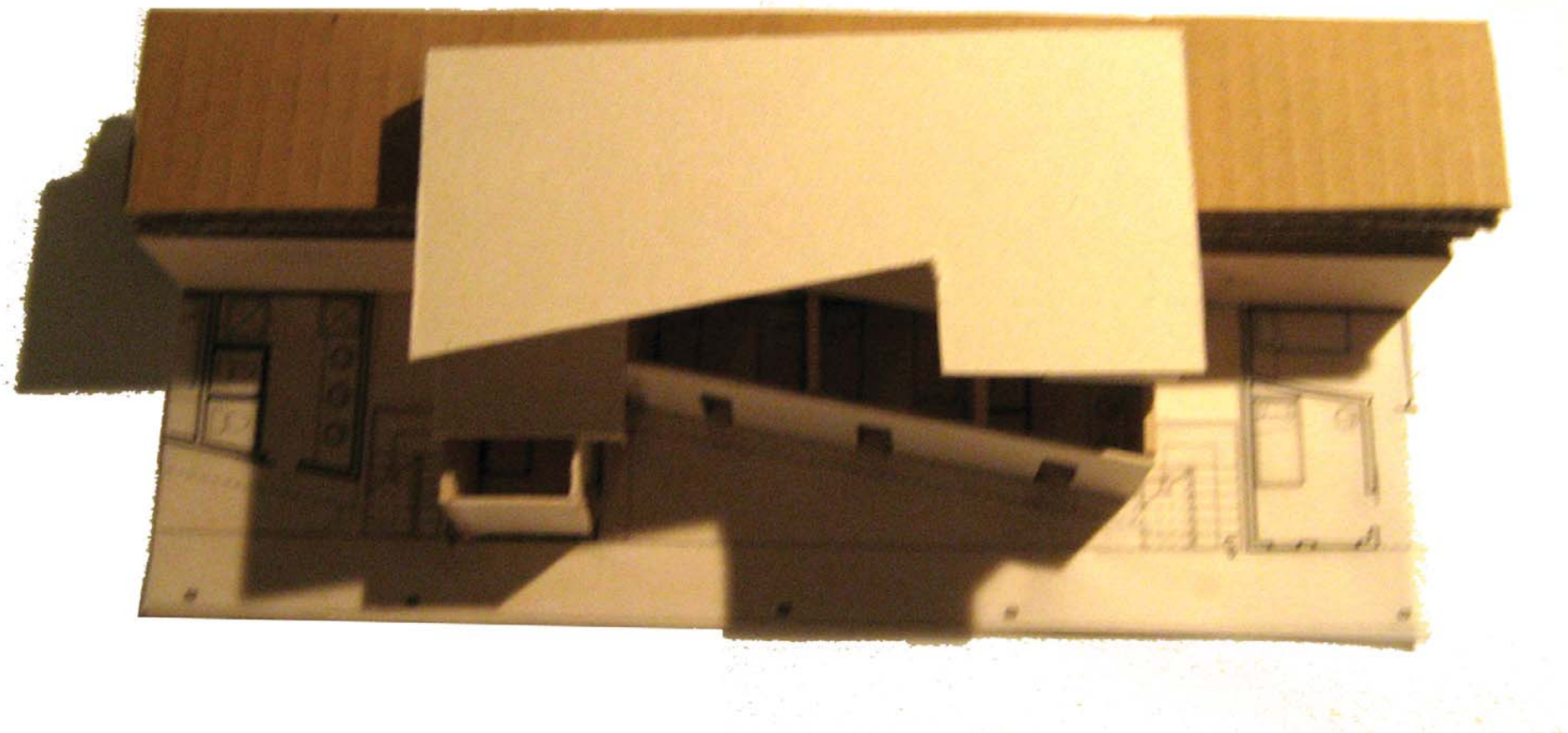
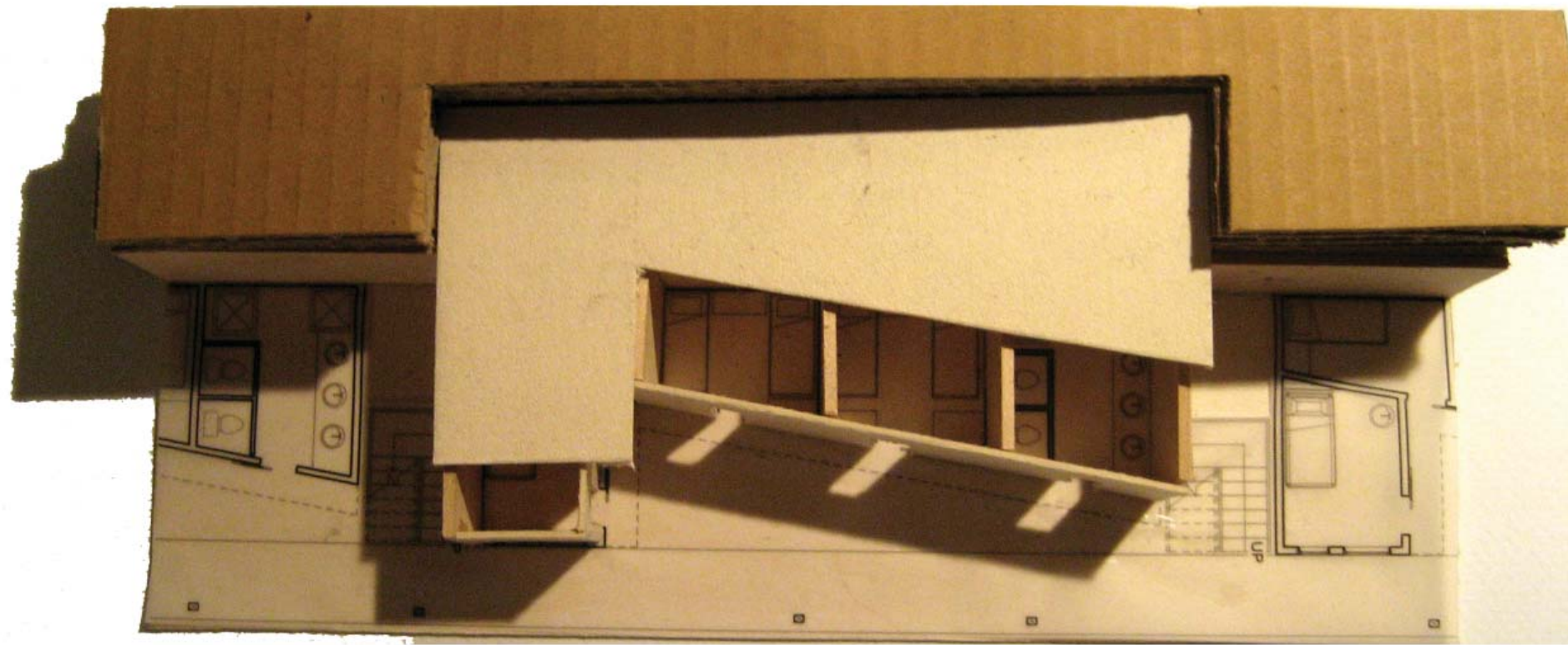


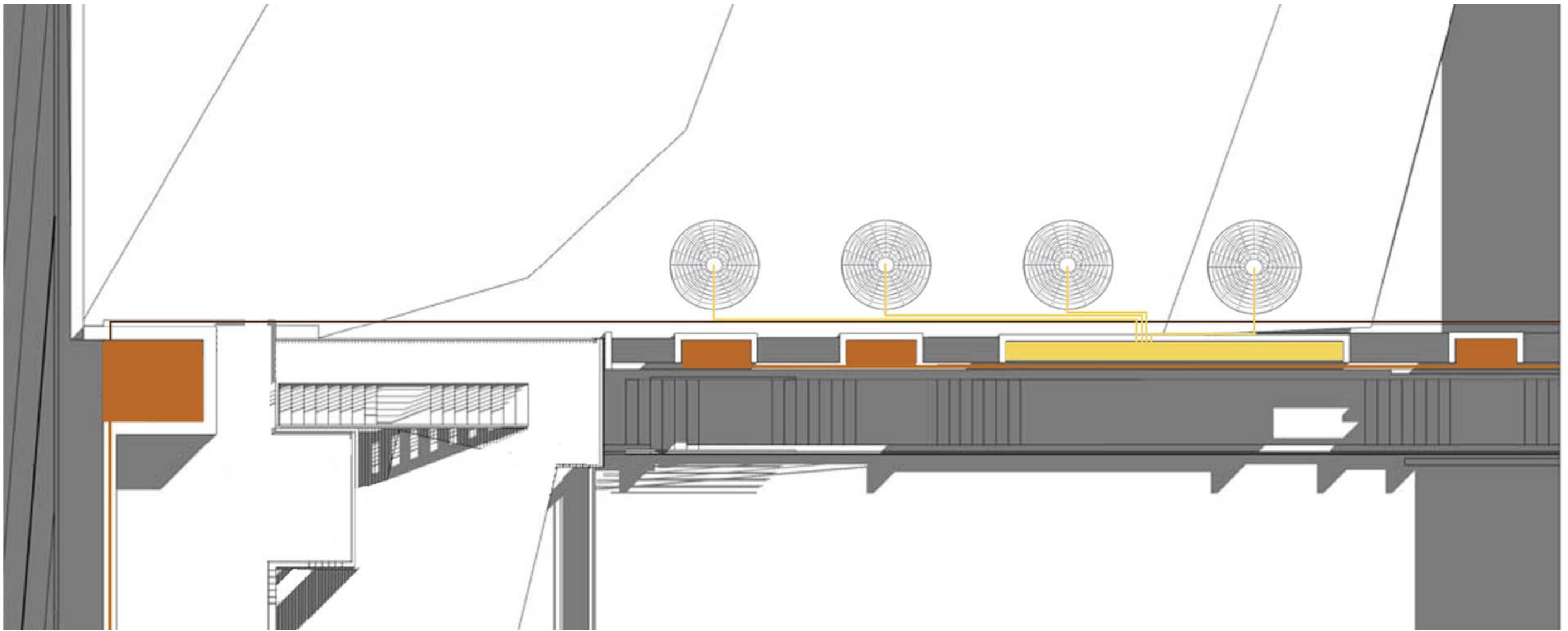
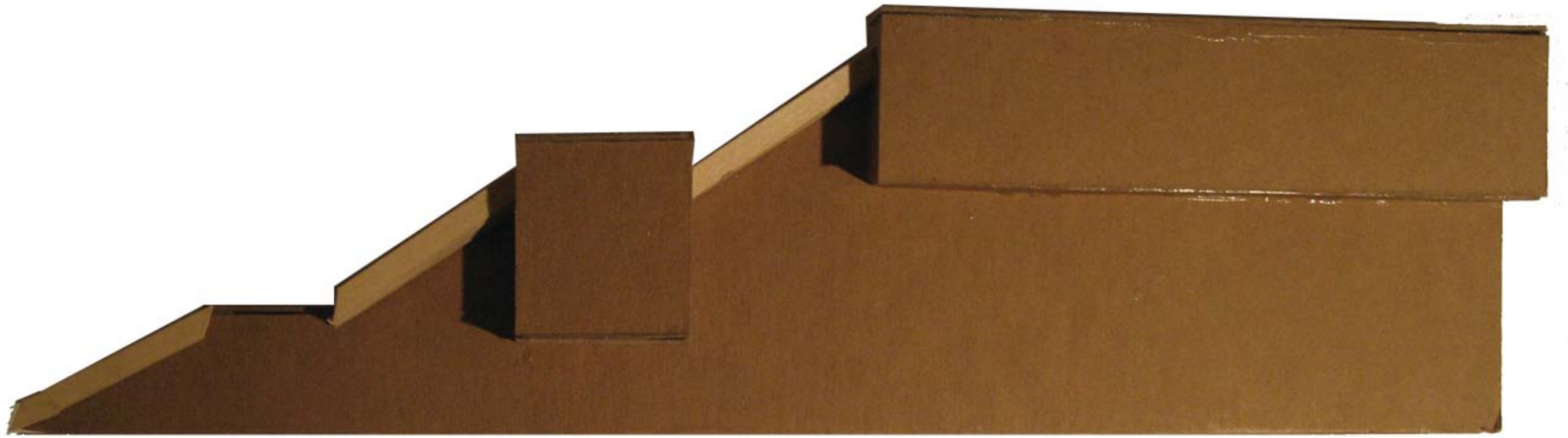


## Development of Residential Area

The key to the residences is to create a sense of a family group, and then a larger family group beyond the immediate family group. Each residence consists of five rooms, each housing four children. The caretaker's room is offset but connected to the children's rooms. A common outdoor space and a shared bathroom belong to each 'family'. This outdoor space could be used to for playing games and eating together.

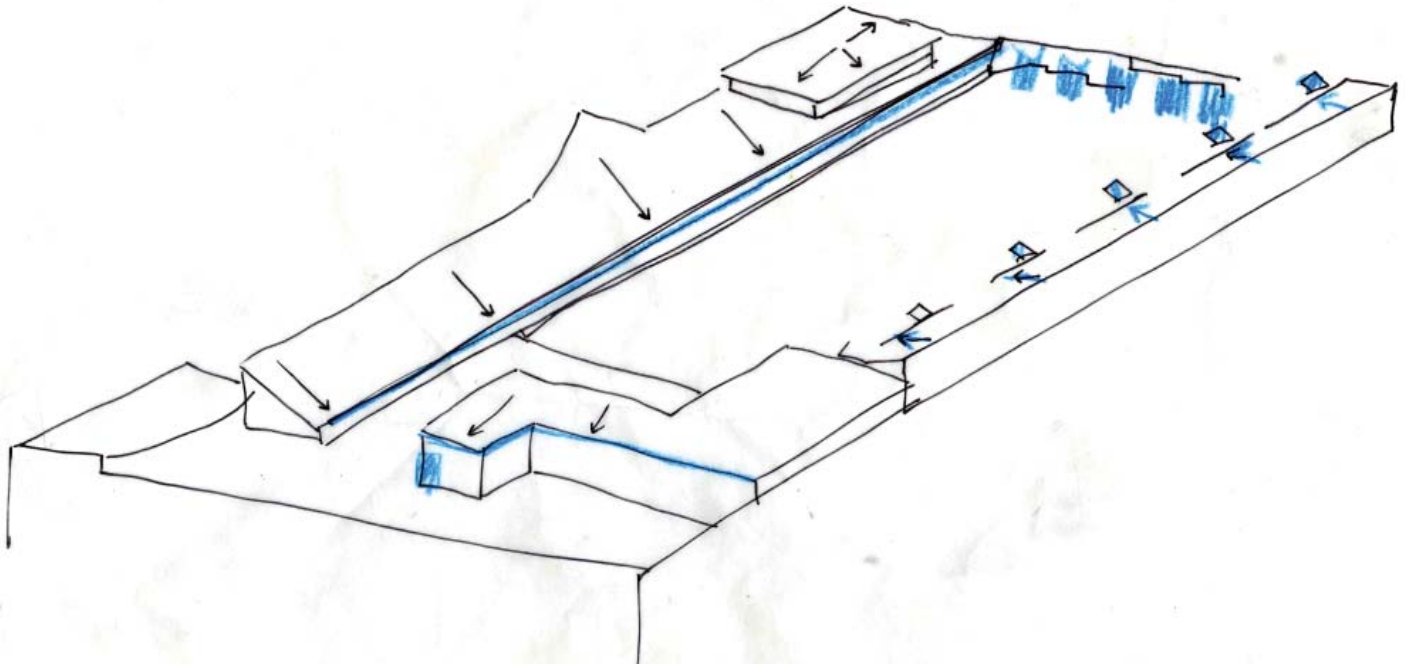
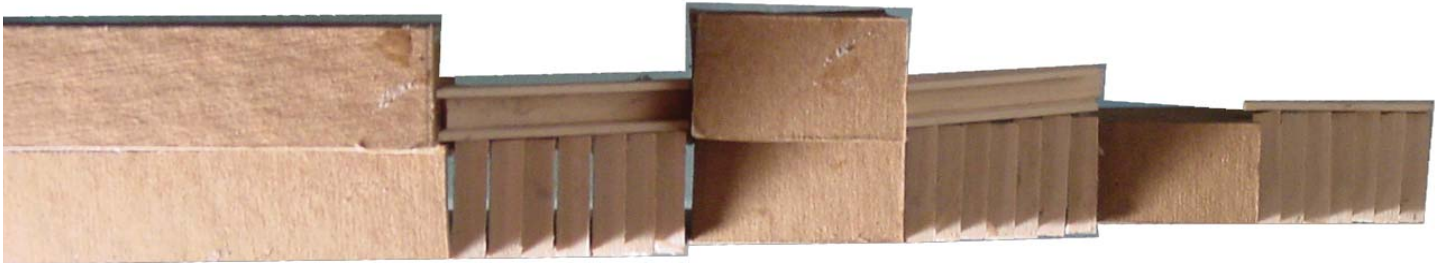
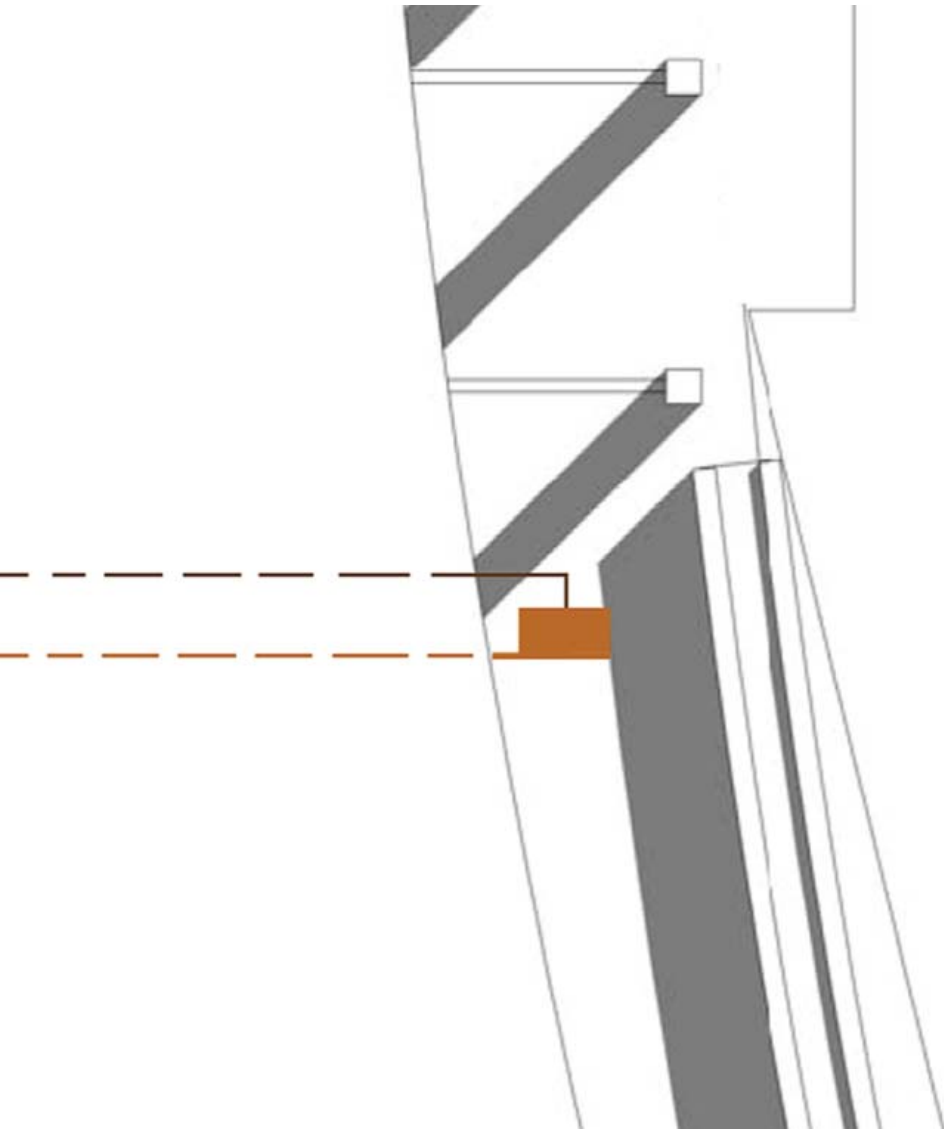
A similar family is located above each family unit. The two act in a sense of extended family, they are close, but not as close to immediate. However, they share a few items, including the stair, and the water collection system. The water collection is from the two roofs of the extended family and the immediate family. The children are able to rinse their feet or water their plants using this water although the main purpose is to maintain the rooftop vegetable garden.

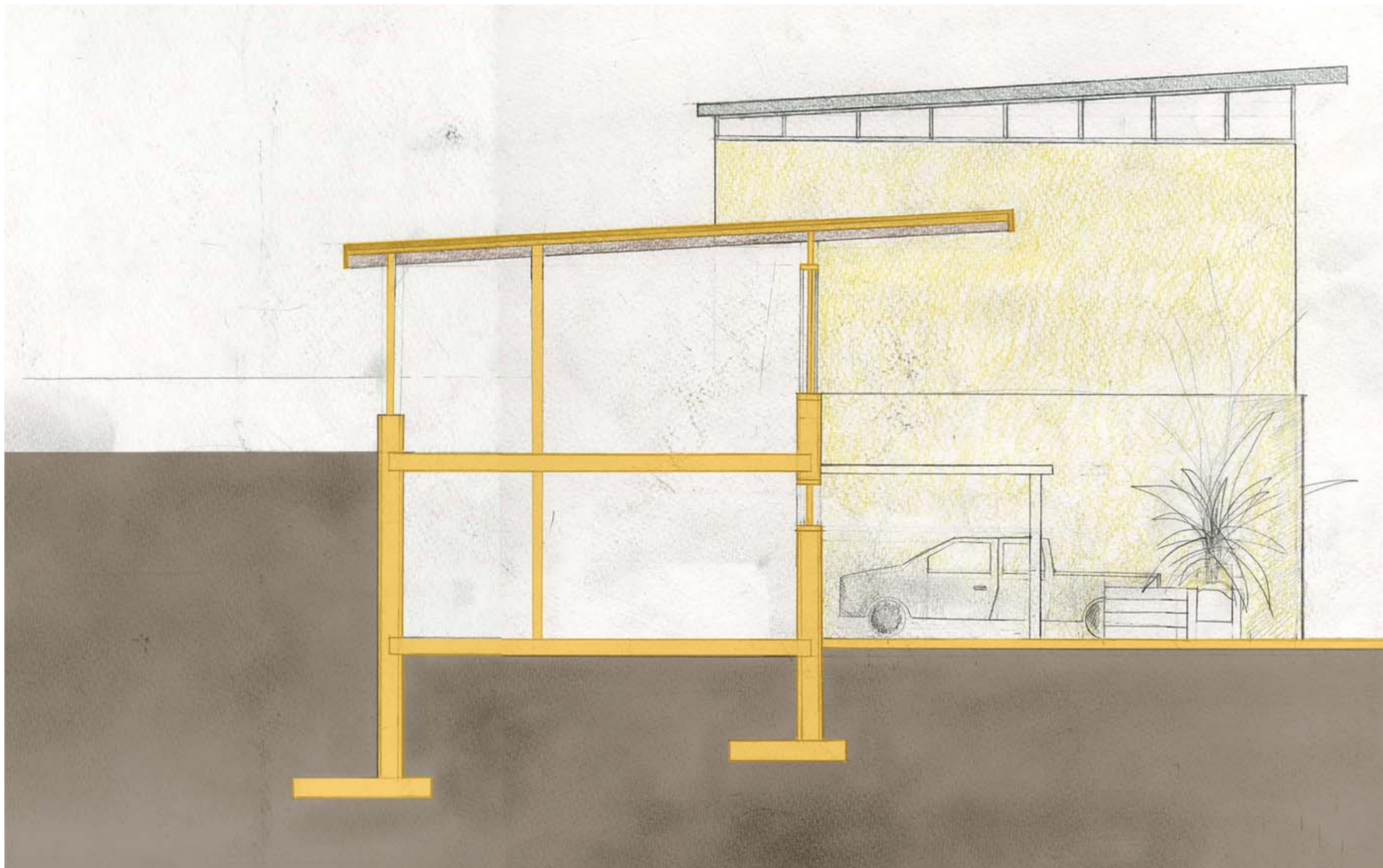




### Water Collection

The central stair acts as the main access to the elements of the orphanage used by the children. It also collects and stores rain water. The water fills the storage tanks and is recirculated to the roof terraces in order to water the vegetable gardens.

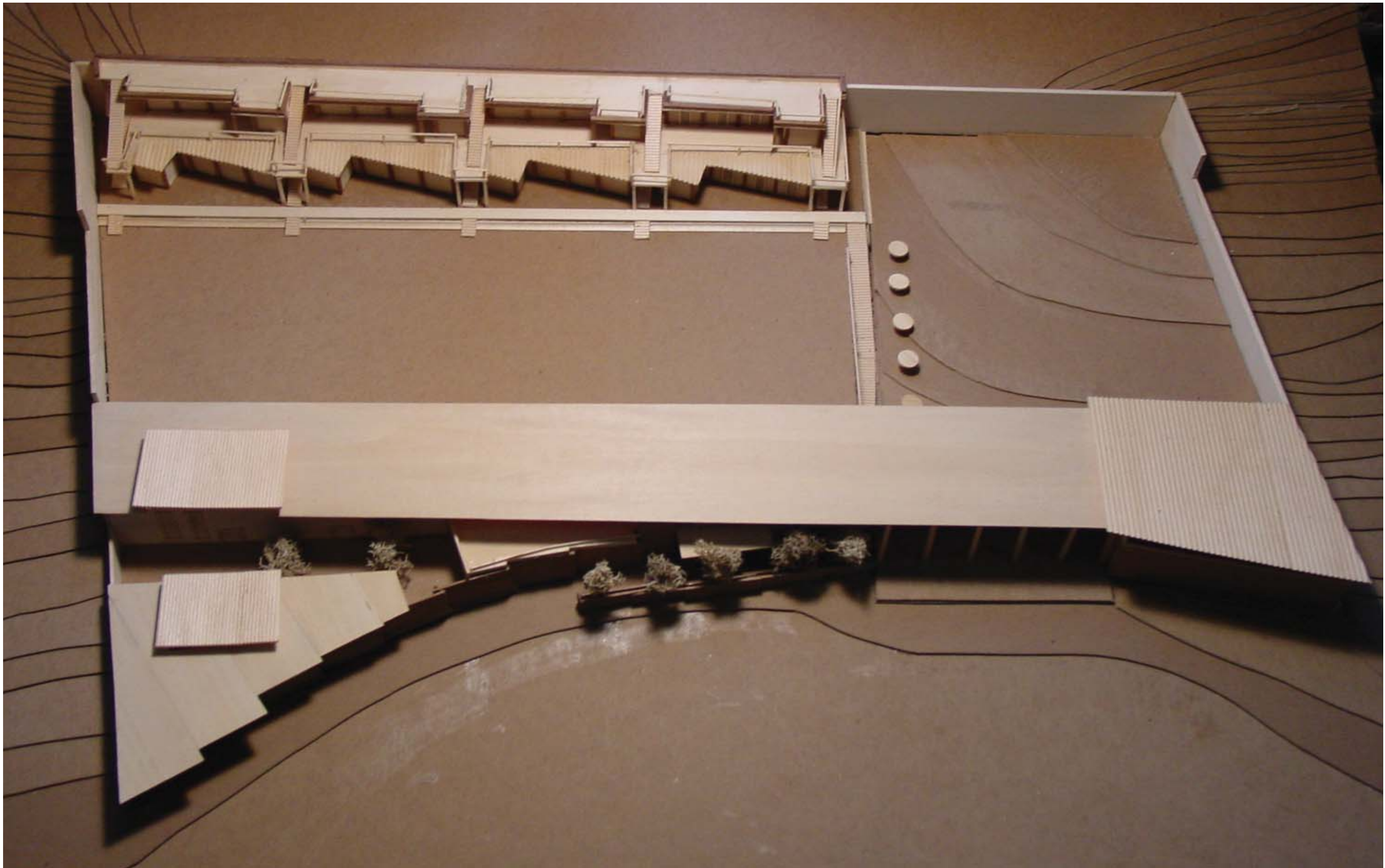








**d e s i g n**





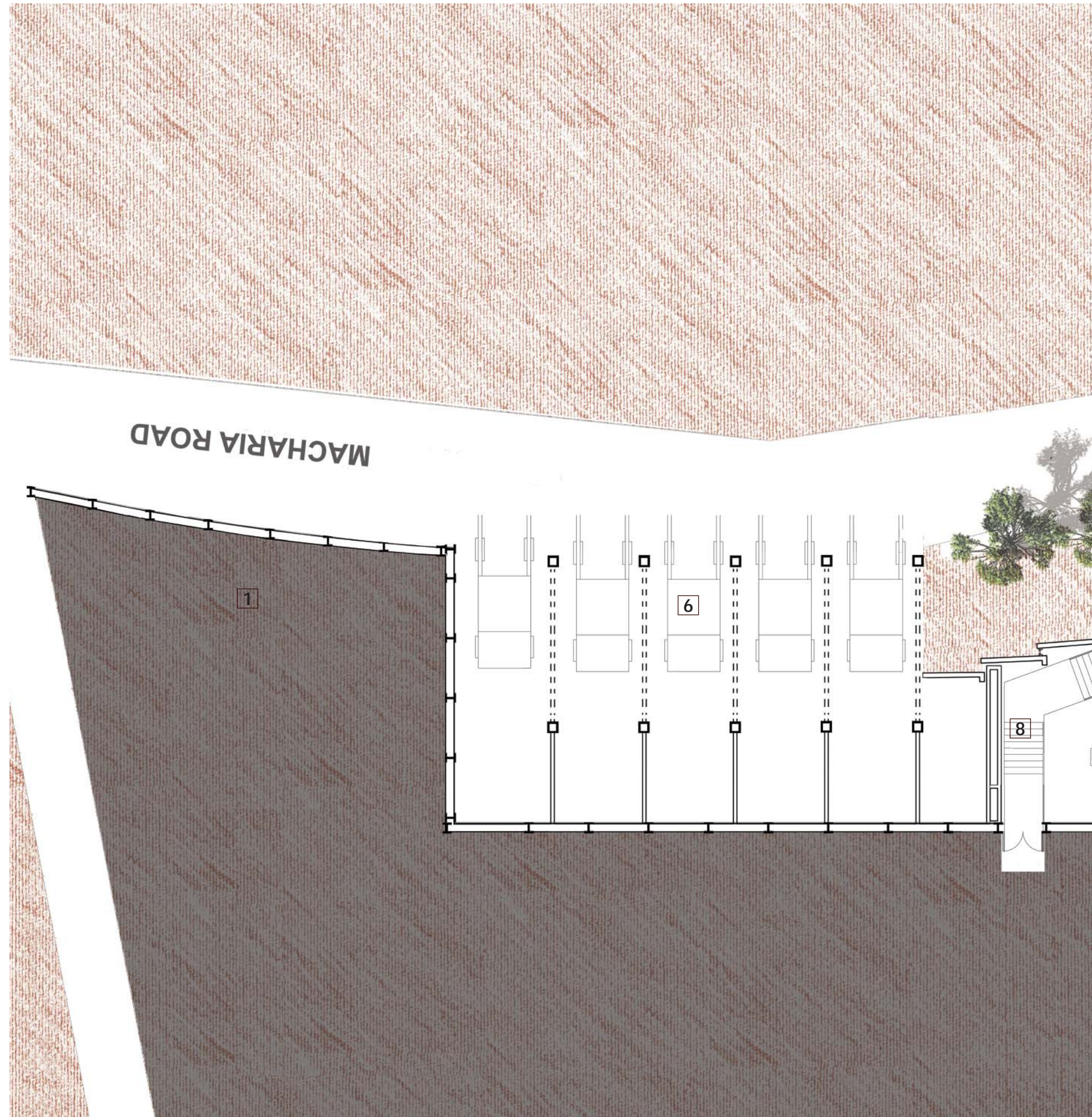
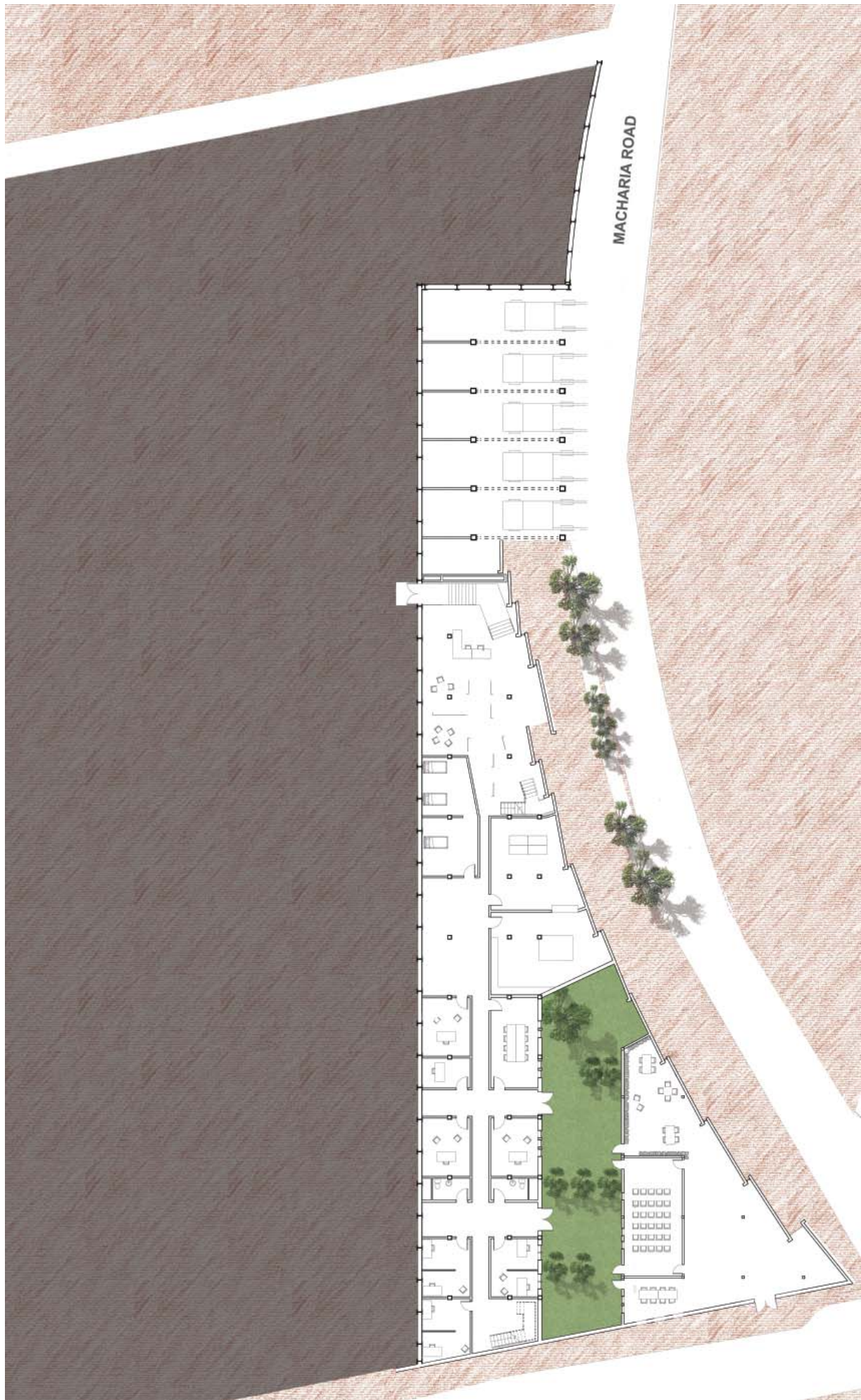


## Final Models

**Opposite Left:** Bird's eye view from East.

**Left:** Front facade of orphanage at entry showing panel walled system, the balcony on the East side, and the residential area visible beyond. The paneled wall system also helps bring the material scale to more of a human level.

Community integration is encouraged by the farmer's market and the connected community center with shared courtyard.



**Level 1 Floor Plan**  
Main Building (East Building)

- 1 Entry
- 2 Reception Area
- 3 Community Center
- 4 Community Center Courtyard
- 5 Typical Orphanage Office
- 6 Farmer's Market Truck Stall
- 7 Infirmary
- 8 Main Stair
- 9 Entrance Community Center
- 10 Kitchen

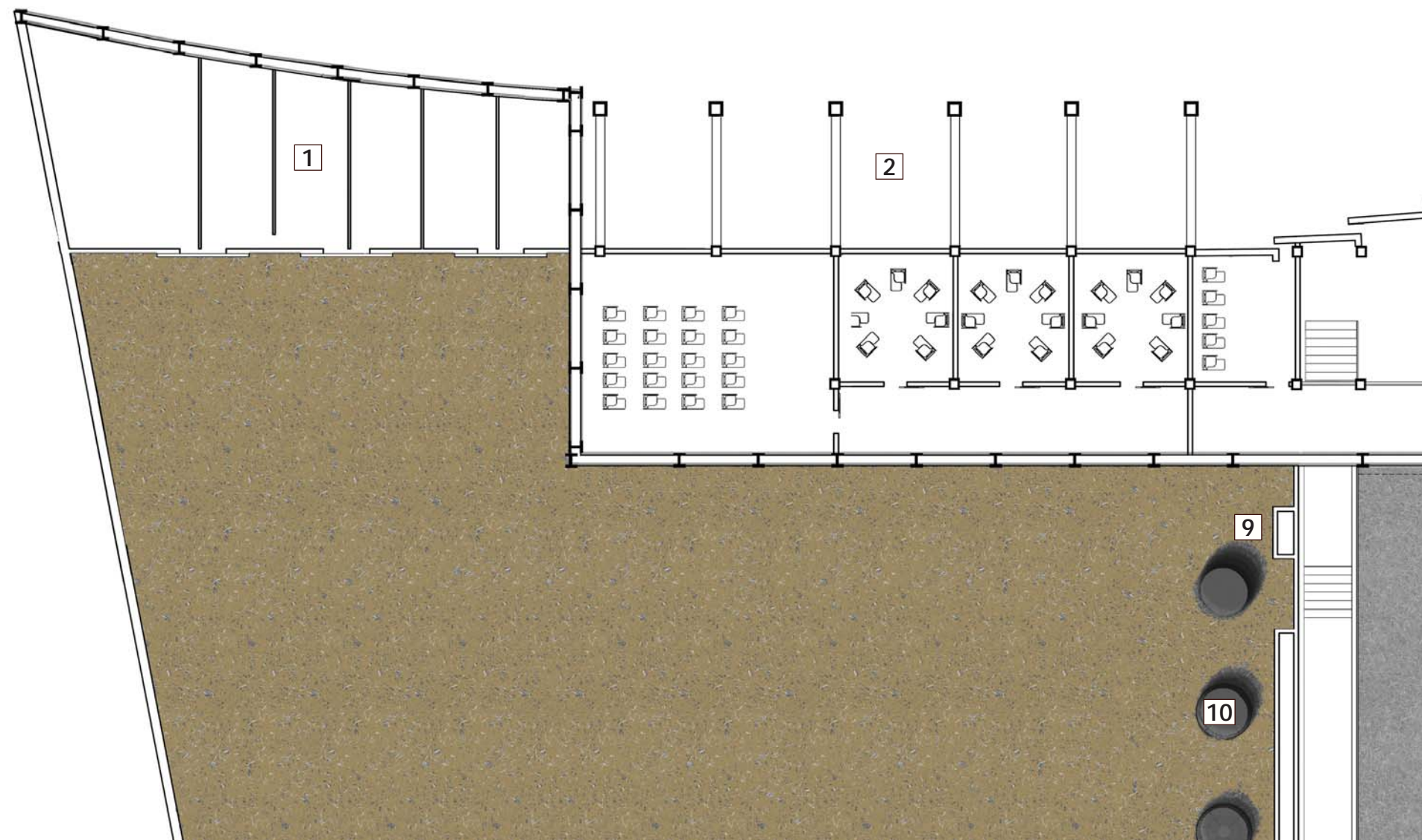
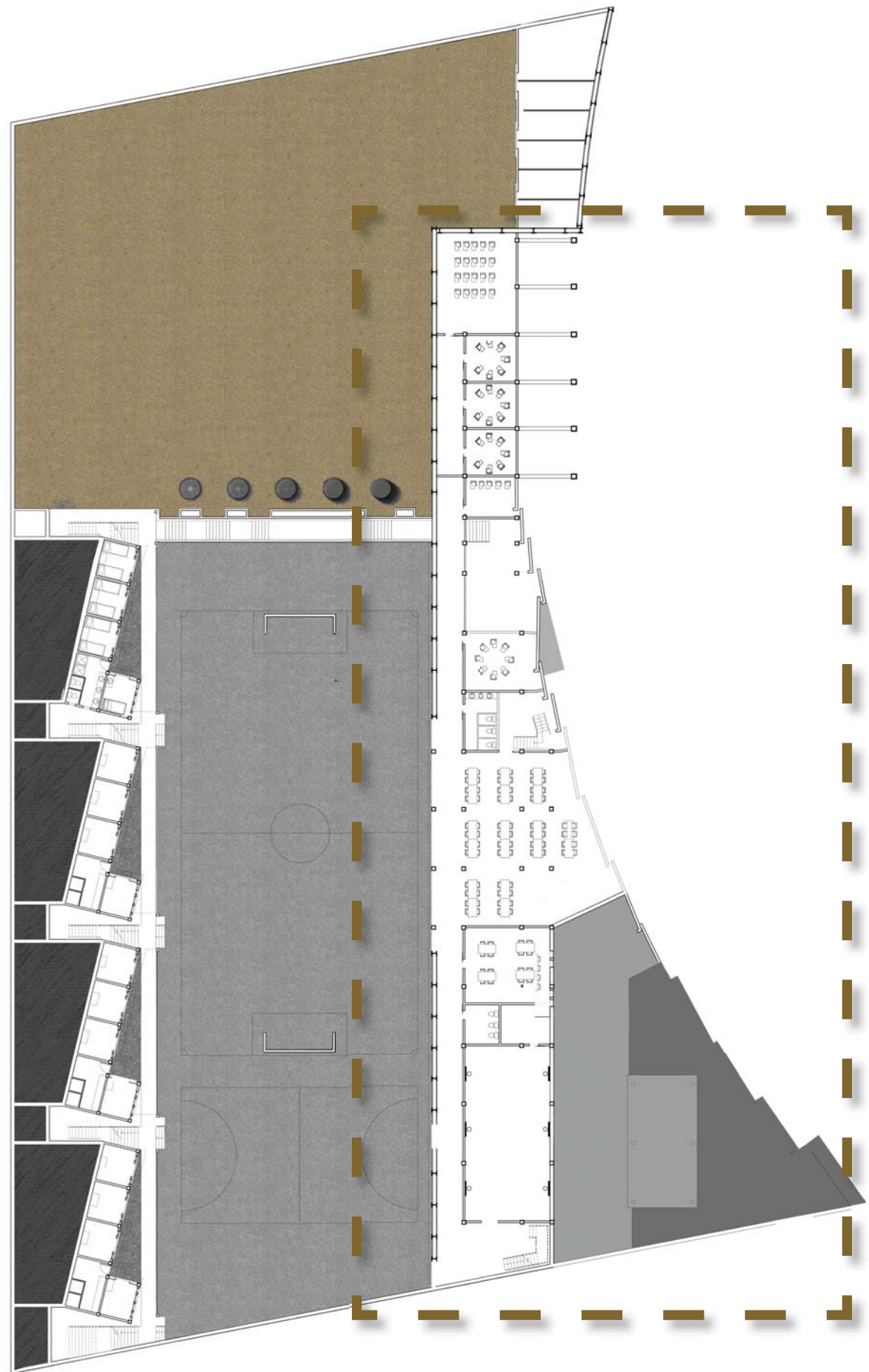
**Level 1**

The primary functions housed on the first level of the main building pertain to creating a buffer between society and the children. Here the orphanage offices are held as well as a community center for the public. Access beyond the first level is limited, creating a secure environment for the children

This creates a sense of security and a division of public space and private space.

In order to accommodate the curved site line on the East side of the site, a series of freestanding precast concrete walls were designed and make up the East Facade. The walls are anchored to the concrete floor to embedded rod. The facade is a series of recessed panels. It is here that the children are able to plaster their hand prints into the wall.





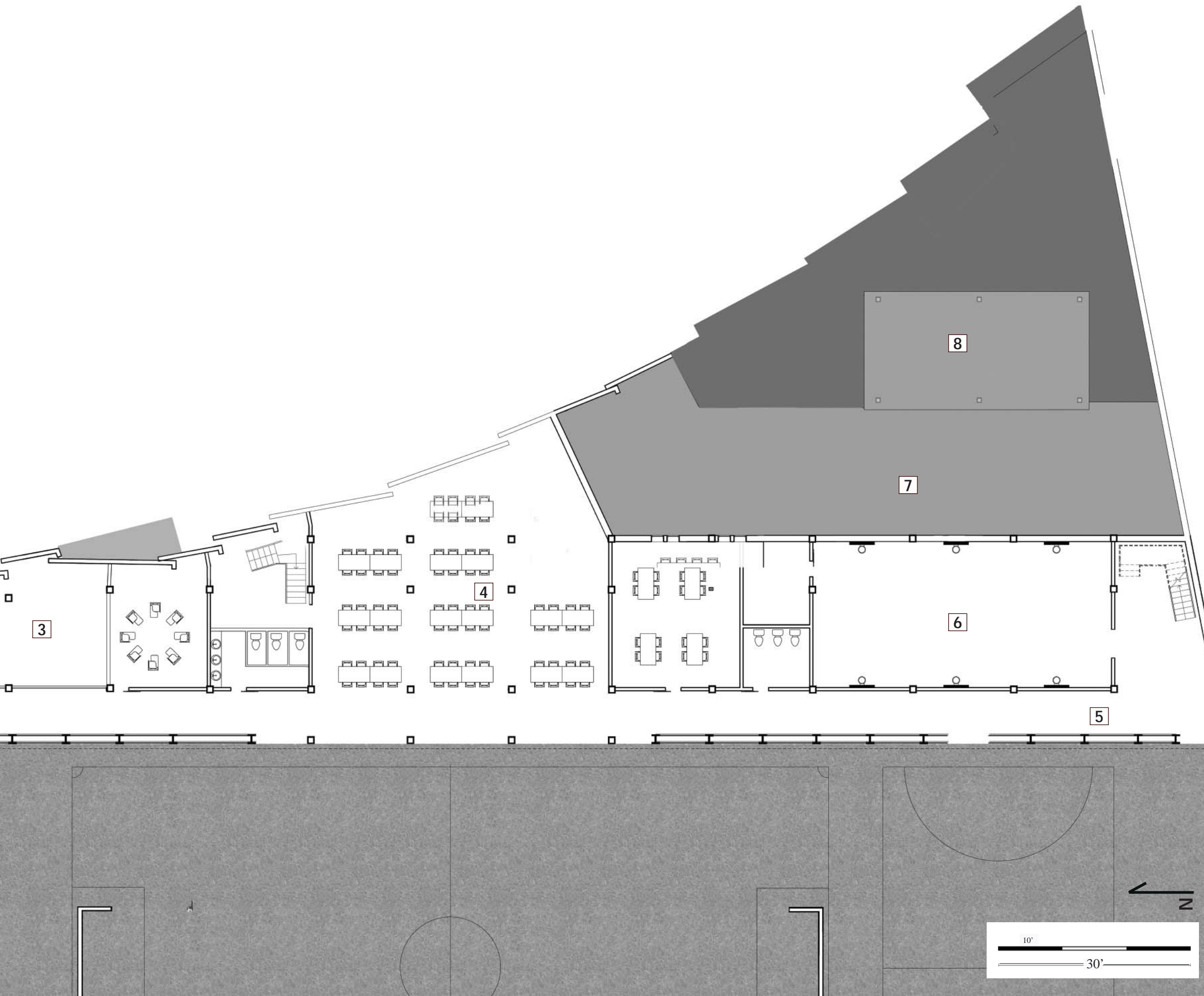
**Level 2 Floor Plan**  
Main Building (East Building)

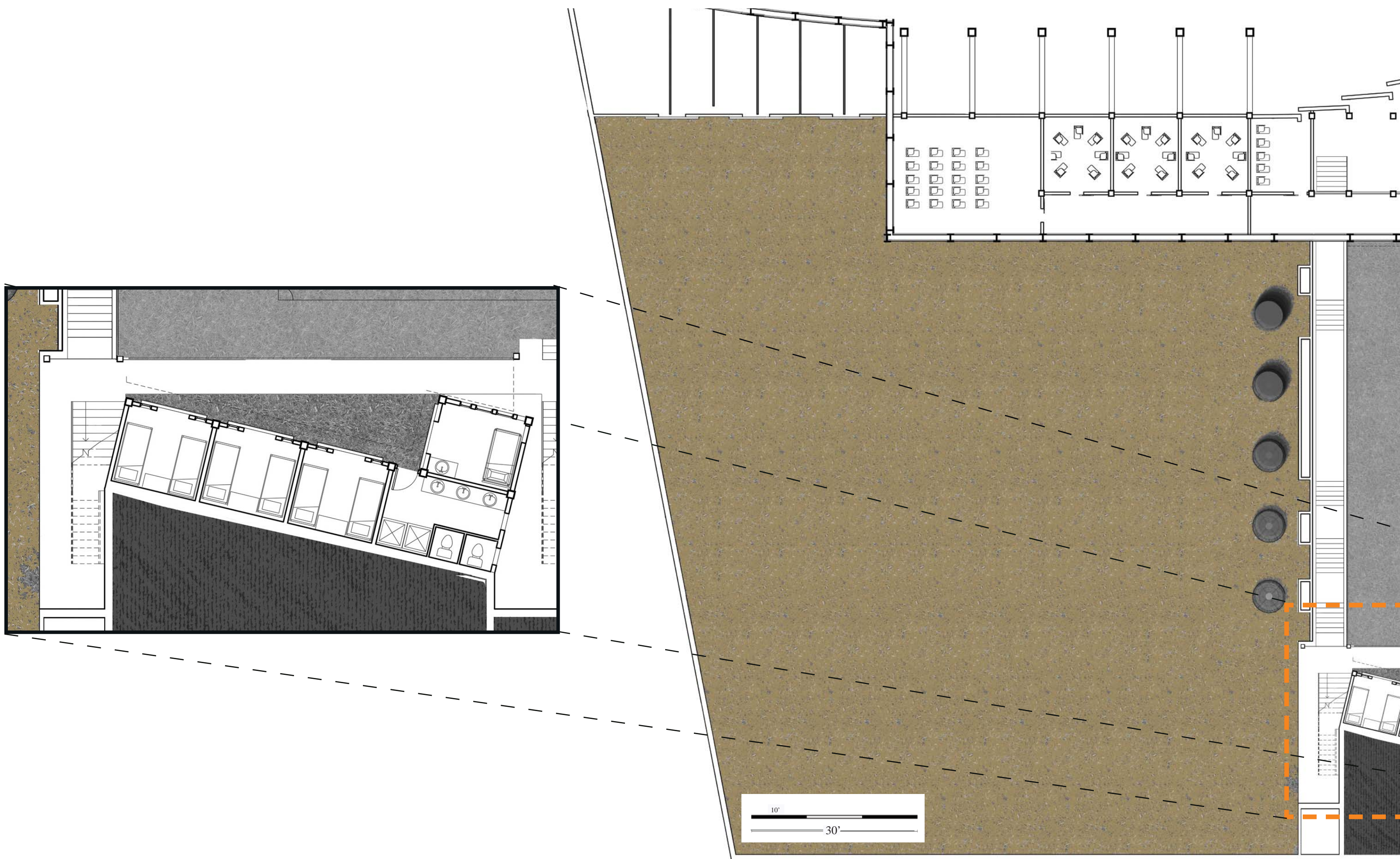
- 1 Barn
- 2 Farmer's Market Above
- 3 Double Height of Entry Below
- 4 Exterior Dining Area
- 5 Exterior Breezeway/Hallway
- 6 Gymnasium
- 7 Interior Courtyard Below
- 8 Roof Community Center Below
- 9 Stair Cistern
- 10 Play Pump

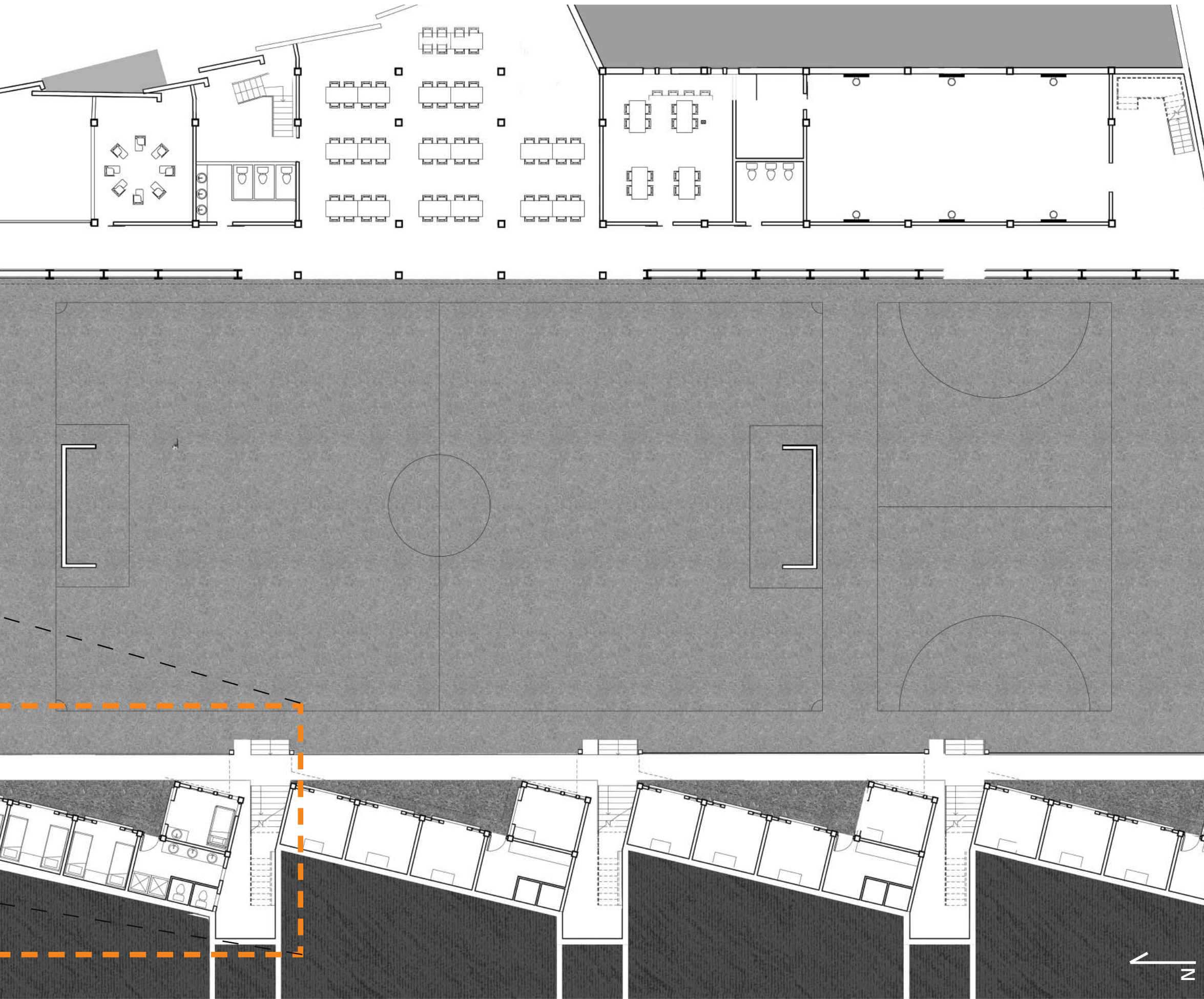
**Level 2**

The primary functions housed in the second level of the main building pertain to the daily functions of the children. The second level opens to main football pitch and leads to housing area. Classrooms, dining, and recreation are all accommodated on this level. In a sense, there is no need for the child to go to the first level on a day to day basis unless leaving the property.

This creates a sense of security and a division of public space and private space.





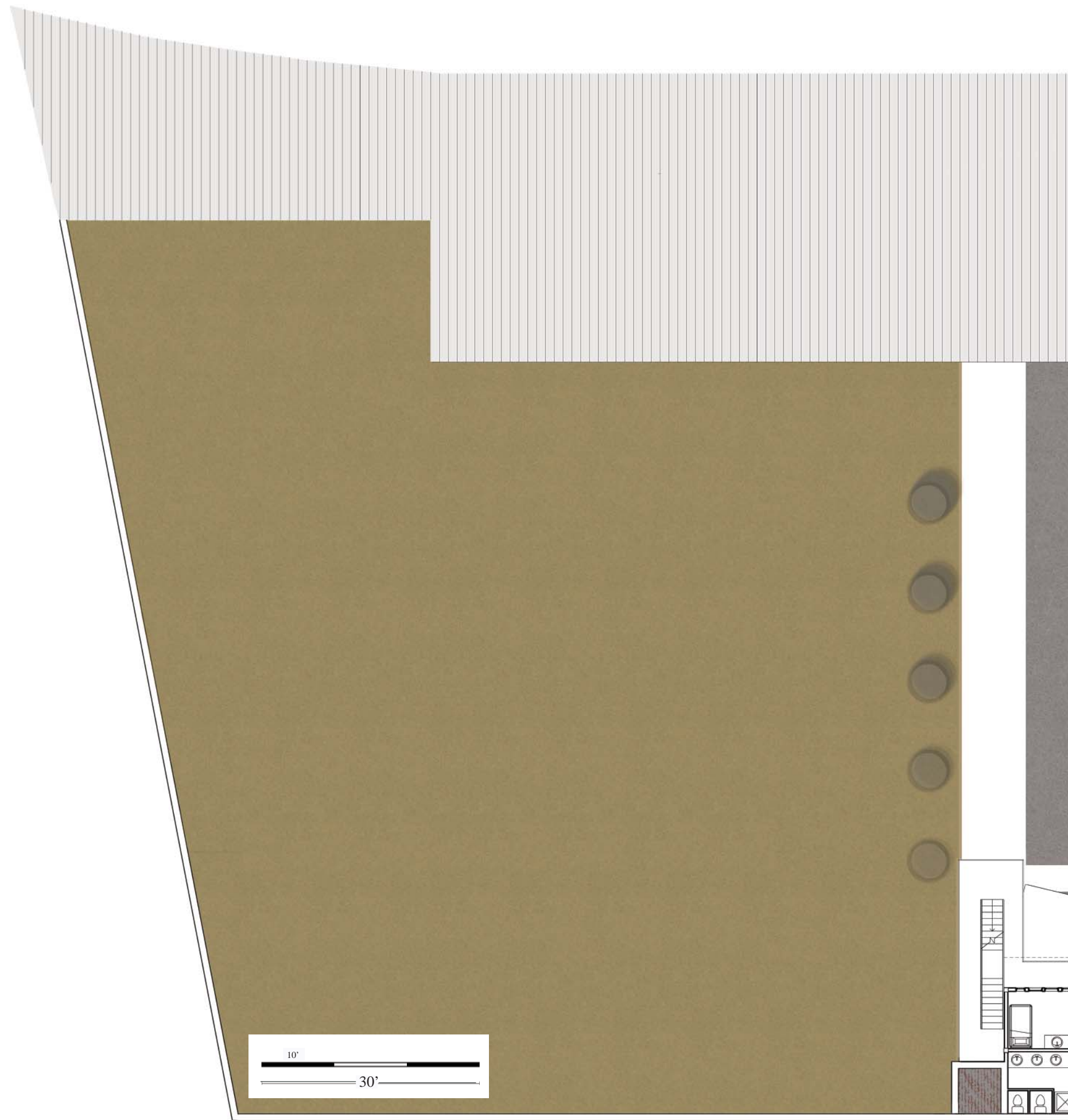
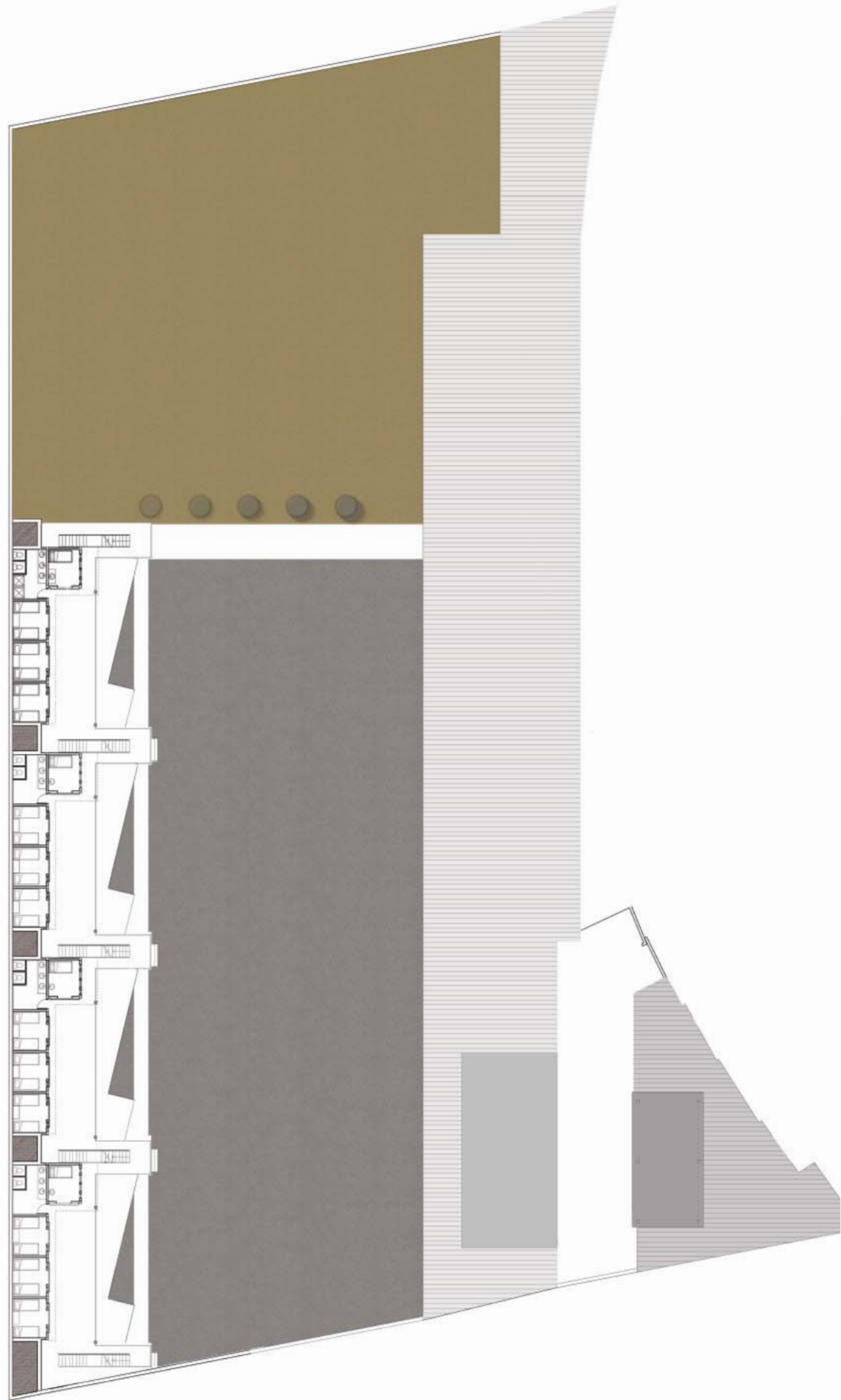


**Level 3 Floor Plan**  
Family Units - Residential (West Side of Site)

- 1 Barn
- 2 Farmer's Market Above
- 3 Double Height of Entry Below
- 4 Exterior Dining Area
- 5 Exterior Breezeway/Hallway
- 6 Gymnasium
- 7 Interior Courtyard Below
- 8 Roof Community Center Below
- 9 Stair Cistern
- 10 Play Pump

**Level 3**

The first level of the housing is four feet higher than that of the football pitch and upper level of the main building. The separation of the play area and the residential area to help define the concept of the family unit.

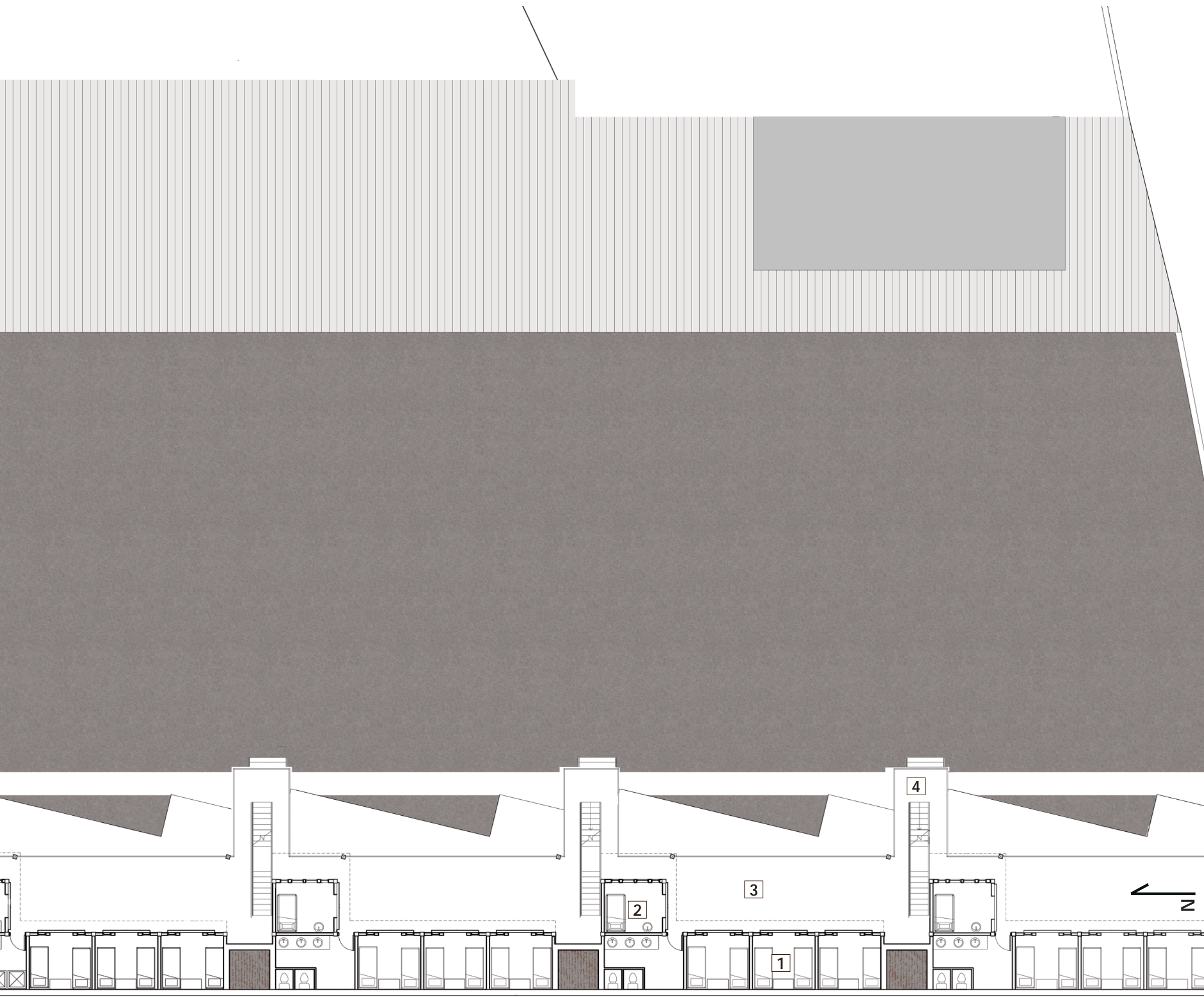


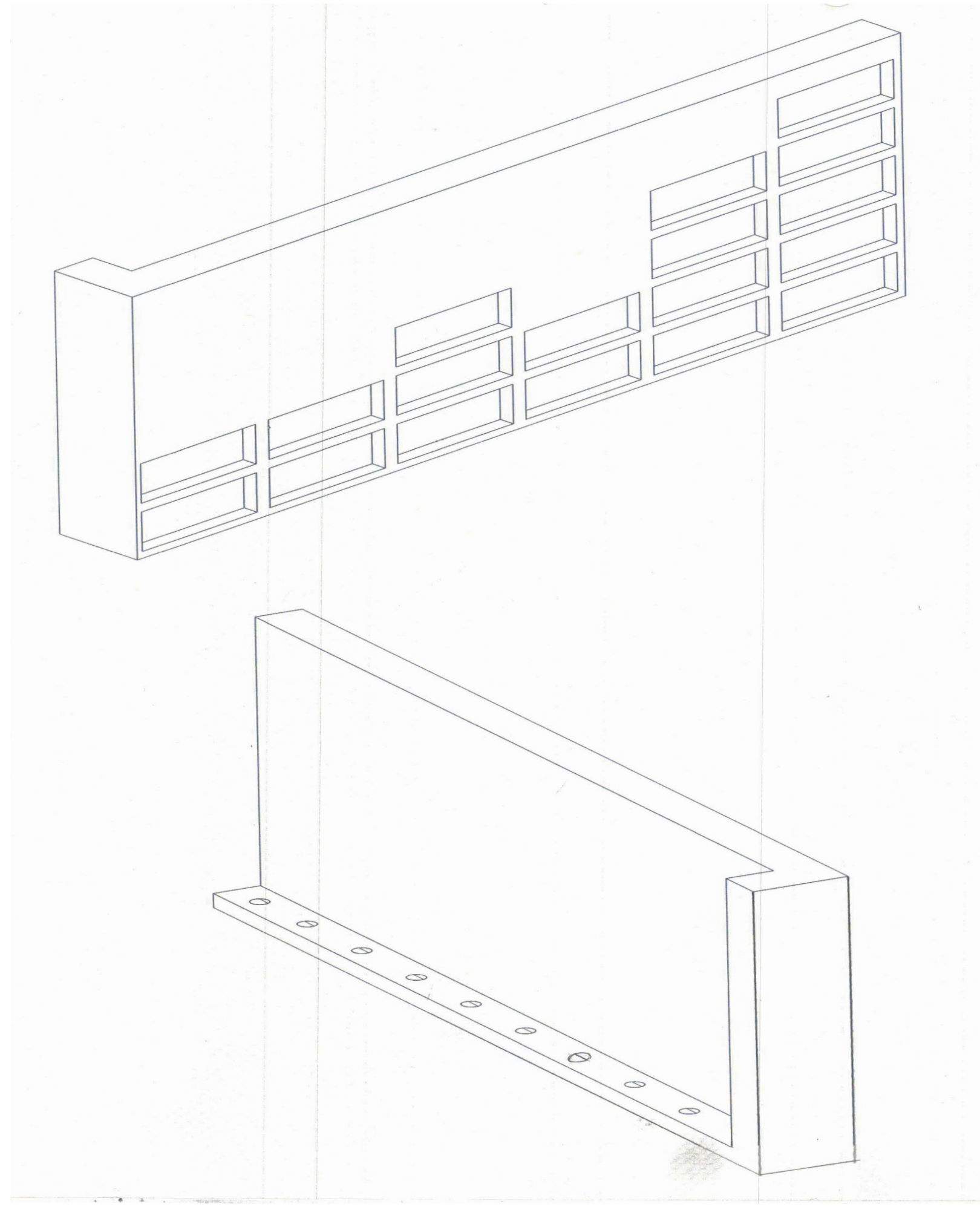
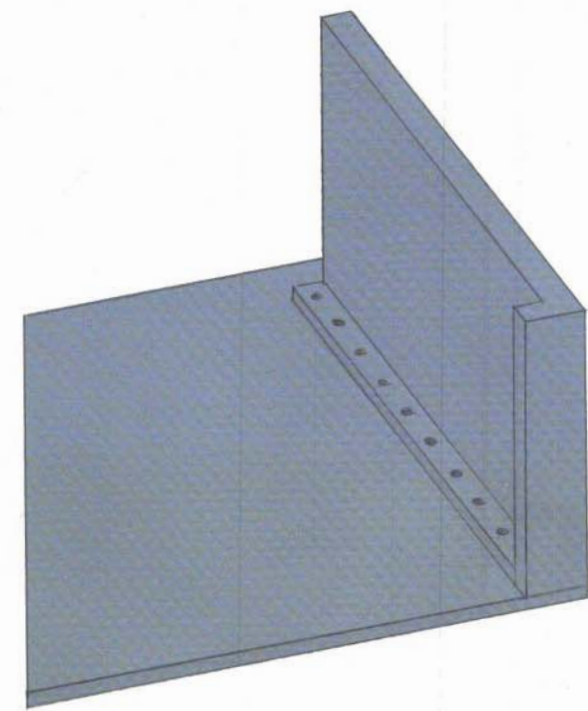
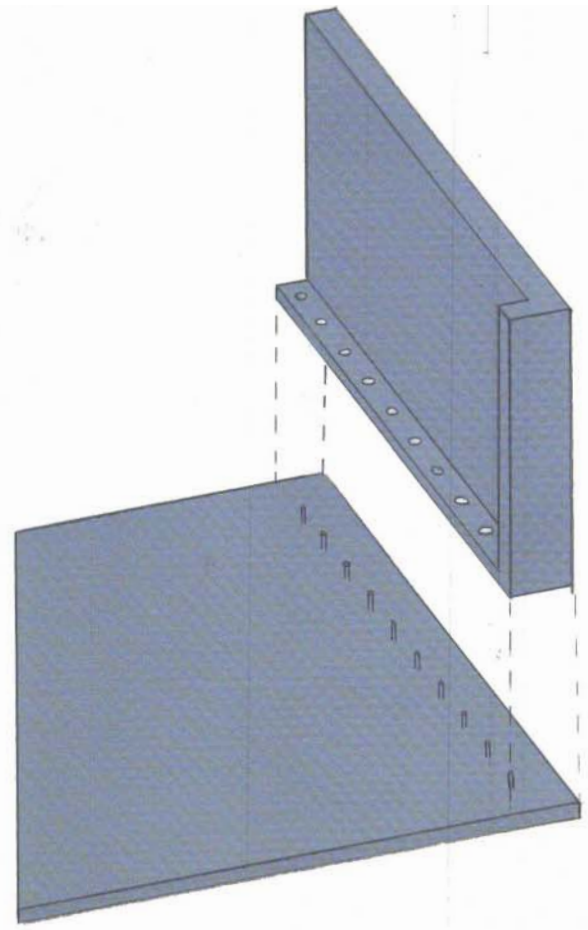
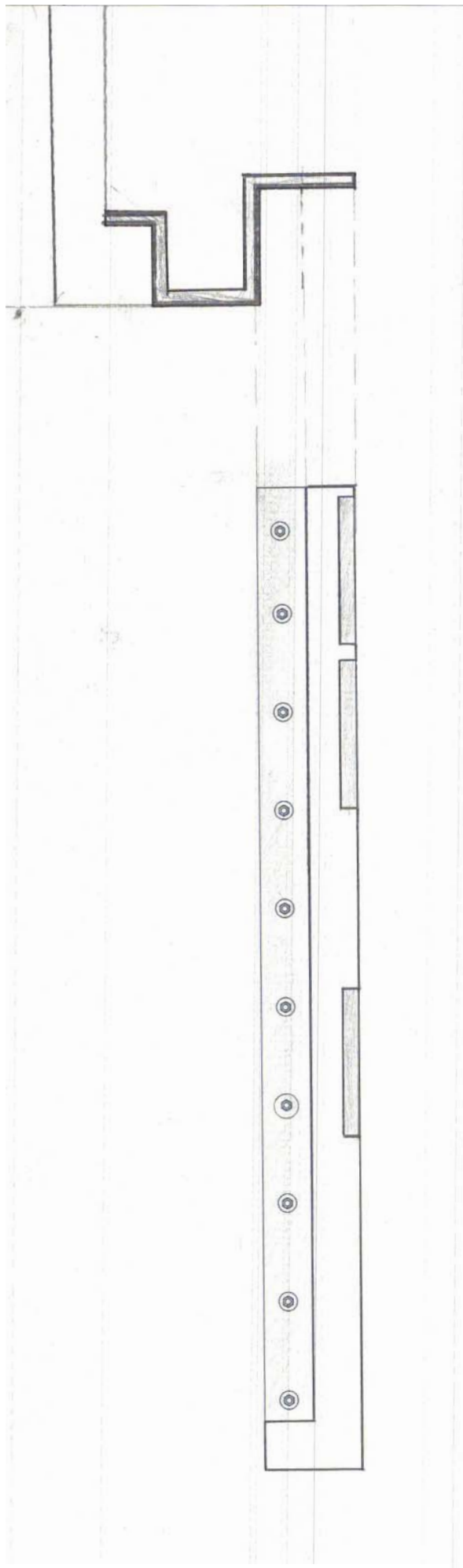


**Level 4 Floor Plan**  
Family Units - Residential (West Side of Site)

- 1 Typical Room
- 2 Caretaker's Room
- 3 Exterior Space
- 4 Access Stair to Level 4

**Level 4**  
The upper level of the residential houses the remaining children. Organized in the same manner, the units are rotated square to the alignment of the football pitch and main building. This helps differentiate again, each individual family unit.



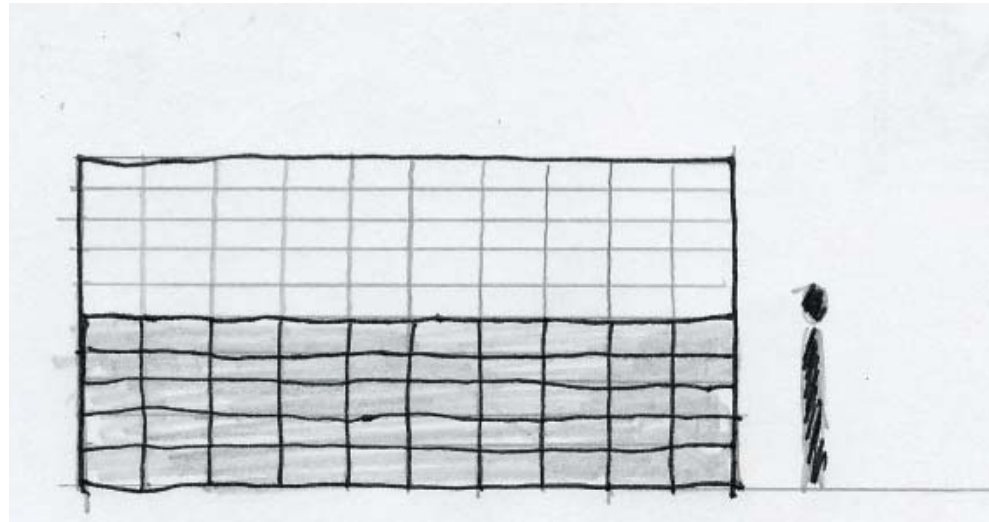
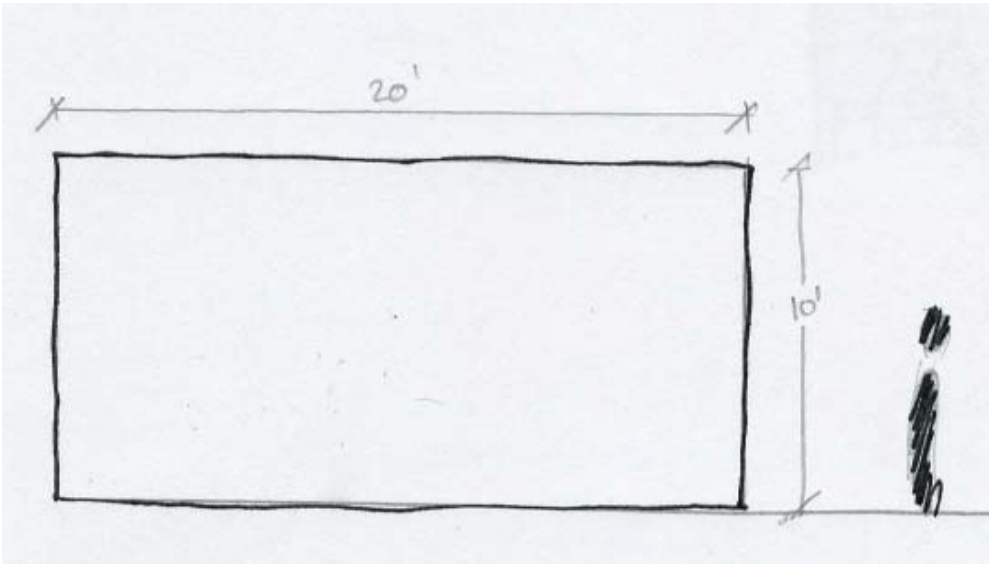
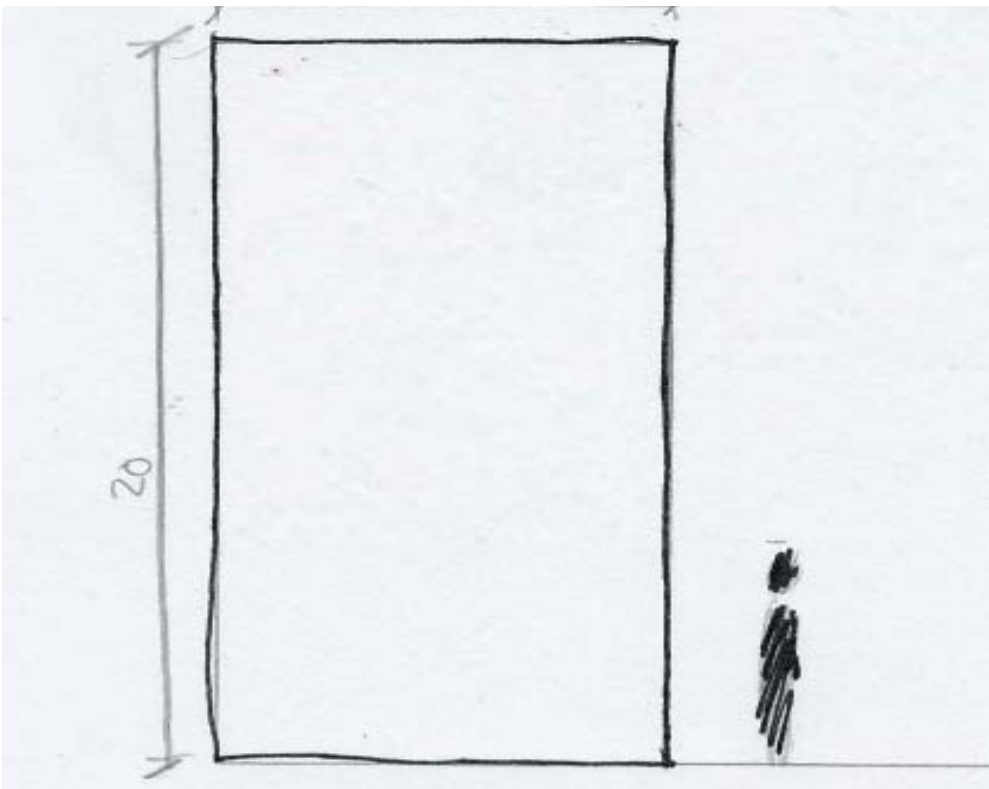


### Paneled Wall Facade

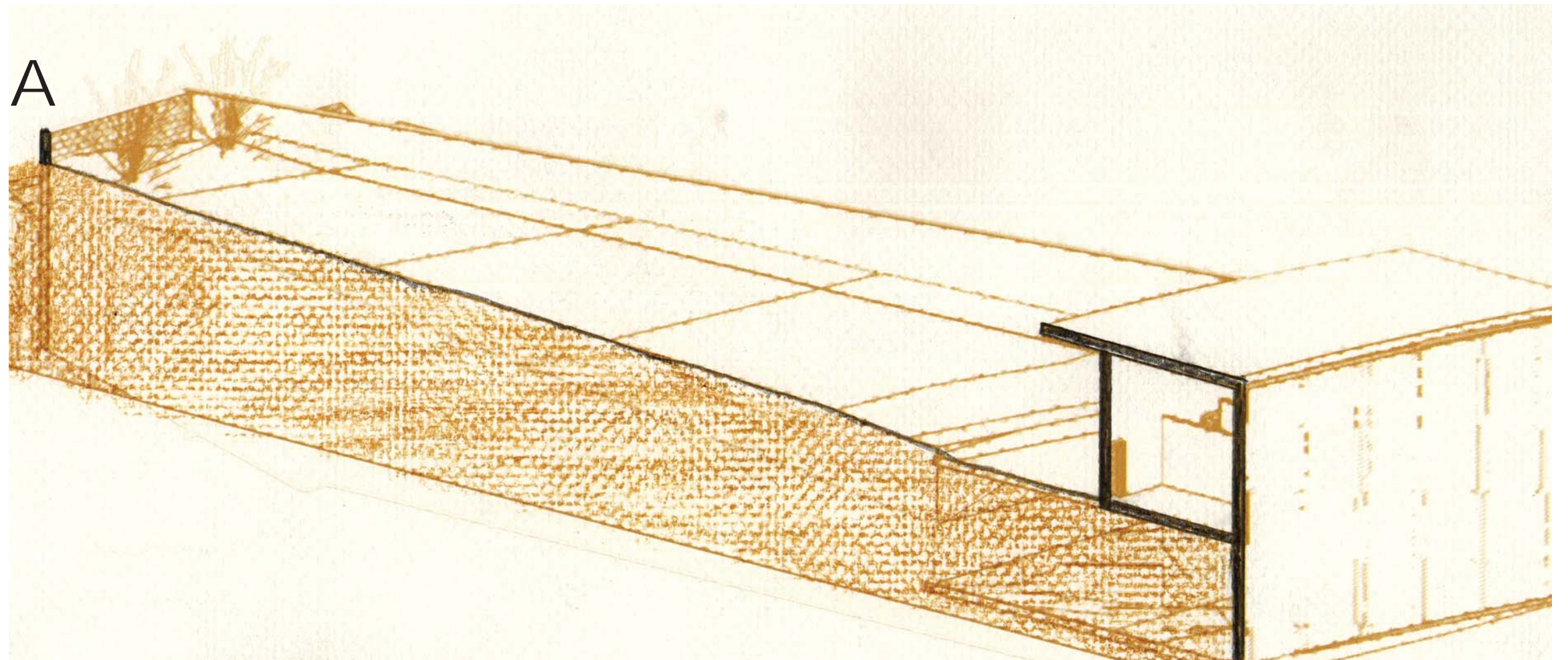
My childhood was spent moving often, and I often sought to find a way to remember tangibly my experience in a particular place because I had numerous homes. Although this is almost not comparable to the feelings of an orphan, the desire to return to a different stage of one's life is similar. Pre-cast reinforced panels with recessed areas that will receive a plaster where the children's hands are imprinted. The family structure of the residential area is expressed. This also allows for the children to have an experience they can reconnect with and recollect. The recesses would be 30" x 18". The wall is a void without the addition of new orphans, and the wall progresses and is the face to the community by not hiding the children, while still protecting them. The idea came from a photograph of my own hand being used against a wall to measure the dimensions of the block which made up the wall. The wall acts as a barrier, but represents the simulated family beyond.

The process might follow along the lines of: First the location is selected together by the family and the new child, they then cast together, imprint together, and so the wall grows. The wall grows with the coming and going of children, at the same time.

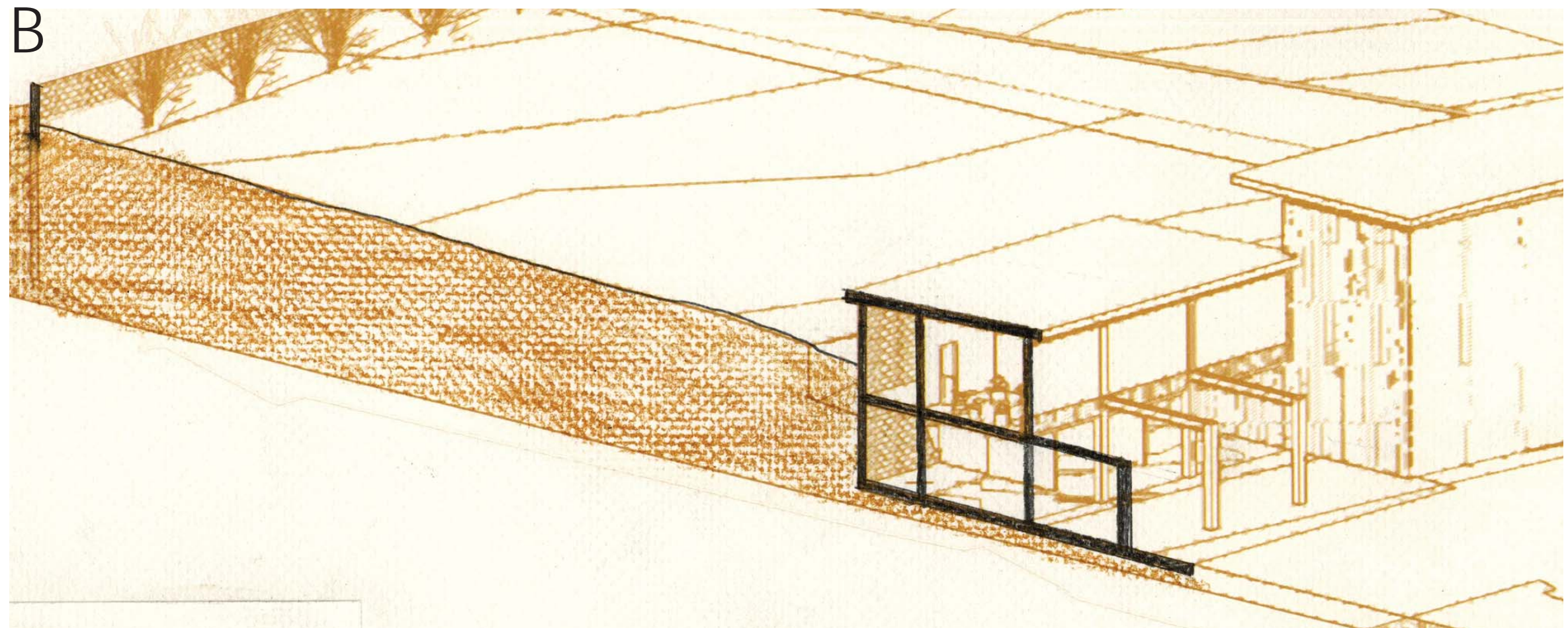
The structure of the wall is likened to the orphan as well. Each panel, 10' x 20' is L-shaped, and therefore is able to stand on its own. It is anchor bolted to the concrete slab via imbeds. This is a consistent construction quality used throughout the design of the orphanage; the building provides the backbone and mediates the harsh reality of life, but still enables the children to be individuals.



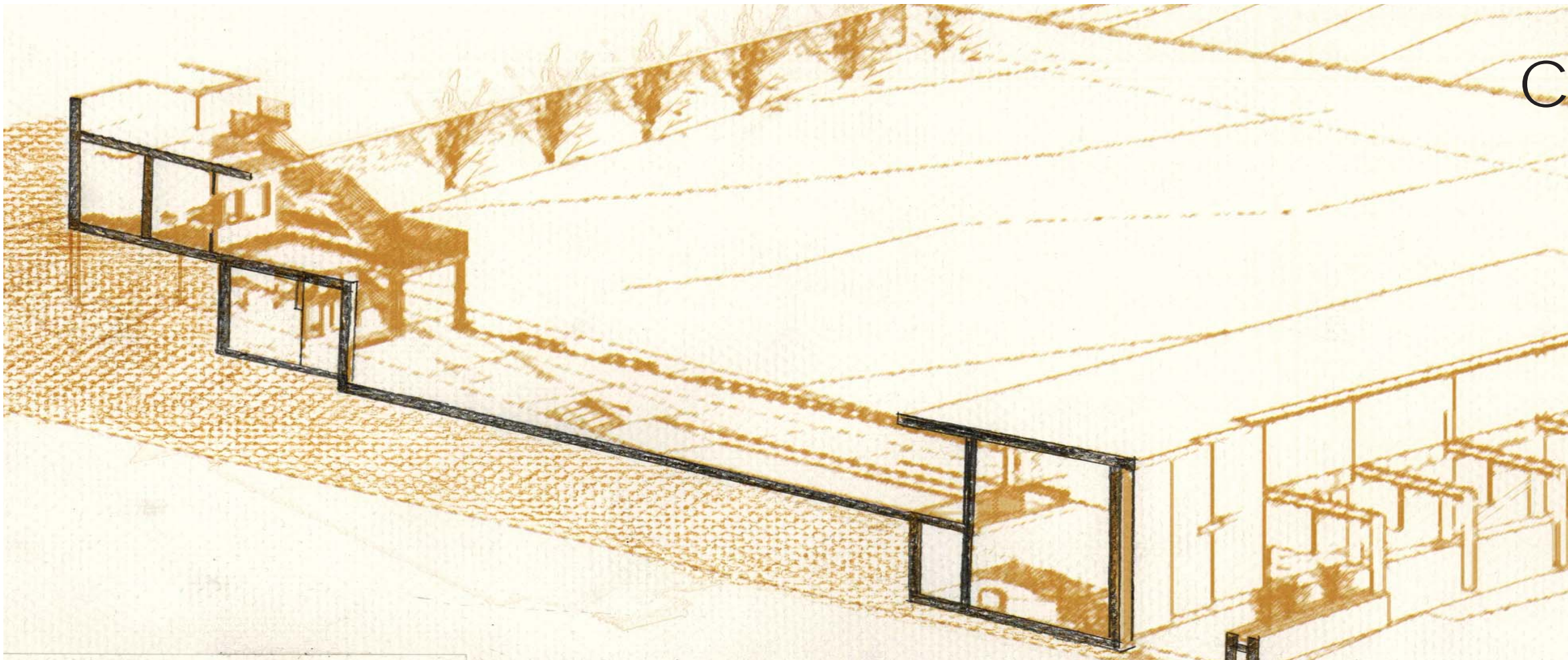
**Section Perspective A** - Cut East - West showing barn.



**Section Perspective B** - Cut East - West showing classrooms on upper level and offices and farmers market on lower level.

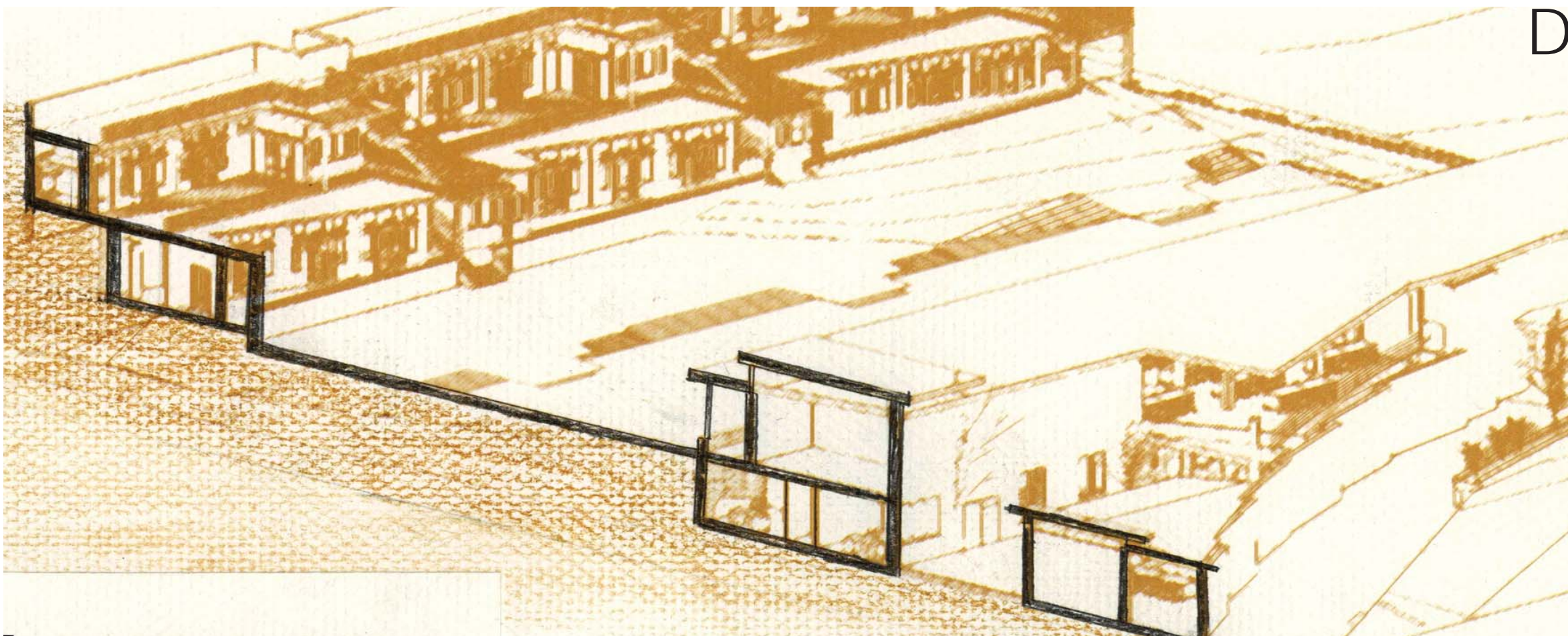


**Section Perspectives A-D**



C

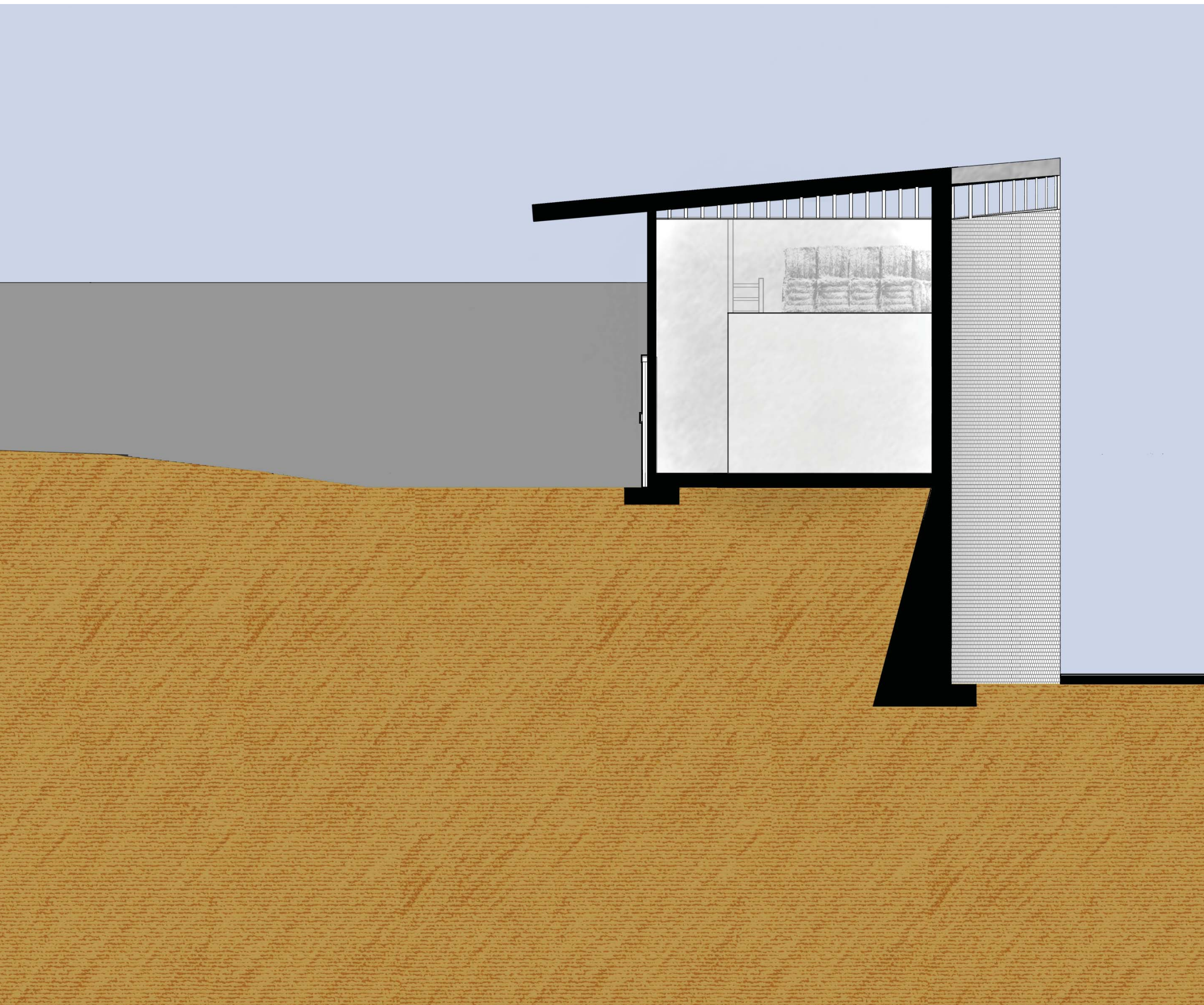
**Section Perspective C** - Cut East - West through main entire site showing living quarters on West side of site and main building.



D

**Section Perspective D** - Cut East - West through main entire site showing upper living quarters on West side of site, main building, and community center.

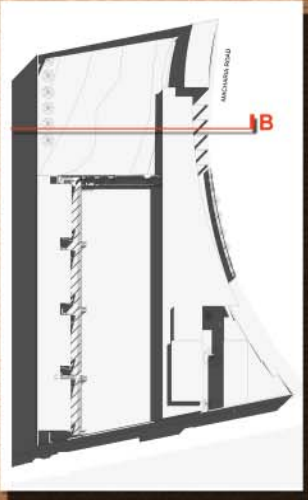




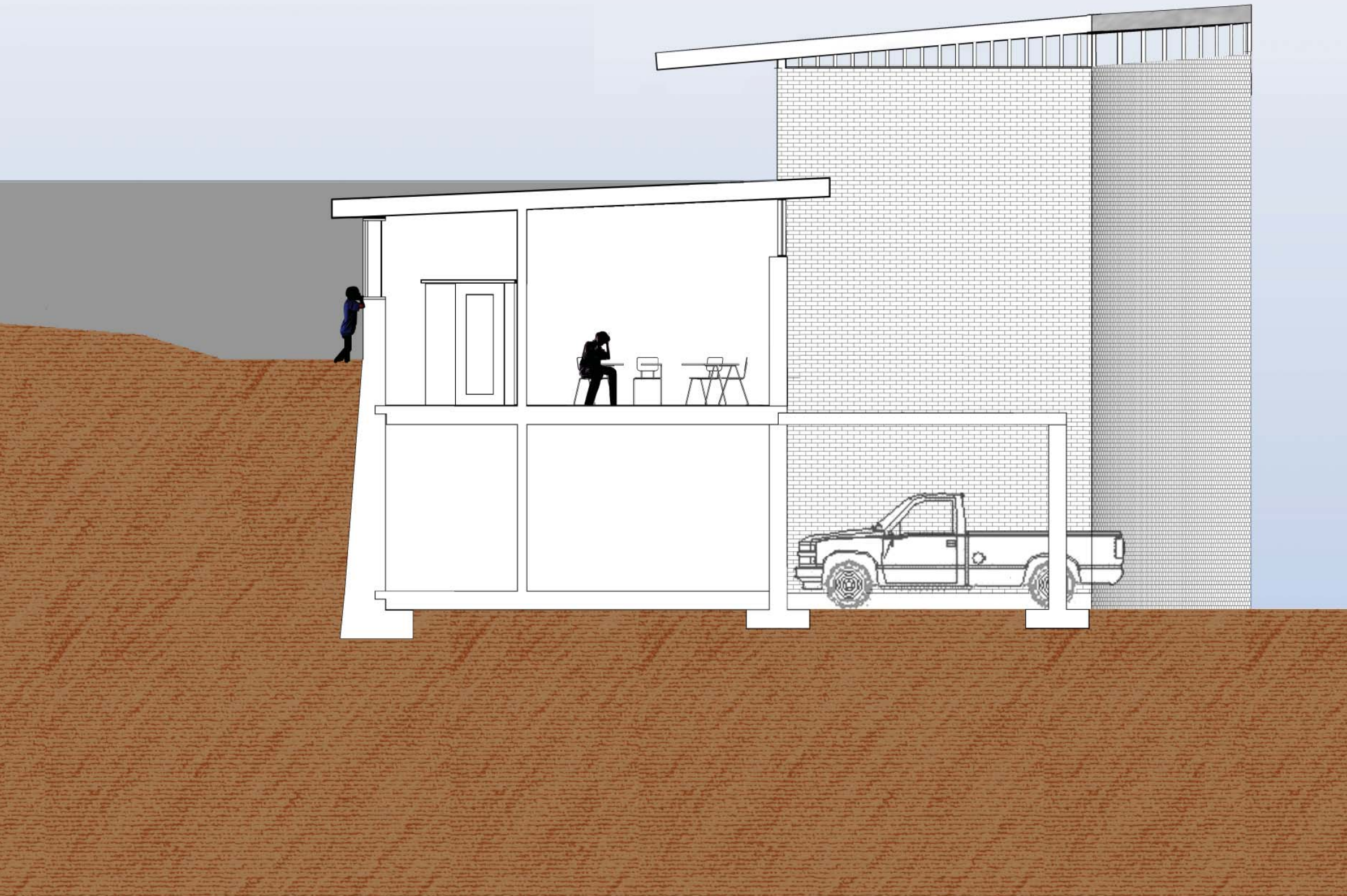
**Section A**  
East - West  
Showing the far perimeter wall, the pasture, and  
the barn at the Northern side of the site.



Section B 1/4"=1'



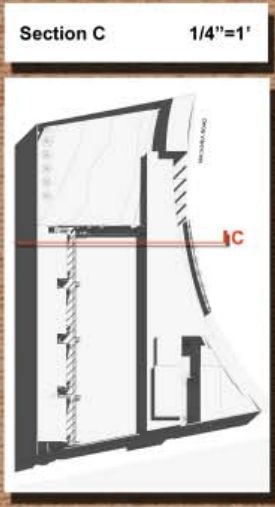
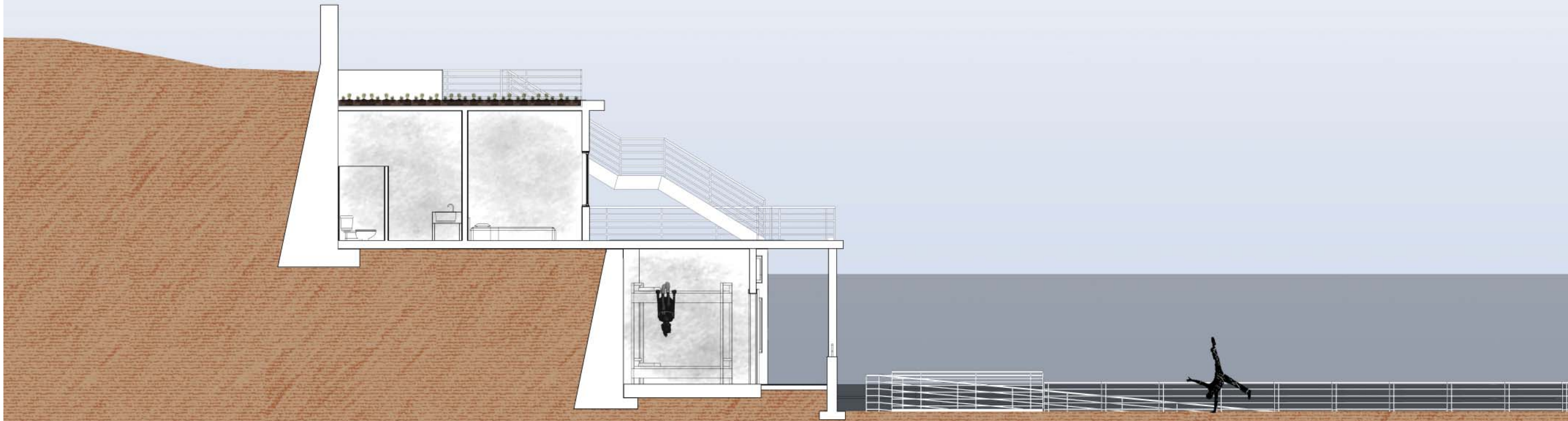


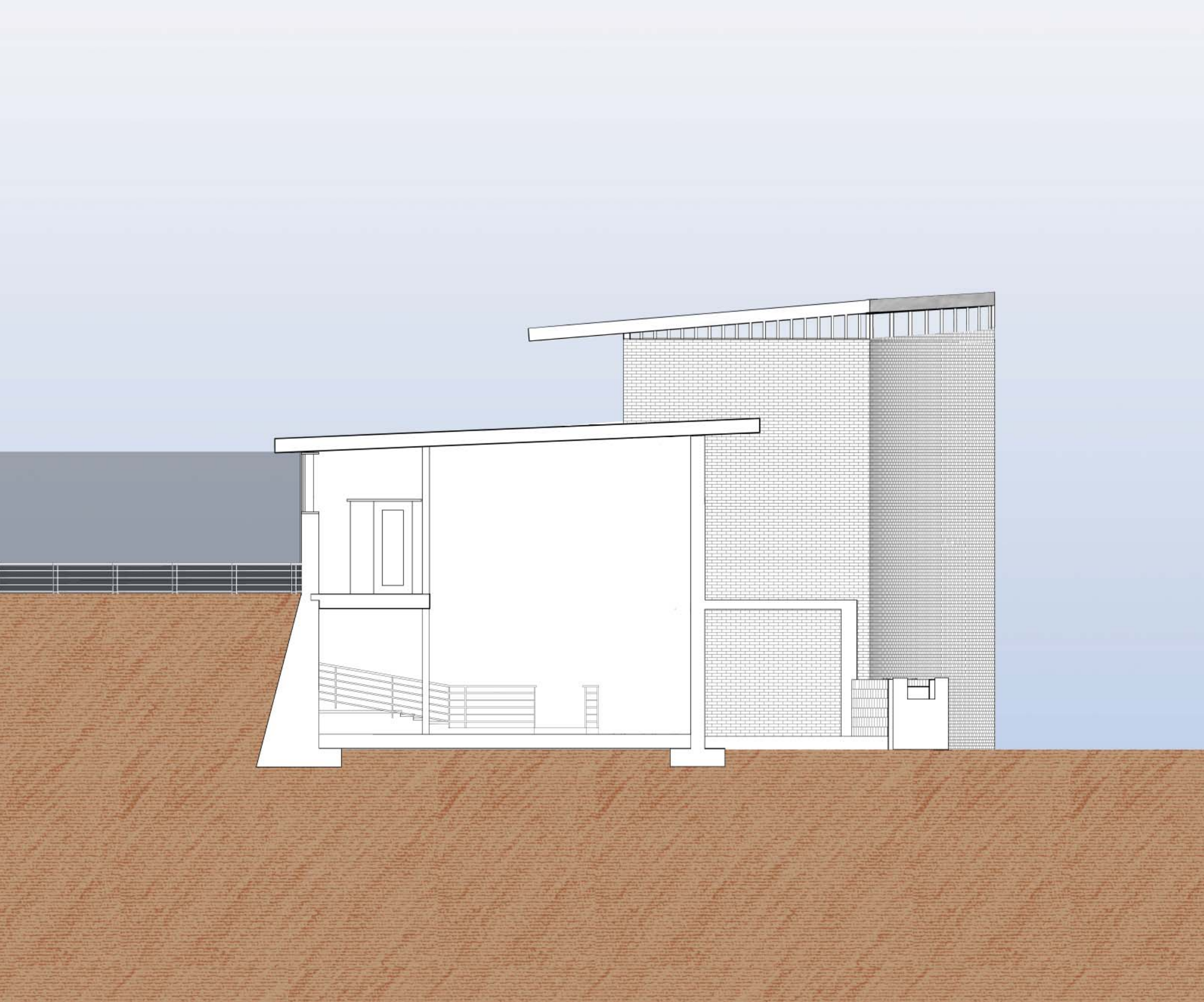


**Section B**

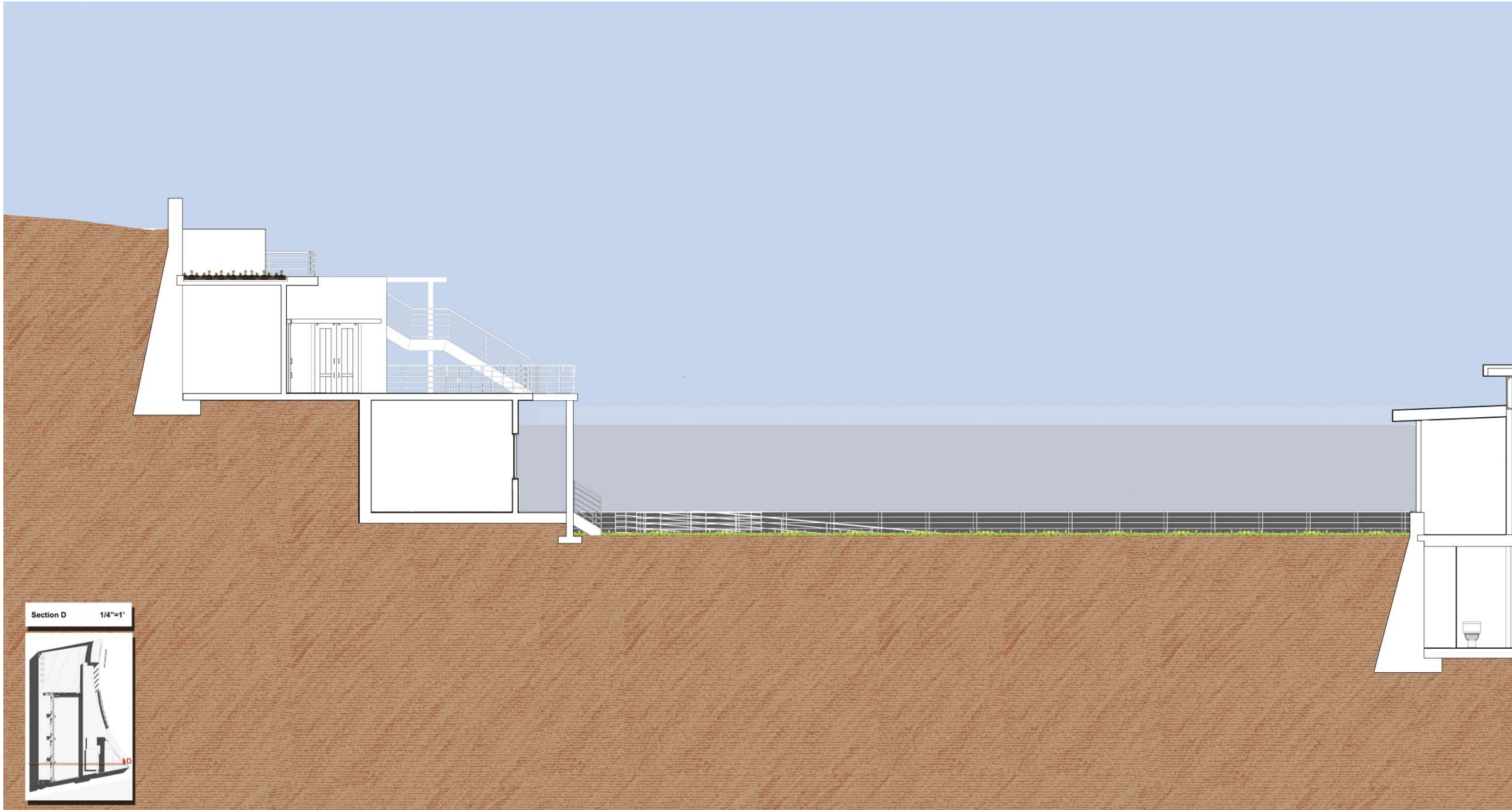
East - West

Showing the perimeter wall, the grazing pasture, the interior corridor, the classroom on the upper level, storage on the lower level and the farmers market area to the East.

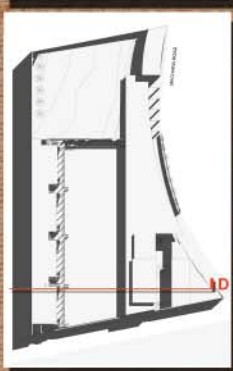




**Section C**  
East - West  
Showing the two levels of the residences, the football pitch, the double height foyer, and the market trellis is visible beyond.

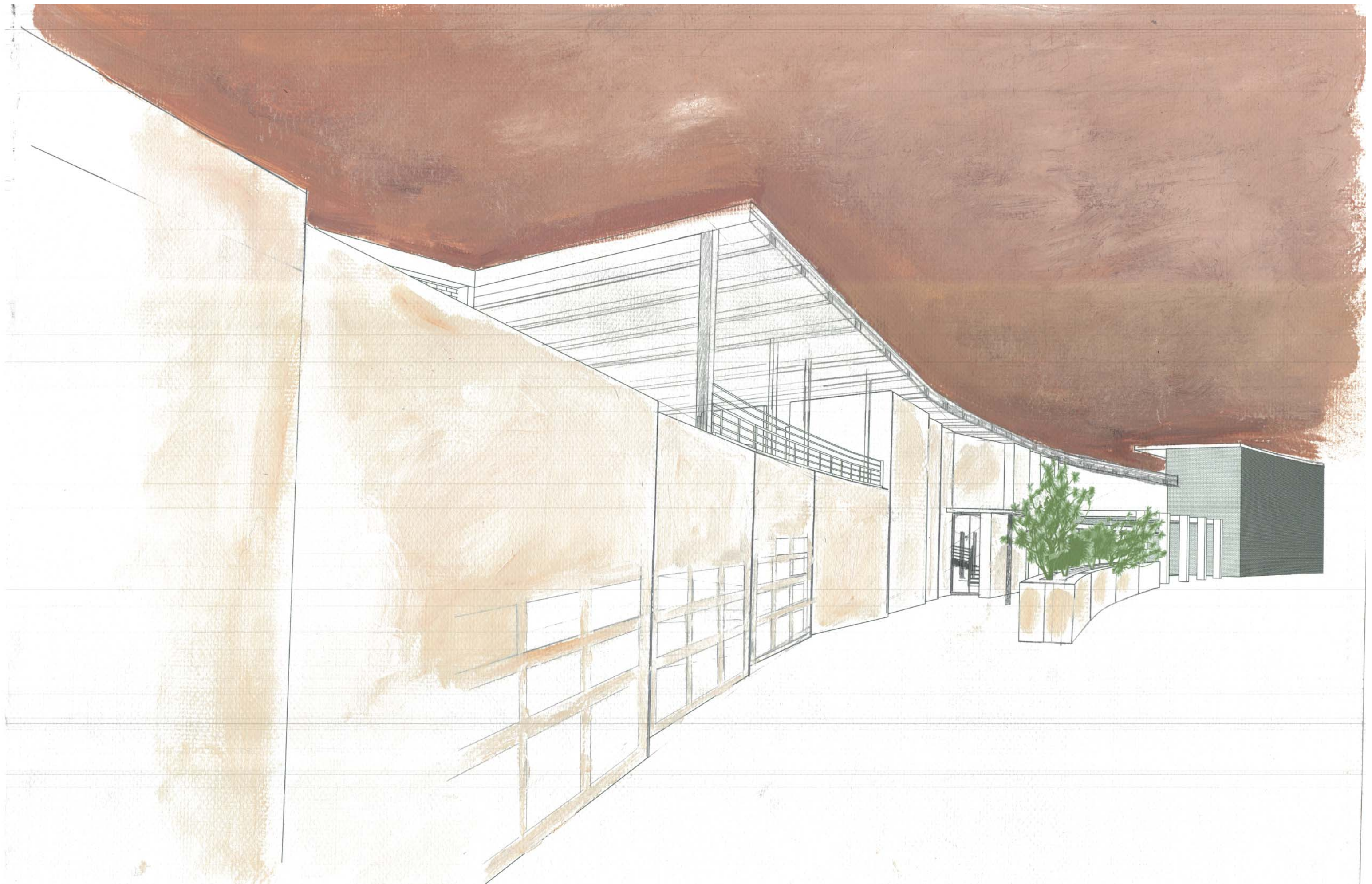


Section D 1/4"=1'





**Section D**  
East - West  
Showing the two levels of residences, the football pitch, the outdoor corridor/breezeway, the classrooms on the upper level, offices on the lower level, the shared courtyard, and the community center followed by the main street.

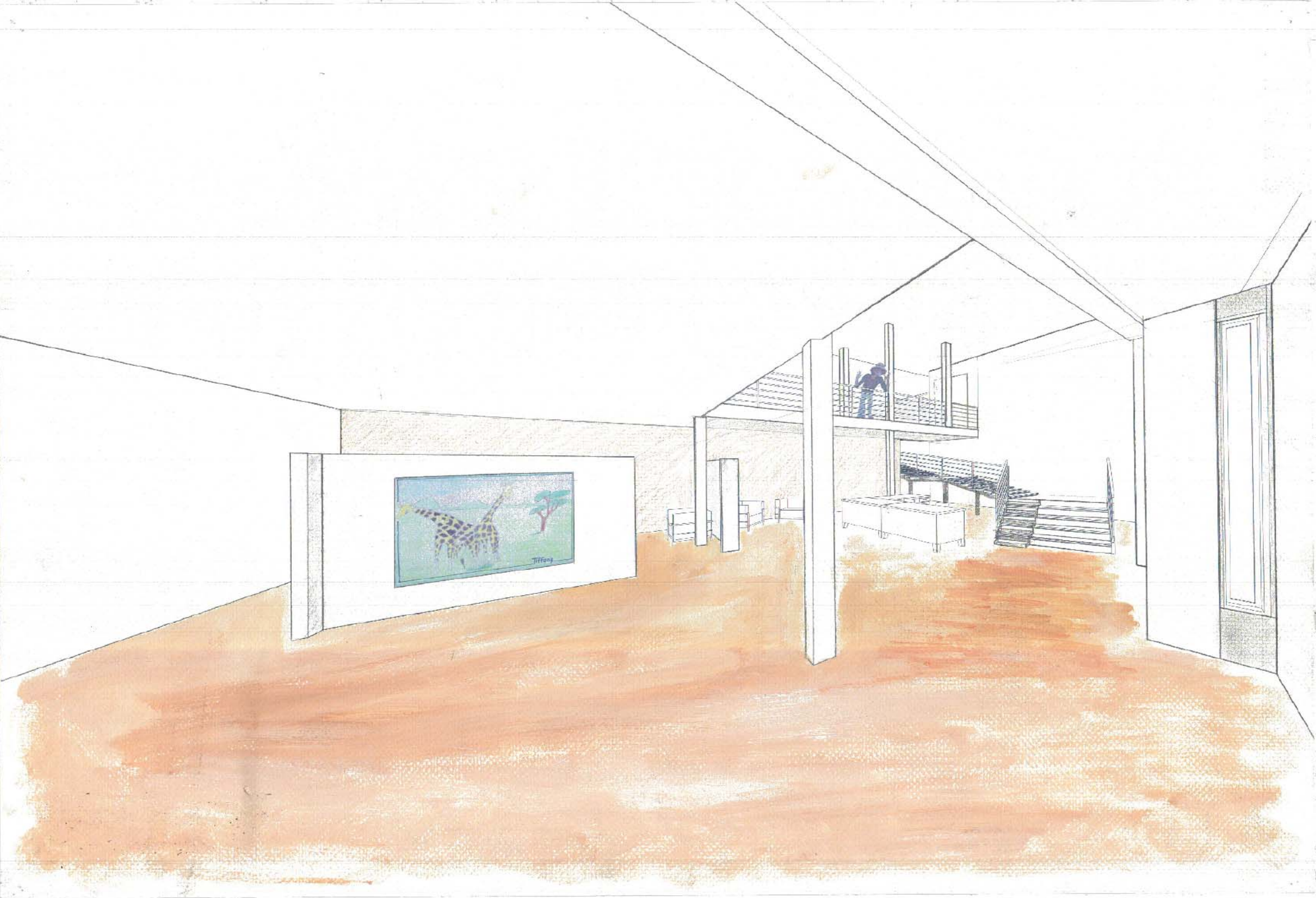


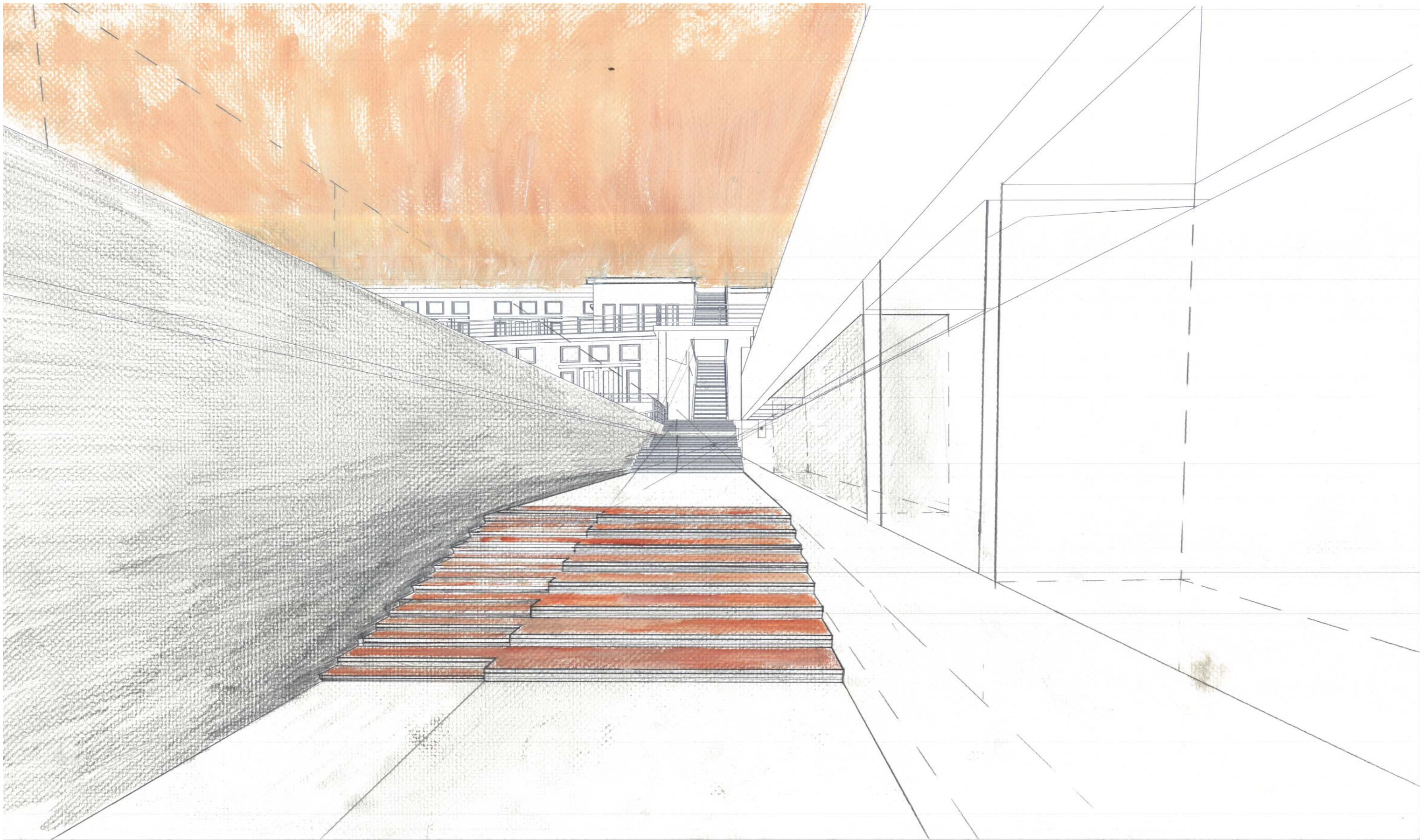
**Exterior and Interior Perspectives**

**Opposite Left:** Perspective at Front Entry

The paneled wall itself is compensating for a curved site line, an invisible line. The window openings are oriented to the north, and visitors enter from the south, therefore, the façade is more opaque to the visitor, and more accepting of the local neighborhood, this is an important function of the design of the building, helping break down the stigma associated with orphans as it is carried in Africa.

**Left:** Perspective in Foyer









## Exterior and Interior Perspectives

**Opposite Left:** Perspective up Main Stair

Here, another piece of architecture is seen bridging differences. The stair is designed to meet the dimensions of the child on the left, and the adult on the right. It is key that this main axis that leads to the private area of the orphanage is seen bringing together the orphan and the caretaker.

**Left:** Perspective Looking South at Playpumps



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