



## **PARTICIPATORY OF CO-LIVING**

**[An elderly-friendly affordable housing system for Lakkatura]**

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## **- CONTENT-**

## **- RESEARCH -**

"How can we create an affordable housing that focuses on living conditions of the elderly and stay sustainable for potential changes in the tea garden community's demographics over time?"



Bangladesh, predominantly an agricultural nation, boasts worldwide recognition for its tea industry. Generally speaking, this country boasts one of the world's largest proportions of its population engaged in various labor sectors, notably in the garment, but also in agriculture, and service industries. However, the labor conditions in the tea industry differ significantly.

The tea plantations in the hilly regions of Sylhet and Chittagong have played an important role in shaping this industry, with their origins rooted in the colonial plantation history of this region. Tea plantation workers were brought from the different provinces of India, especially those poverty-stricken regions, by brokers employed by the tea companies. These laborers, along with their families, were tied to the land for tea cultivation, gradually giving rise to communities centered around the plantation sites. Meanwhile, due to the history of labor migration, their different ethnic sub-culture kept them independent from mainstream local Muslim communities. Because of their relative isolation from urban areas, these sub-cultural labor communities have been significantly influenced by colonial plantations and contemporary tea companies.

*Colonial influence & Industrialization and urbanization & Labor conditions of tea garden community*

## **INTRODUCTION**

For tea garden communities, land has been a crucial element in the lives of tea laborers, serving as the most important resource for their social existence from the colonial period to the present. Over time, as tea plantations remained relatively isolated, some lands not used for tea cultivation were allocated to workers for growing crops. This change not only ensured the sustainability of laborer communities but also laid the foundation for the residents' subsistence livelihoods. The significance of land gradually shaped the spiritual and cultural aspects of their lives, as observed:

*“Our funeral ceremonies take place on the land. The land does not only provide crops that are required to survive, but it also is used for religious rituals. Therefore, our life cycle depends on the land—from birth to death.”*

This history and collective memory within the tea plantation community created a common political language and also directly influenced the current situation of those tea garden community in Sylhet.

In the tea cultivation industry, there are approximately 300 million workers, with a notable majority of whom, around 75 percent, being female. These laborers have been bonded to this land for generations, with limited opportunities to interact with people beyond their communities. Additionally, around 58 percent of tea workers are illiterate, and 60 percent could not attend school due to poverty. This lack of education hinders their ability to engage in alternative work opportunities. However, in the context of industrialization and urbanisation in Bangladesh, there is a notable shift towards urban living over rural residence, especially among young people. The appeal of city life and employment appears to outweigh the continuation of their parents' farming traditions for those residents living in the tea garden communities.

*Colonial influence & Industrialization and urbanization & Labor conditions of tea garden community*

## INTRODUCTION



SPATIAL ORDER



INFRASTRUCTURE



FACILITY



BUILDING QUALITY

The tea garden communities now face a complex array of contemporary problems that affect labor quality and living conditions. Over the years, tea workers have faced marginalization and exclusion from the outsiders, with little attention from the government and tea garden authorities. Therefore, they live in poverty which makes it challenging for them to secure a comfortable standard of living. To sustain themselves, workers have to balance both tea cultivation and crop farming, despite the demanding nature of tea garden work. Some female workers have acquired skills in weaving sarees and curtains to earn income. These workers lack access to proper education, healthcare, and other basic rights. Additionally, their geographical isolation from urban centers enlarges difficulties due to the absence of commercial activities and limited access to diverse goods and food resources.

## CURRENT SITUATION



It is observed that the elderly could mostly show the problems of living conditions in the tea garden communities. Typically lacking independent income sources, and with limited pension offerings from companies, the older generation often returns to their families, relying on their children for support. However, this does not mean that the elderly can rest and enjoy their retire life. The necessity for the middle-aged generation to work in tea gardens, together with gender issues assigning household responsibilities to women, making female elders in a central role in managing household works. Due to the lack of basic facilities, it will take a lot of effort for these old ladies to finish their household work. Meanwhile, they also need to take care of babies and children in their families, which is also a tough job.

*Challenges the elderly facing in tea garden communities with the demand of new housing system*

### **CURRENT SITUATION-ELDERLY**

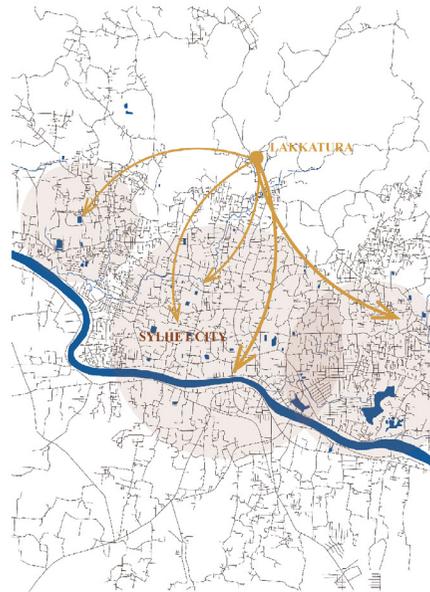


Typically, laborers in the tea garden work until they are physically unable, leaving elderly retirees vulnerable to health challenges and mortality. In the context of the tea garden community, the combination of inadequate infrastructure and poverty makes life more challenging compared to urban areas. Due to prevailing poverty, most elderly people struggle to meet their dietary needs, potentially leading to health issues. Meanwhile, there are no medical services inside the community. If there is someone getting sick, he or she needs to go to the public hospital in the city far away from the community, which means that those elderly may encounter difficulties in accessing healthcare due to limited care facilities.

Based on those problems the elderly are facing, the condition of the infrastructure and housing system seem to become another factor that impacts their life condition negatively. Due to physical inconveniences, the elderly have very limited space for activities. They have to stay at their homes, even just their rooms, due to the limited indoor space and housing areas within the community. Moreover, the housing lacks design elements and facilities catering to physical inconveniences, such as ramps, to facilitate the movement of the elderly. Additionally, the use of limited construction materials and structure design results in houses that are excessively hot in summer and cold in winter, adversely affecting the health of the elderly.

*Challenges the elderly facing in tea garden communities with the demand of new housing system*

## **CURRENT SITUATION-ELDERLY**



Moreover, an increasing number of young people in the tea garden community display a preference that moving out to find urban employment opportunities and settle down due to the tendency of industrialization and urbanization process in Bangladesh. Consequently, the middle-aged population in the community is projected to age over time, potentially facing the challenge of inadequate care in their later years. Once the tea garden community become an aging community, the community itself could decline after generations. To ensure the sustainability of the community in the future, implementing a new housing system with a focus on accommodating the needs of the elderly could be a valuable solution.

Therefore, it can be stated that the elderly in tea garden communities face challenges in living within a conducive environment and lack adequate caring facilities. The implementation of a new housing system, designed with a focus on caring considerations, could prove beneficial for both the elderly individuals and the entire community.

*Challenges the elderly facing in tea garden communities with the demand of new housing system*

## **CURRENT SITUATION-COMMUNITY**

## RESEARCH QUESTION

**How can we create affordable housing that focuses on the living conditions of the elderly and stays suitable for potential changes in the tea garden communities' demographics over time?**

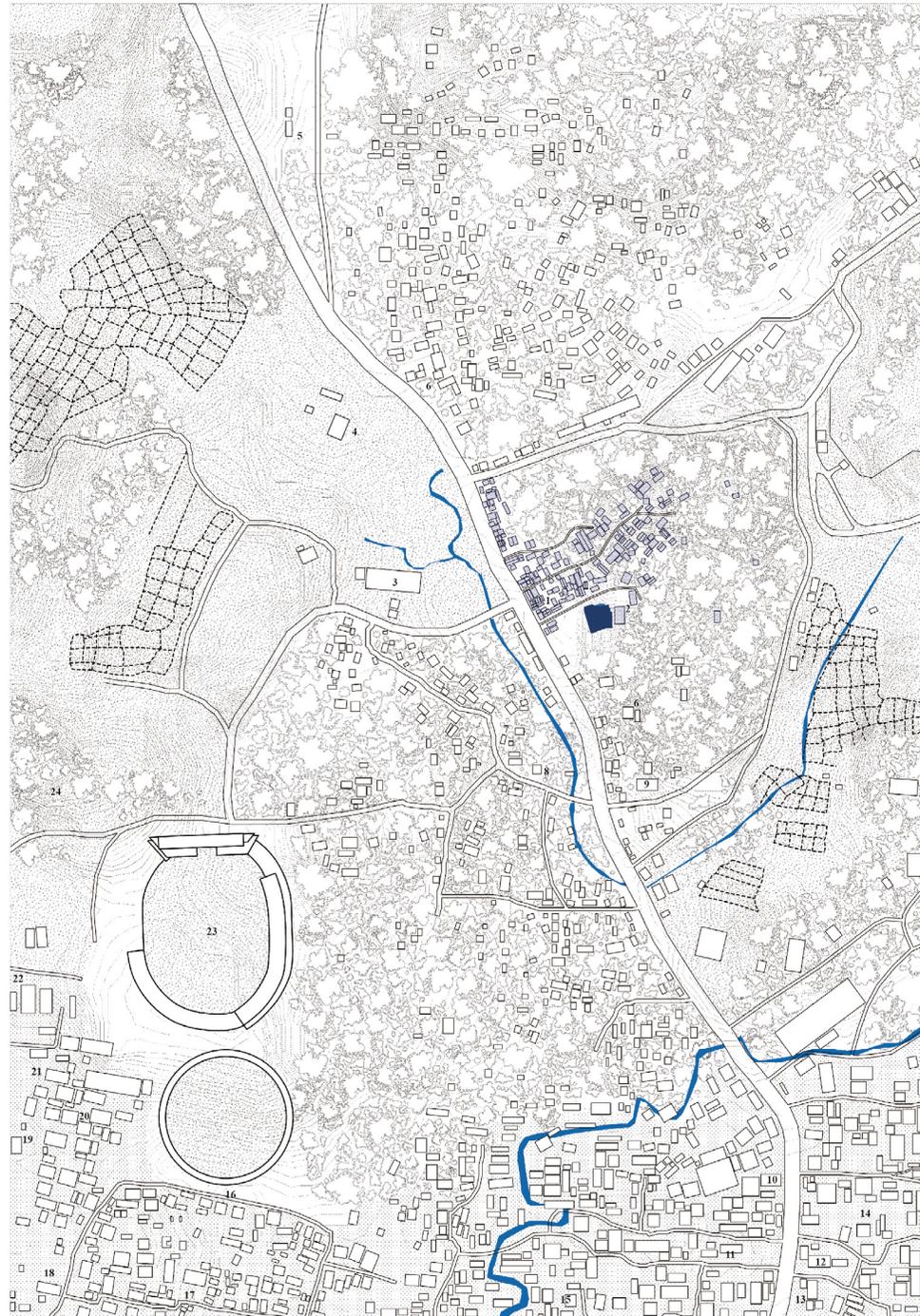
- How to address the challenge of **limited resources and infrastructure** while meeting the needs of the elderly and the entire community?
- How to deal with the current or future **changes in the population** of long-term residents to remain the community sustainable?
- How to **build up connections** between the subcultural community with the city to solve the problem of geographical, social and cultural isolation?

## **- HYPOTHESIS-**

Based on the existing condition of topography, community circulation, and cluster typology, design proposal about the Lakkatura tea garden community is drawn.



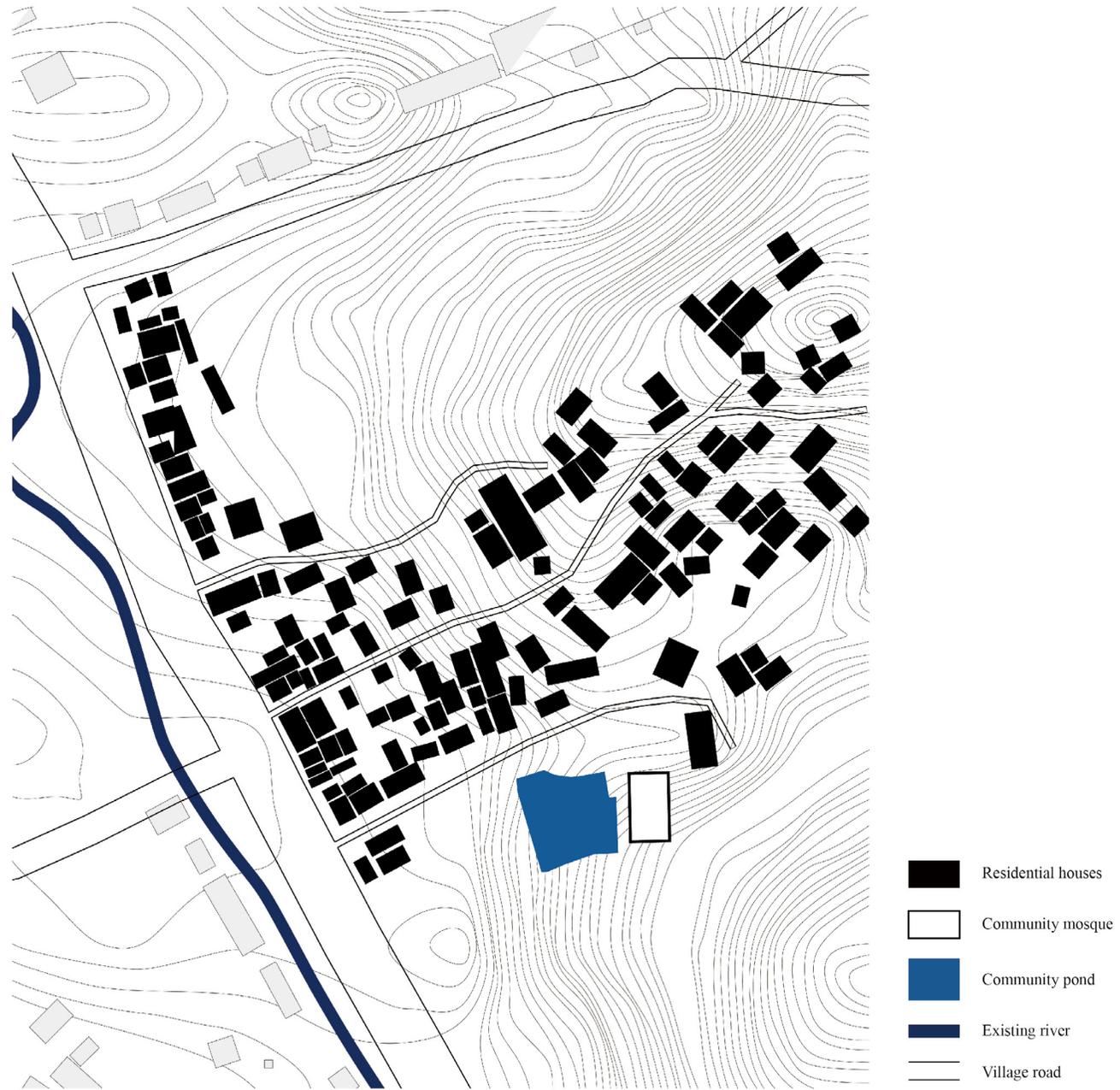
**SITE LOCATION**

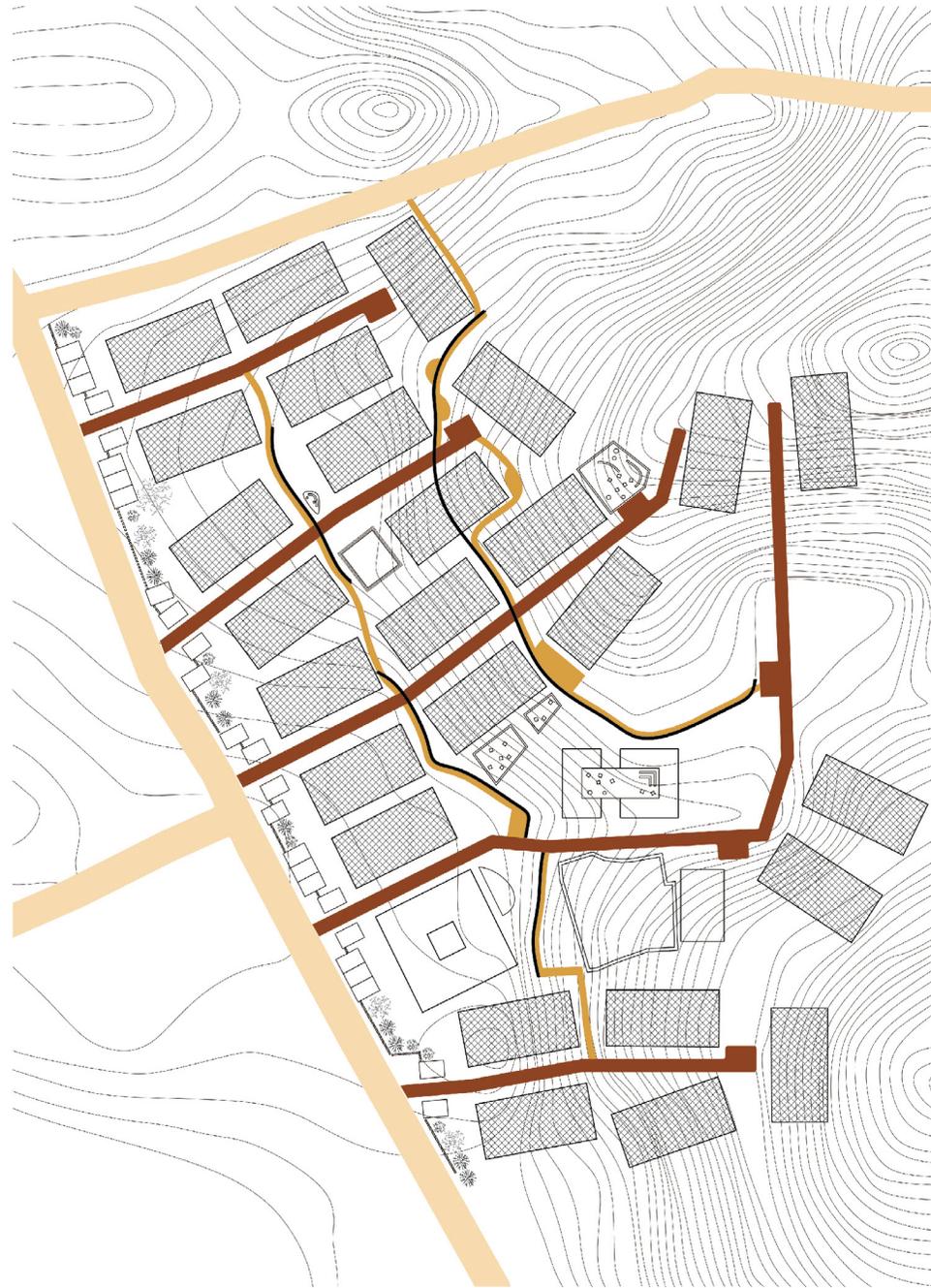


Lakkatura Tea Garden Community, Sylhet

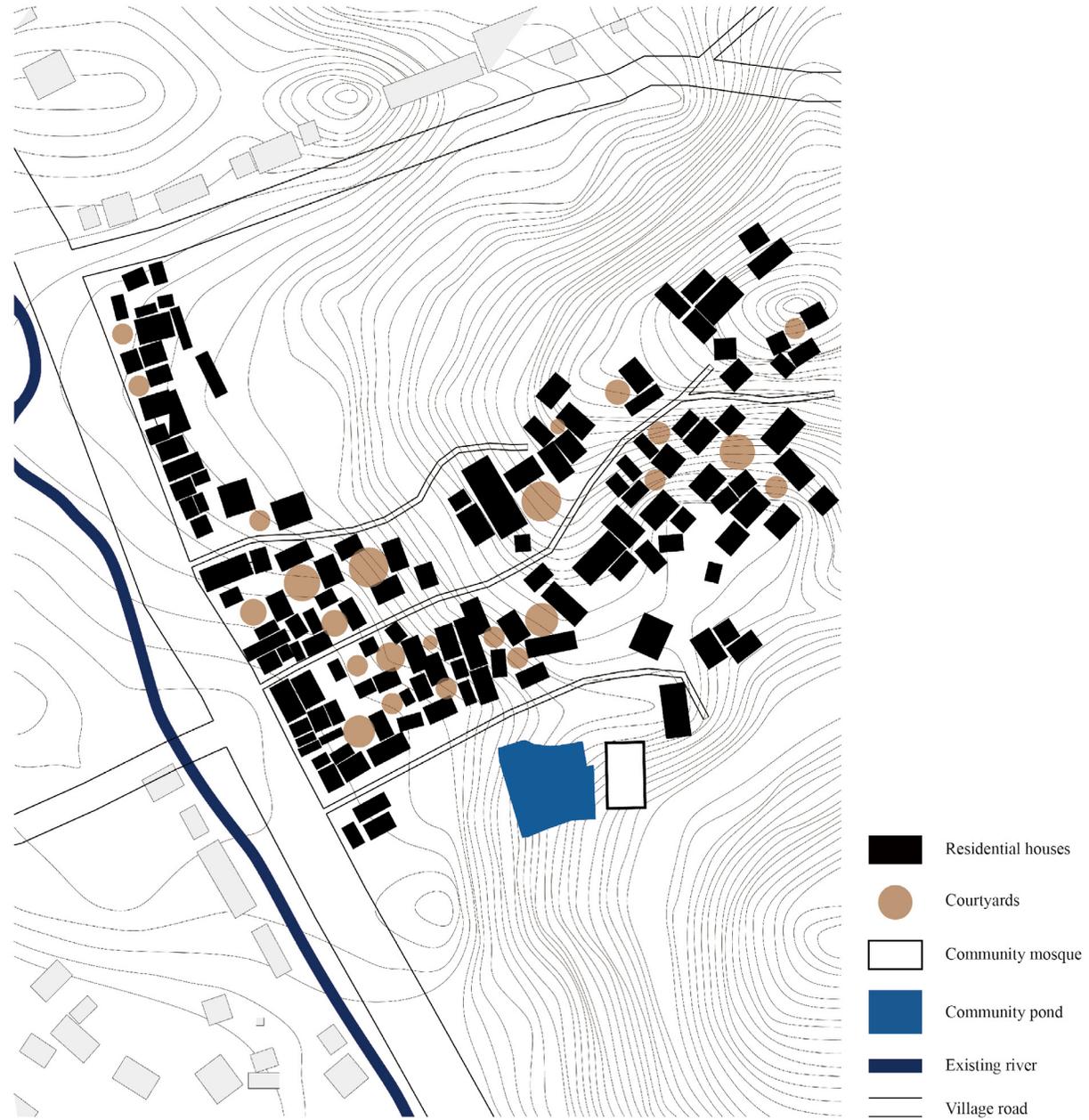
- 1 Lakkatura Tea Garden Community
  - 2 Lakkatura Muslim Moholla Jame Mosque
  - 3 Sylhet Govt High School
  - 4 Substation CEEC
  - 5 Malimicherra Jame Mosque
  - 6 Hindu temple
  - 7 Lakkatura Tea Garden Health Center
  - 8 Lakkatura Mosque
  - 9 Lakkatura Primary School
  - 10 Chowkidekhil Mosque
  - 11 Syed Nasir Uddin Mosque
  - 12 Al-Ansar Arabic & Bangla Teaching School
  - 13 Mazar Gate
  - 14 Pre-Cadet Academy
  - 15 Syed Nasir Uddin School and College
  - 16 Showpanloy
  - 17 Badambagicha Jame Mosque
  - 18 North Primahalla Jame Mosque
  - 19 Syloti Language Center
  - 20 Jamiatul Abrar
  - 21 Bengali Language Center
  - 22 Gous Uddin Government Primary School
  - 23 Sylhet International Cricket Stadium
  - 24 Lakkatura Tea Garden Mountain
- 
- Houses in Lakkatura Tea Garden Community
  - Pond
  - Stream
  - Residential Houses
  - Tree
  - Farmland
  - Road
  - City Area
  - Mountain Area
  - Tea Garden
  - Typology: Contour Line

## SITE OVERVIEW





**COMMUNITY CIRCULATION PROPOSAL**



-  Cluster
-  Area for amenities
-  Commercial area along the road
-  Contour lines
-  River
-  Circulation road and pavement
-  Community pond

I have followed the original road layout of the community, adding parallel roads along the contour lines. Smaller roads connect the area and follow the natural contours to make walking easier for pedestrians. I've also expanded the original community hub around the mosque to strengthen its role as a central gathering point.

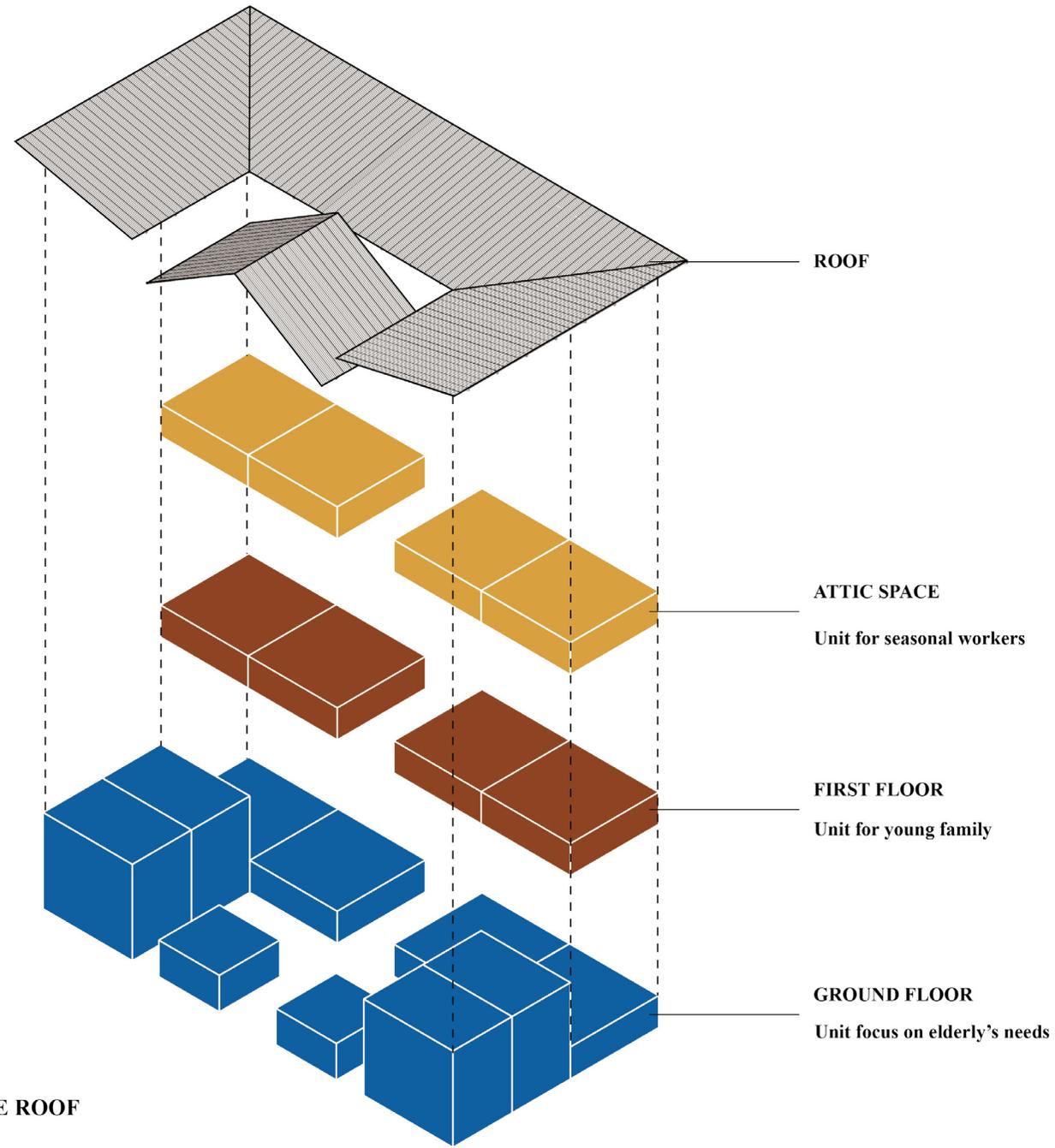
Additionally, because the existing houses are mainly courtyard-style, I have continued this tradition in my design. The housing clusters are arranged in a U-shape with central courtyards to support community interaction and gathering.



## HYPOTHESIS

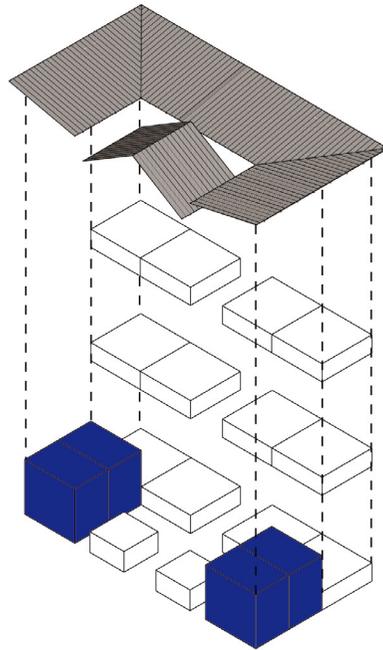
## **- CLUSTER-**

The design of cluster starts from the unit that meet the elderly's needs. Units for different groups come together under the same roof, trying to bring the cluster a small community's atmosphere.



Three kinds of units assembled together and goes to the layout of a cluster. Different groups of people live under the same roof.

**UNIT ASSEMBLY - LIVE UNDER THE SAME ROOF**



**Housing unit 1:**

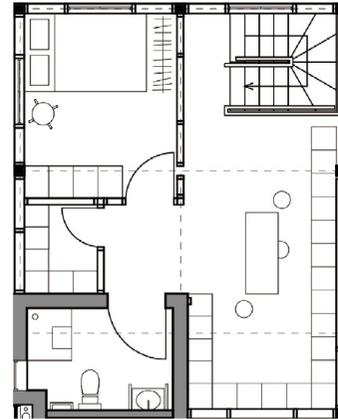
Three-floor unit with 4 bedrooms

Target: Big family with different generations

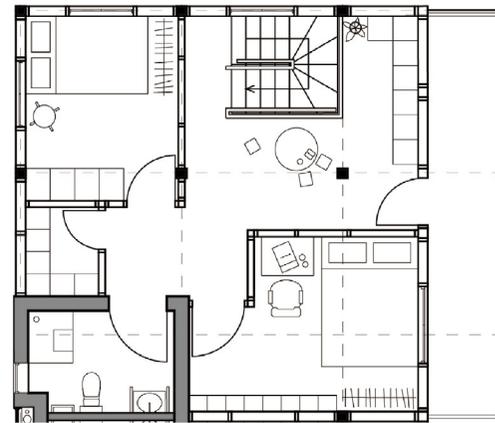
Area: 100 m<sup>2</sup>

Residents: Maximum 8 people  
12.5 m<sup>2</sup> per person

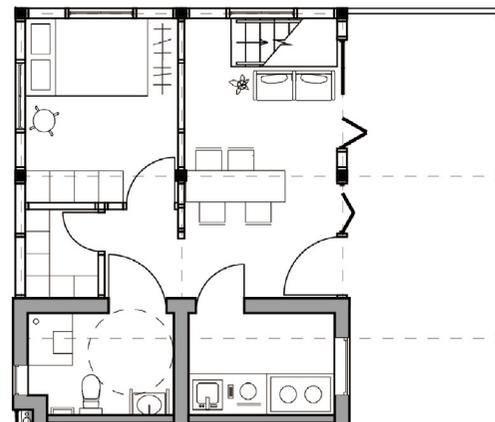
Elderly facilities: Accessible toilet  
Elderly room on the ground floor



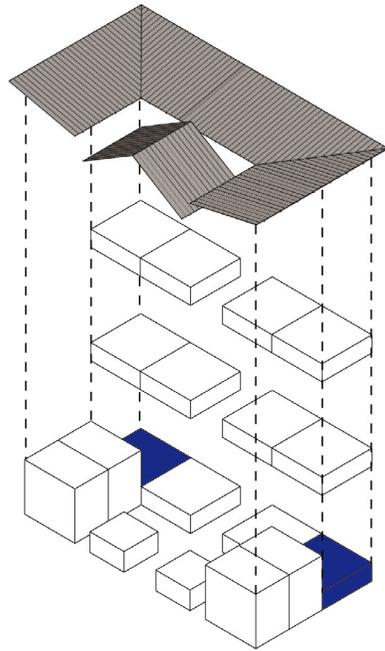
**Attic space plan**



**First floor plan**



**Ground floor plan**



**Housing unit 2:**

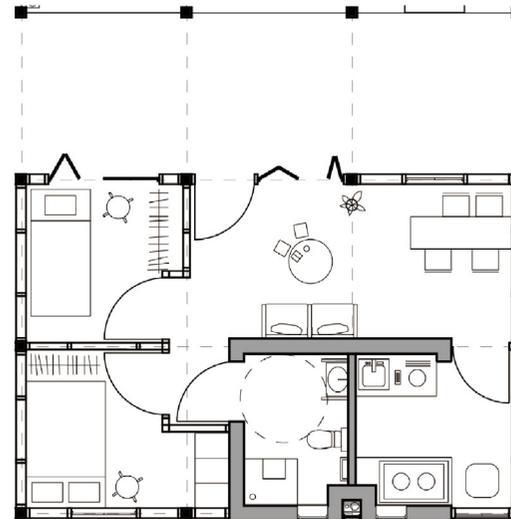
One-floor unit with 2 bedrooms

Target: Family with different generations

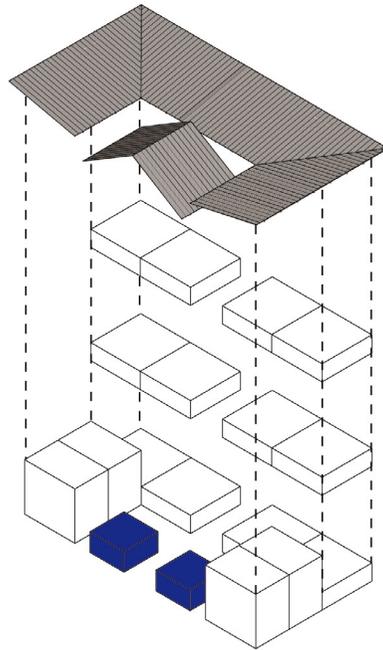
Area: 37.5 m<sup>2</sup>

Residents: Maximun 4 people  
9.375 m<sup>2</sup> per person

Elderly facilities: Accessible toilet  
Better to be located on the ground floor



**Ground floor plan**



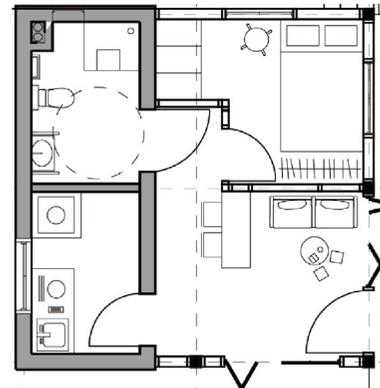
**Housing unit 3:**

One-floor unit specially for single elderly/elderly with special needs

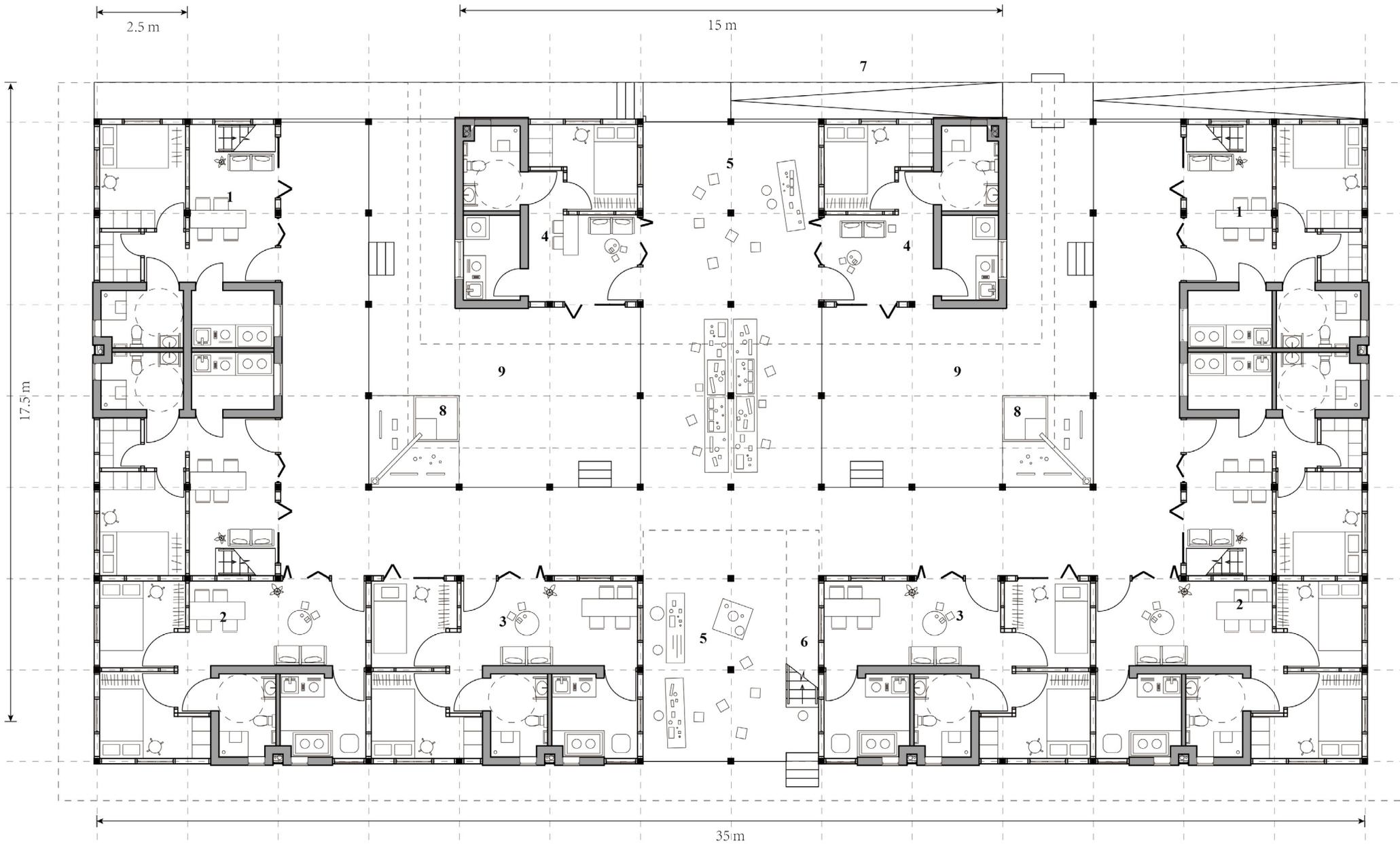
Area: 25 m<sup>2</sup>

Residents: Maximun 2 people  
12.5 m<sup>2</sup> per person

Elderly facilities: Accessible toilet  
Located on the ground, independent unit



**Ground floor plan**

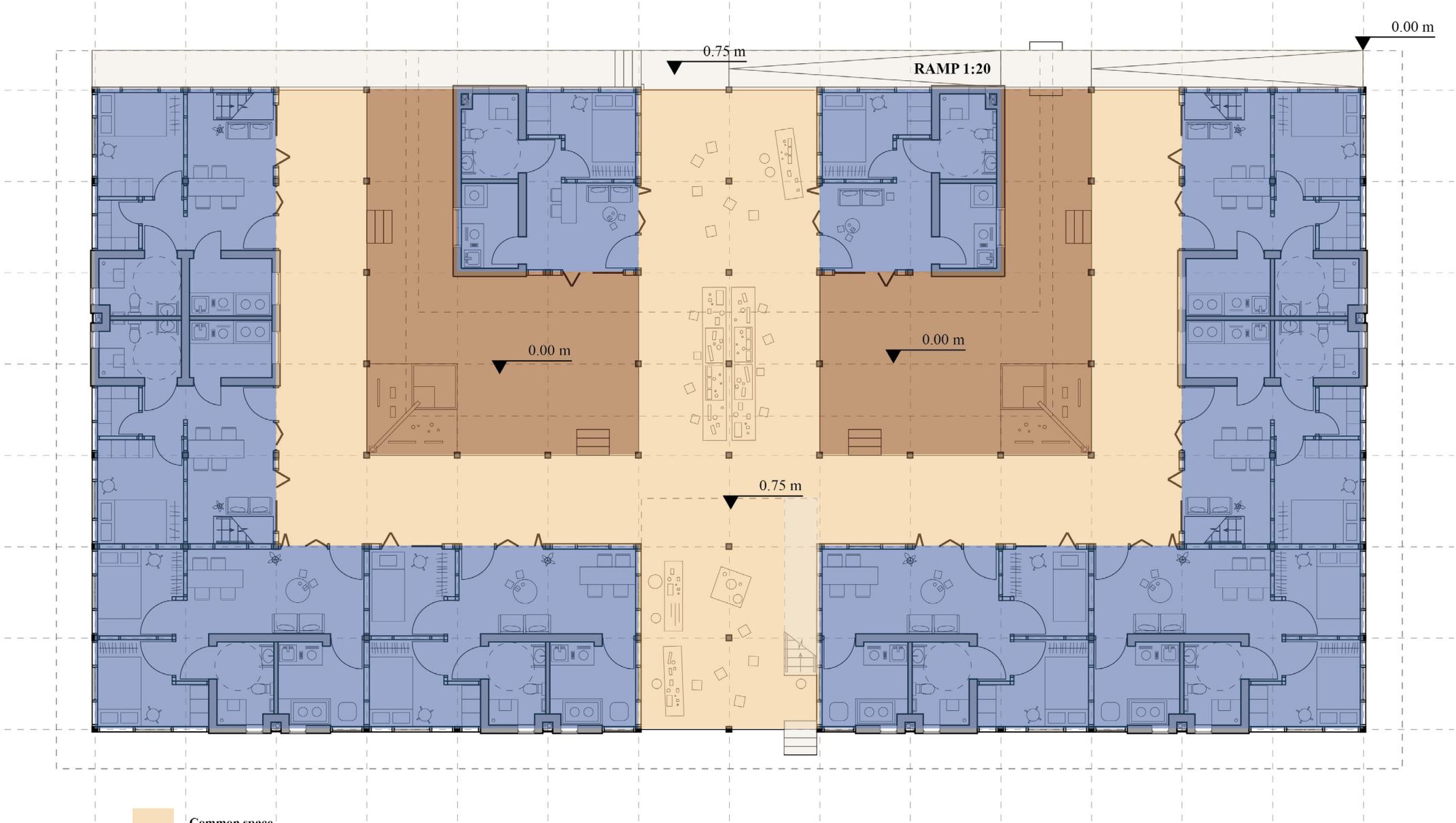


- 1 UNIT 1
- 2 UNIT 2
- 3 UNIT 3
- 4 ELDERLY UNIT
- 5 COMMON SPACE
- 6 PUBLIC STAIRCASE
- 7 RAMP FOR WHEELCHAIR
- 8 WATER TANK & CLUSTER LAUDARY
- 9 SHARED HOUSEHOLD SPACE

**GROUND FLOOR PLAN**

**1:100**

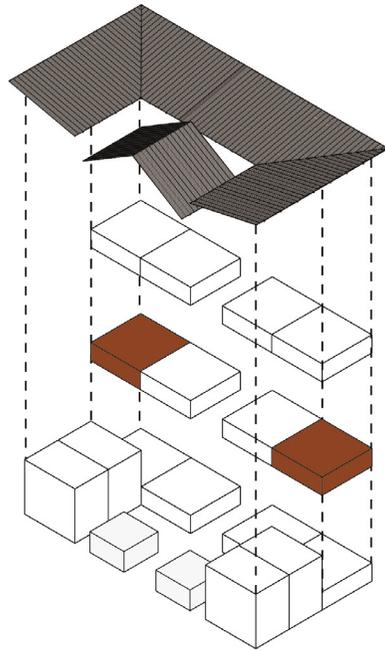
Number of unit: 12 family unit + 2 elderly unit + 8 worker unit per cluster  
 Number of people: Maximun 84 people  
 Residential area: 512.5 m2 for ground floor area;  
 1212.5 m2 floor area  
 Common area: 237.5 m2



**GROUND FLOOR PLAN**

**1:100**

Number of unit: 12 family unit + 2 elderly unit + 8 worker unit per cluster  
 Number of people: Maximum 84 people  
 Residential area: 512.5 m<sup>2</sup> for ground floor area;  
 1212.5 m<sup>2</sup> floor area  
 Common area: 237.5 m<sup>2</sup>



**Housing unit 4:**

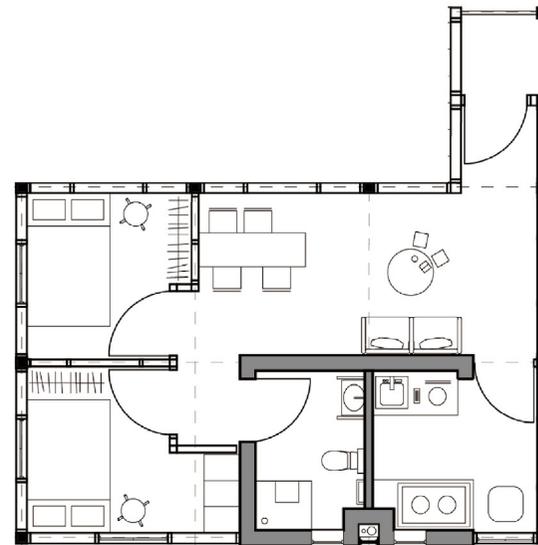
One-floor unit with 2 bedrooms

Target: Young family

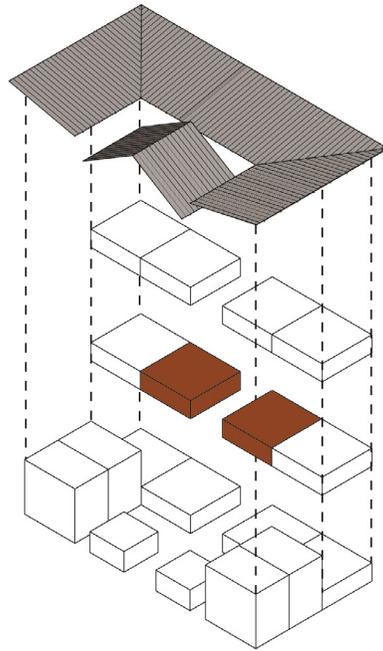
Area: 40.625 m<sup>2</sup>

Residents: Maximum 4 people  
10.15 m<sup>2</sup> per person

Younger generation' family can be located on the upper floors



**First floor plan**



**Housing unit 5:**

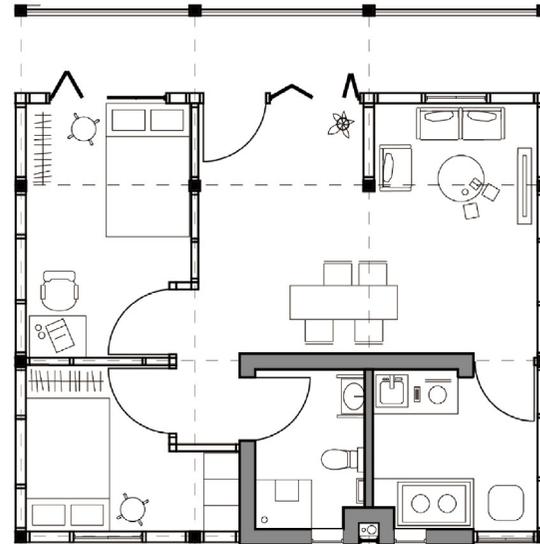
One-floor unit with 2 bedrooms

Target: Young family

Area: 46.88 m<sup>2</sup>

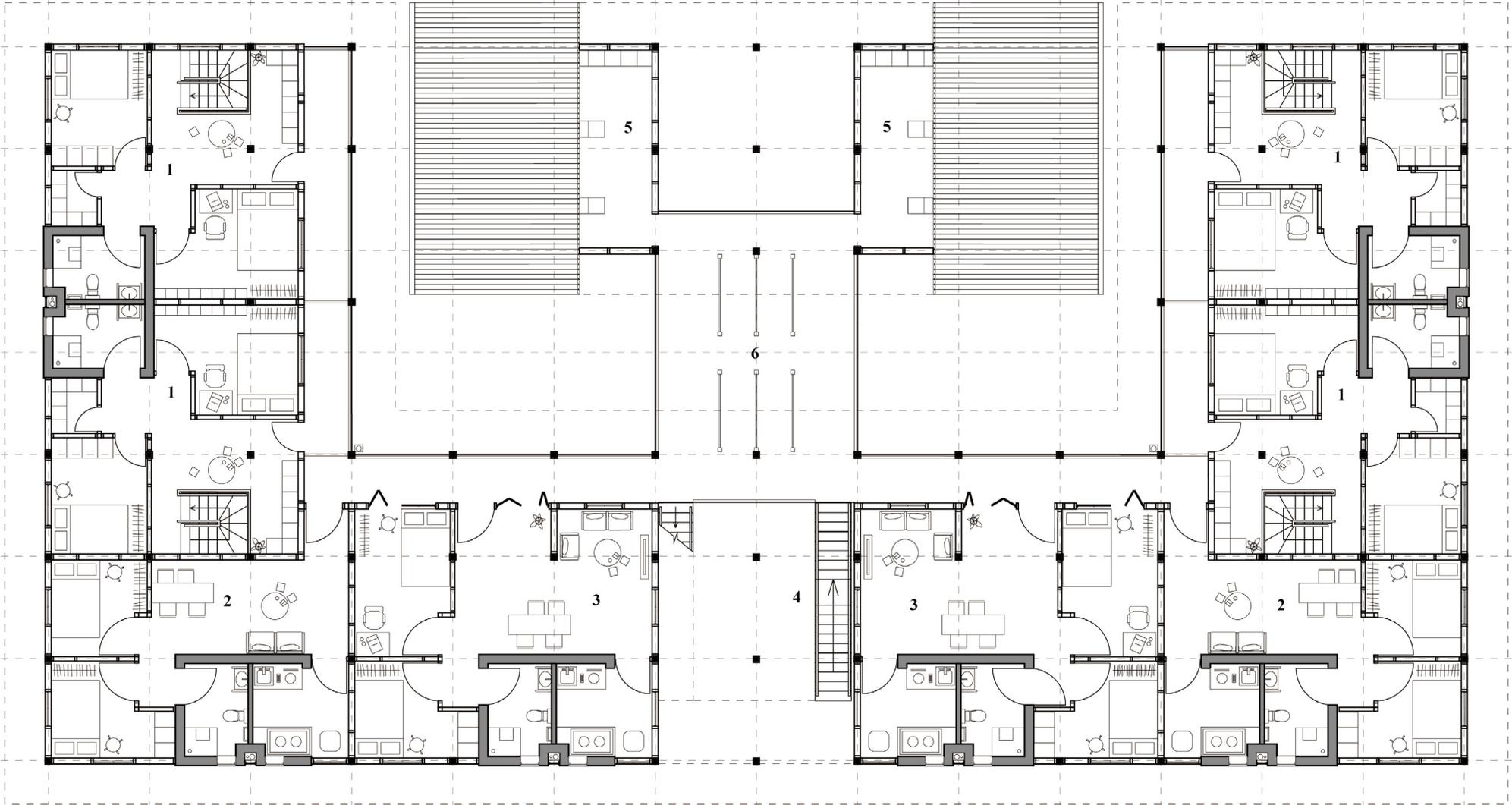
Residents: Maximum 4 people  
11.7 m<sup>2</sup> per person

Younger generation' family can be located on the upper floors



**First floor plan**

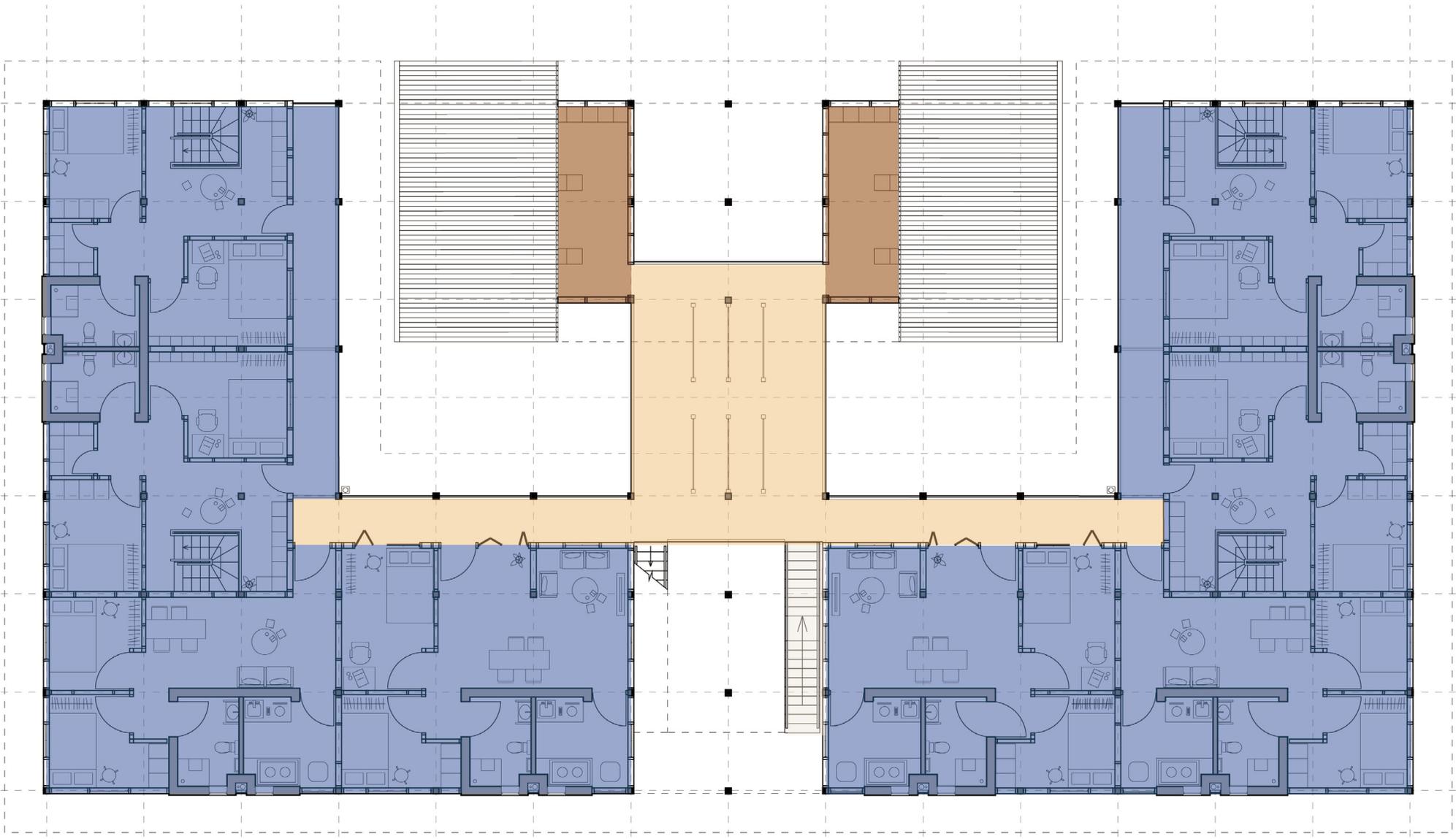
2.5 m



- 1 UNIT 1
- 2 UNIT 2
- 3 UNIT 3
- 4 PUBLIC STAIRCASE
- 5 STORAGE AREA
- 6 TERRACE

**FIRST FLOOR PLAN**

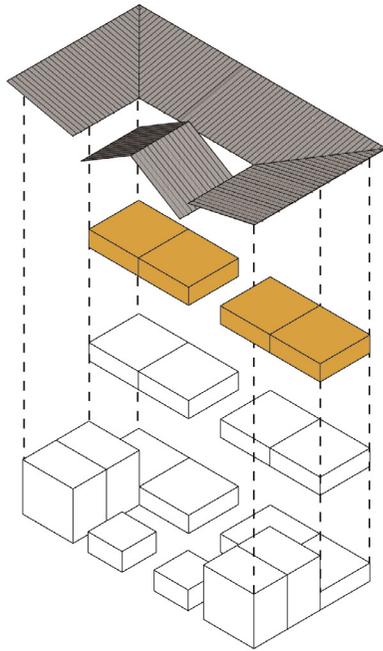
1:100



- Common space
- Living space
- Storage space
- Circulation space

**FIRST FLOOR PLAN**

1:100



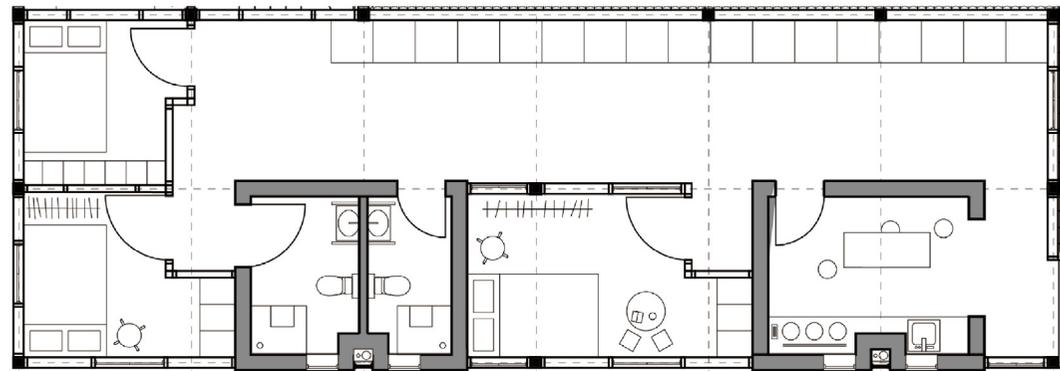
**Housing unit 7:**

Individual room with shared facility space

Target: Seasonal workers  
 Area: 75 m<sup>2</sup>

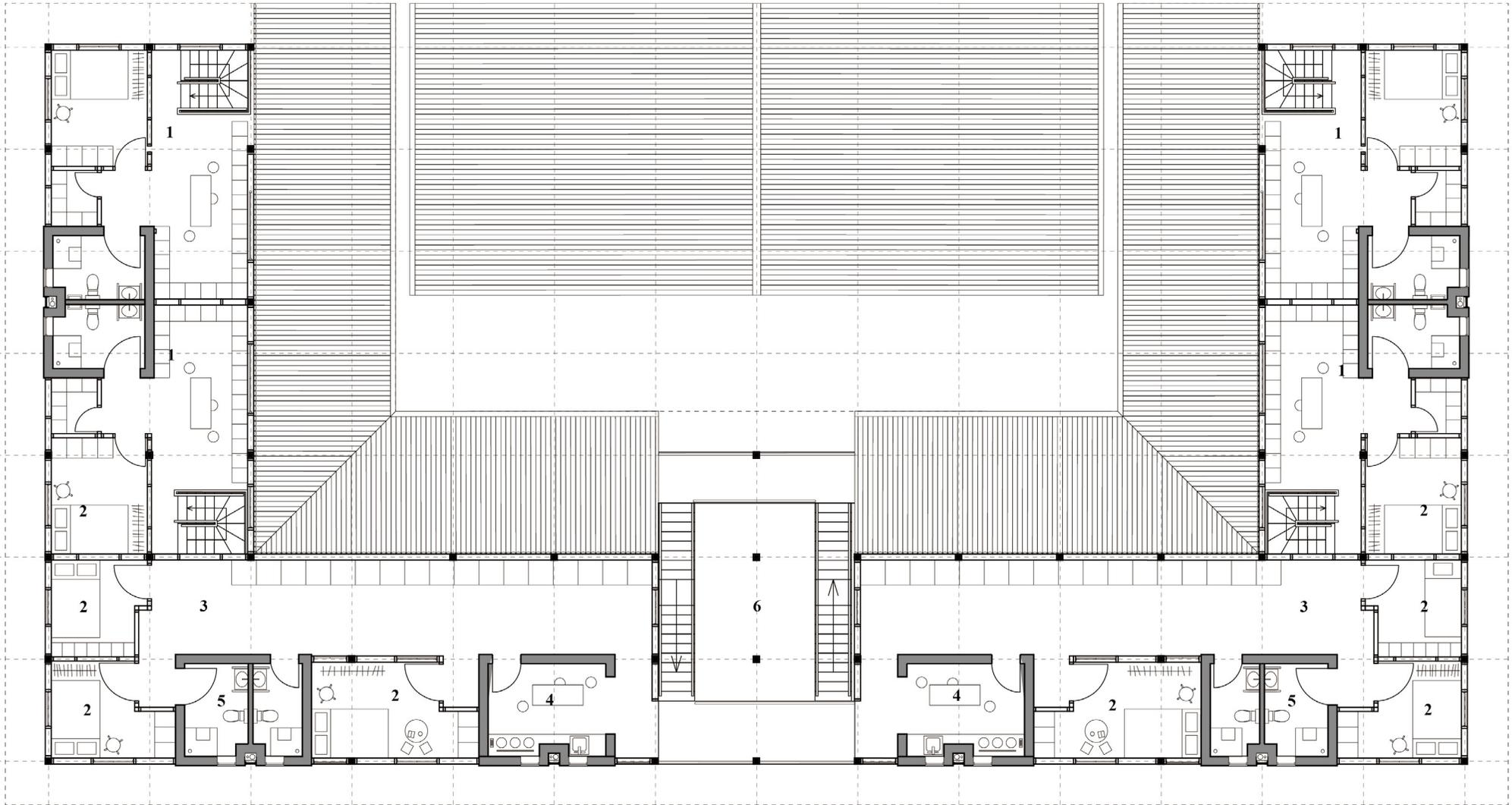
Residents: Maximun 6 people  
 12.5 m<sup>2</sup> per person

Seasonal workers can be located on the attic space



**Attic space plan**

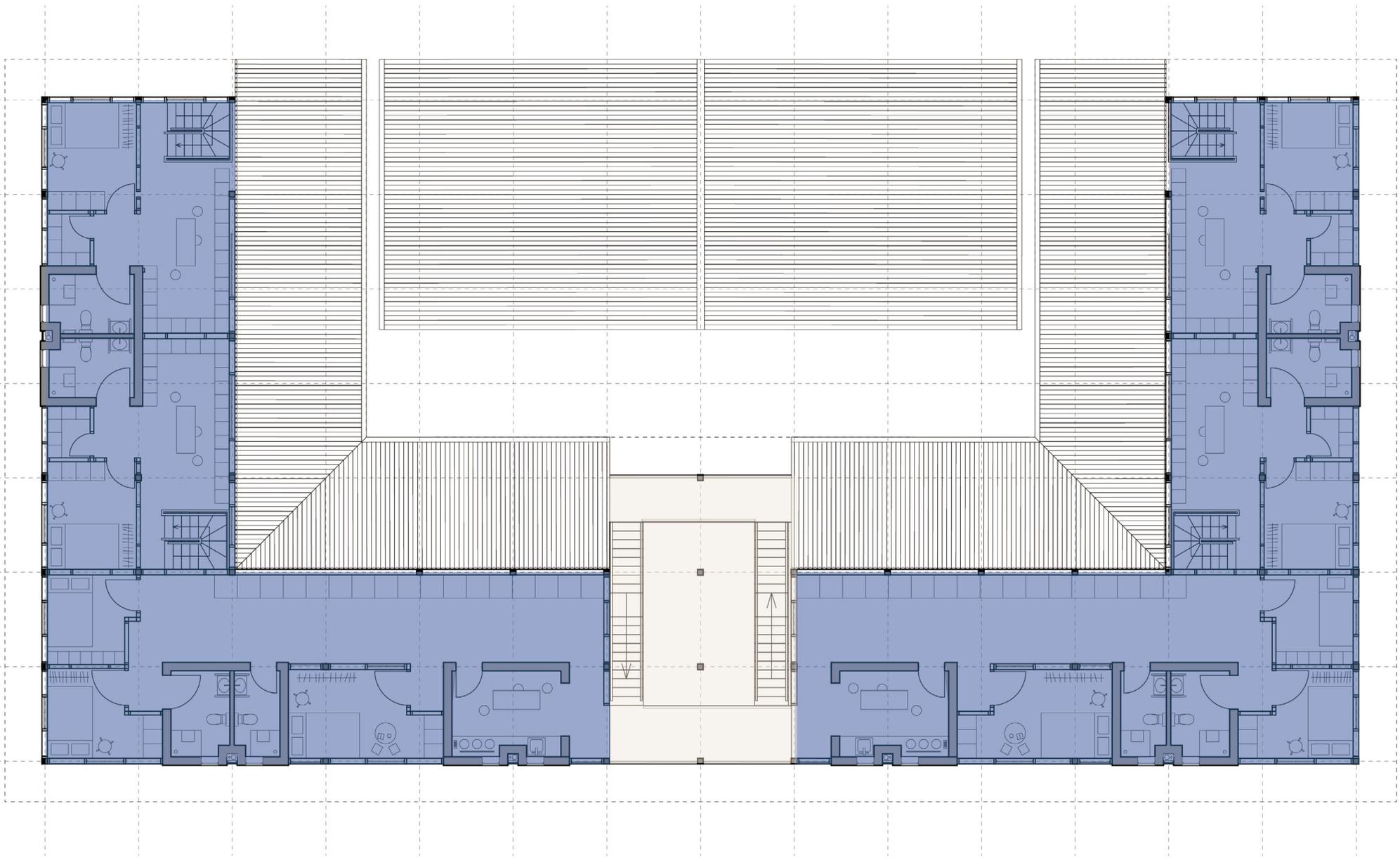
2.5 m



ATTIC PLAN

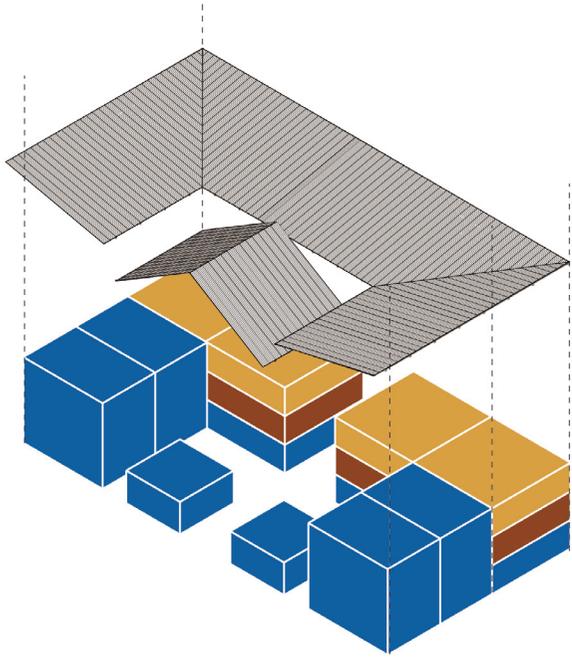
1:100

- 1 UNIT 1
- 2 WORKER UNIT
- 3 SHARED SPACE
- 4 SHARED KITCHEN
- 5 TOILET
- 6 PUBLIC STAIRCASE



- Living space
- Circulation space

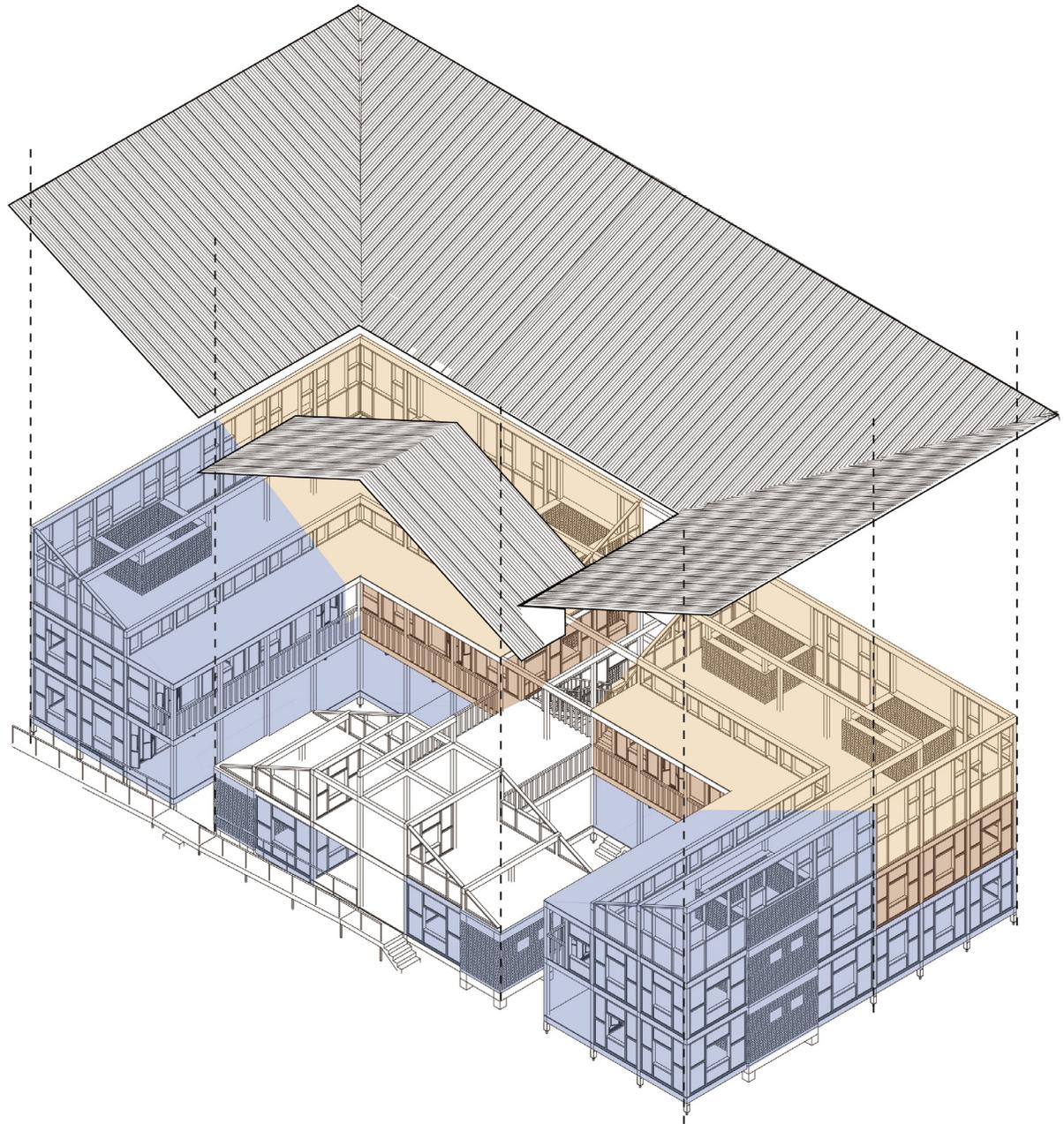
ATTIC PLAN  
1:100

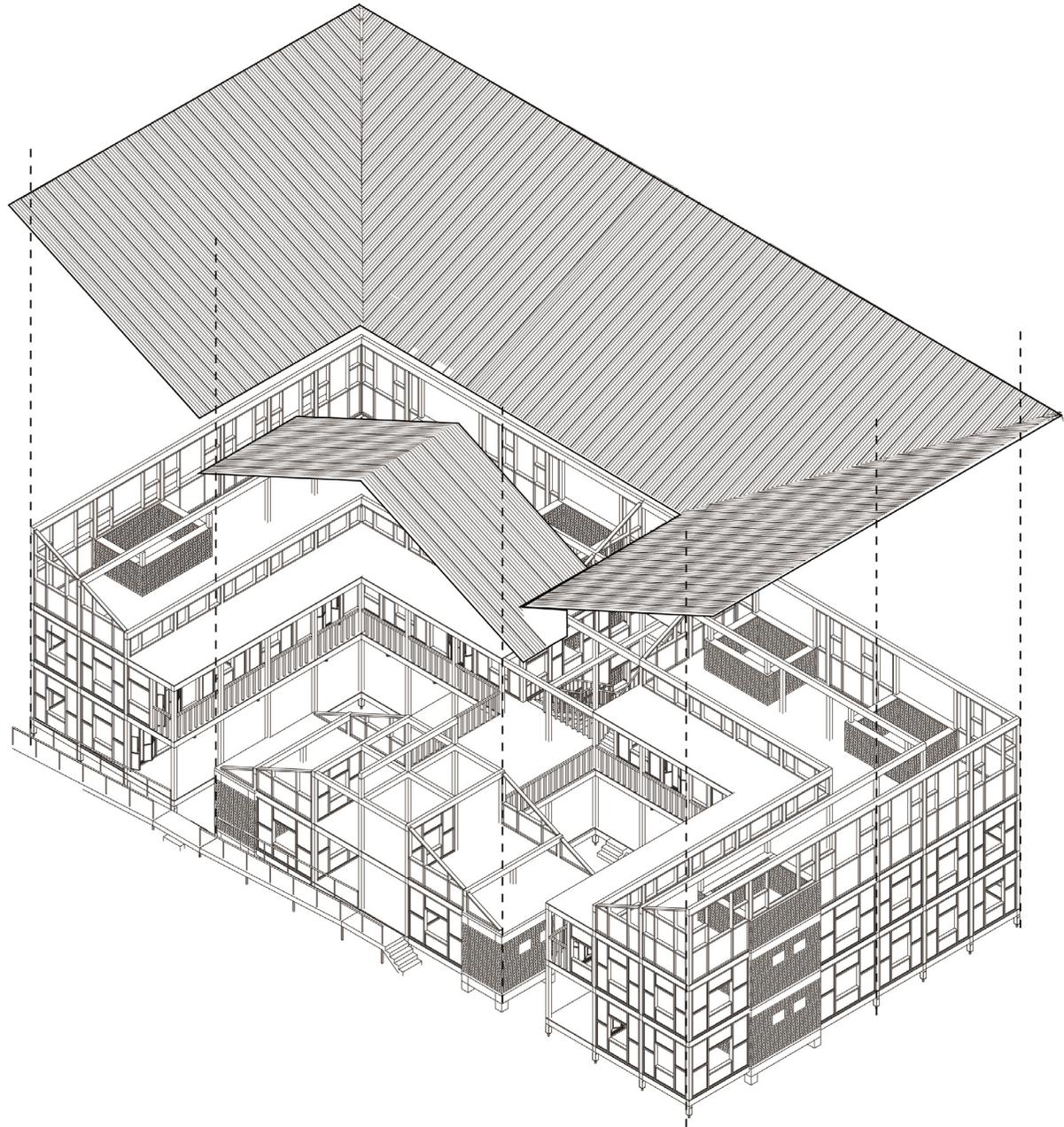


These three types of units are assembled to form a cluster layout, allowing diverse groups of people to live under the same roof. This design aims to create a sense of a small community within each cluster, so that elderly residents feel connected to others as part of a shared community. This way, they are no longer isolated in individual rooms but instead experience a sense of belonging and interaction within their living environment.

- Unit for seasonal workers
- Unit for young family
- Unit focus on elderly's needs

**CLUSTER - LIVE UNDER THE SAME ROOF**





Number of dwelling cluster: **26** in total;

**12** family unit + **2** elderly unit + **8** worker unit per cluster

Number of different unit types: **6**

Average floorspace area: **1312.5 m<sup>2</sup> floor area** per cluster;

**237.5 m<sup>2</sup> common area** per cluster

Percent of dwelling space/cluster space: **84.7%**

## CLUSTER - PROGRAMATIC DATA





GROUND FLOOR PLAN

1:210



LAKKATURA

## **- COMMUNITY-**

The planning of tea garden community goes along with its natural context, while keeping and enlarging the original community hub. Residential clusters are located along the road in the same phase.

## Social-Spatial Data

### Existing situation

Community area: 5.7 ha

Original residents: 124 family; 744 people  
250 seasonal workers

Original density: 130.5 (residents/ha)  
26.3 (units/ha)

Original FSI: 0.15

Original GSI: 0.15

### New community planning

Community area: 5.7 ha

Residents: 364 families+416 workers; 3146 people  
Including 104 single elderly people

Density: 551.92 (residents/ha)  
100.35 (units/ha)

FSI: 0.6

GSI: 0.33

Area for Amenities: 11190.5 m<sup>2</sup>

Ratio of amenities/resident: 37.8 (m<sup>2</sup>/person)

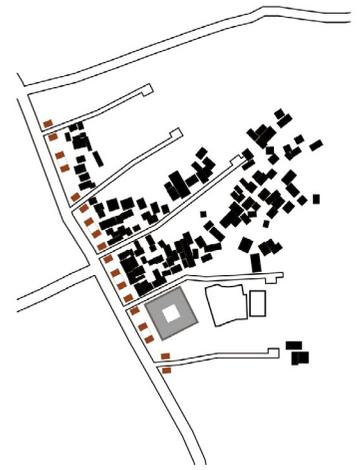
Ratio of open space/resident: 16.36 (m<sup>2</sup>/person)





- Existing houses
- Residential cluster
- Cluster common space
- Commercial unit
- Temporary apartment
- Nursing building
- Community hub
- Road

**DEVELOPMENT PHASES**



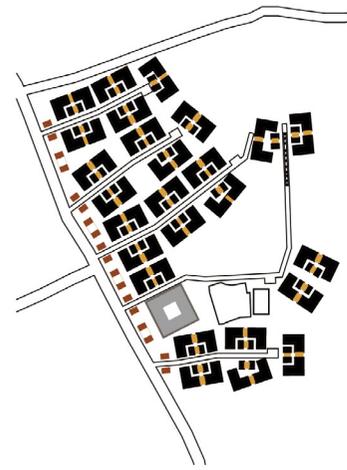
**PHASE 1:  
TEMPORARY APARTMENT & COMMERCIAL**

There will be a building functioning as a temporary apartment for residents in Lakkatura. During the construction period, people can move into the apartment for a transition. Commercial units along the community road will also be built in the first period.



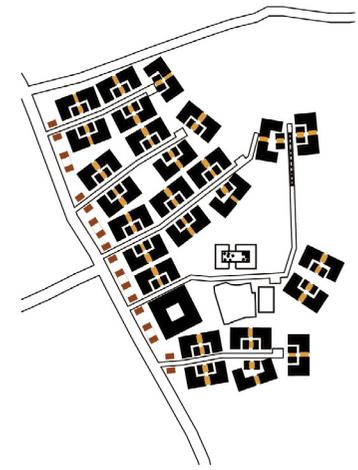
**PHASE 2:  
CLUSTERS ON FLAT LAND**

The construction of the whole community will be in several parts. Clusters locating near the road and relatively on flat land will be built first.



**PHASE 3:  
CLUSTERS IN THE HILL**

The whole construction of new housing system.

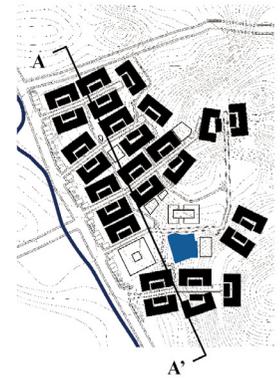


**PHASE 4:  
NURSING & COMMUNITY HUB**

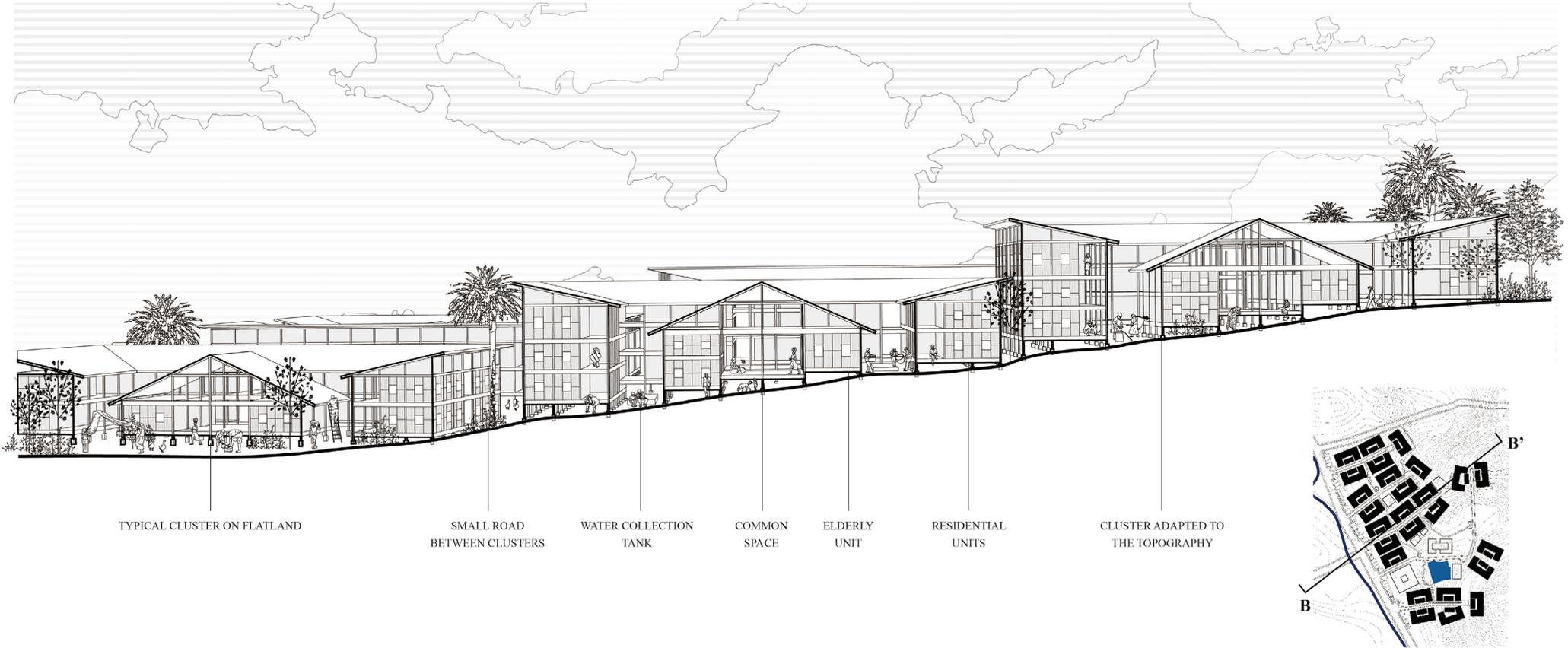
After the construction of housing clusters, the temporary apartment will be changed into a nursing building for those dependent elderly people. There will be medical care service especially for them. One community hub will be built next to the mosque, also functioning as additional housing area for seasonal workers during tea harvest time.



SECTION AA'







TYPICAL CLUSTER ON FLATLAND

SMALL ROAD  
BETWEEN CLUSTERS

WATER COLLECTION  
TANK

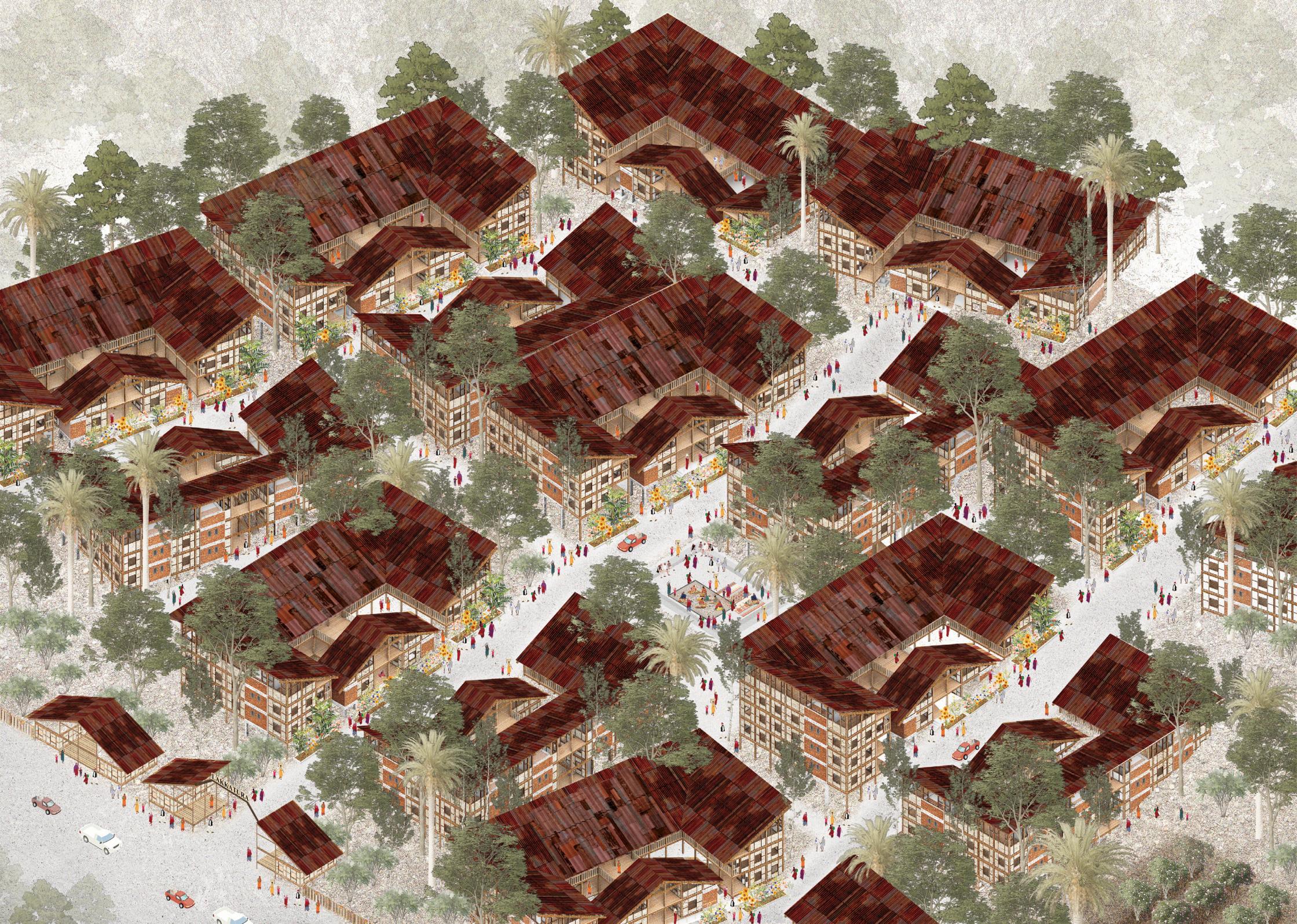
COMMON  
SPACE

ELDERLY  
UNIT

RESIDENTIAL  
UNITS

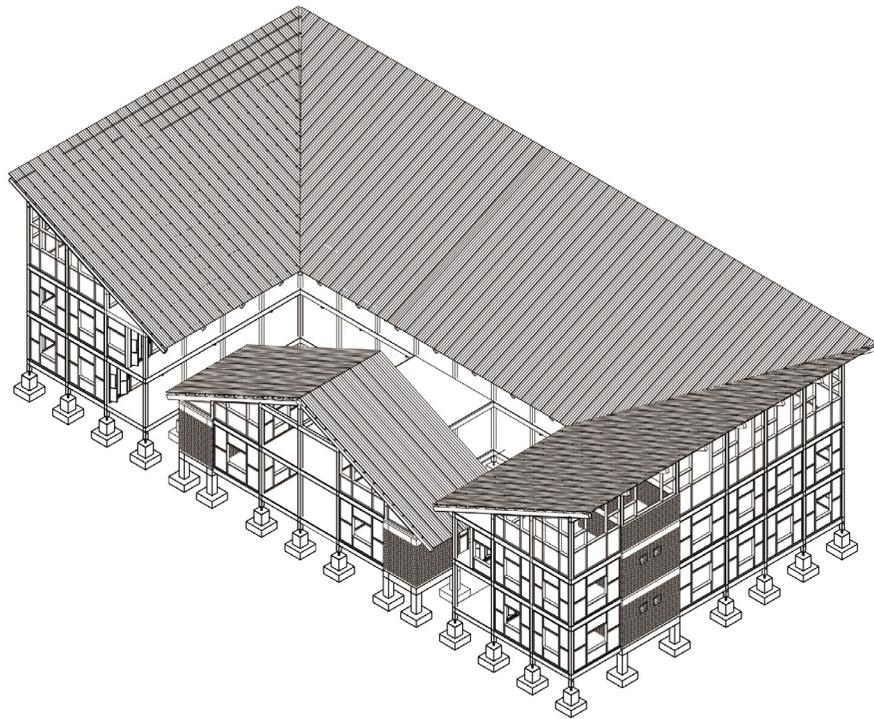
CLUSTER ADAPTED TO  
THE TOPOGRAPHY

SECTION BB'

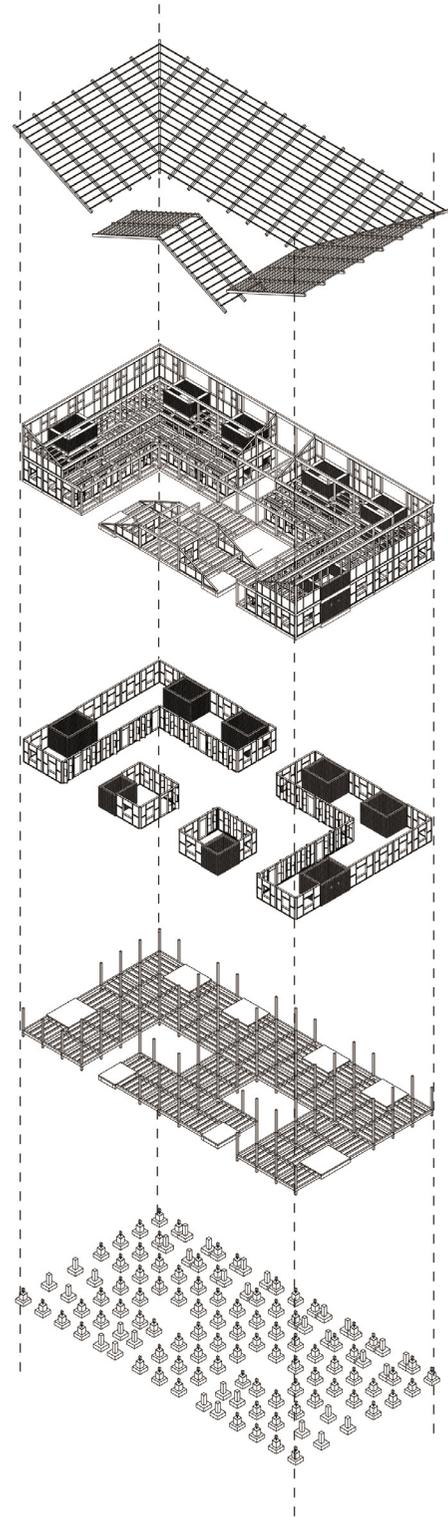


## **- STRUCTURE-**

The structure system is a light-weight timber structure with brick service core connected. It is constructed with the local material, trying to be low-cost and easy to be built by residents.



**CLUSTER STRUCTURE**



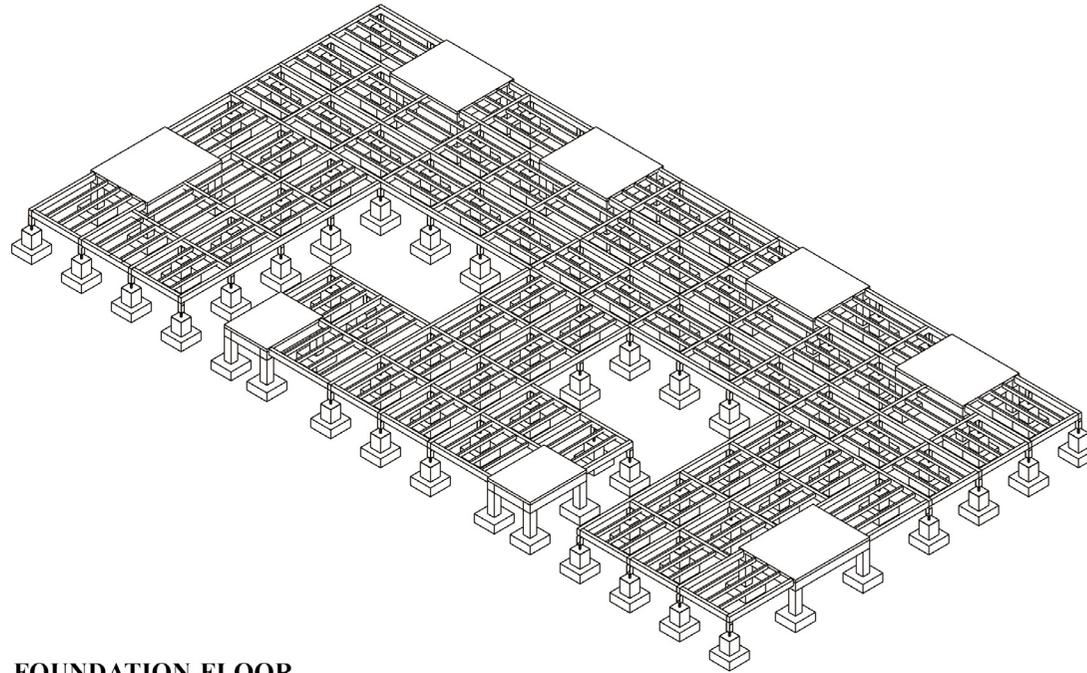
**ROOF STRUCTURE**

**FIRST FLOOR  
ATTIC**

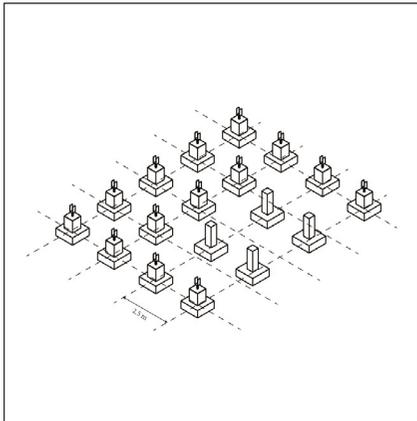
**WALL SYSTEM**

**FLOOR - BEAM**

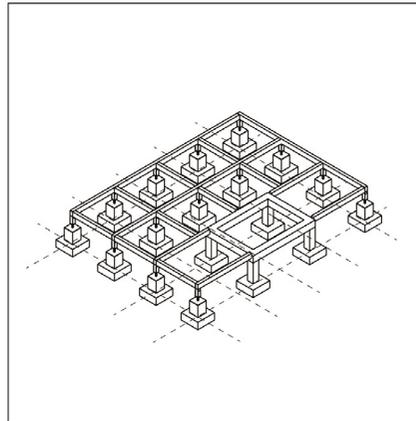
**FOUNDATION**



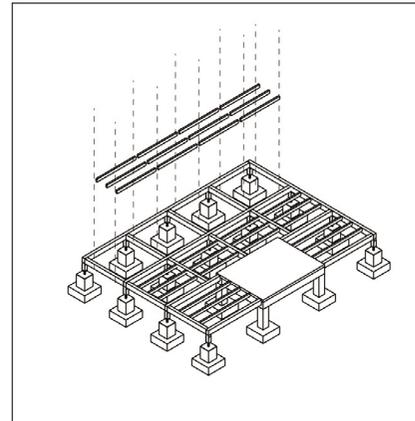
## FOUNDATION-FLOOR



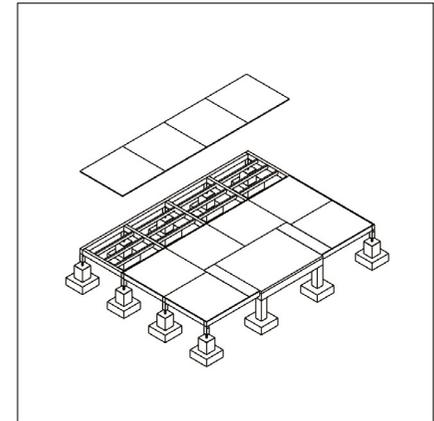
1 Base  
Concrete footings are located following the grid.



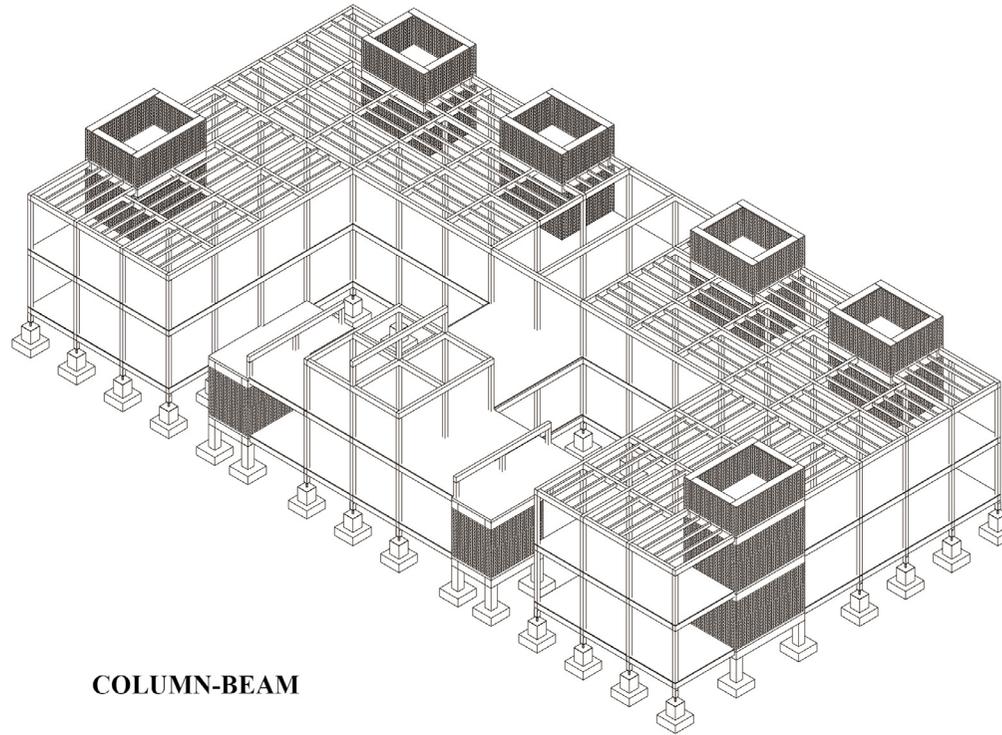
2 Floor main structure  
Timber beams are nailed to the columns which connect to the base; concrete floor beam are poured to connect with the base.



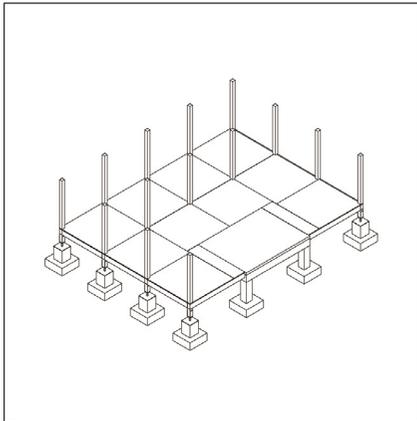
3 Floor substructure  
Timber joists are connected to the beams as supporting elements for floor slab.



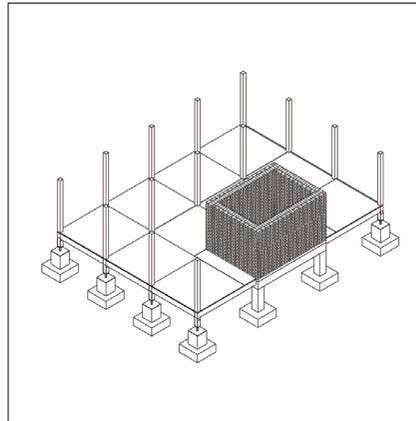
4 Flooring  
Wooden subfloor slabs (Karo tree, thickness 32 mm) are located onto the floor supporting structure.



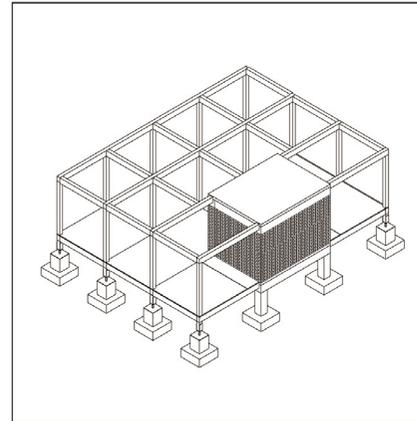
**COLUMN-BEAM**



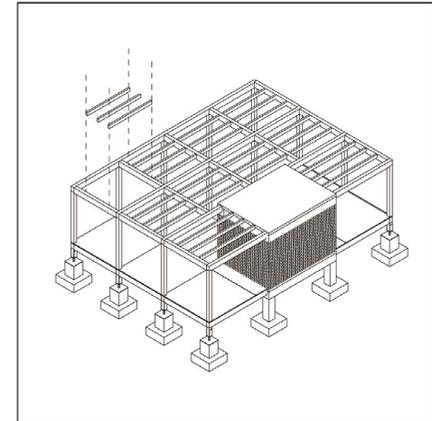
**1 Column**  
After finishing the construction of foundation and floor, timber column (Ironwood) will be constructed on the floor structure.



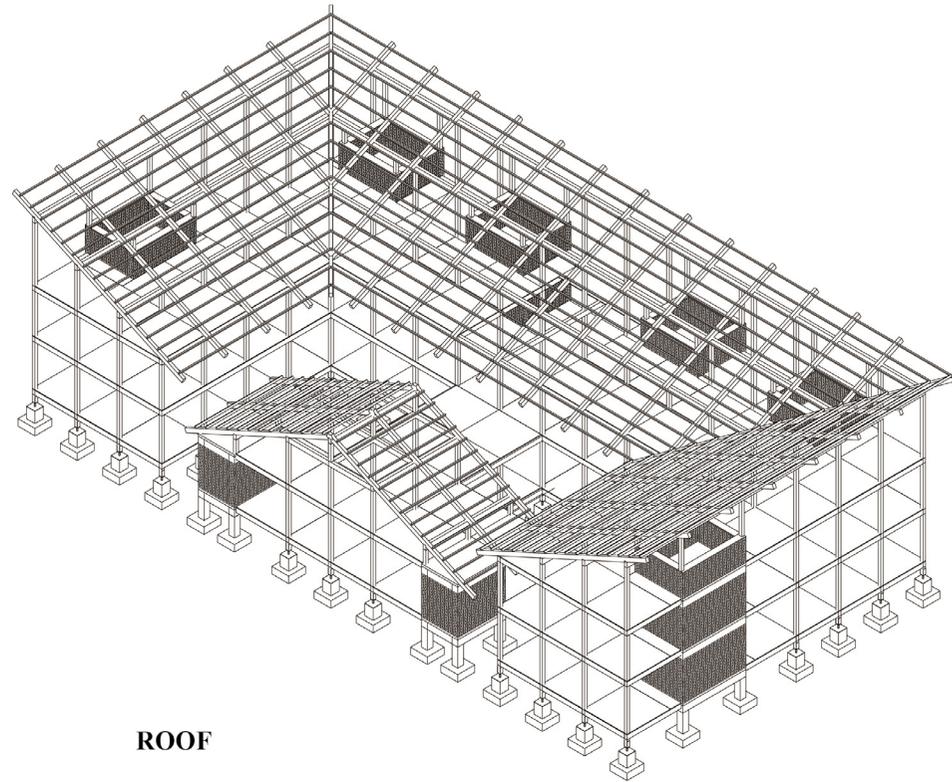
**2 Brick load-bearing structure**  
Brick wall will be constructed on the concrete structure to build up the service core (toilet and kitchen).



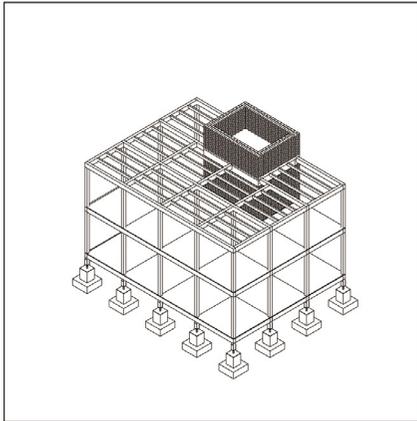
**3 Beam**  
Timber beams are connected to the column system.



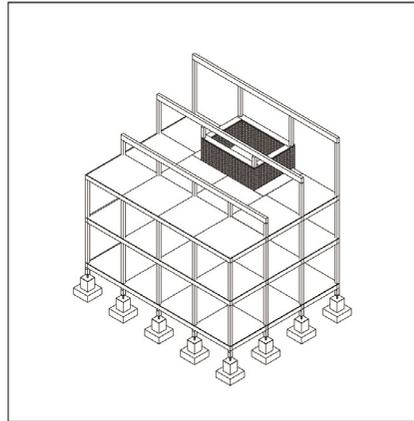
**4 Beam substructure**  
Timber joists are added to hold the weight of floor slab.



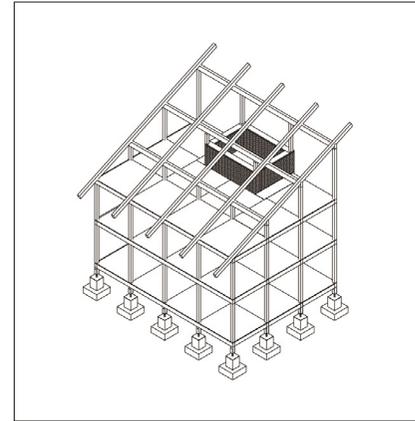
## ROOF



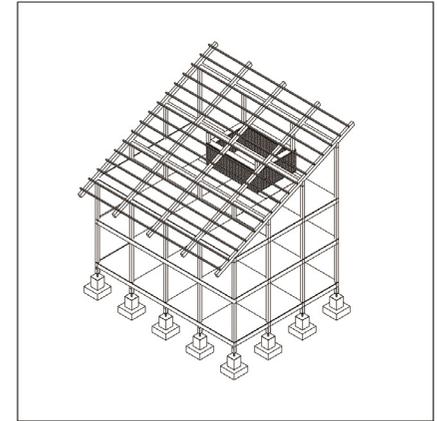
**1 Column and beam**  
After finishing the construction of column and beam system, it comes to the construction of roof structure.



**2 Roof beam**  
Timber columns and beams are located for the attic space to hold the weight of roof structure.



**3 Rafters**  
Timber rafters are set on the roof beams in the angle of 25°.

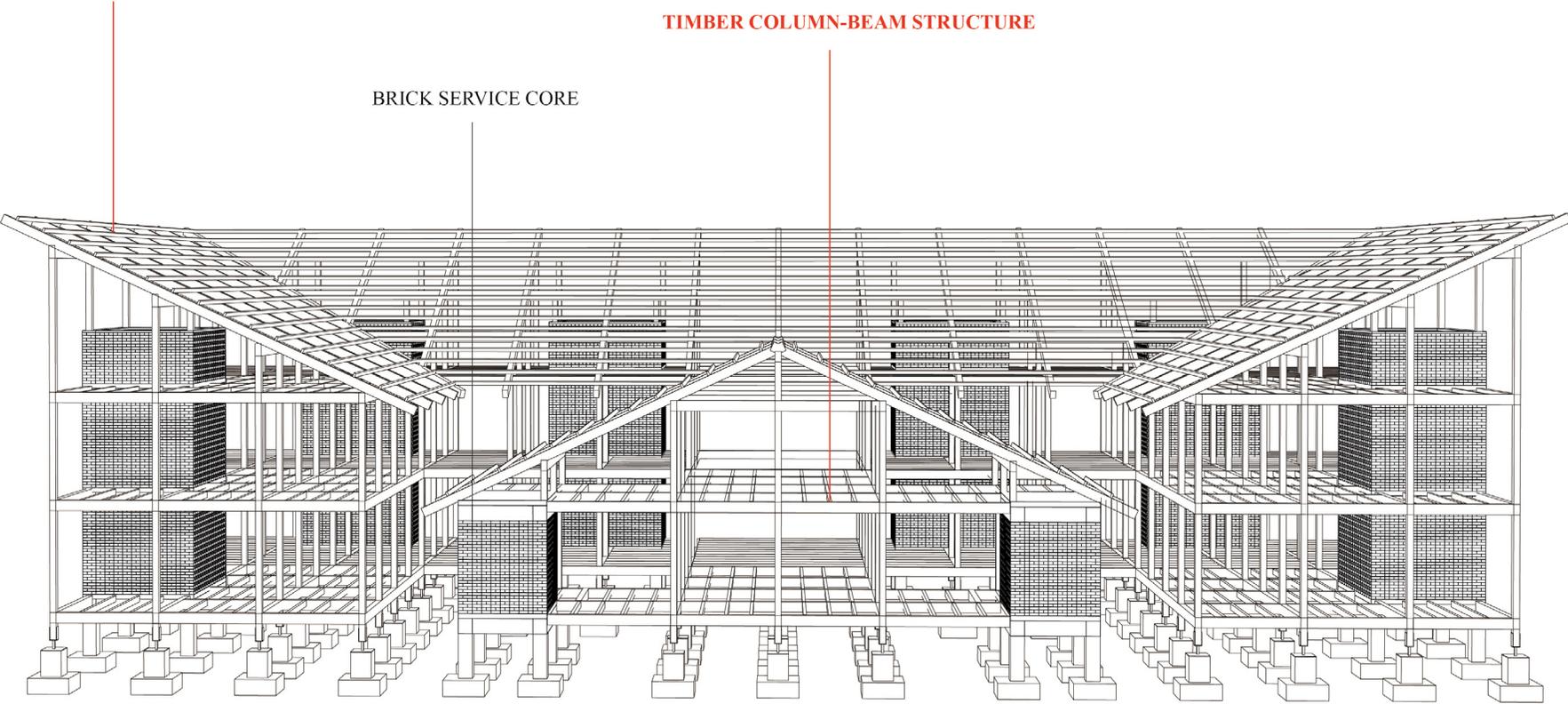


**4 Purlin**  
Timber purlins are added to the rafters in order to support the roof envelope.

TIMBER ROOF STRUCTURE

TIMBER COLUMN-BEAM STRUCTURE

BRICK SERVICE CORE

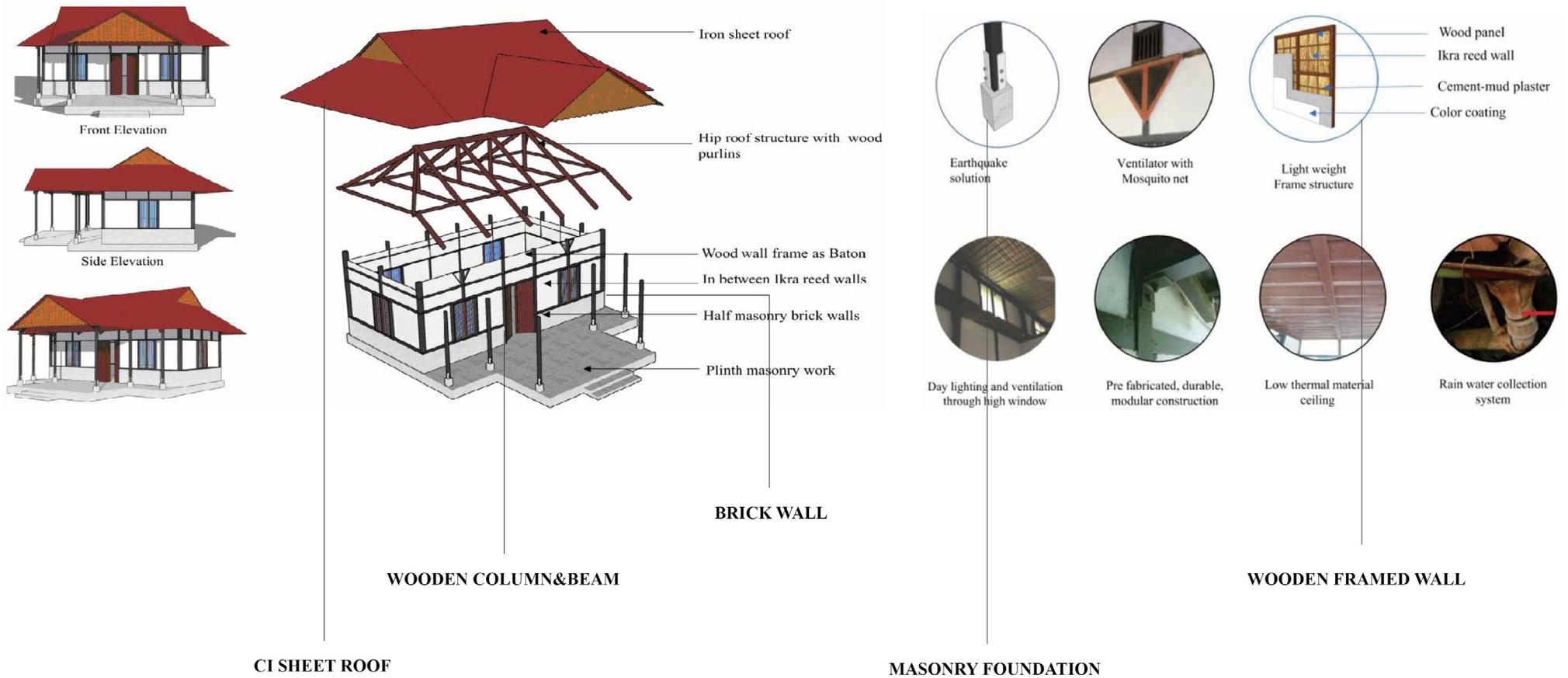


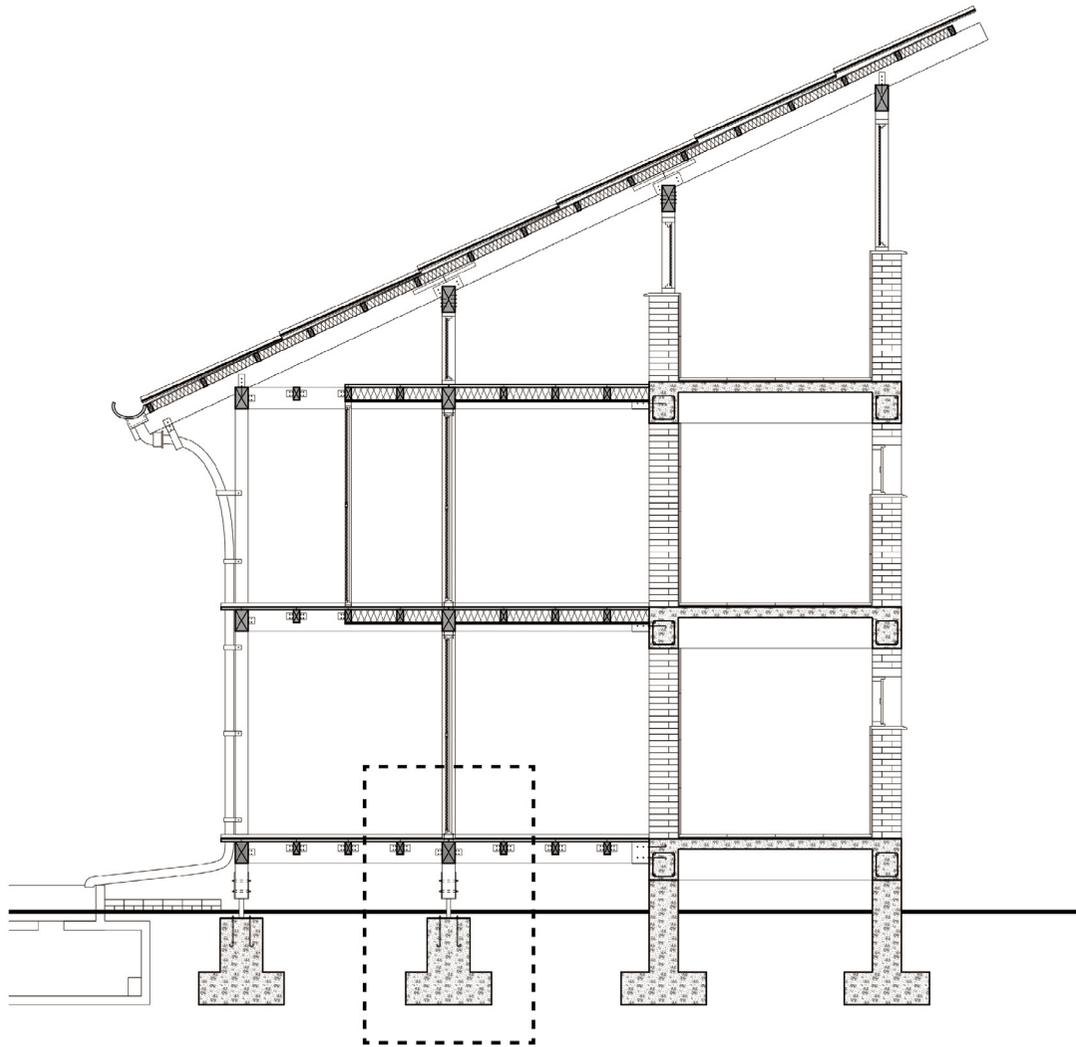
CONCRETE FOUNDATION

MAIN STRUCTURE

# BANGLA BATON ARCHITECTURE

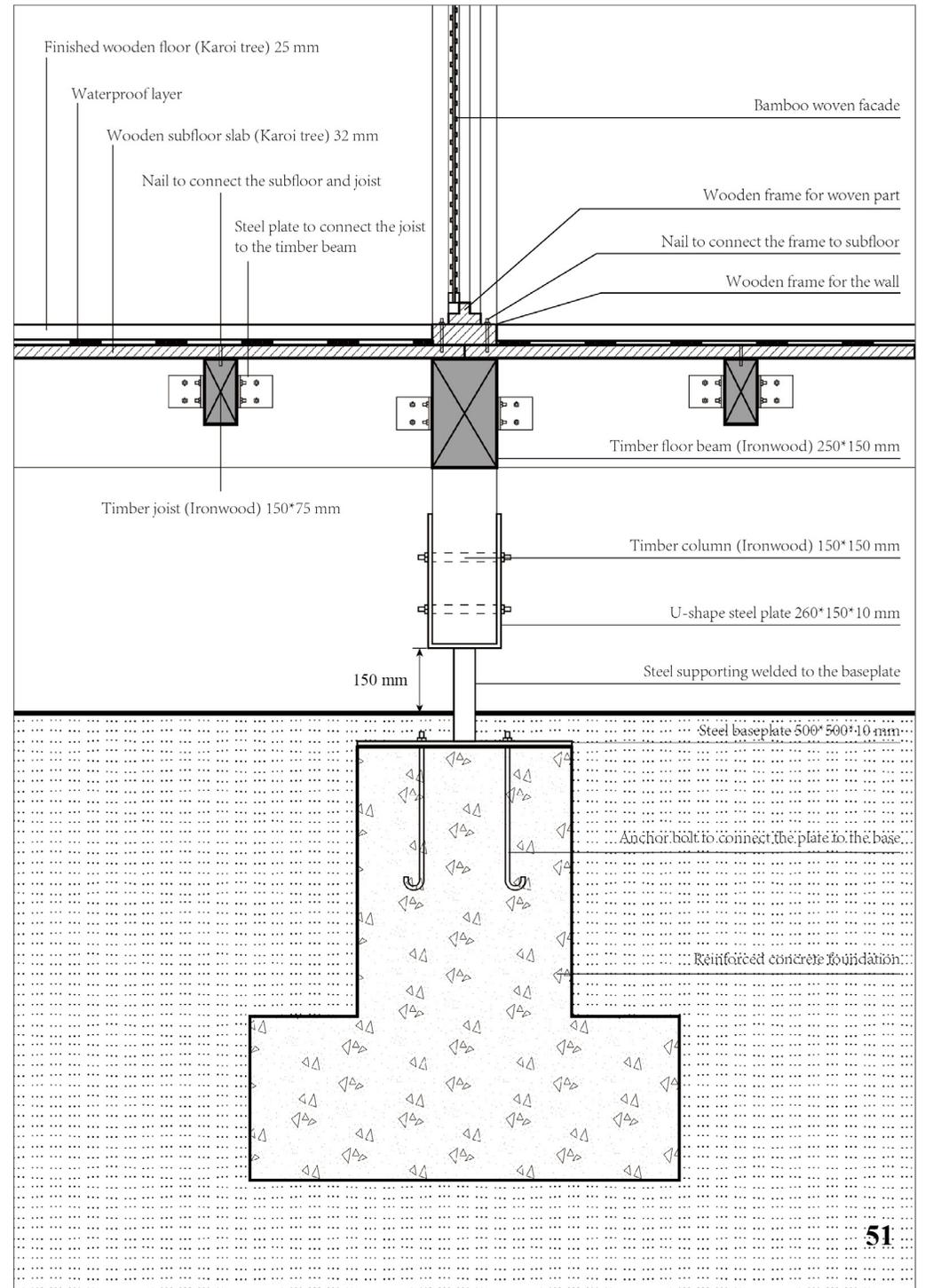
Bangla baton is a traditional architecture style in Sylhet region. It is easy for the local residents to build their houses with this style due to its modular construction technique.

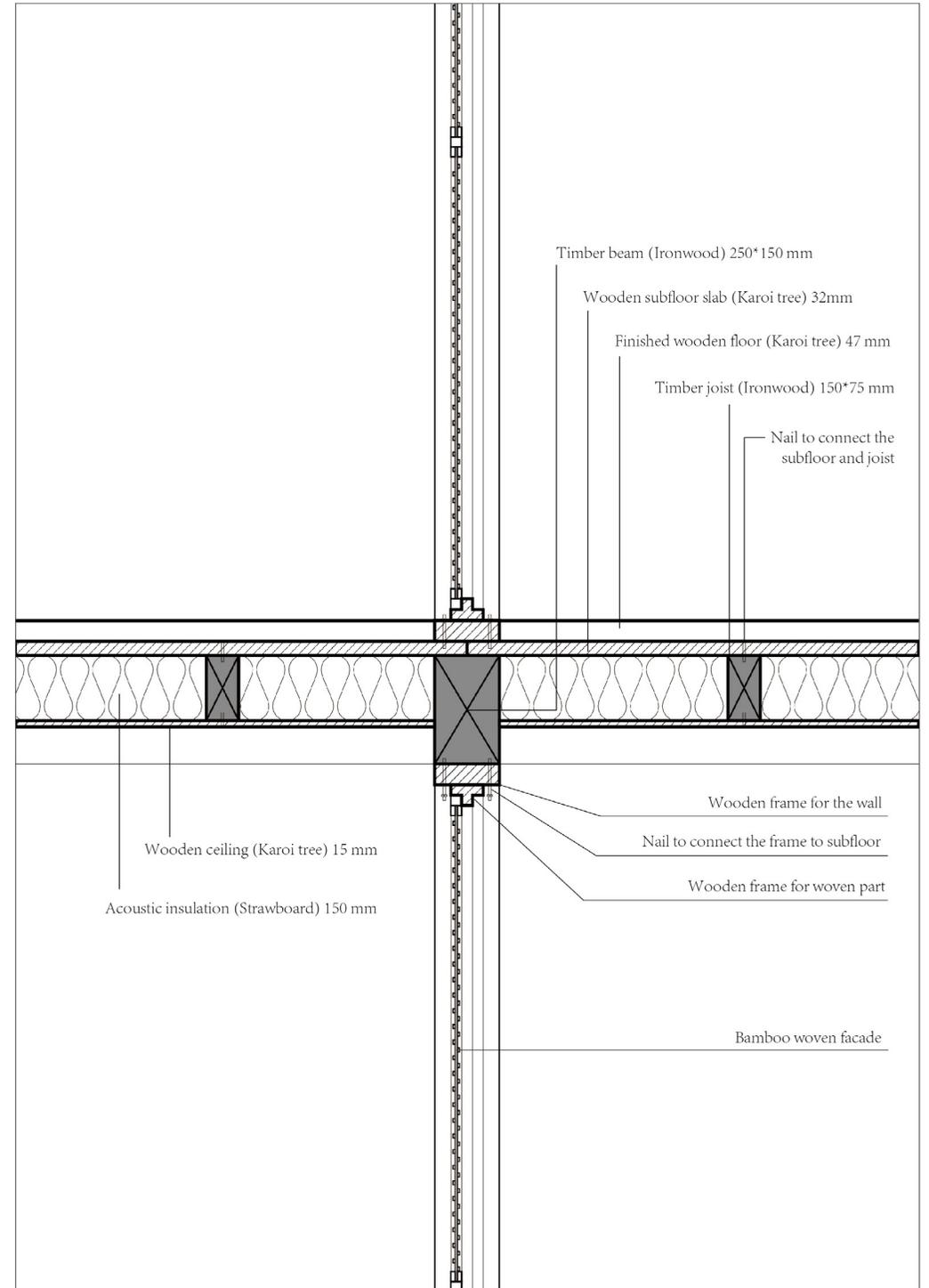
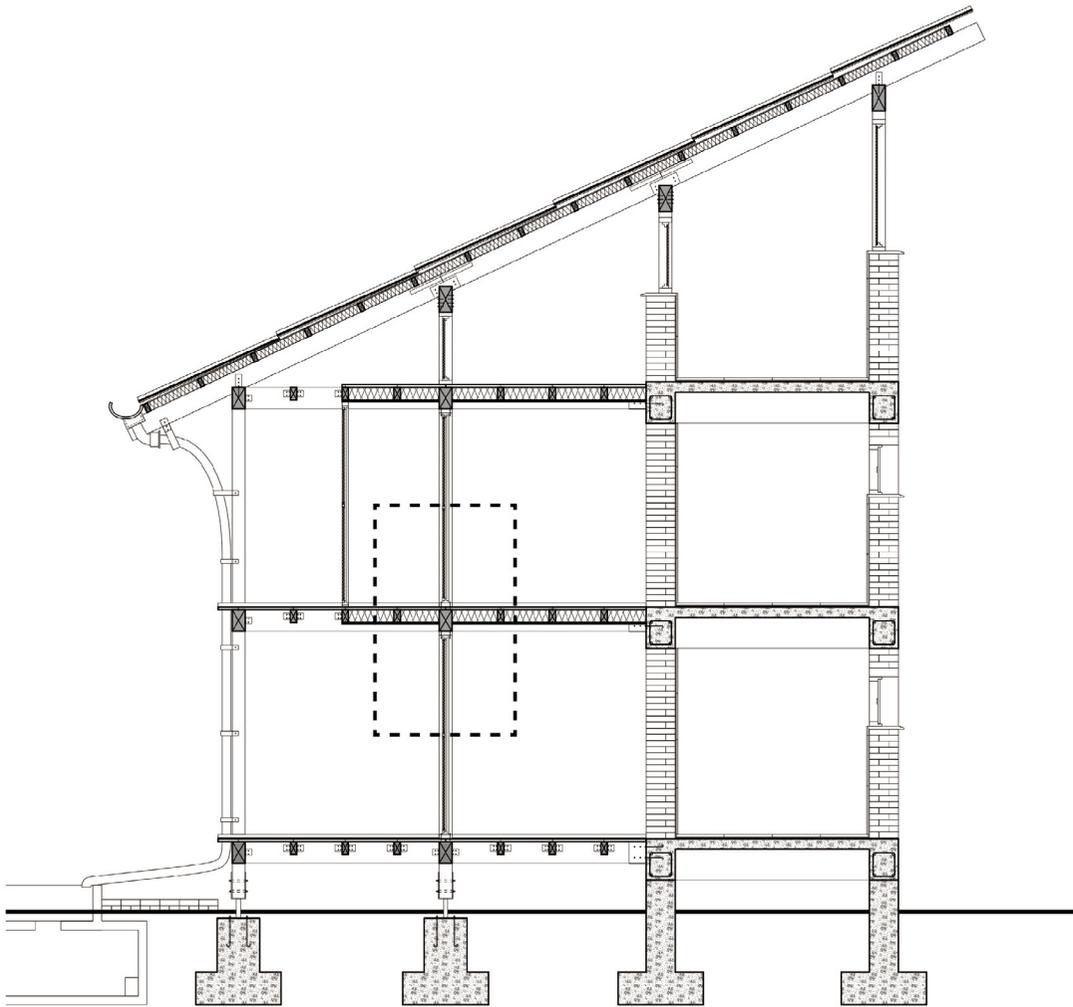




DETAIL SECTION - FOUNDATION 1

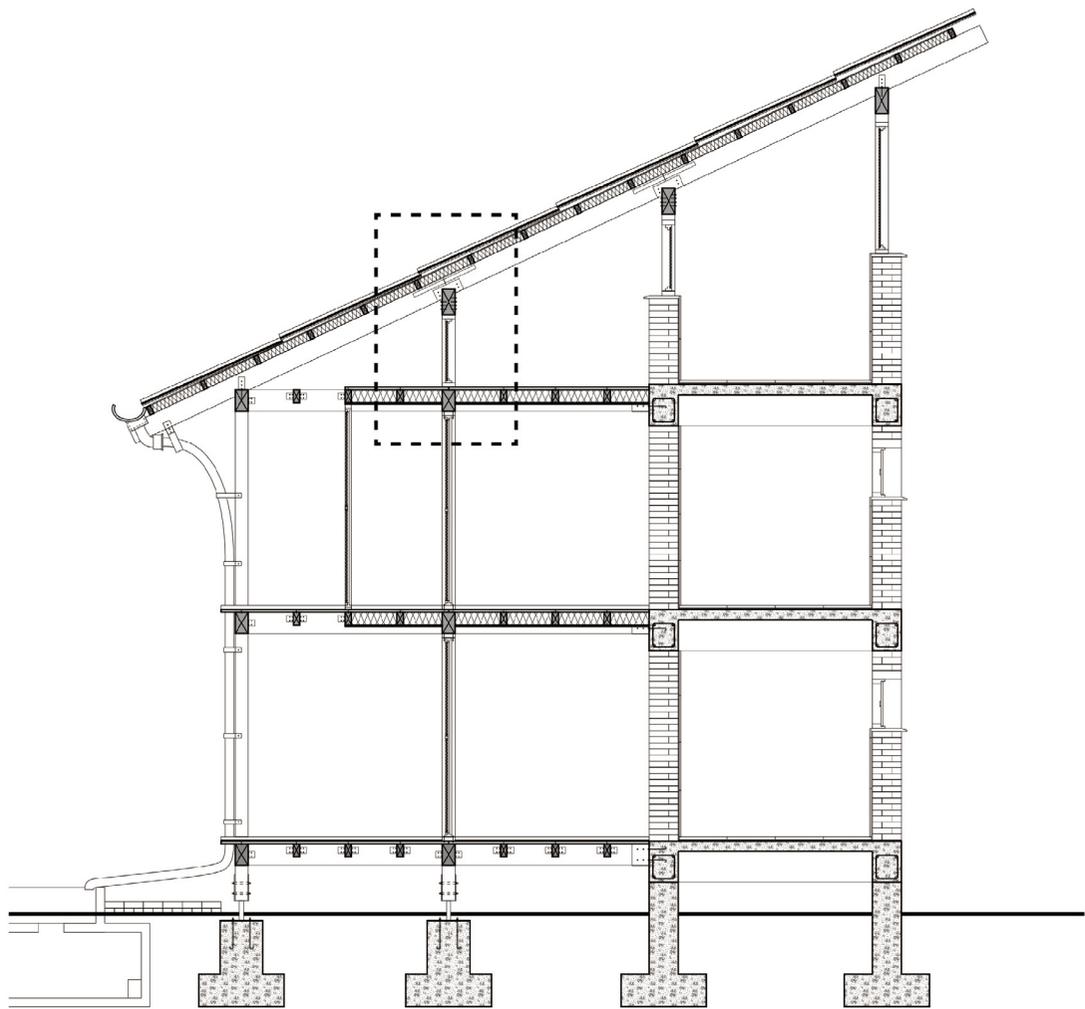
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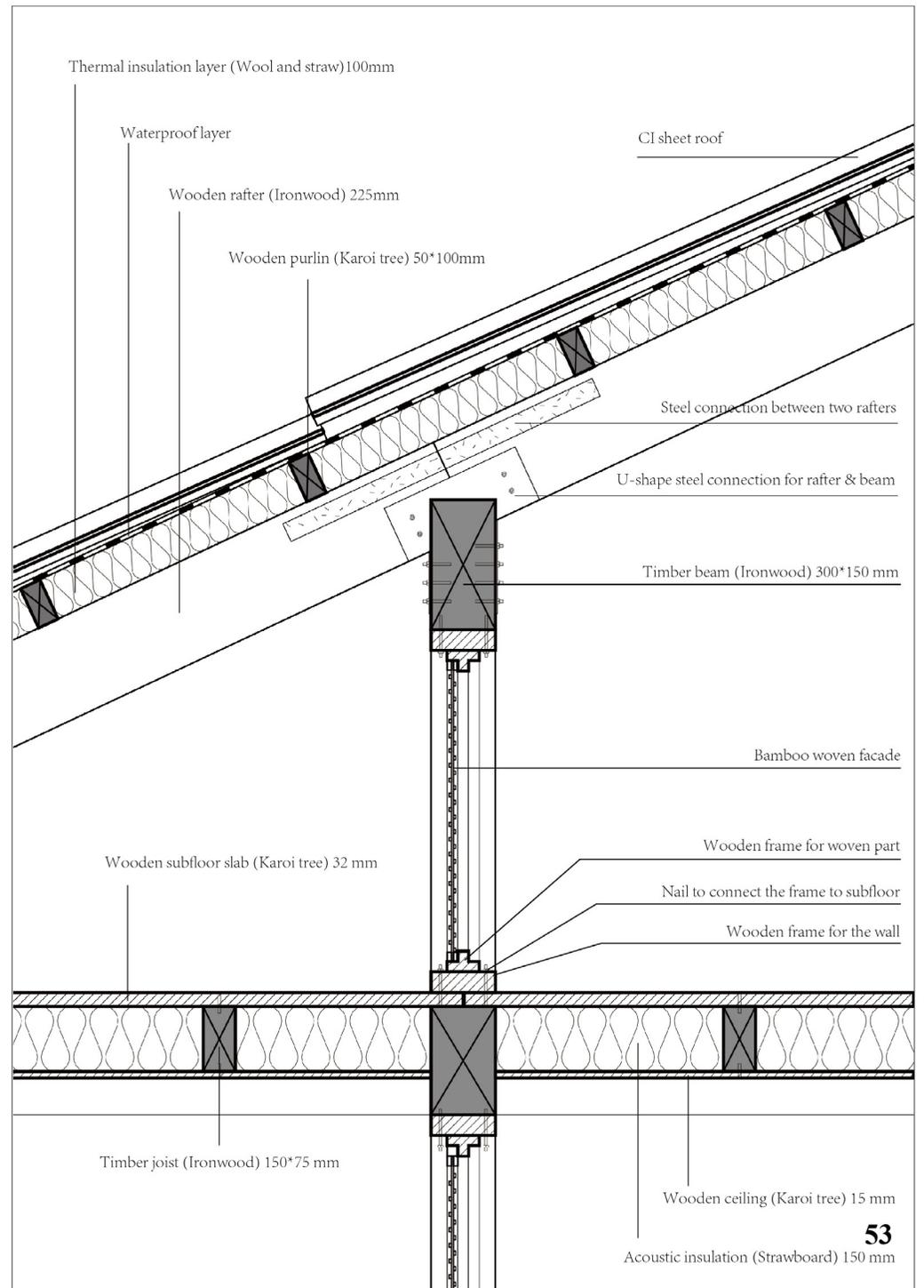
DETAIL SECTION - FLOOR AND WALL 1

1:10



DETAIL SECTION - ROOF 1

1:10

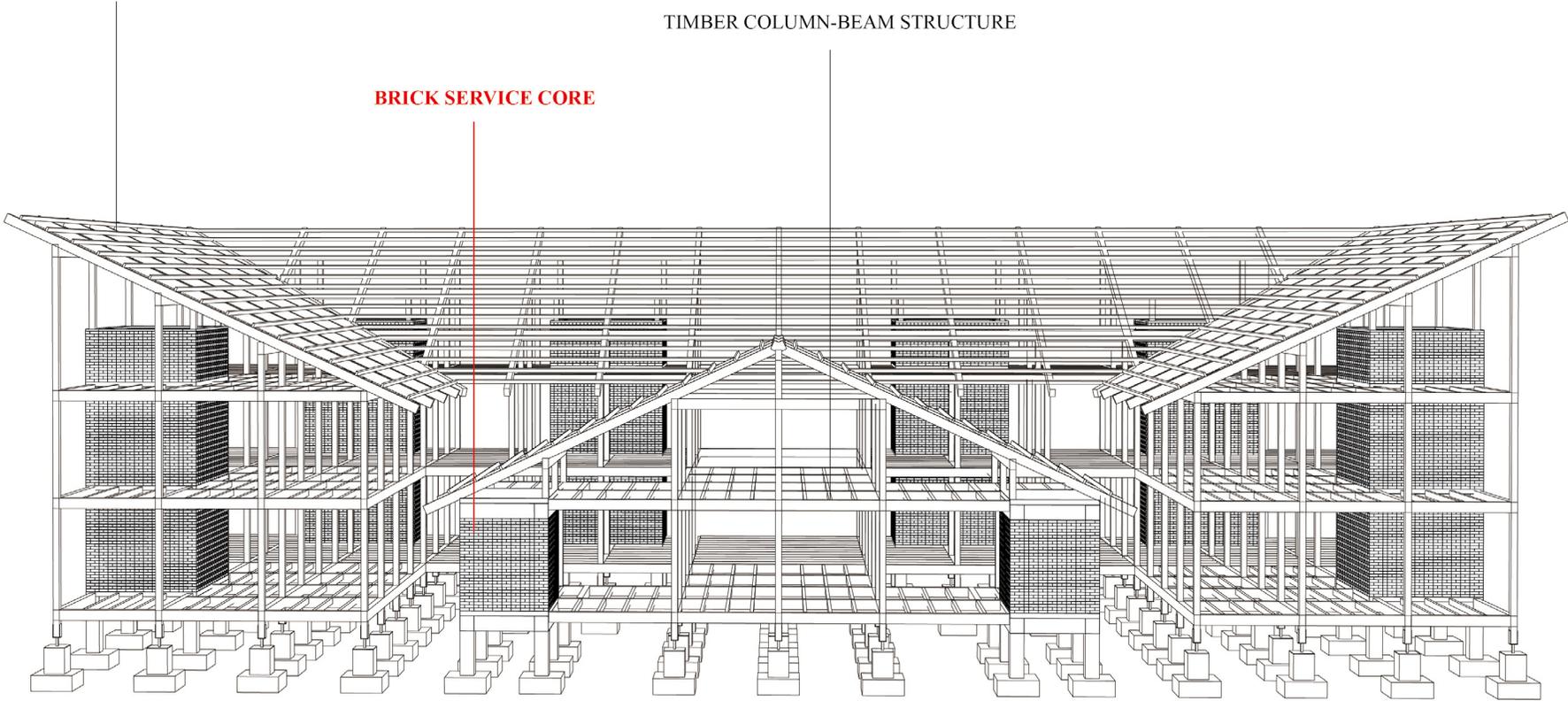




TIMBER ROOF STRUCTURE

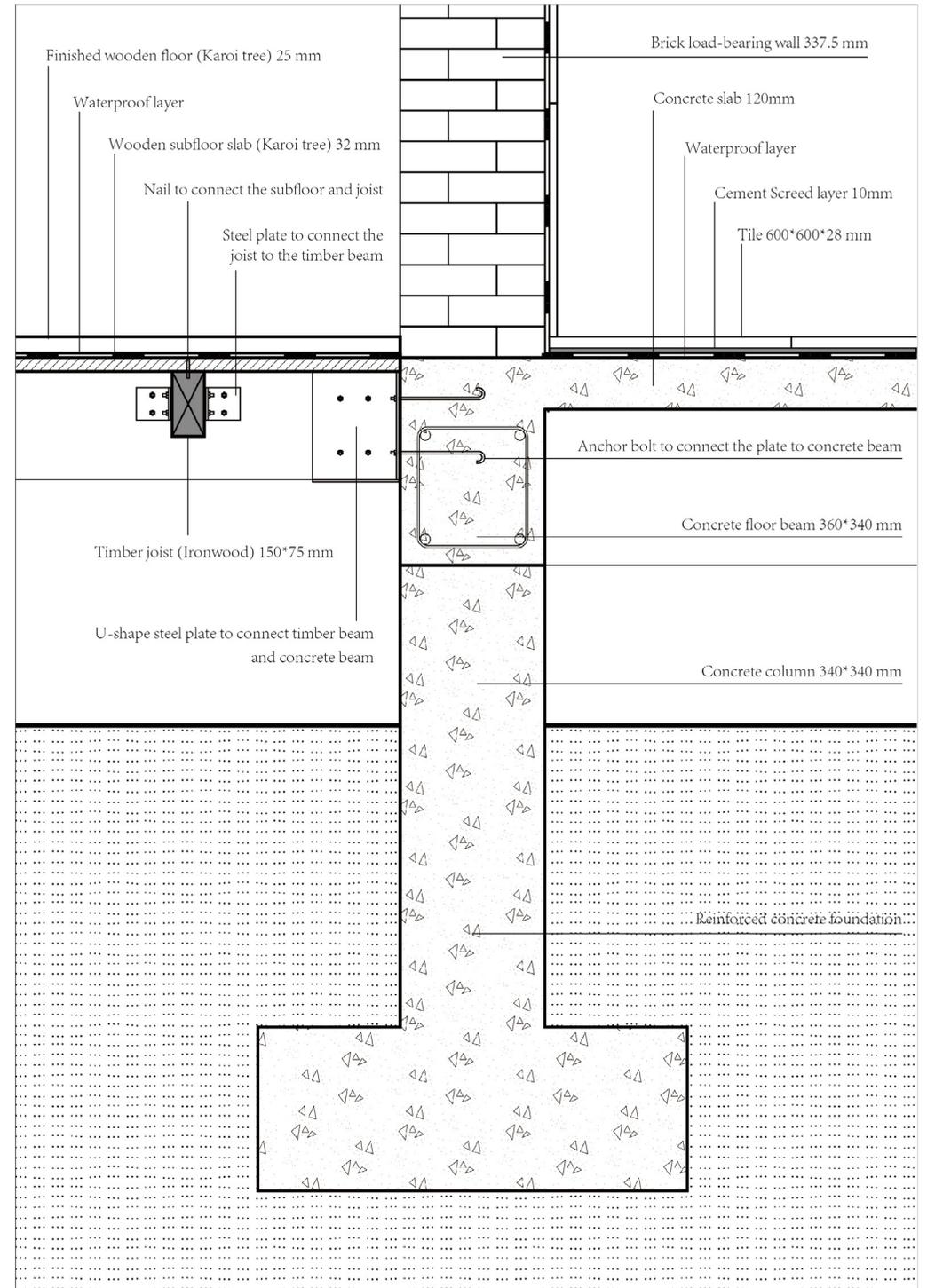
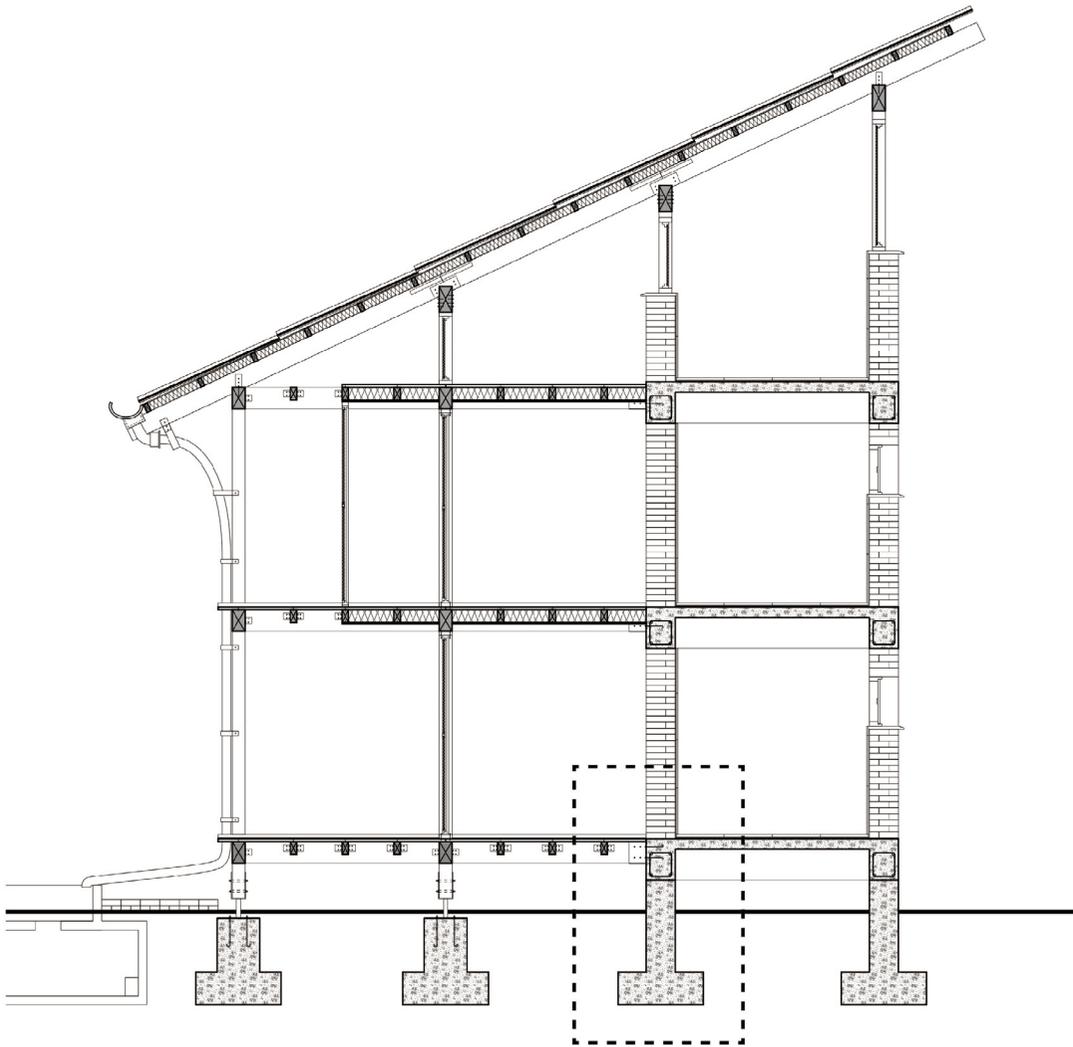
TIMBER COLUMN-BEAM STRUCTURE

BRICK SERVICE CORE



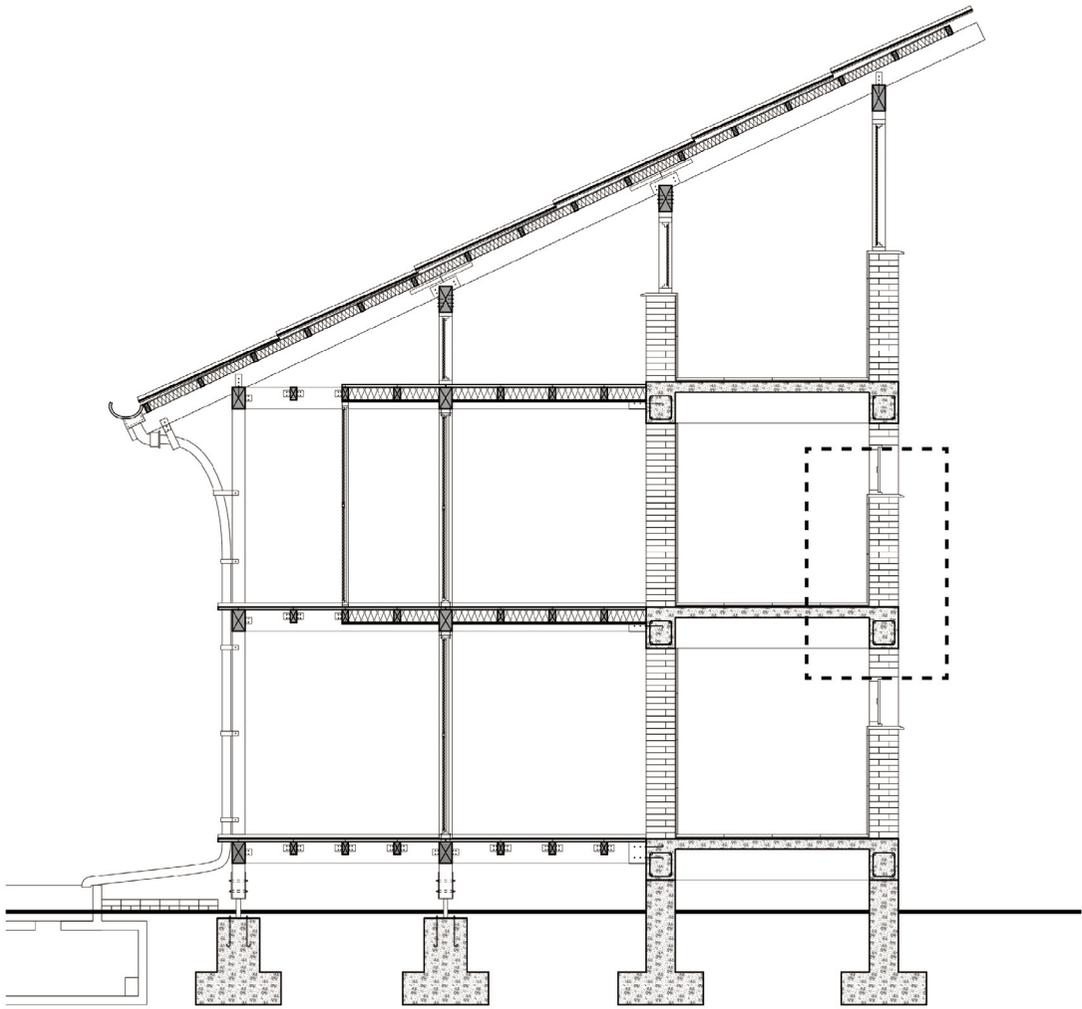
CONCRETE FOUNDATION

MAIN STRUCTURE



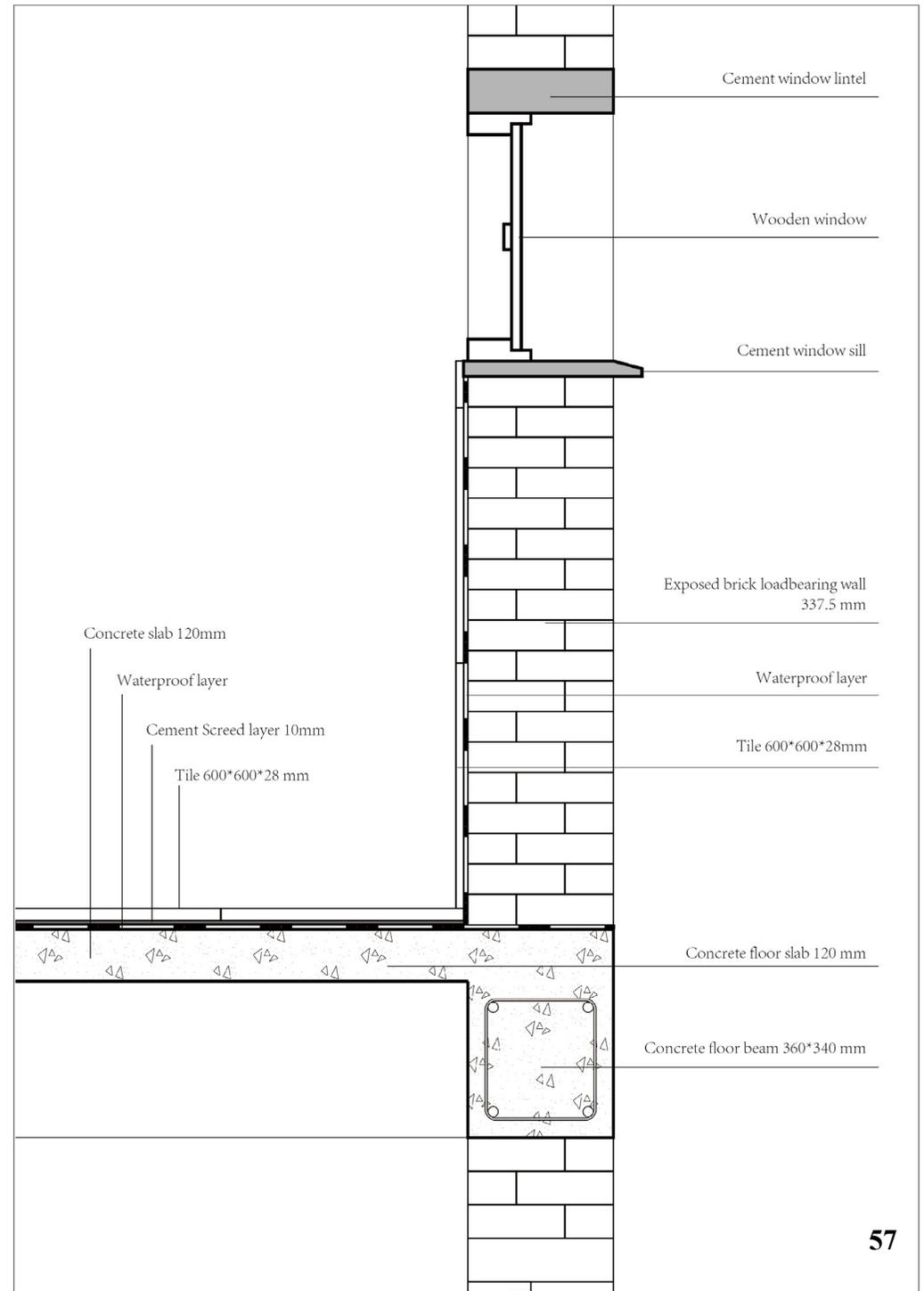
DETAIL SECTION - FOUNDATION 2

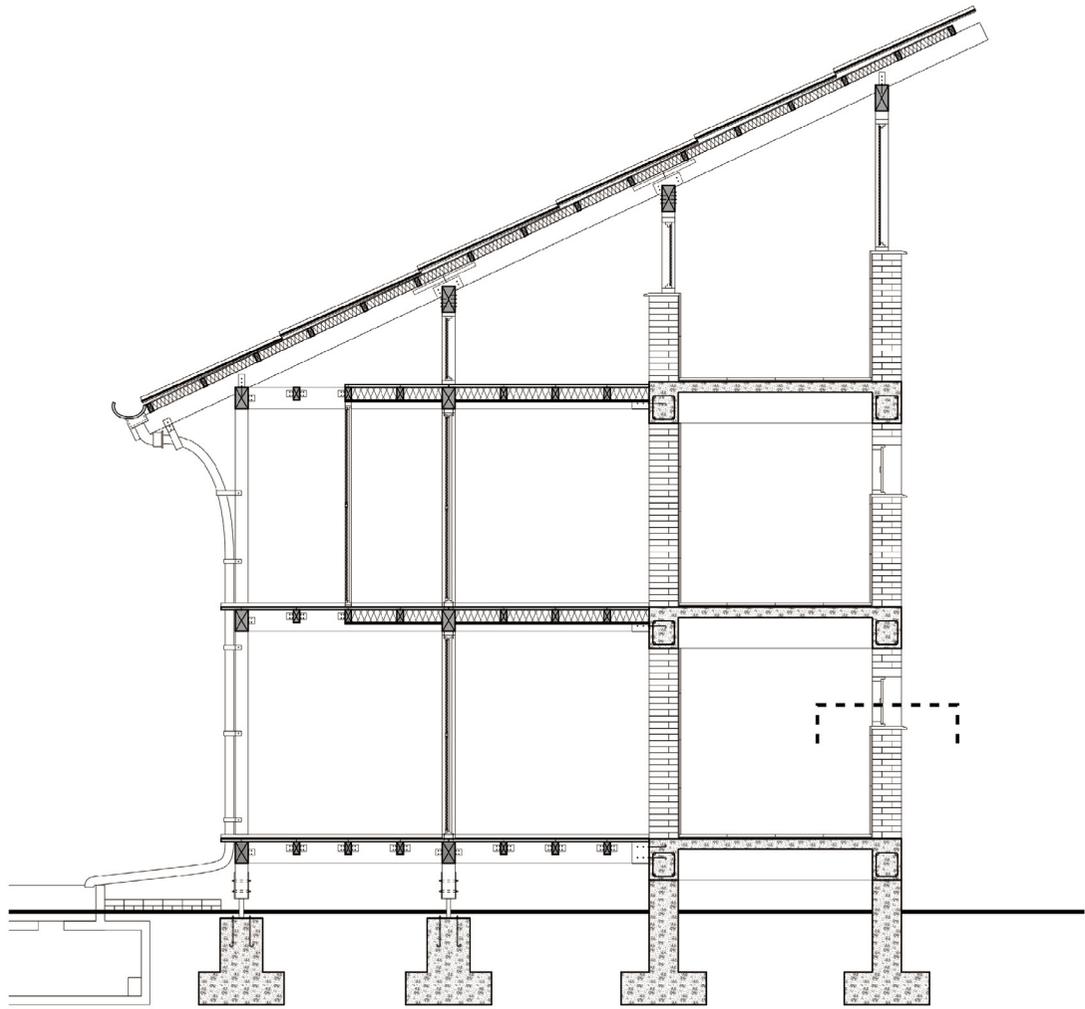
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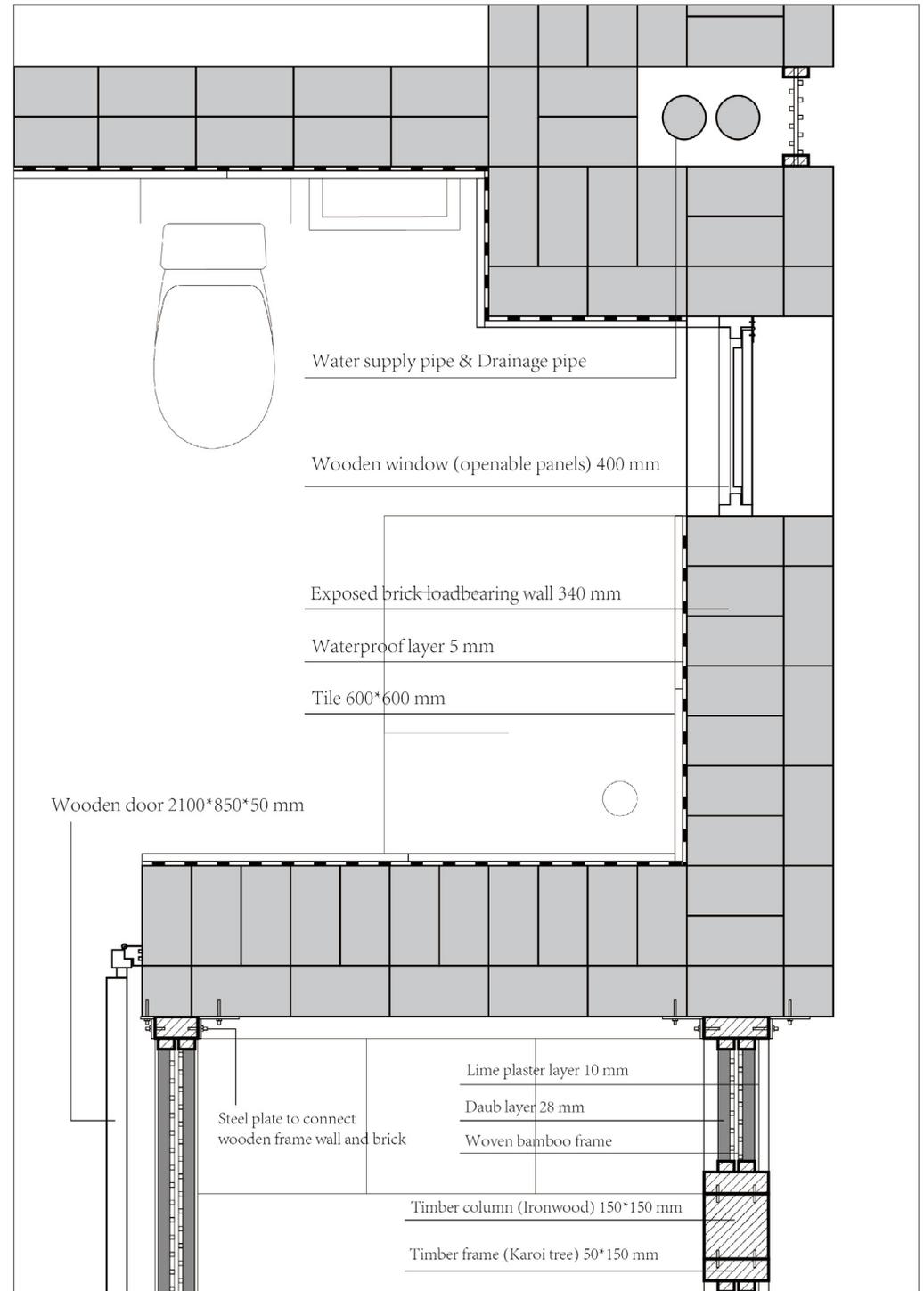
DETAIL SECTION - FLOOR AND WALL 2

1:10

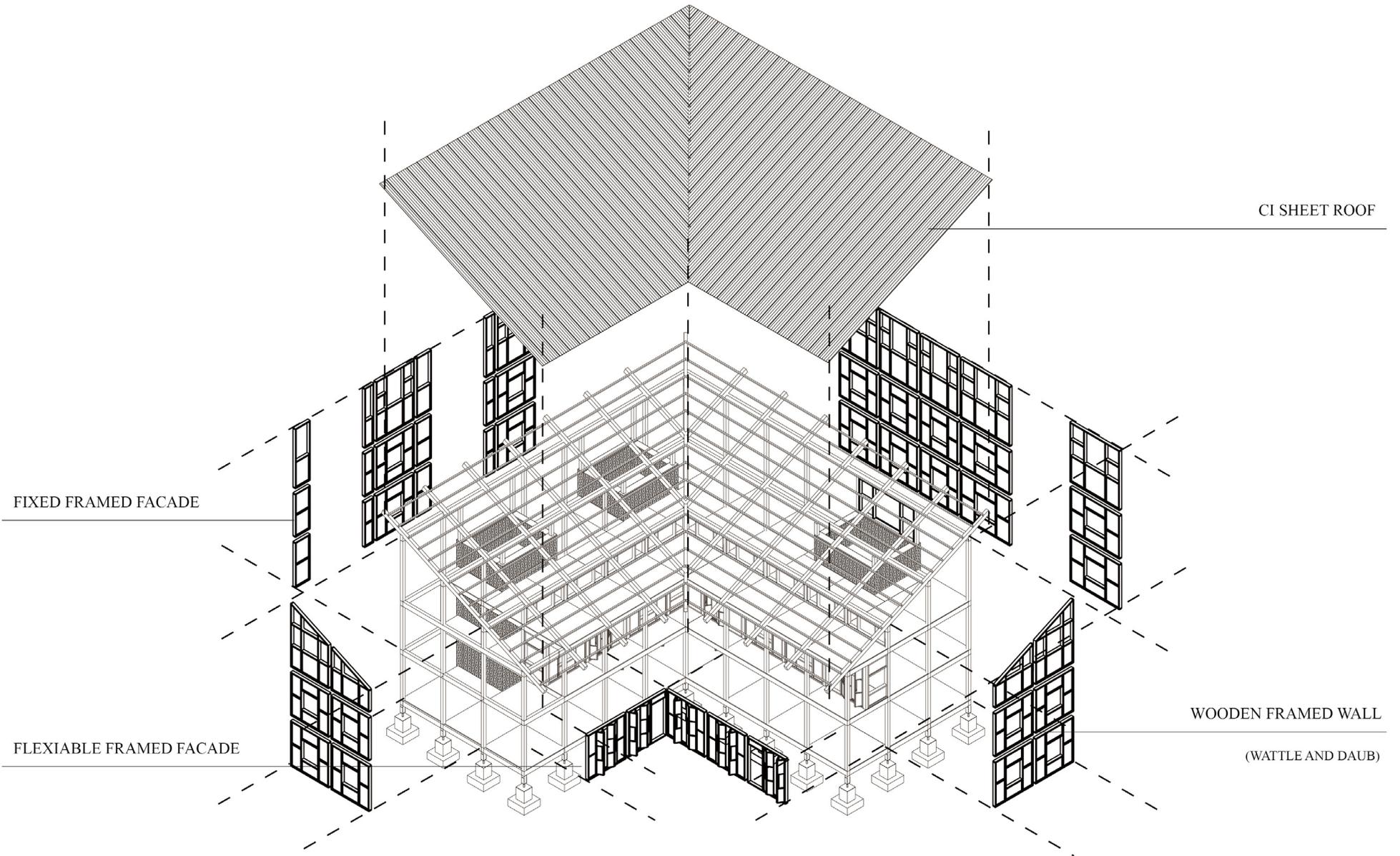




FRAGMENT PLAN - BRICK LOADBEARING WALL





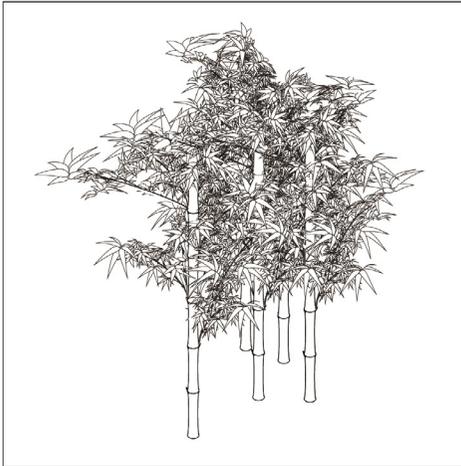


**BUILDING ENVELOPE**

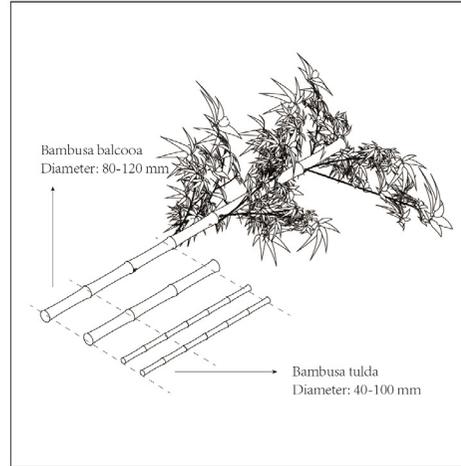
# WATTLE AND DAUB CONSTRUCTION

## Part 1: Prepare the framework and weave the wattle

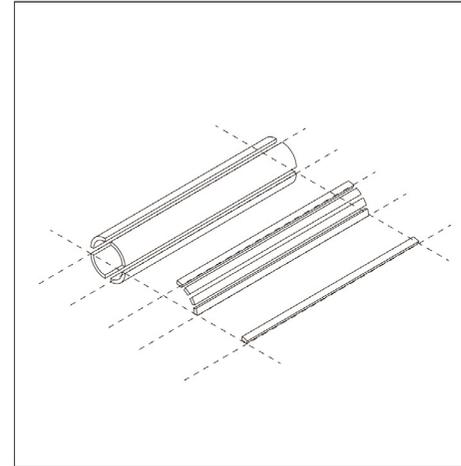
In this construction, the wall framework is made of wood, and the material of wattle is bamboo. Basically two kinds of local bamboo will be used as the horizontal slats and weaving strips.



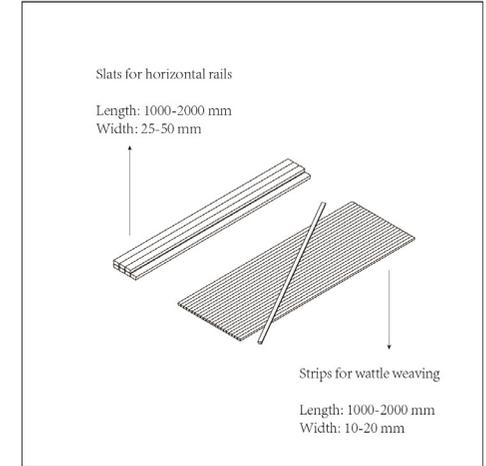
01 Bamboo forest



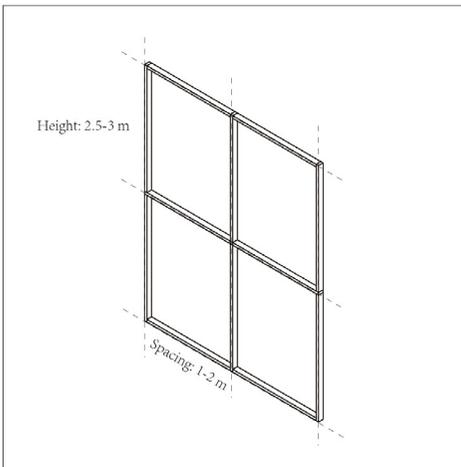
02 Cut down the bamboo



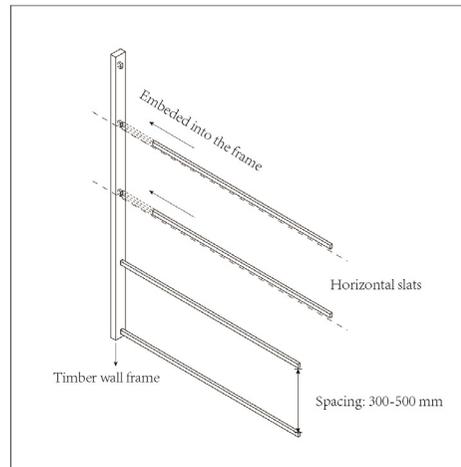
03 Cut the bamboo into slats



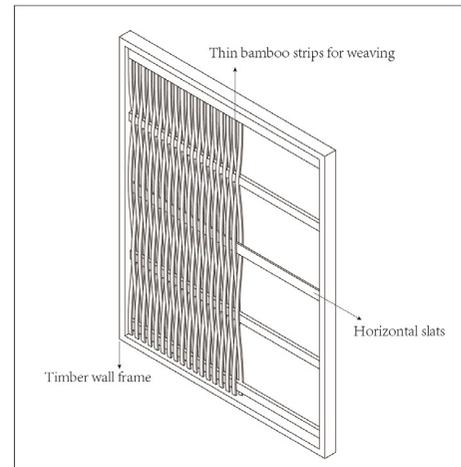
04 Bamboo slat dimension



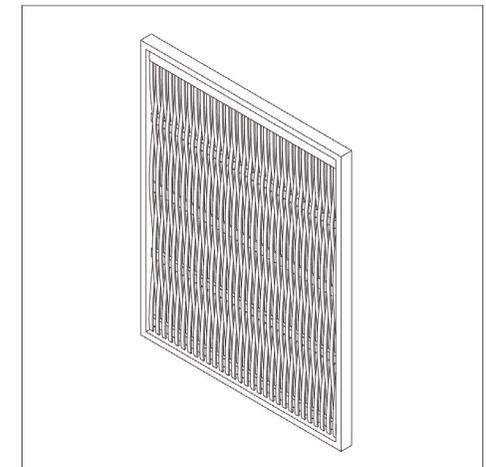
05 Bangla Baton wall frame dimension



06 Connect horizontal slats to wall frame



07 Weave the bamboo strips

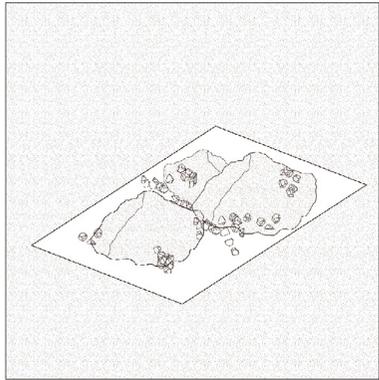


08 Wall framework and wattle

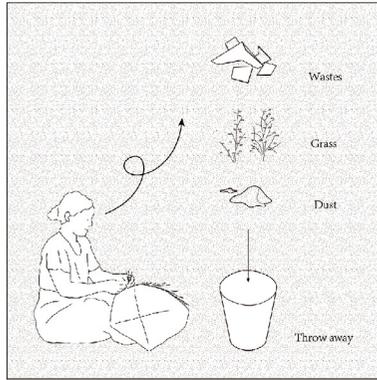
# WATTLE AND DAUB CONSTRUCTION

## Part 2: Prepare and apply the daub

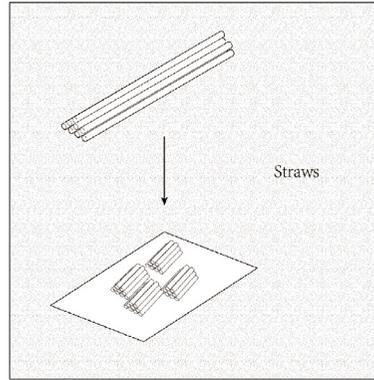
Materials of the daub are all natural sources from the local context, and are also easily used by local residents.



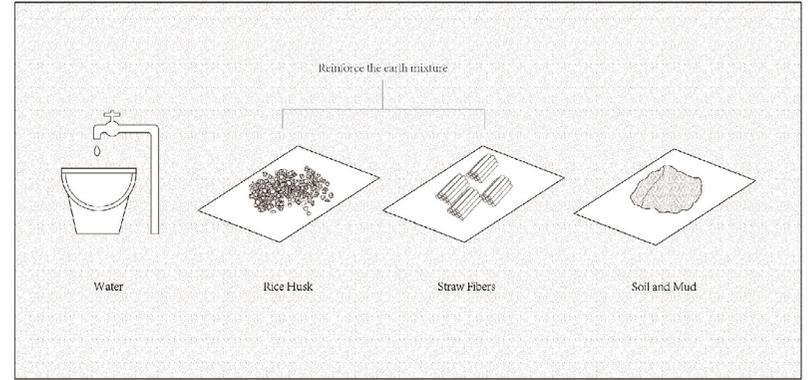
01 Soil and mud from the field



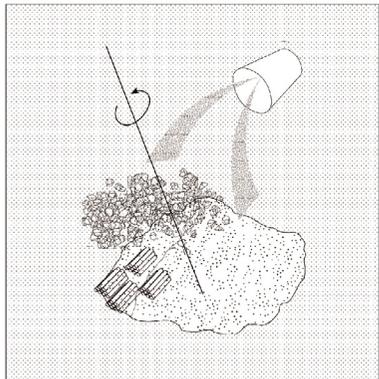
02 Remove debris



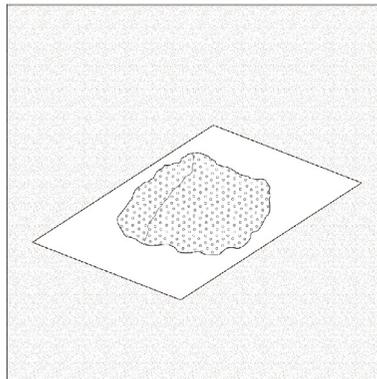
03 Cut the straws into pieces



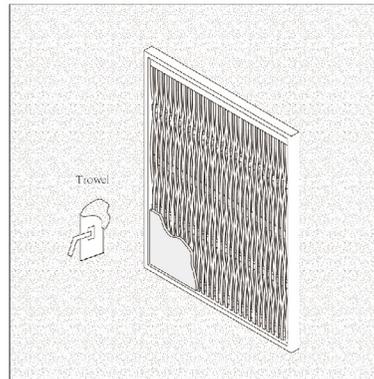
04 Material for the daub



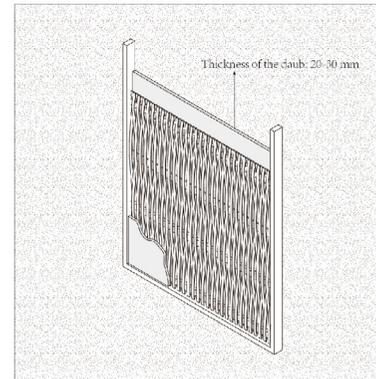
05 Mix and stir the material



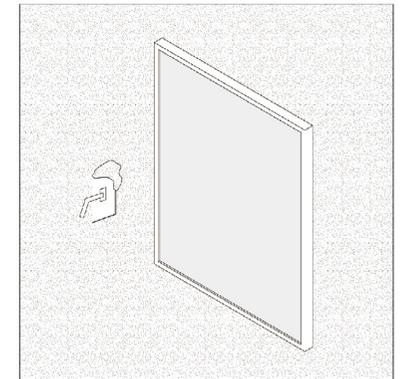
06 Set the mud for 2-3 days



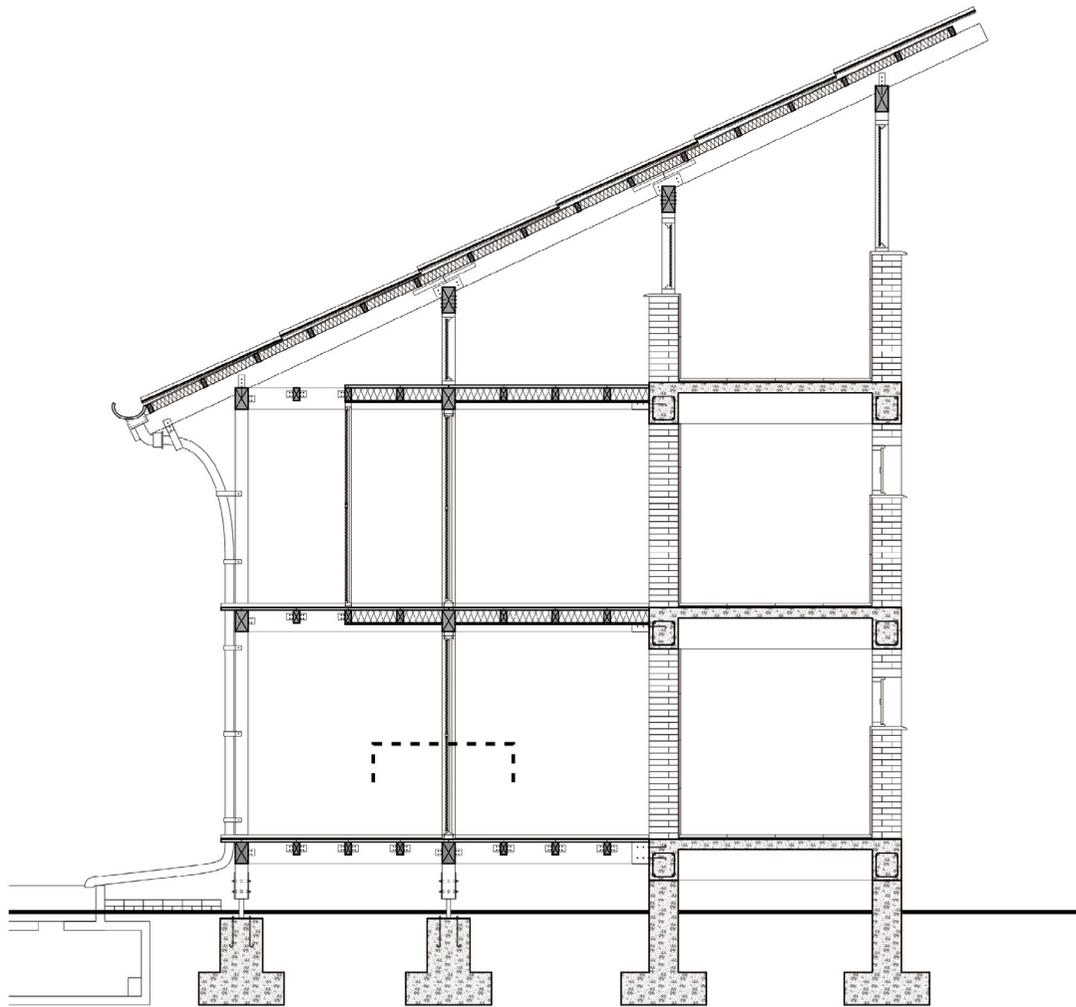
07 Plaster the daub to the woven lattice



08 The daub mixture to both sides

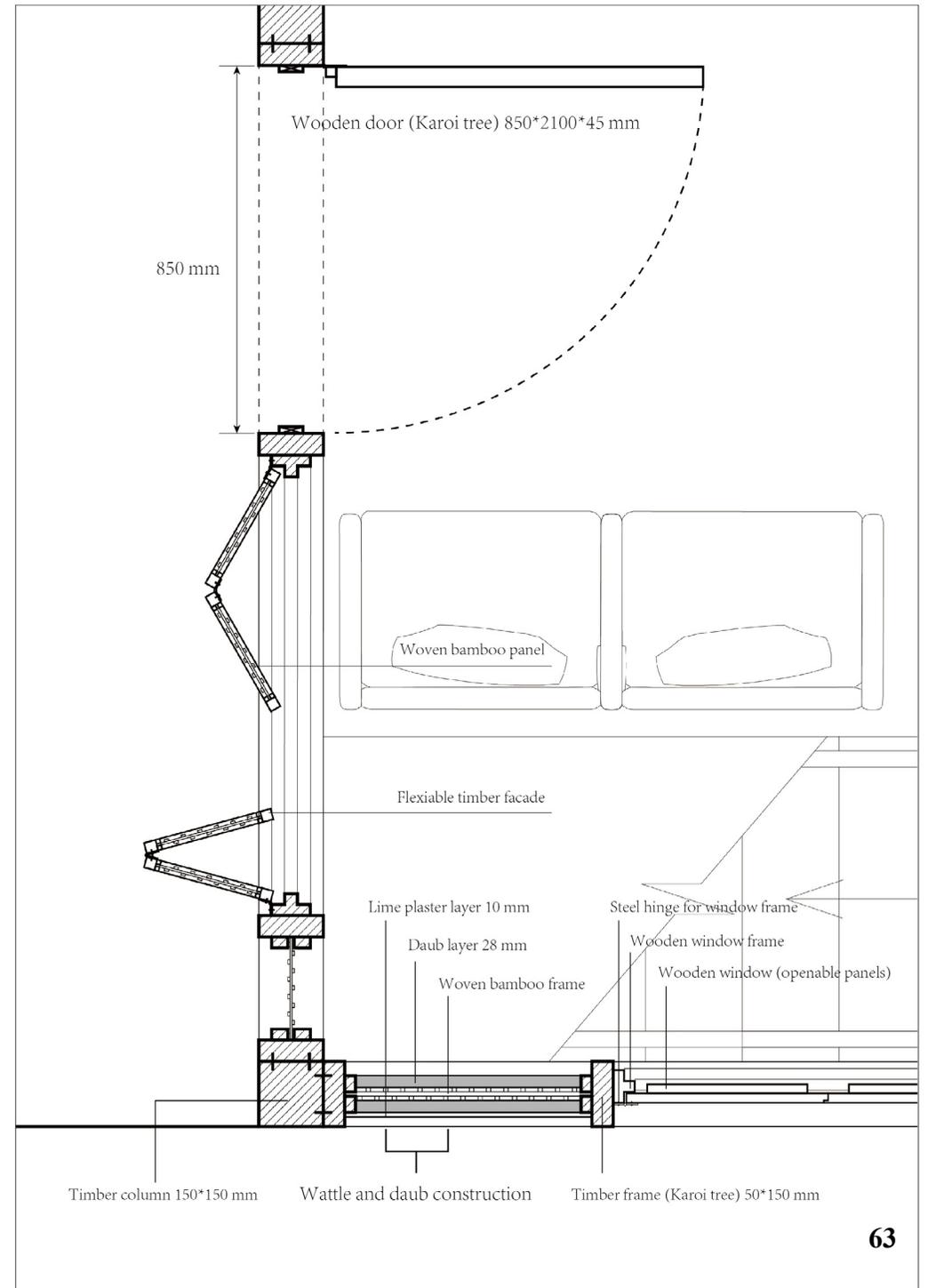


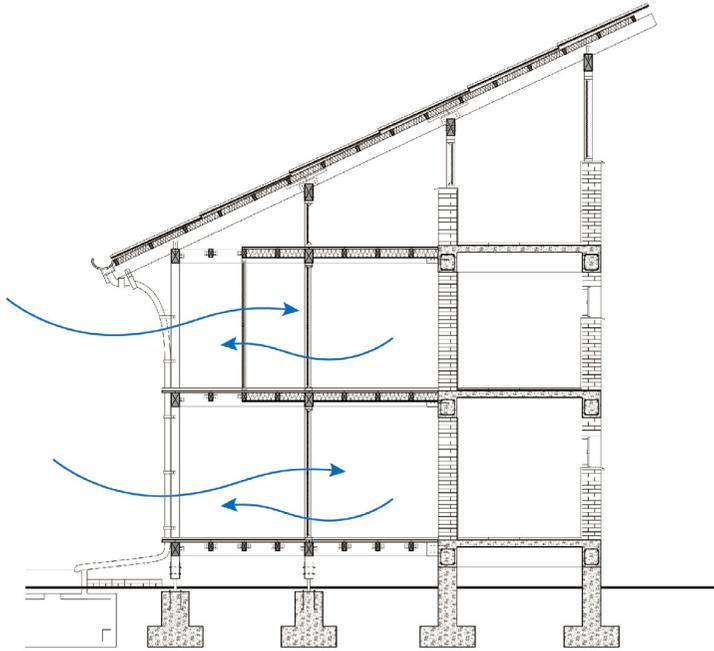
09 Smooth the surface



FRAGMENT PLAN - WOODEN FRAMED WALL

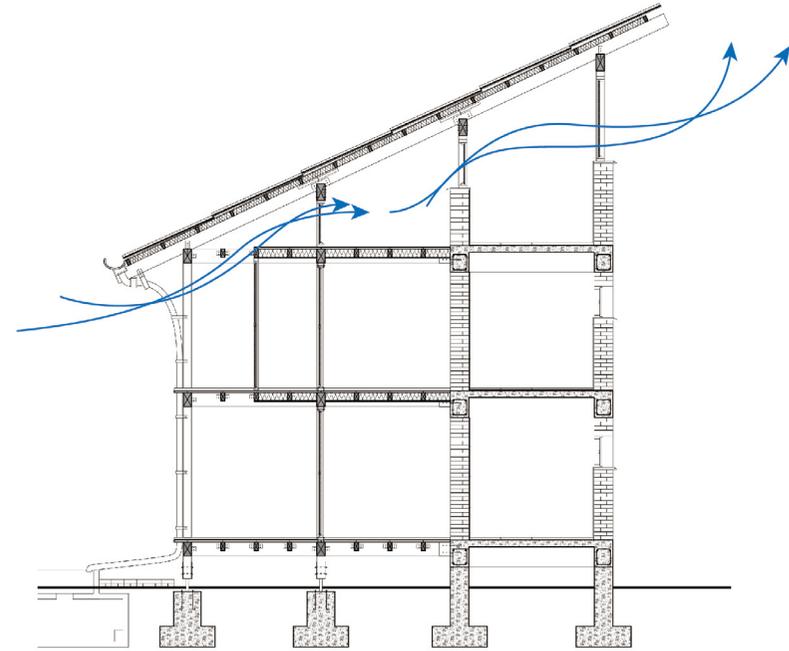
1:10





**BAMBOO FOLDING FACADE**

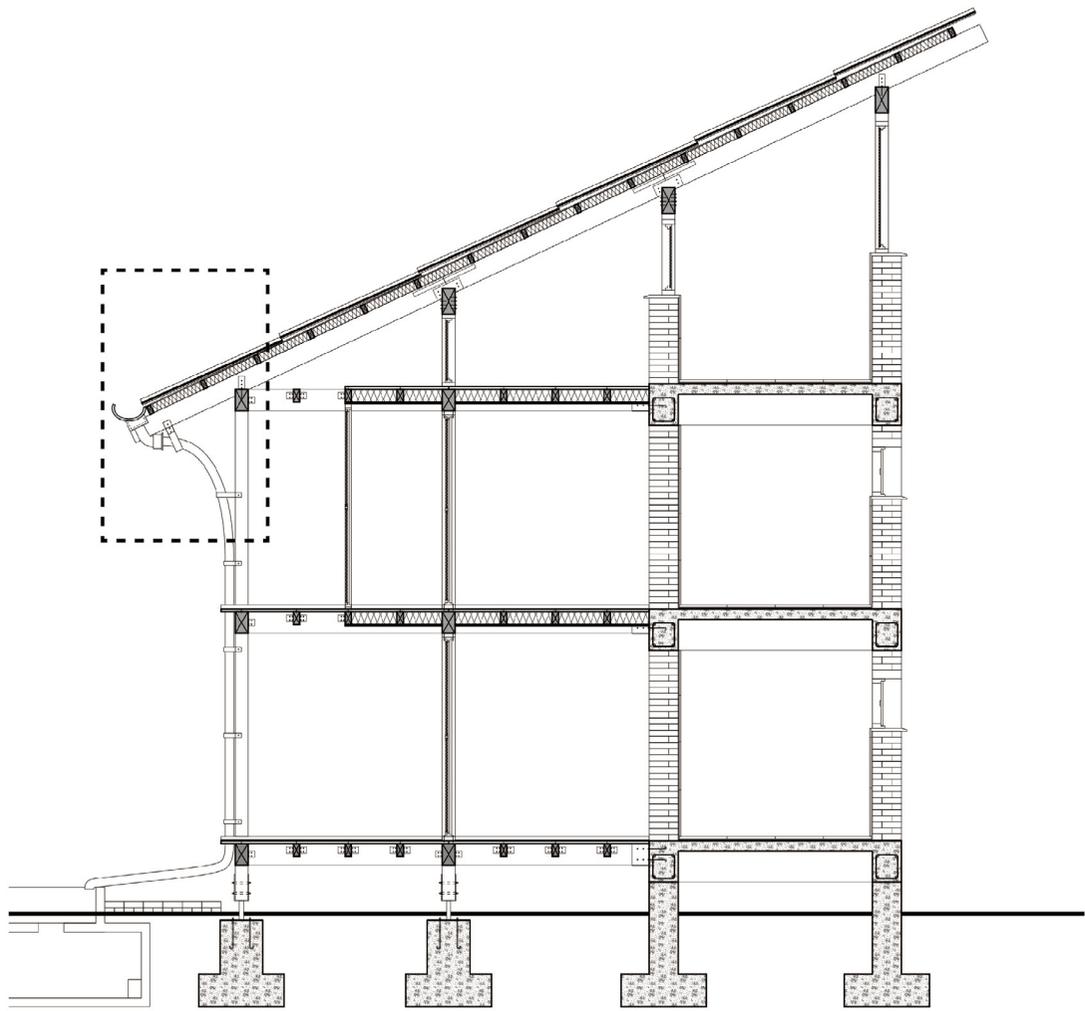
The woven bamboo facade and folding walls could enhance the air circulation between the interior and exterior space, creating better ventilation conditions indoors.



**SLOPE ROOF**

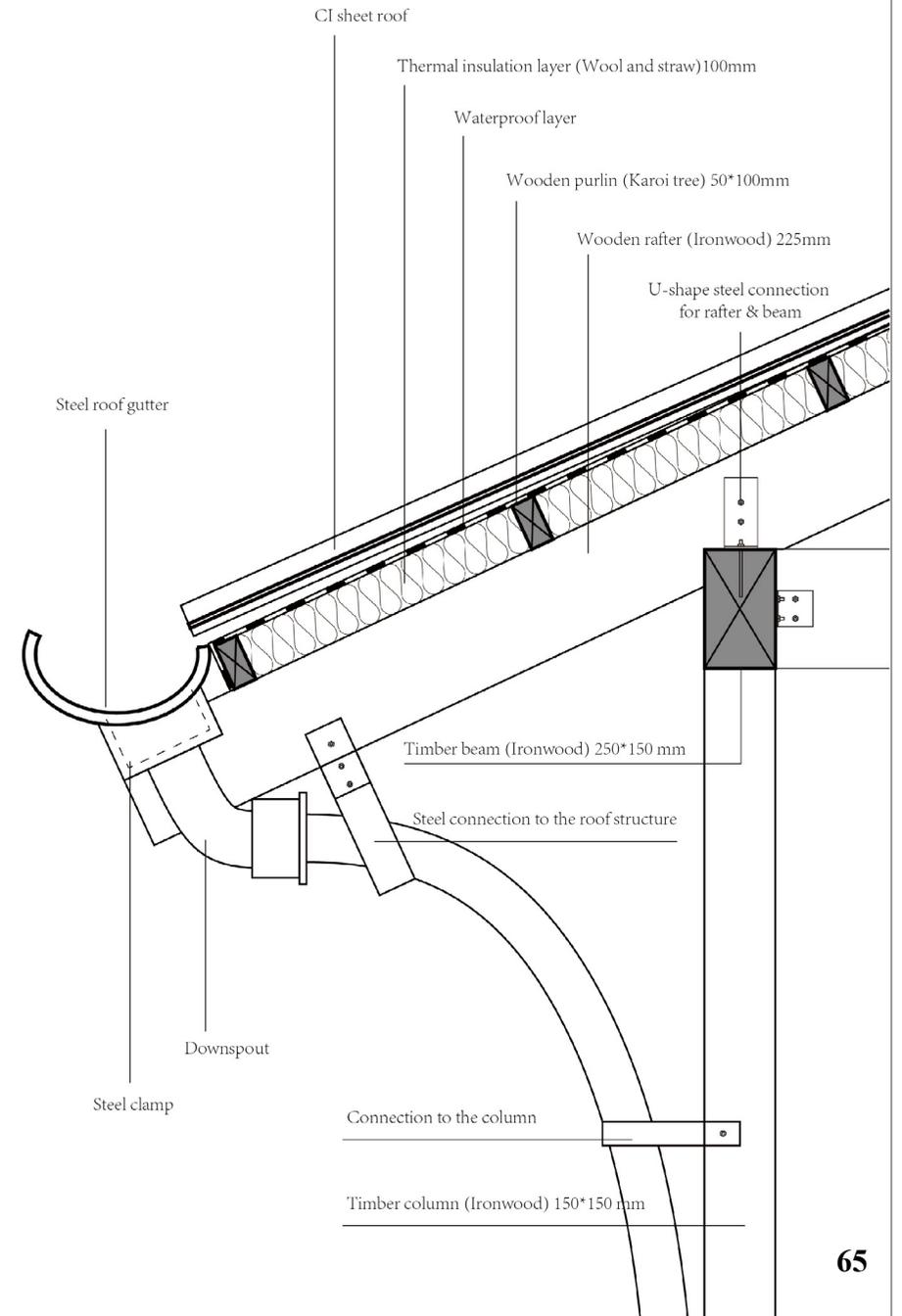
By raising the roof, spaces could be created to let fresh air into the upper attic space. This design could increase the capacity of natural ventilation to cool down the interior space since the CI sheet roof will generate heat due to its metal characteristic.

## CLUSTER VENTILATION



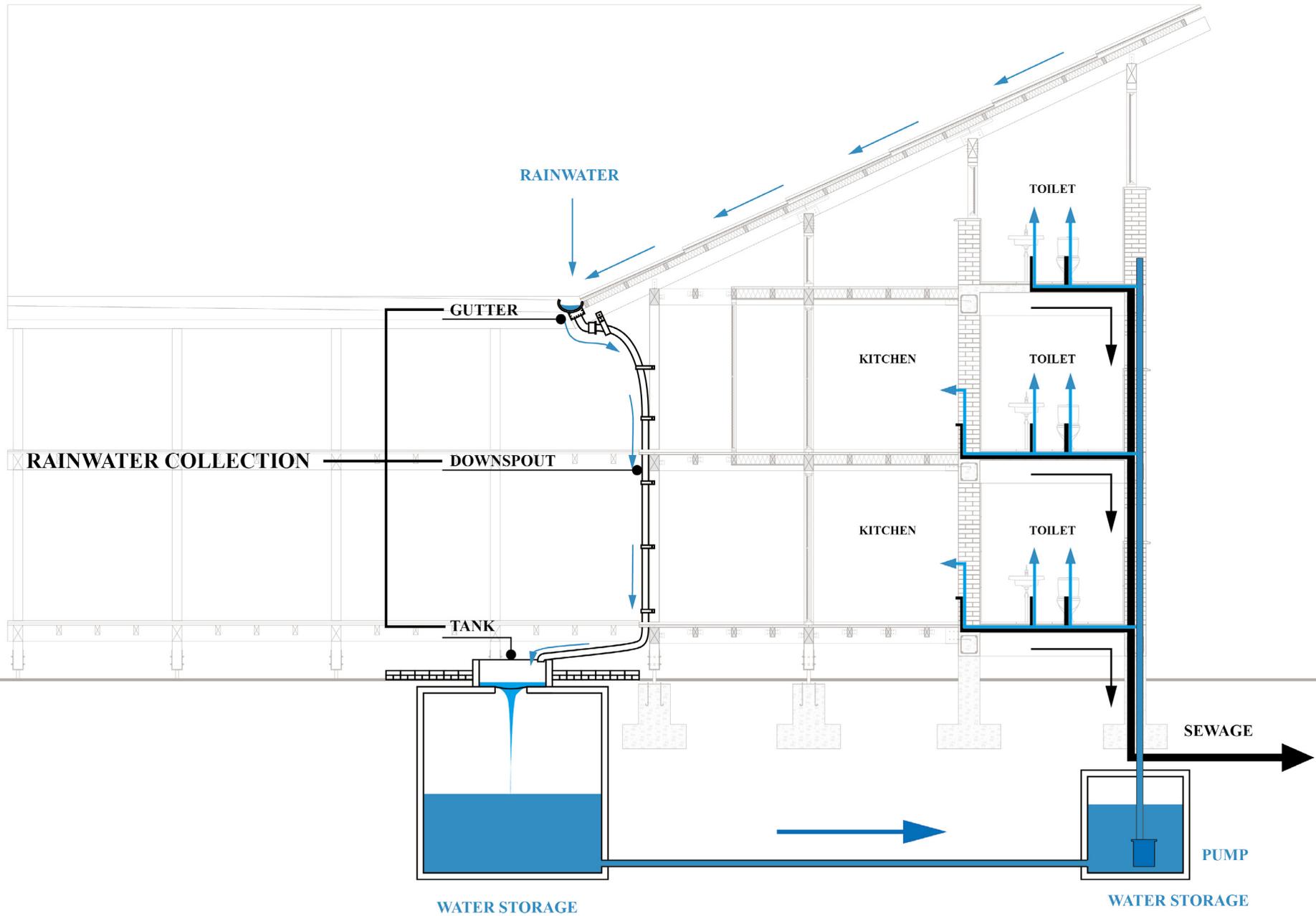
**DETAIL SECTION - ROOF 2**

1:10



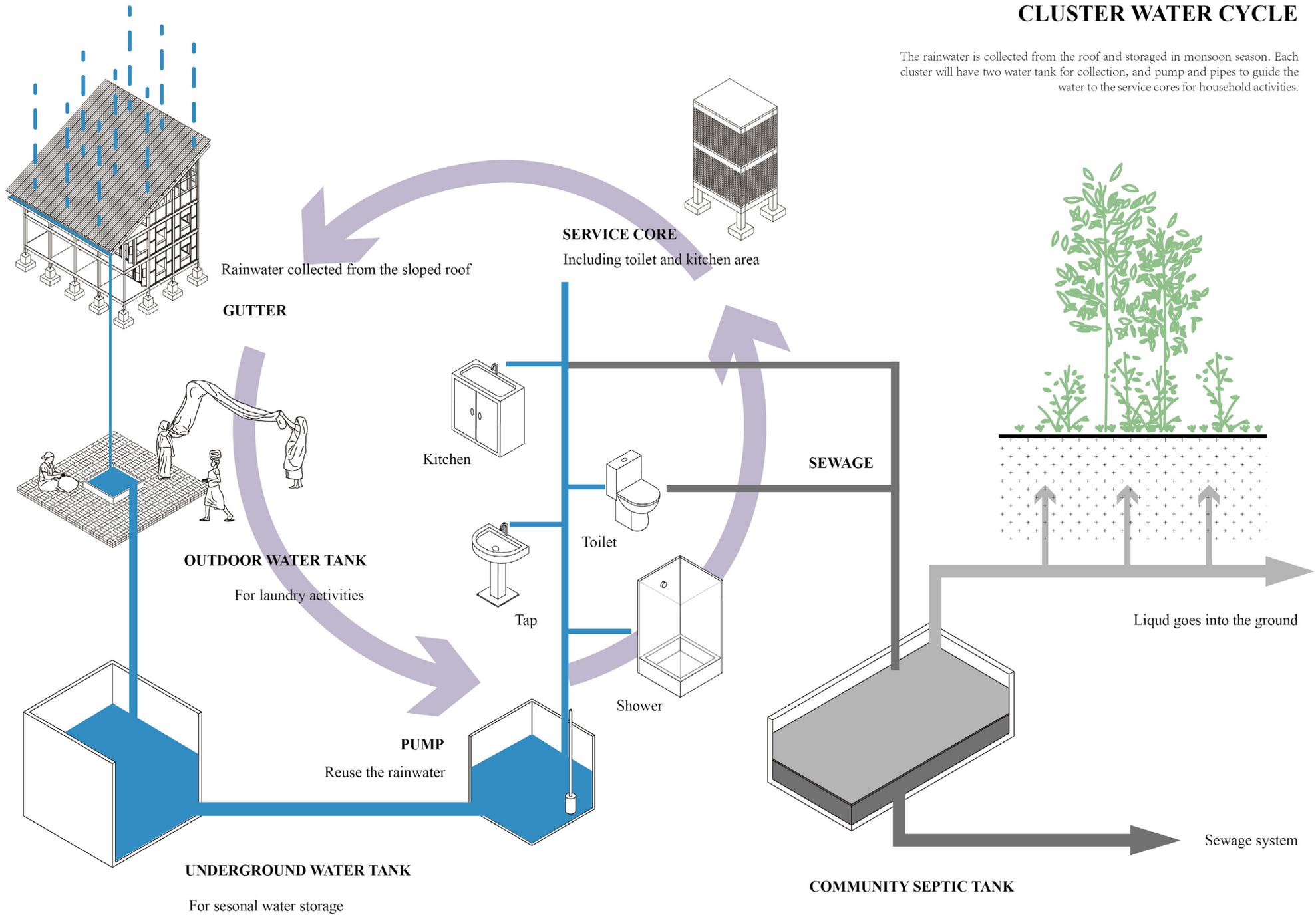
## **- ENVIRONMENT-**

There are several environmental strategies in this community project. The most important strategy is the water system, which takes use of rain water and deal with the water cycle in the community.



# CLUSTER WATER CYCLE

The rainwater is collected from the roof and stored in monsoon season. Each cluster will have two water tank for collection, and pump and pipes to guide the water to the service cores for household activities.





-  Cluster water collection
-  Community water planning
-  Vegetable planting space
-  Contour lines
-  Dwelling cluster

**COMMUNITY WATER SYSTEM**



**WATER SYSTEM - CITY**

Beside the water system, landscape is another focus to the environmental strategy in the community planning. To address environmental concerns, shade trees are also incorporated to provide natural cooling, drawing from species commonly found in tea gardens to help cool the CI sheet roofs.

From an economic perspective, fruit trees are strategically placed around the hub and public areas to generate potential income for the community.

Finally, flowering trees are planned along circulation paths to enhance the living environment and contribute to a higher quality of life for residents.



**COMMUNITY PLANNING - ROOF**



SHADE TREE

Shade tree is a strategy for tea garden to modular the environment of the tea ecosystem.



Sada koro  
(Albizia procera)



Kalo koro  
(Albizia lebbek)



Sissoo  
(Dalbergia sissoo)



Akashmoni  
(Golden shower)



LANDSCAPE STRATEGY



### FRUIT TREE

There are some fruit trees in Sylhet are also tall and evergreen, which could provide both shading and fruit production for the community residents.



Mango  
(*Mangifera indica*)



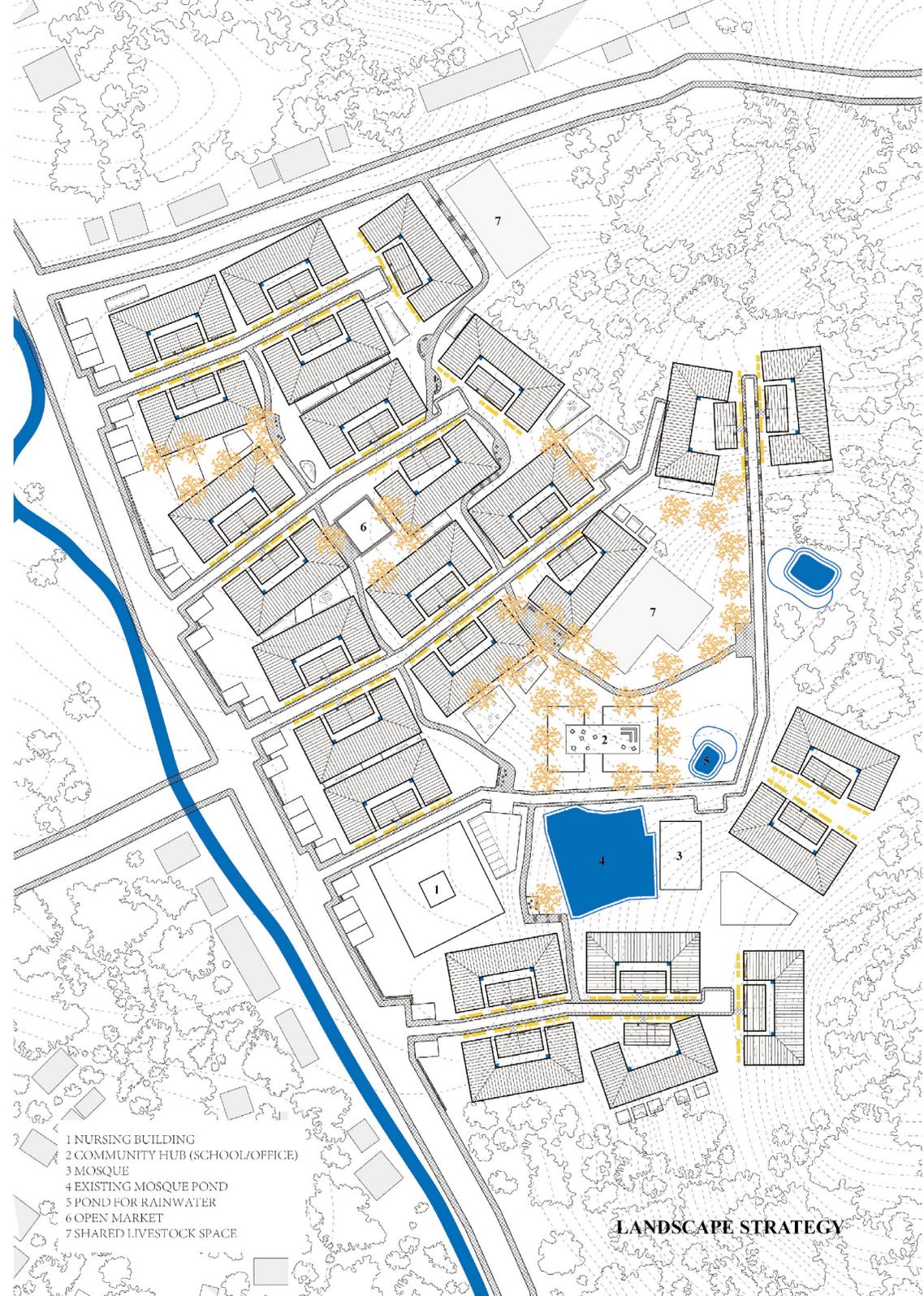
Jackfruit  
(*Artocarpus heterophyllus*)



Guava  
(*Psidium guajava*)



Litchi  
(*Litchi chinensis*)



- 1 NURSING BUILDING
- 2 COMMUNITY HUB (SCHOOL/OFFICE)
- 3 MOSQUE
- 4 EXISTING MOSQUE POND
- 5 POND FOR RAINWATER
- 6 OPEN MARKET
- 7 SHARED LIVESTOCK SPACE

### LANDSCAPE STRATEGY



### FLOWER TREE

There are some common flowers and flower trees grow in Sylhet listed below, which are suitable to grow in the community.



Royal poinciana  
(*Delonix regia*)  
Height: 12 m



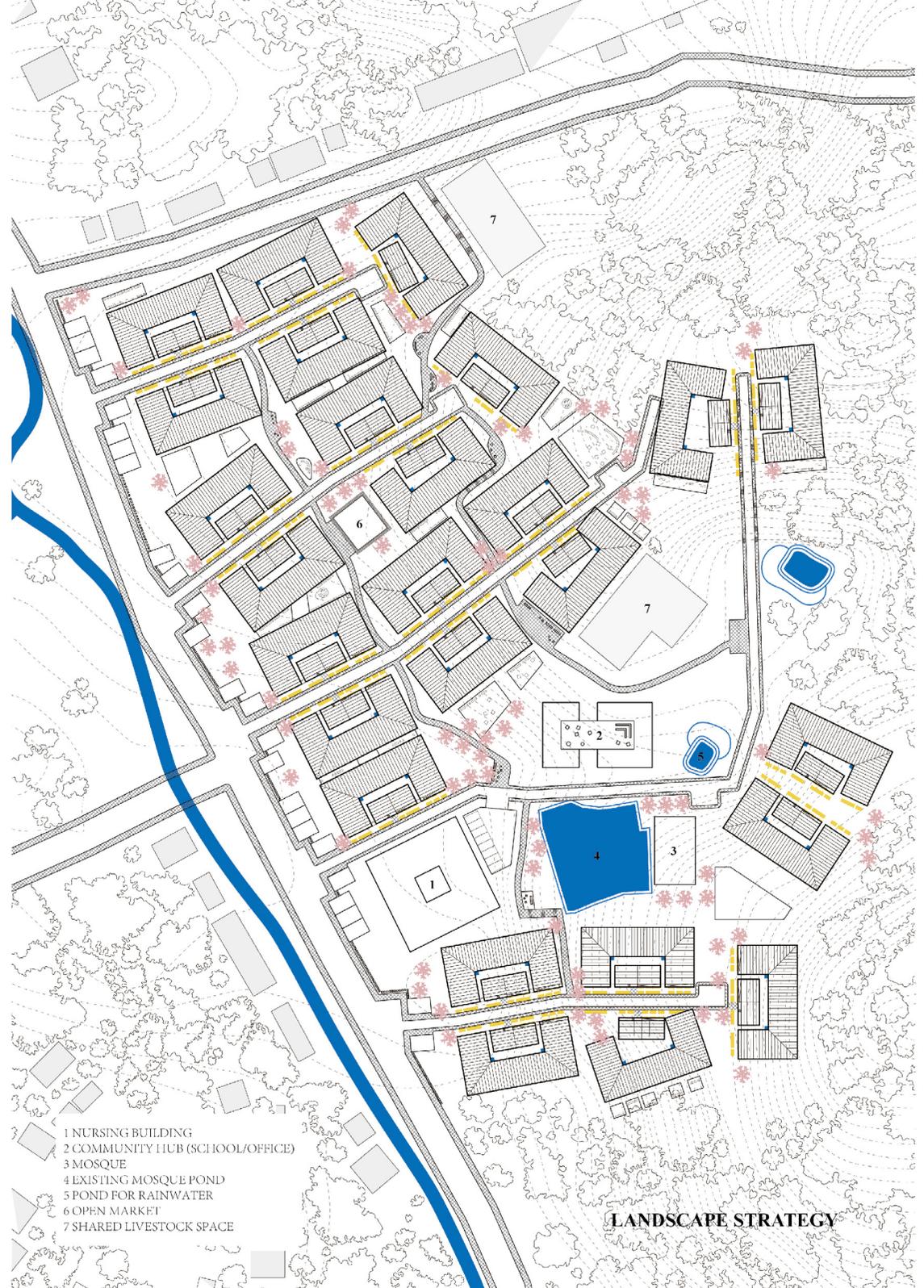
Rose of sharon  
(*Hibiscus syriacus*)  
Height: 2-4 m



Black locust  
(*Robinia pseudoacacia*)  
Height: 27 m

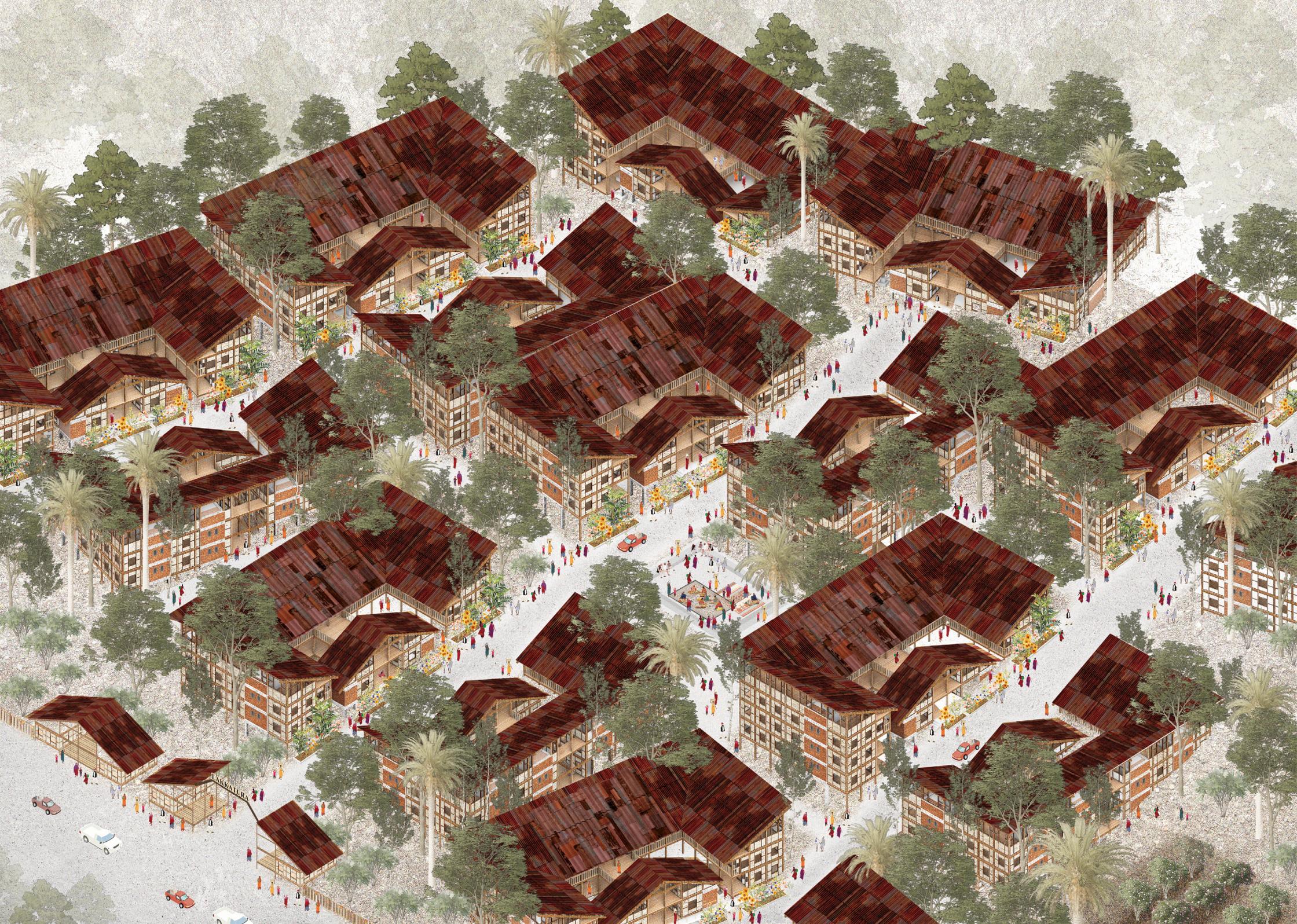


Japanese cherry  
(*Prunus serrulata*)  
Height: 3-8 m



- 1 NURSING BUILDING
- 2 COMMUNITY HUB (SCHOOL/OFFICE)
- 3 MOSQUE
- 4 EXISTING MOSQUE POND
- 5 POND FOR RAINWATER
- 6 OPEN MARKET
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**LANDSCAPE STRATEGY**



## **- REPLICABILITY-**

This housing system focuses on the specific context inbetween the urban and rural area, which is the transitional area between. It is replicable for housing projects under the similar circumstance.



**COMMUNITY PLAN FOR KUCHAI**

