

Natural and unnatural disasters and wars are catastrophic events that cause loss of life, extensive property damage and environmental degradation. Number of natural disasters are drastically increasing in recent decades, causing a great impact on natural and built environment. Most of the buildings are collapsing or becoming unusable due to damage; leaving thousands of people homeless over night.

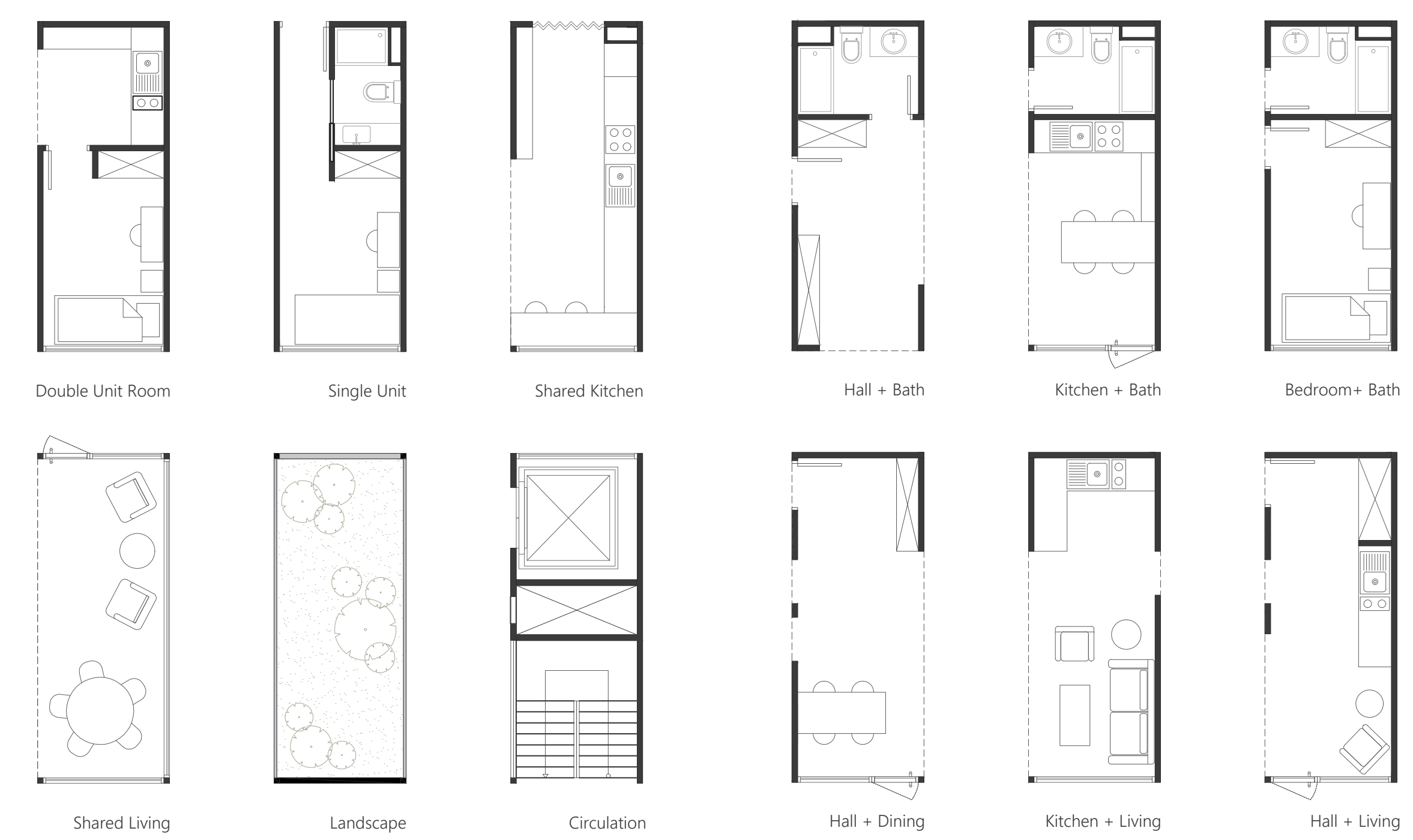
Post-disaster shelter programmes provide durable housing that successfully meet the humanitarian needs and protect the vulnerable after disasters. Housing provision plays a crucial role while reconstructing the damaged areas since it's one of the most important needs for people and essential for their well-being.

Current temporary settlements have the sole purpose of accommodating displaced people due to conflicts. Focusing on providing only basic humanitarian requirements and assuming the situation is temporary, these settlements failed to address a sustainable aid, tailored to the needs of refugees and host communities. These almost unlivable dwellings with huge infrastructural strain in hosting countries cannot allow the refugees to create a new life for themselves.

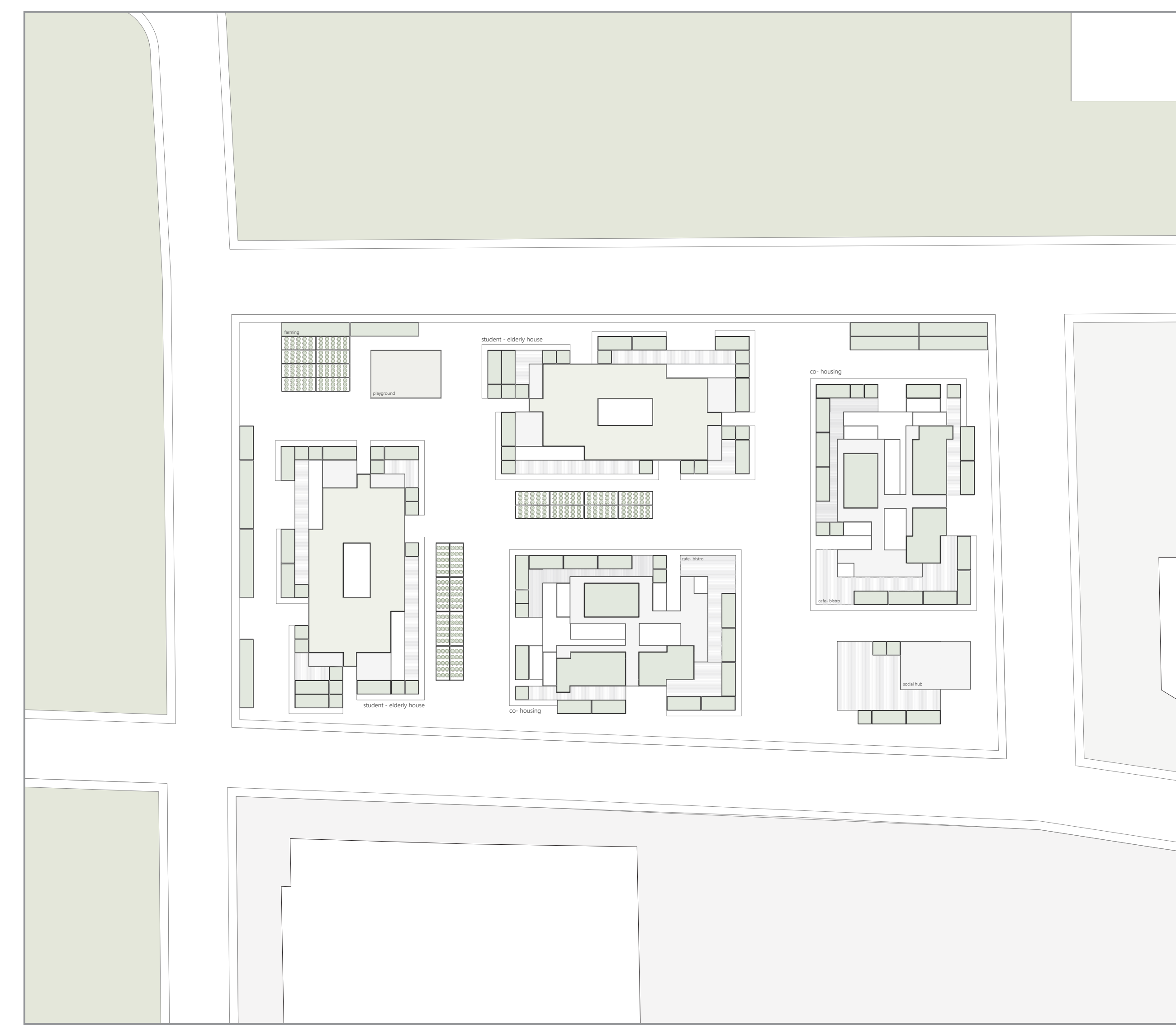
This project is an attempt to find a better solution to existing housing crisis in post disaster/post-war cities by installing modular portable housing units to create more livable, sustainable places for people in need. Moreover providing the users with emotional and physical support with additional common areas is intended. There are mainly two approaches to post-disaster reconstruction: transitional shelter and multi-phased.

Project explores ways to create a transitional shelter, a mid-term response which focuses on upgradable, reusable, relocatable, resalable and recyclable shelter. Planned use is during the time between the emergency and the permanent solutions, 6 months to 2 years after the disaster.

6M CONTAINER MODULES



FLAT TYPOLOGY



Although the aim of this project to provide modular shelters that aren't made for a single location; an exemplary project is designed to show possible outcomes. On 06.02.23, southern part of Turkey struck by two 7.8 magnitude earthquakes, affected thousands of people and destroyed many buildings from 11 cities, leaving all the citizens without shelter for days. This project is a hypothetical response to such catastrophe by providing immediate modular housing. Project site has been chosen Erzin, which is the only district of Hatay that hasn't been affected from the earthquake. Therefore it is a safe space to construct temporary residences as well as providing the opportunity to benefit from urban amenities.

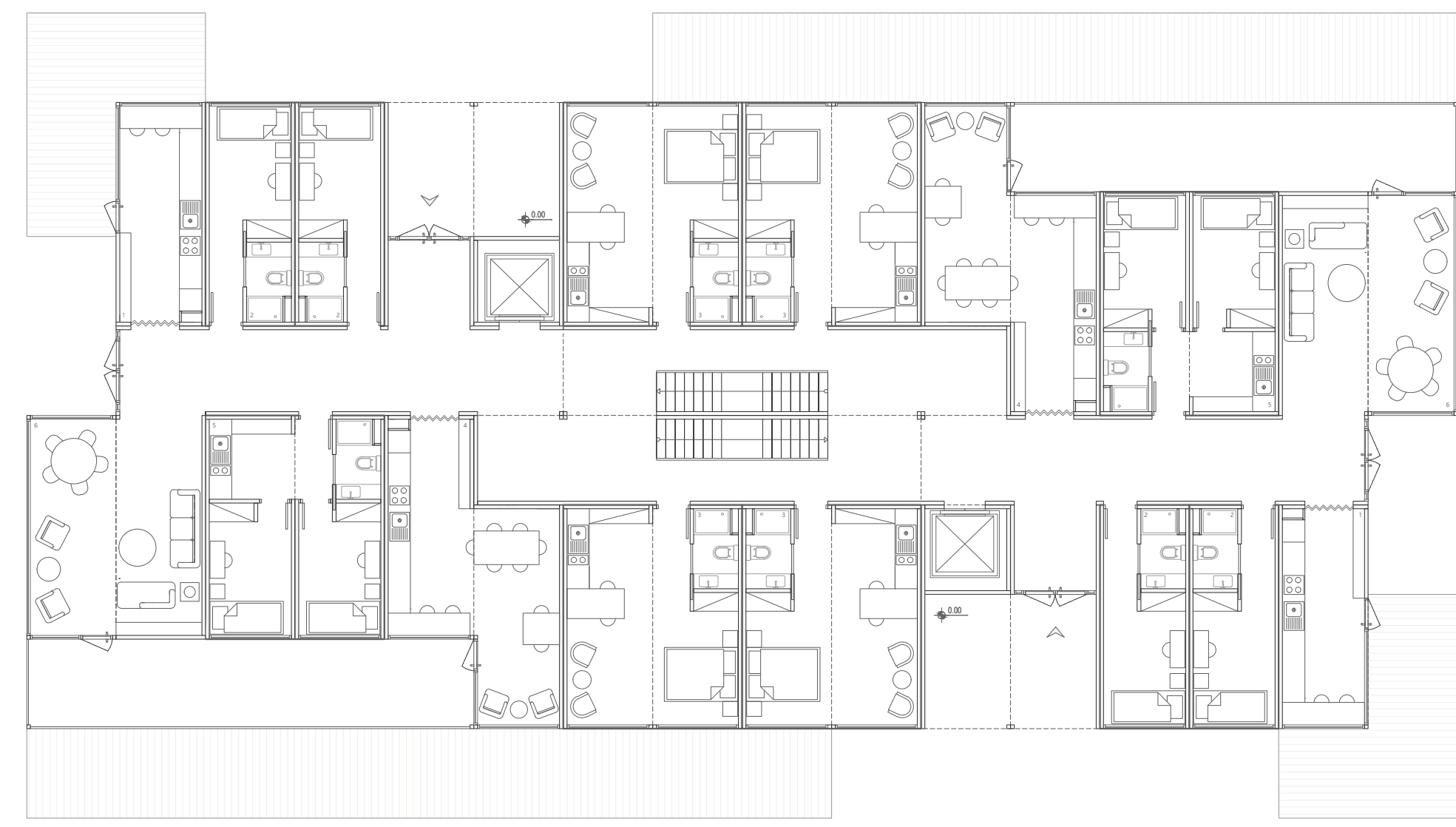
The project is created to meet the urgent need of people who were affected by natural or humanitarian crises. Following that, the concept is generated after considering the economic realities, immediate timing and available materials. Therefore creating "ready to assemble modules" have chosen as methodology. Following modules are designed in order to be prefabricated and attach to each other in order to form flats or common areas.

Although these modules opened the way to form flats in further design process, as the flexible nature of the project, it is important to state that there are countless ways to offer prefabricated solutions. The objective is to obtain easy attach- detach system to enable constant development throughout the time.



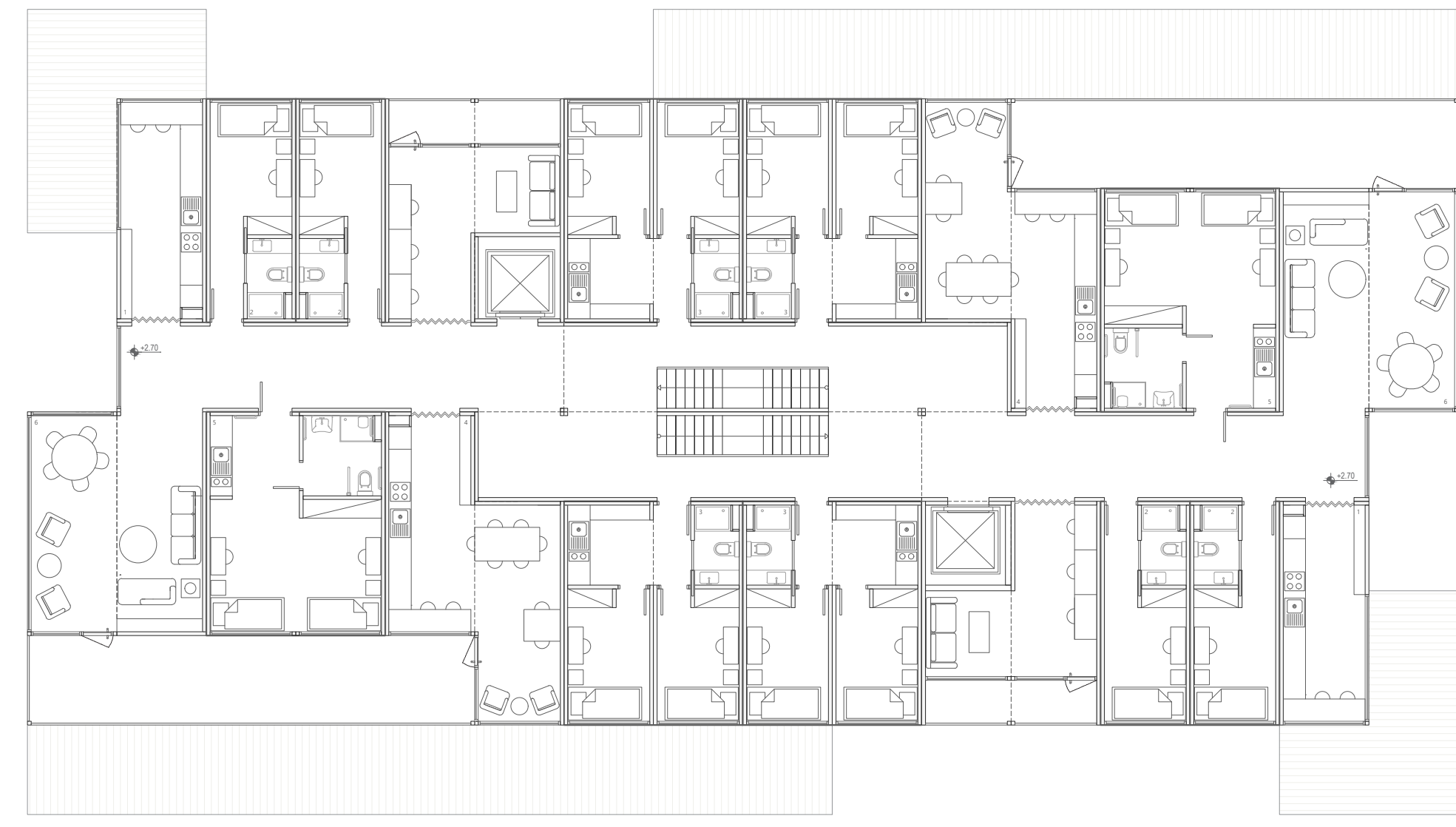
TEMPORARY SHELTER PROJECT

STUDENT - ELDERLY HOUSING



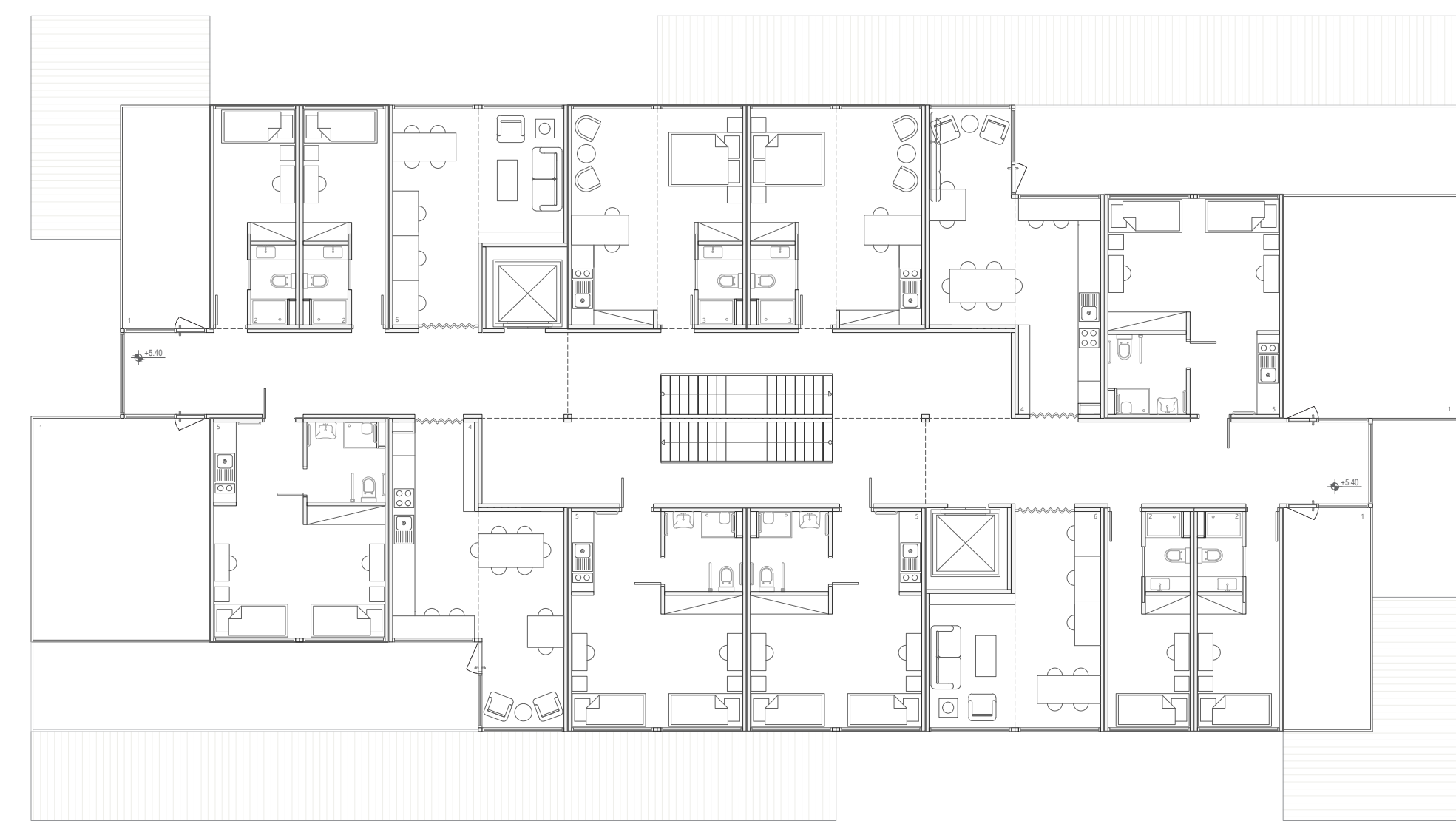
Ground Floor Plan
510 m²

- 1. Common Kitchen
- 2. Single Unit
- 3. Double Unit (double bed)
- 4. Common Kitchen - Dining
- 5. Double Unit (2 x single bed)
- 6. Common Living Room



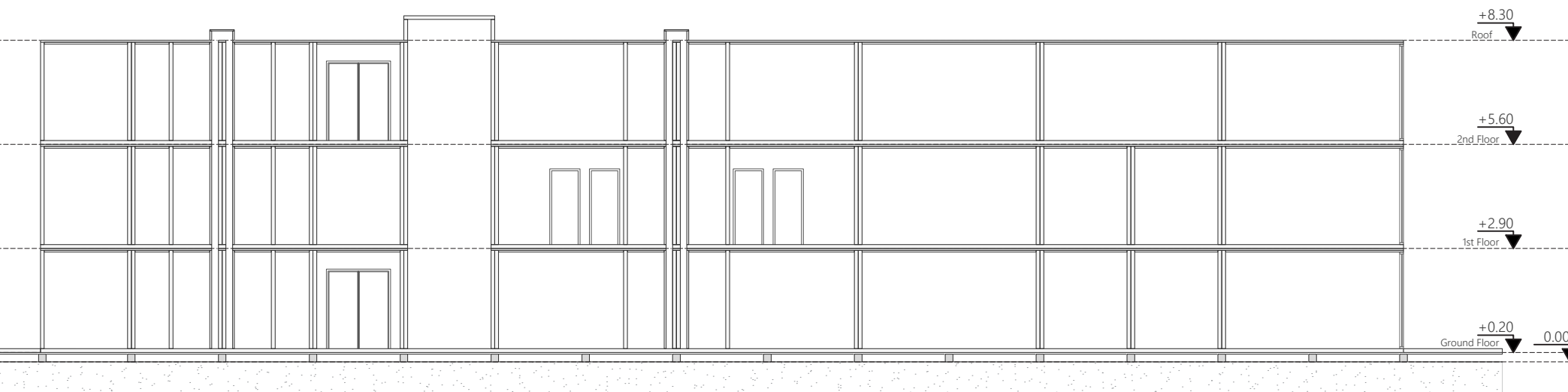
1st Floor Plan
480 m²

- 1. Common Kitchen
- 2. Single Unit
- 3. Double Unit (2 x single bed)
- 4. Common Kitchen - Dining
- 5. Accessible Unit (2 x single bed)
- 6. Common Living Room



2nd Floor Plan
440 m²

- 1. Terrace
- 2. Single Unit
- 3. Double Unit (double bed)
- 4. Common Kitchen - Dining
- 5. Accessible Unit (2 x single bed)
- 6. Common Living Room

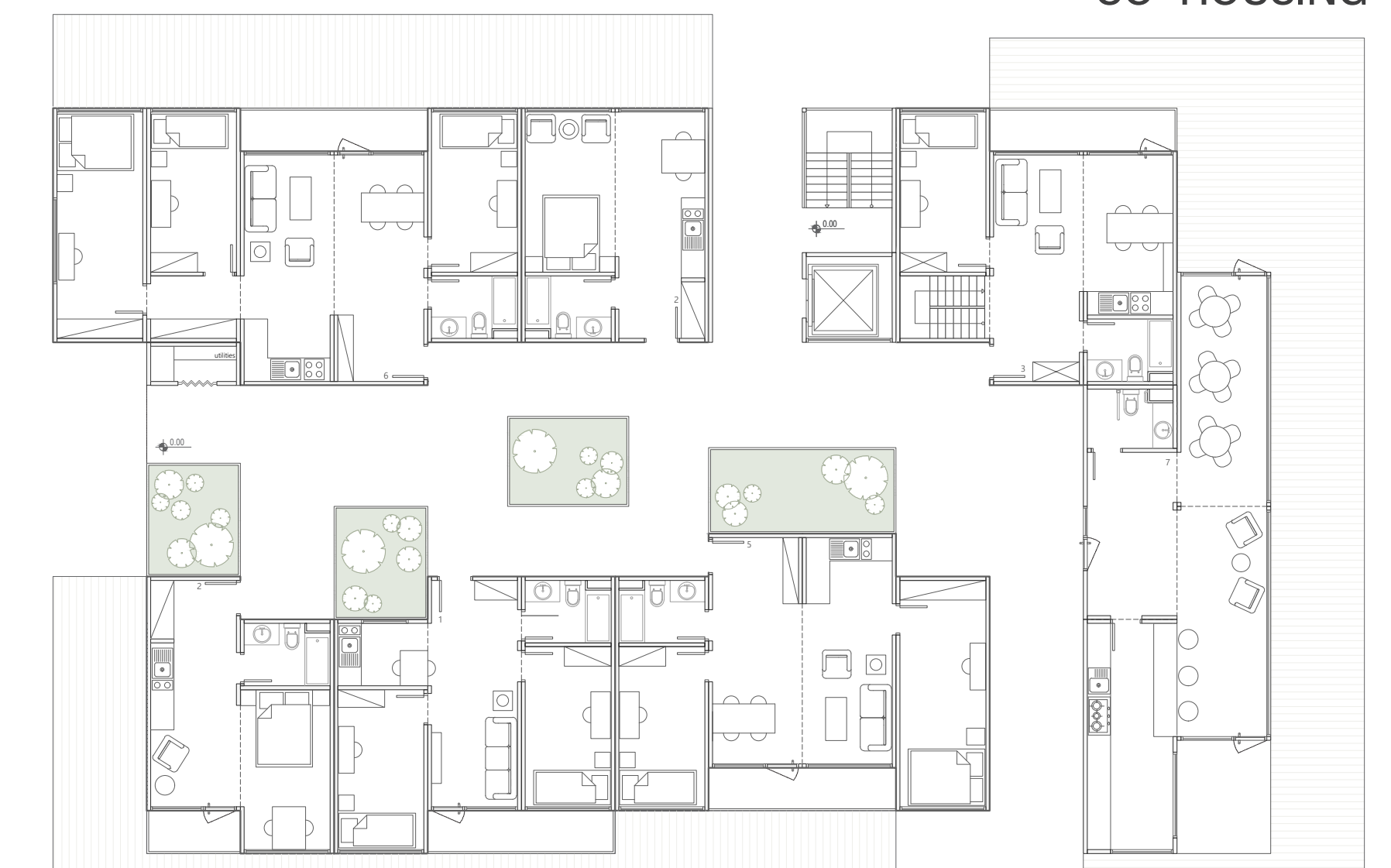


Two kinds of buildings are designed; one for students and elderly people and one for families. Student- Elderly House considers the users as single or shared inhabitants. Both students and elderly people may need caretakers which is provided as shared units while considering accessibility. Although units include a small kitchenette and other furnitures, users have the opportunity to use shared kitchens, living rooms and study rooms.

On the other hand Co-Housing Building is designed mostly for families (up to 6 people) with a more private life. The building has an open plan type with central courtyard and open terraces. Every flat is designed in the add-subtract principle which allows the families to go have less or more people during the time by attaching prefabricated modules. Greenery is integrated as much as possible with modular gardens, farming areas and green roofs.

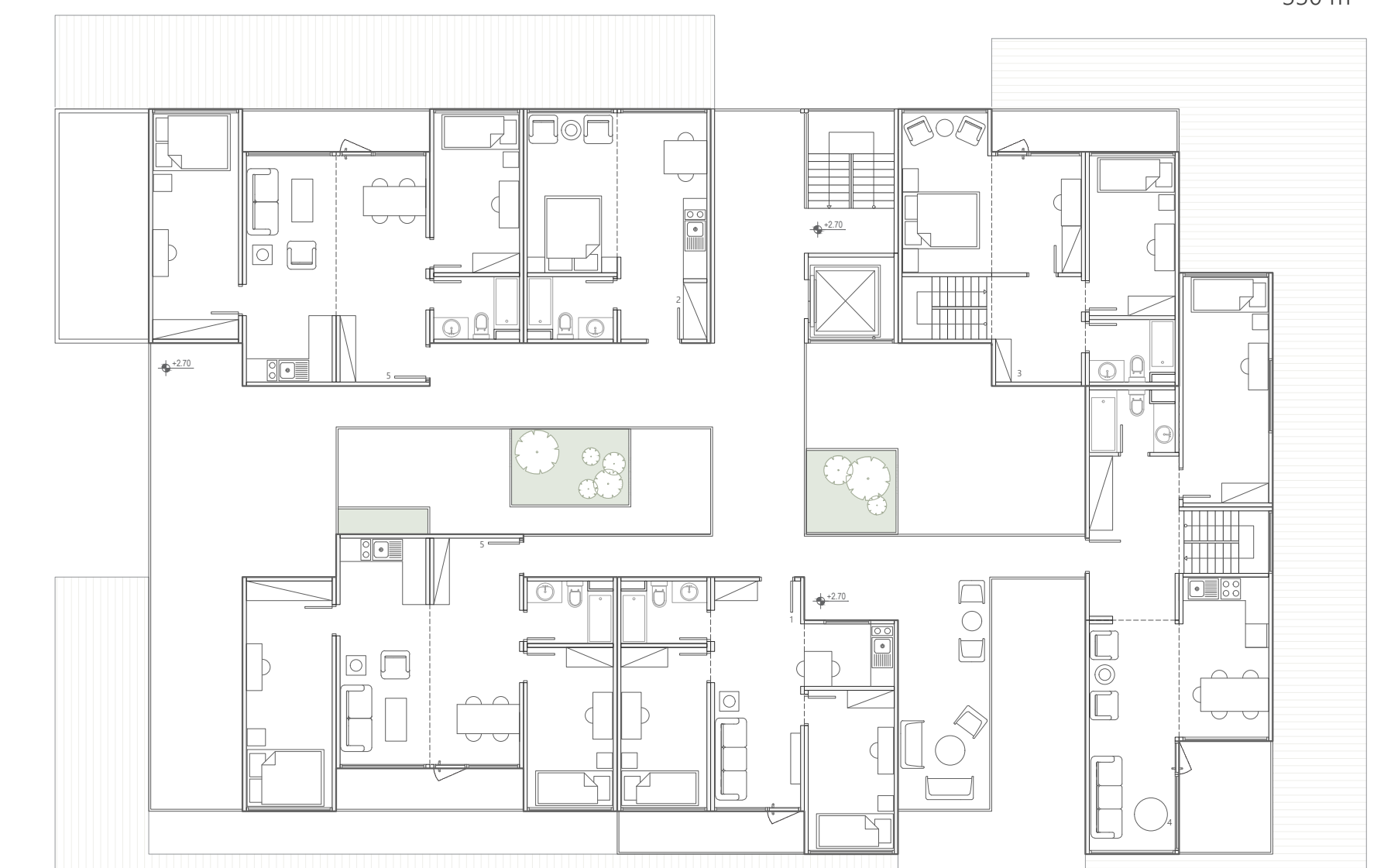


CO- HOUSING



Ground Floor Plan
330 m²

- 1. 2+1 Unit (2-3p)
- 2. Studio (2p)
- 3. 3+1 Unit (4p)
- 4. 3+1 Unit (5p)
- 5. 2+1 Unit (3p)
- 6. 3+1 Unit (4p)
- 7. Cafe- Bistro



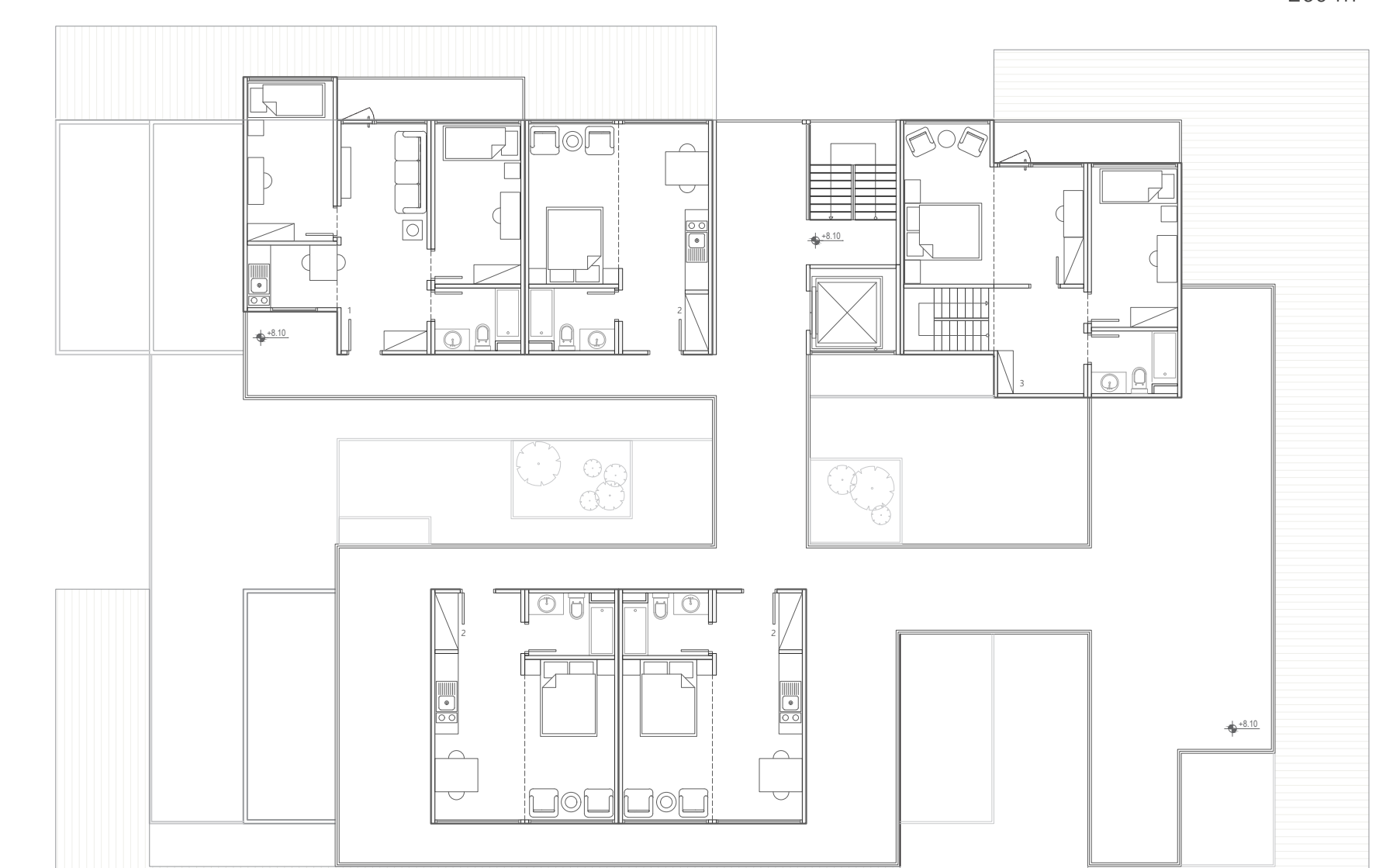
1st Floor Plan
290 m²

- 1. 2+1 Unit (2-3p)
- 2. Studio (2p)
- 3. 3+1 Unit (4p)
- 4. 3+1 Unit (5p)
- 5. 2+1 Unit (3p)



2nd Floor Plan
260 m²

- 1. 2+1 Unit (2-3p)
- 2. Studio (2p)
- 3. 3+1 Unit (4p)
- 4. 3+1 Unit (5p)



3rd Floor Plan
145 m²

- 1. 2+1 Unit (2-3p)
- 2. Studio (2p)
- 3. 3+1 Unit (4p)

MODULAR HOUSING DESIGN FOR POST-DISASTER SETTLEMENTS