

Weiwei Lu

Student number: 4402197

Graduation Studio: Global Housing

Tutors: Dick Van Gameren, Nelson Mota, Sjap Holst, Anteneh Tola

P3 Reflection

Focus point

The studio "Global Housing" is dealing with the affordable housing shortage problem within the urban context in Addis Ababa, Ethiopia. More and more people leave to big cities in hope of better job opportunities, as a result the city center bears heavier burden of rural migrant. The focus on this part of city deserves more attention. Mercato area is the biggest open-air market in Africa and one of the most dynamic districts in Addis as well. In order to save money, the mix of residence, commerce and production is frequent here. Moreover the continuously growing families and new arrivers lead to illegal extension and smaller and over-crowded space. The existing density of that area is reaching as high as 200 DU/Hectare already. At the same time, the city is experiencing big construction especially the infrastructure. The newly-constructed light rail way passing through Mercato cuts the whole area as two completely separated parts. It becomes a border in many people's everyday life.

The existing strategy to deal with the mass housing is the government led condominium program. The standard urban configuration and unit layout provide the possibility to construct quickly and large scale. But this ignorance of the existing urban context causes the featureless copy and paste. And this most efficient building layout cannot accommodate some traditional lifeway. As the problems stated before how to provide affordable housing in central city with high quality while integrating with infrastructure to diminish its negative effects is my main focus.

In order to preserve the grid urban structure (30m*80m) now originated from the Italian occupation period, low-rise high-density residential typology is required. The project of CIDCO designed by Indian architect Rewal is really inspired. The staggered stack housing blocks provide every unit an open space which can be used for future extension as well. The design focus of daily life shifts from interior to open space due to a lot of outdoor activities there. The outdoor life is also a fundamental part in Ethiopian traditional life, like injera making and coffee drinking.

Design Hypothesis

Firstly, I study and analyze the 3 urban layers (open space and public amenity, building, road system) there. For instance the road system in Mercato is without hierarchy, jumping from the highest level city road directly into the residential street. My first step is to reorganize the 3 layers according to the existing urban context. The roads are divided into 4 levels, from the arterial roads (1st level) with fastest traffic flow to the last circulation road (4th level) only for completing the circulation. In between there is communal main road (2nd level) accommodating the community amenity and communal secondary street (3rd level) only for pedestrians. In order to better combine two sides of the arterial road, a new urban bridge is introduced together with the function of community center. The building blocks follow the structure which is a neighborhood unit of 30m*80m surrounded by the streets of varying hierarchy stated above. The building blocks are designed as introverted embracing a communal garden in the center.

Because the pedestrian roads between 2 neighborhood is only 6 meters, the building blocks are around 5 storeys with set back sometimes to ensure a better height width ratio of the streets. All the shops are arranged along the communal roads to create livable streets and provide income generation. The parking garage is on the same level of streets with a lifted garden above.

Because of the 4 meters height difference in the plot, the building blocks are divided into 2 parts to follow the topography. The garage and communal garden is on two levels consequently.

Two residential building types are adopted for different income groups, a slab building with gallery access (B1) and a staggered stack building with staircase access (B2). There are 4 unit types in B1, from the smallest studio of 22 sqm sharing the facility to the biggest 2-bedroom with an area of 45 sqm. In contrast B2 provides larger housing units of 3-bedroom with balcony around 70 sqm to 52 sqm 2-bedroom unit. In order to maximize the efficiency of construction in B1 the layout of each residential floor is same, while in B2 a small variation is designed.

For construction, the local hollow blocks (HCB) made in-situ are the main materials.

Project Data

SITE AREA 15,200 sqm (12,500 sqm without city road)

GROSS CONSTRUCTION AREA 24,265 sqm (DWELLING AREA 19,965 sqm AMENITY 4,300 sqm)

FAR (FLOOR AREA RATIO) 1.60

NUMBER OF DWELLING 405

GROSS DWELLING DENSITY 266 DU/Hec

NET DWELLING DENSITY 324 DU/Hec

PARKING UNIT 102