

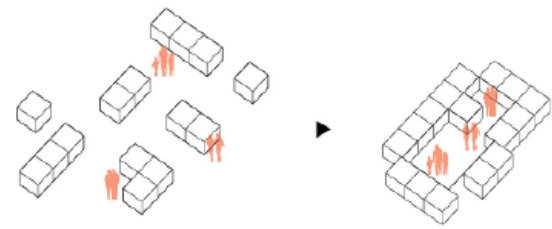
Courtyard Village

The mixed-use complex project aims to intensify and revitalize Sudbury's downtown core by developing a largely unbuilt parcel of land along the proposed Elgin Greenway.

From the initial observation and research, we have realized that the downtown Sudbury has been facing a lack of sense of community and inclusive public space which leads it to a state of isolation. However, the site has the potential of providing an active communal space which could create a sense of belonging and safety for the citizens.

Our design objective is to revive the social interaction by developing an intimate "village" that provides affordable housing for families, seniors, and students.

The courtyard is a design motif of this "village" which is explored in various scales and programs through the site to create a safe and close neighborhood. The project also explores a three-dimensional grid consisting of 3 by 3 by 3 meter cubic modules to create an organizational logic within the structure.



Axo View To The Site



Sport Ground



Community Gathering Stage



Playground



Water Fountain
Ice Skating



Stairs to underground parking



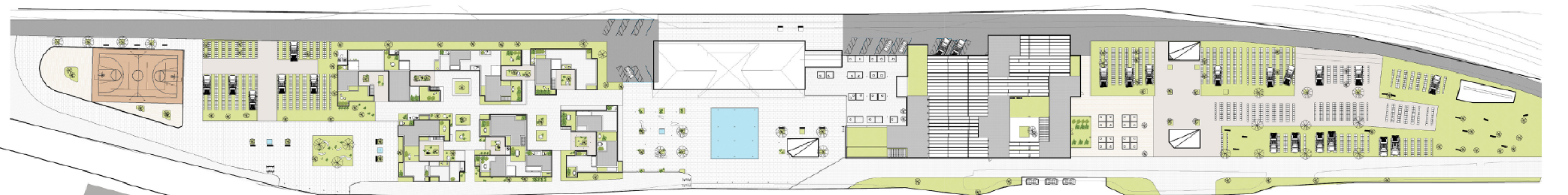
Temporary Market



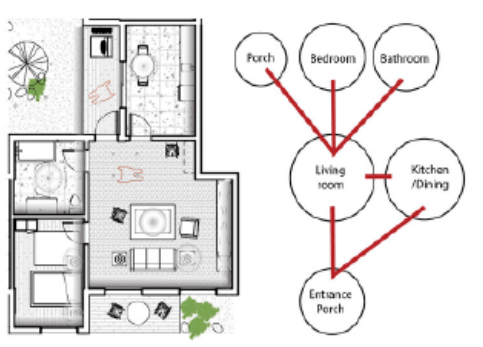
Indoor Dining
Winter Garden



Car booth
Drive-in Movie



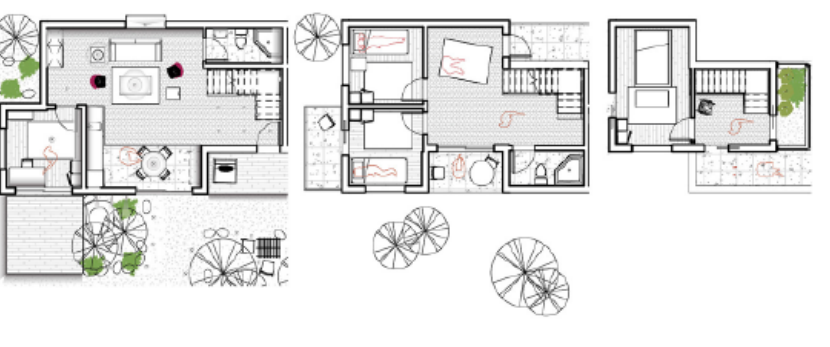
Site Plan
SC: 1:600



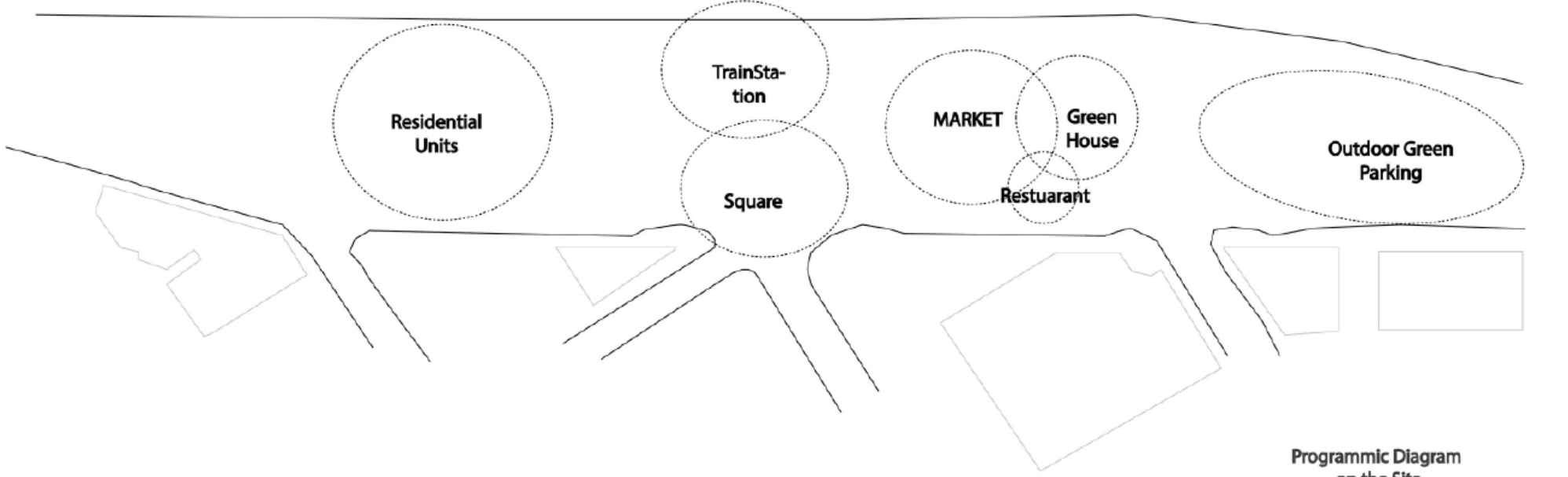
Typical Elderly Unit
Barrier-free Design



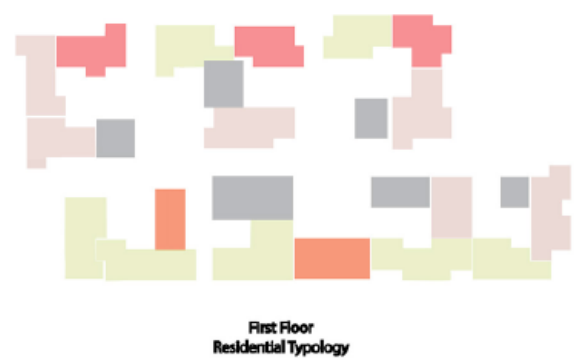
Typical Student Unit
First and second FL



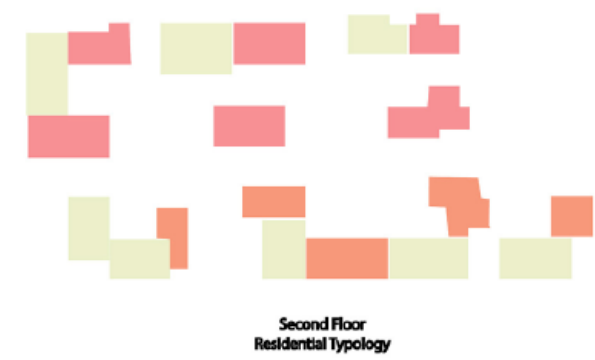
Typical Family Unit
First to Third FL



Programmatic Diagram
on the Site



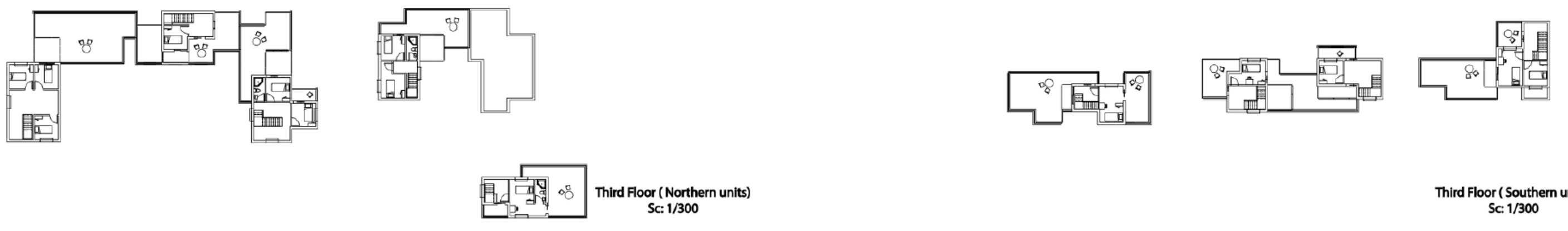
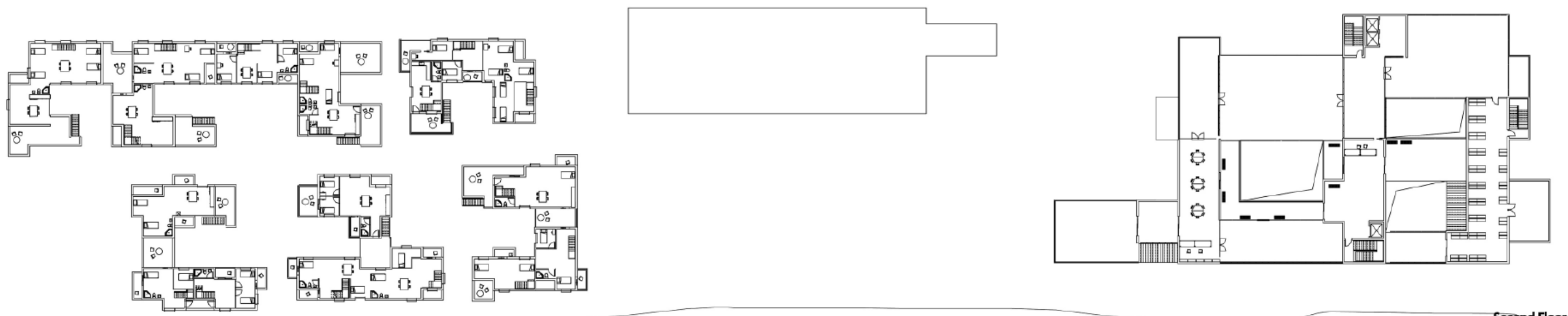
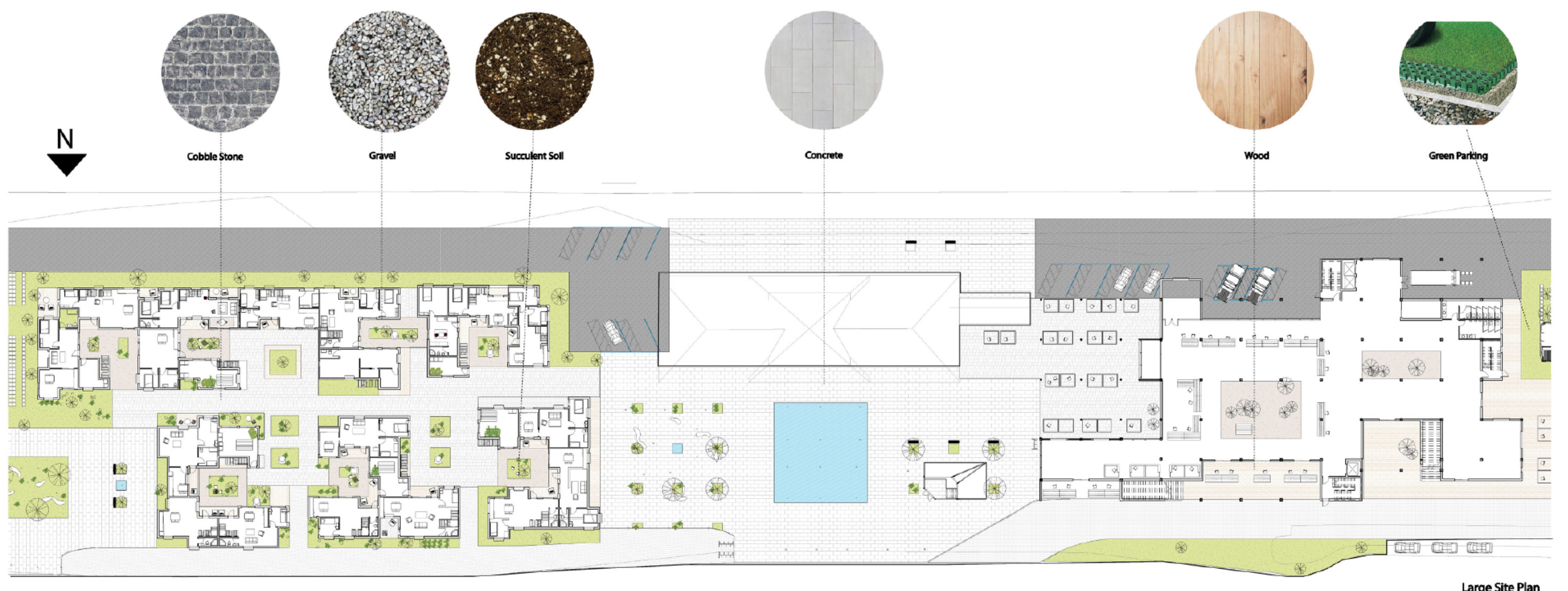
First Floor
Residential Typology



Second Floor
Residential Typology

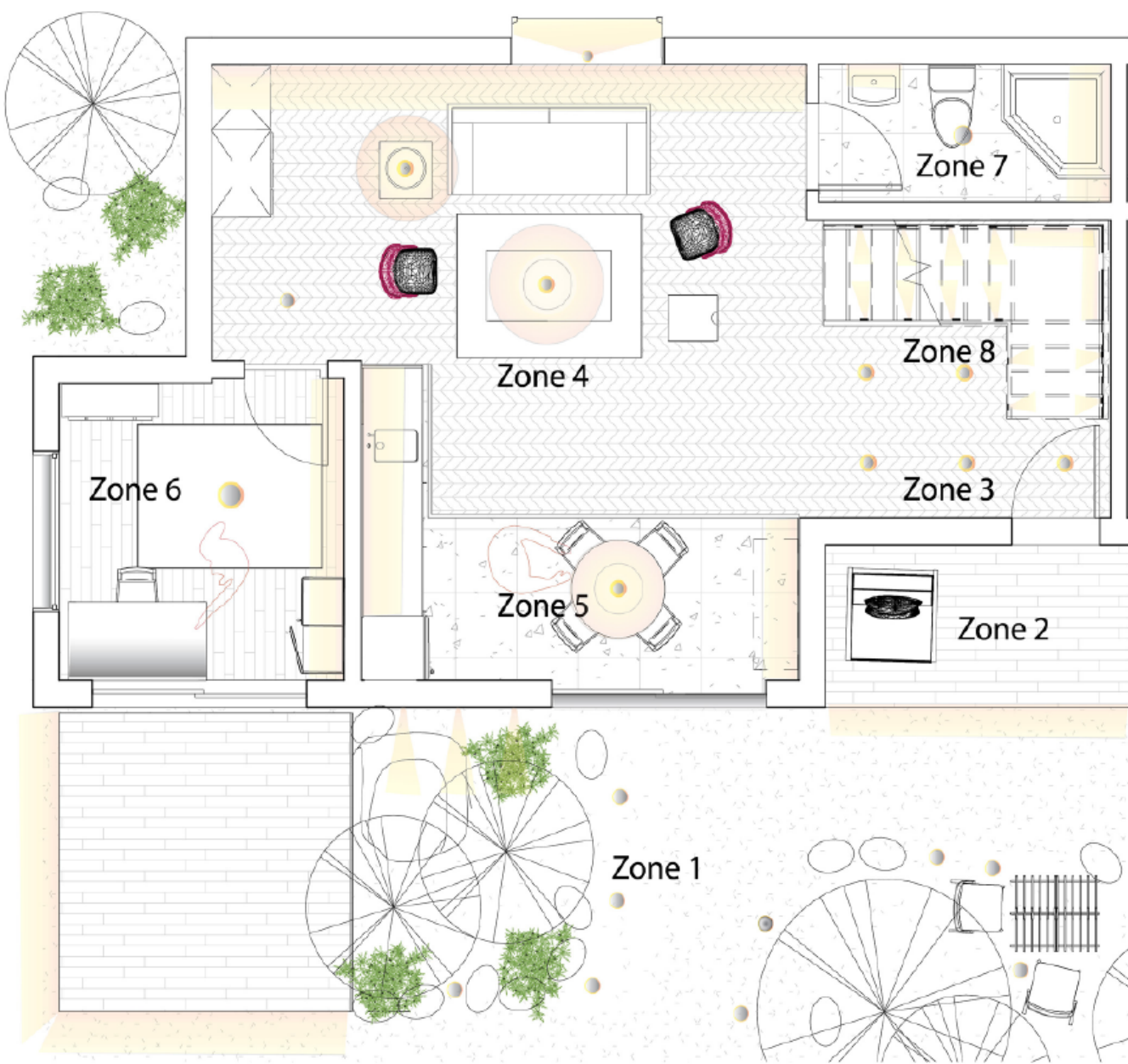


The View of The Public square in front of Market





Interior view of a studio room



Lighting Study of a Typical Family Unit



The pendant light fixtures are designed to provide task lighting for the spaces as well as intimacy by installed close to the human eye level.



Hidden lighting integrated with the vent bulkhead is designed to create a uniform lighting in every space while, in some cases, illuminating the path and creating atmosphere.



Diffuser light in the outer edge of window frame or inside the seating area in pop-out windows are designed to emphasize on the carved volume.

Nanoled Stainless Steel-SIMS:

The recessed spot is installed into the ground flush to the surface or in the wall. It is used to illuminate walking area, paths, stairs and hallways.

4000K /CR90, 950lm

Keglen-Louis Poutisen:

The pendants with a built-in curved opal insert creates a glare-free downward light. It is used to create more intimate area with low color temperature in kitchen and livingroom.

2700K /CR80, 1190lm

Linear strip light with grazing effect, SIMS:

The linear light hidden in the bulkhead vent, cabinets, shelves, and desks depending on the space creates a uniform, diffuse light.

3000/4000K /CR80, 750/3000lm

Shape-SIMS:

The clear polycarbonate diffuser is installed in the outer edge of window to create uniform light and charming effects on the facade.

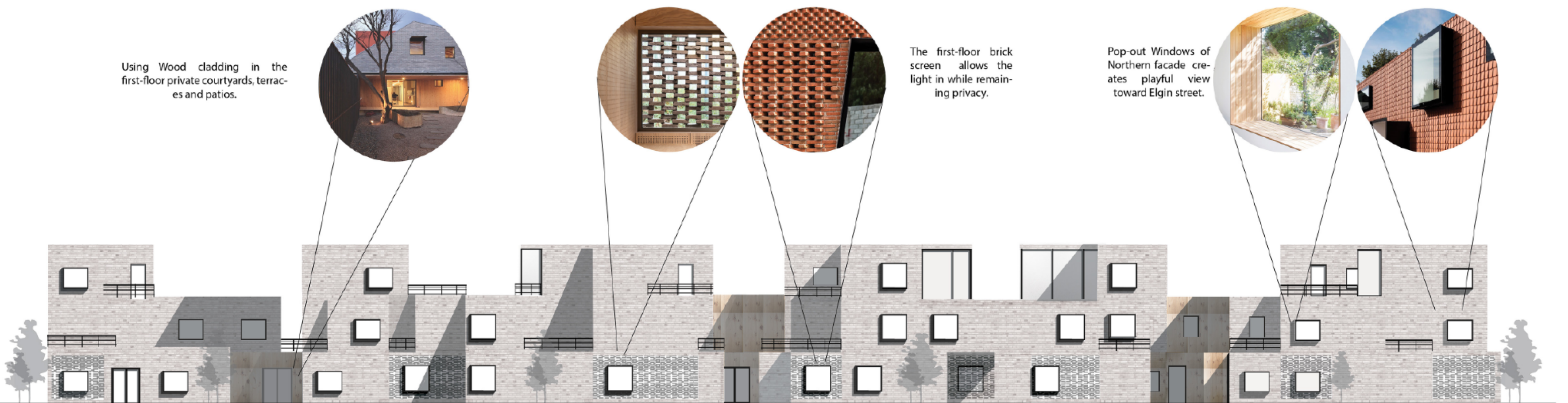
This type can be used in both indoor and outdoor.

3000K /CR80, 295lm

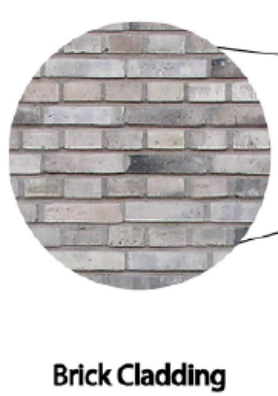
Using Wood cladding in the first-floor private courtyards, terraces and patios.

The first-floor brick screen allows the light in while remaining privacy.

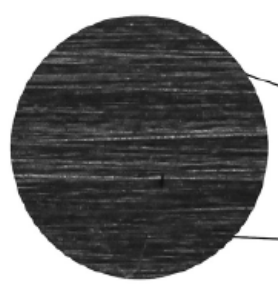
Pop-out Windows of Northern facade creates playful view toward Elgin street.



Northern Elevation, Housing



Brick Cladding



Black Steel



Frosted Glass



Maple Wood Cladding



Housing Detail Elevation Section SC: 1/30

Green roof structure is used as a passive strategy as well as the building envelope's inhabitation.

Deep, large terraces create a strong connection between indoor and outdoor spaces.

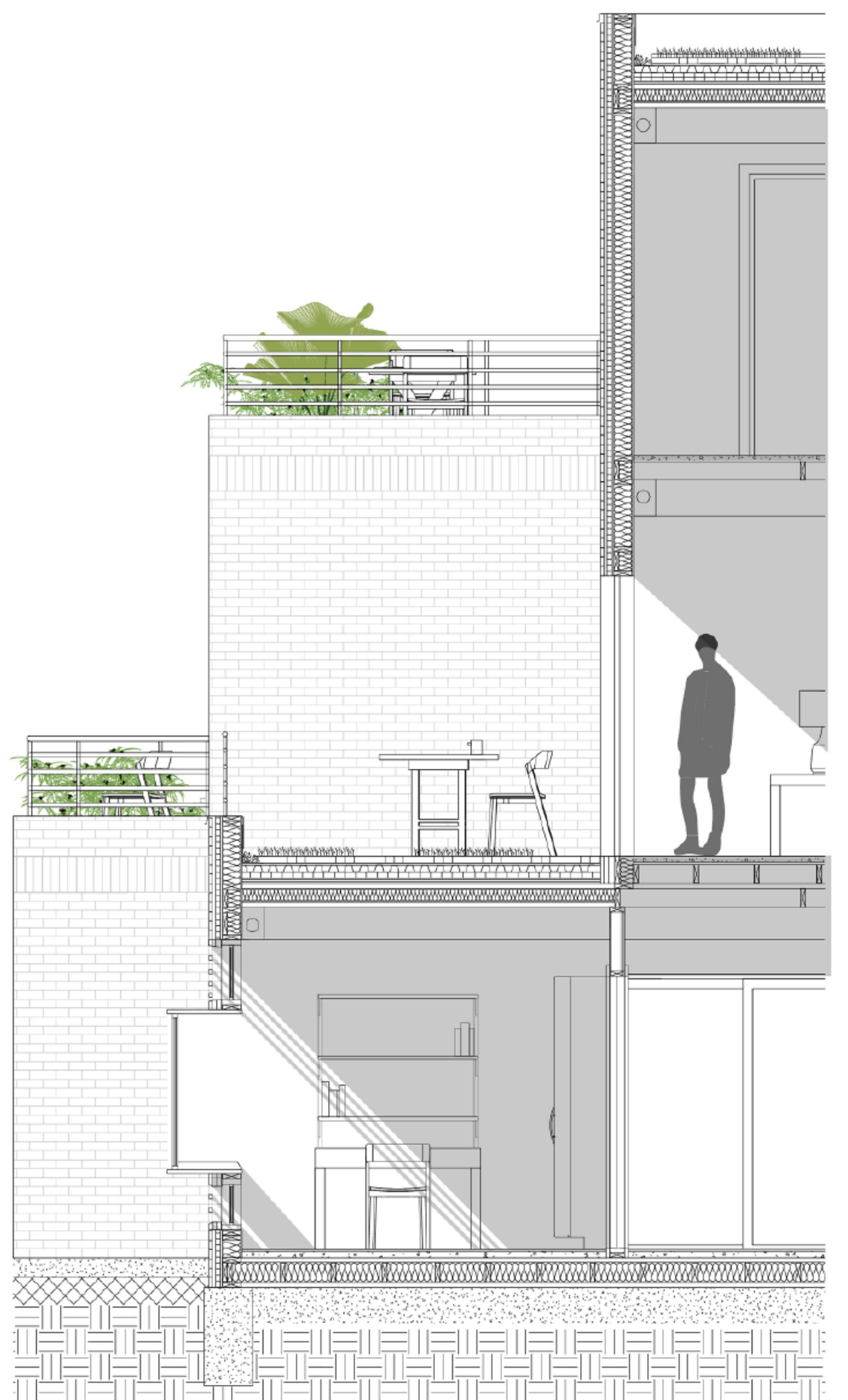
Brick facade cladding with Natural variation in grey tone colour allows for personalisation of urban development.

Brick screen is used to create a privacy as well as playful atmosphere inside the study room.

The corrosion of the frame steel will vary across the buildings site and create imperfections and uniqueness to the exterior of the dwellings.

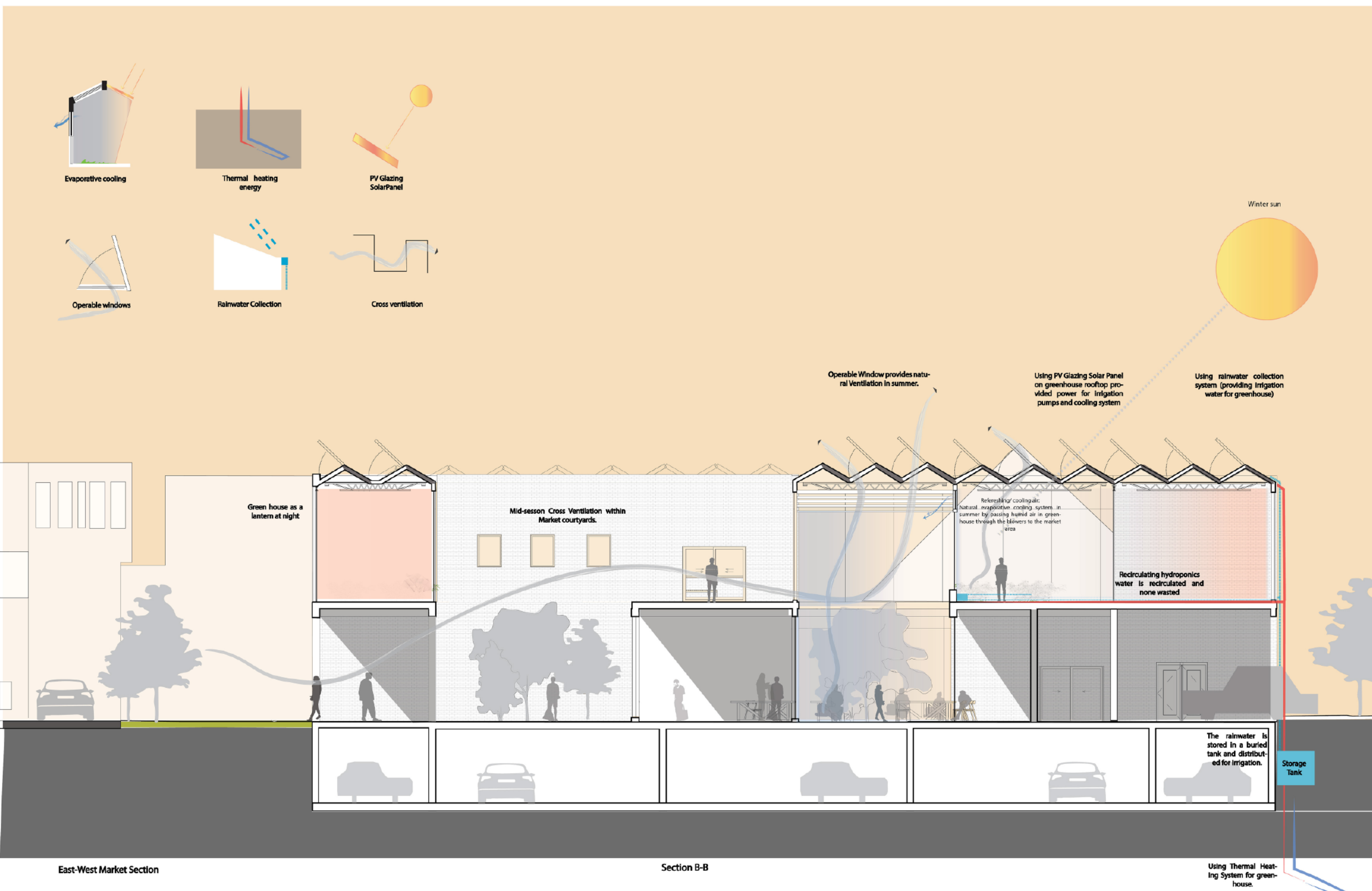
The pop-out windows create a view into pedestrian walkway and Elgin street while remaining the resident's privacy.

Plywood base of window seat includes cushion. The Cushion is removable based on the residence needs over time.



layer of gravel and soft soil 40 mm Sand base for water run off and slow drainage

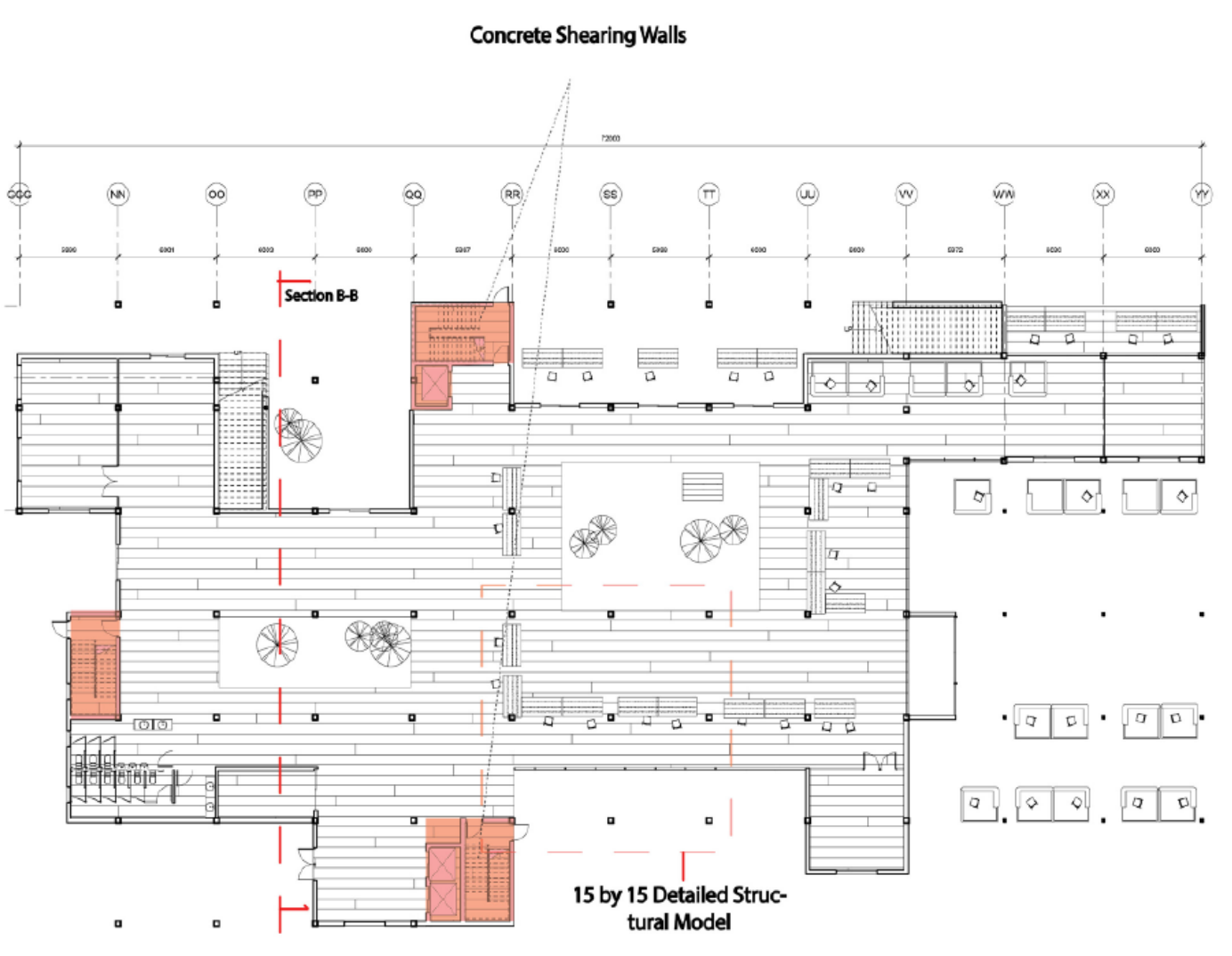
Concrete foundation block



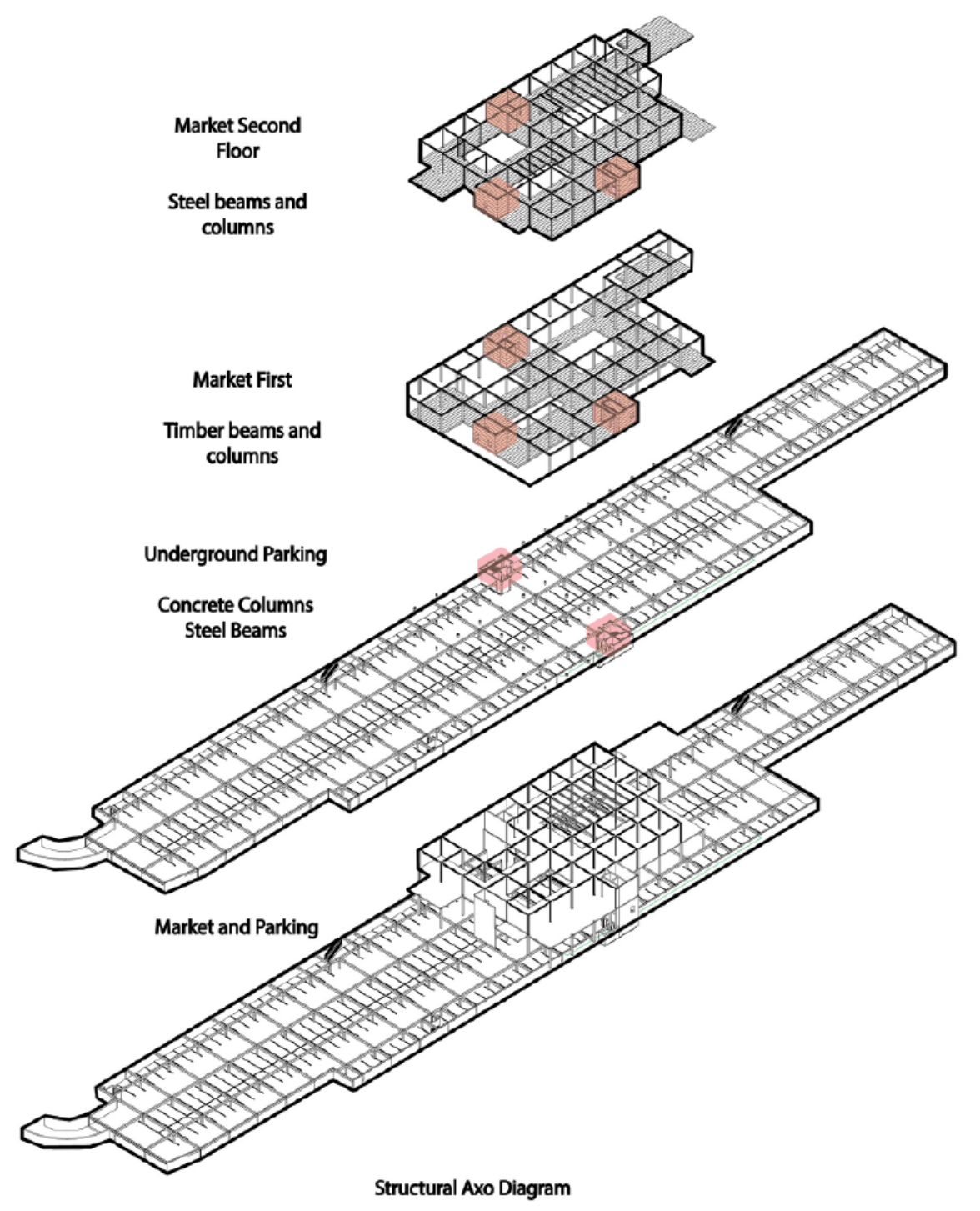
East-West Market Section

Section B-B

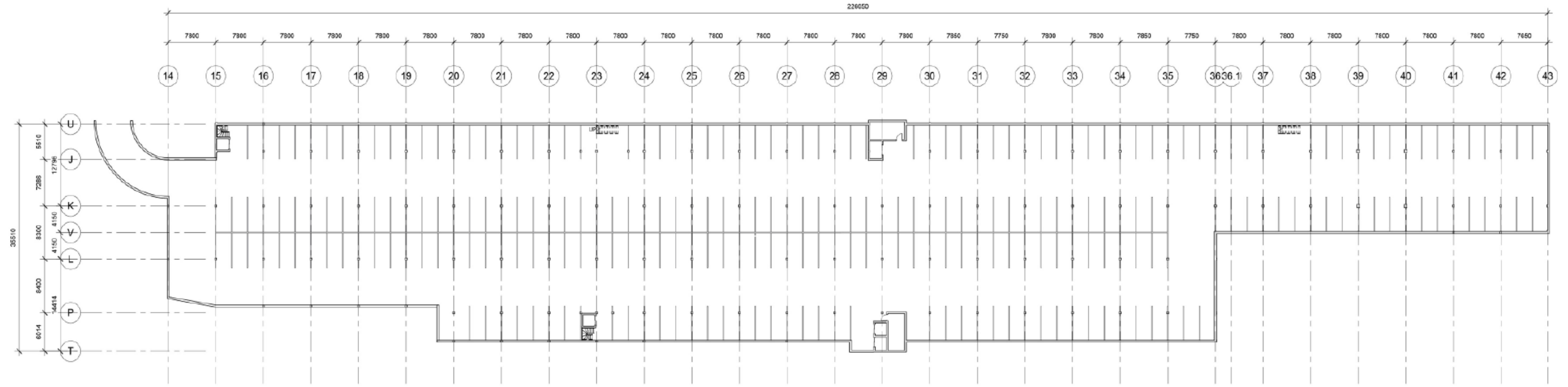
Using Thermal Heating System for greenhouse



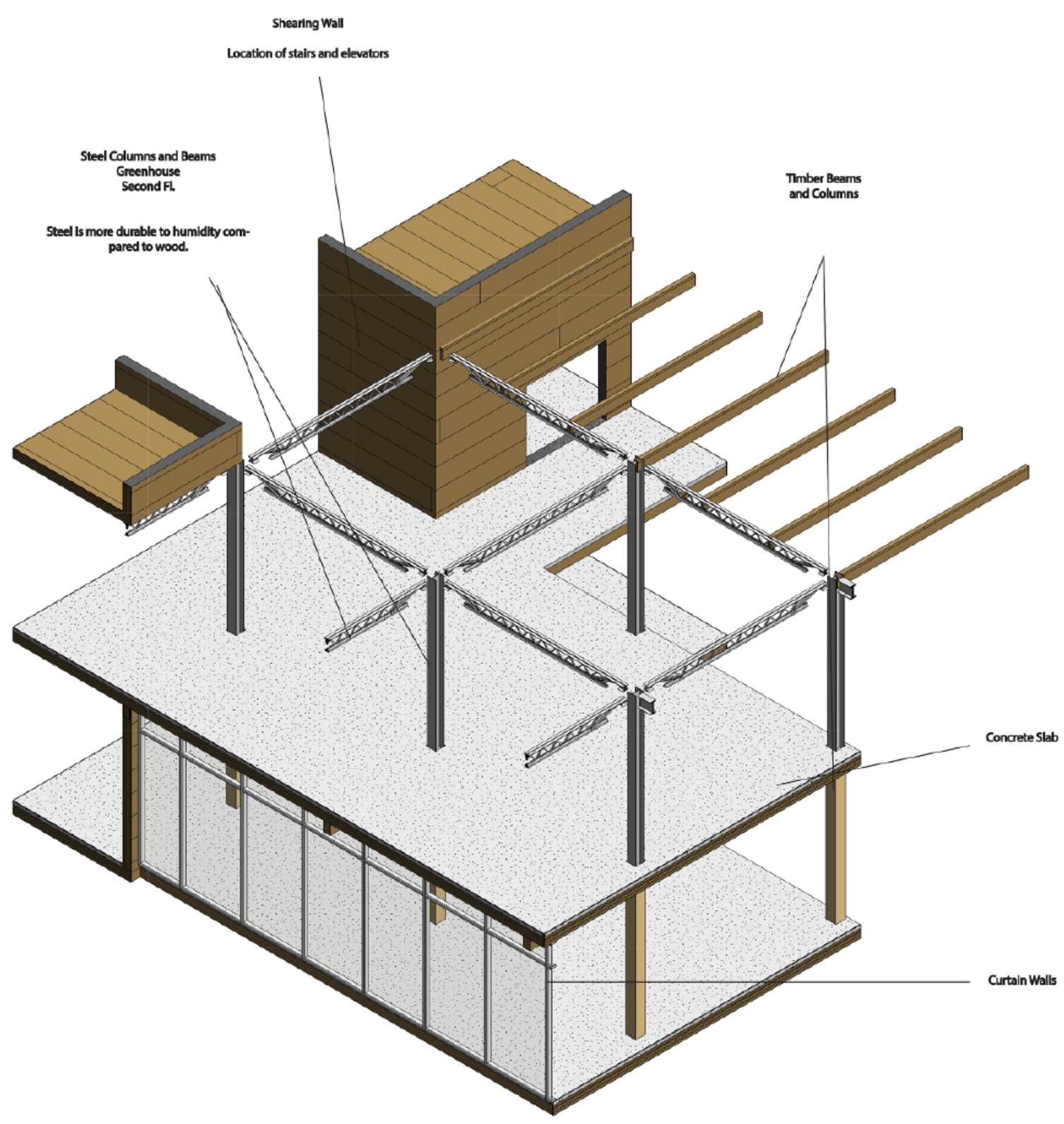
First Floor Market Structural Plan



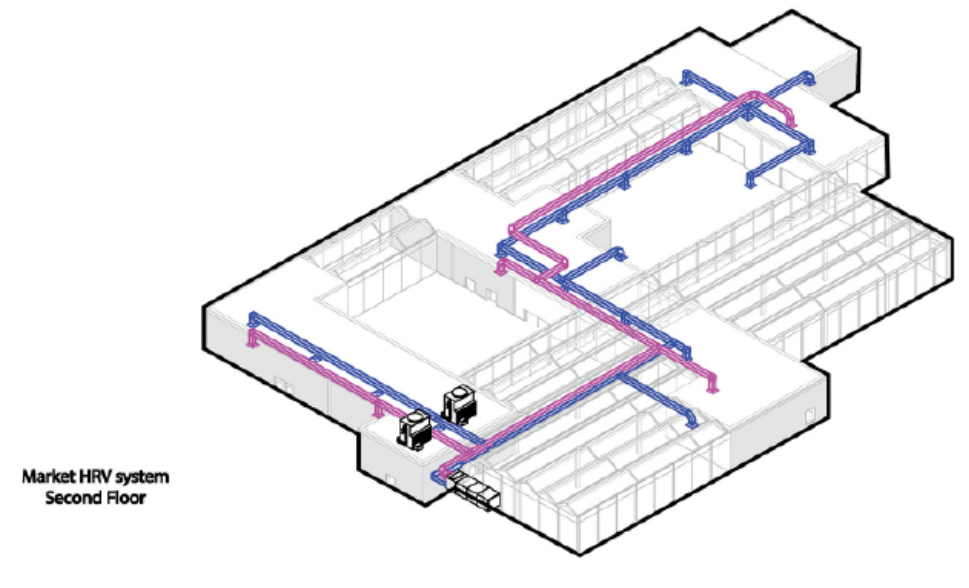
Structural Axo Diagram



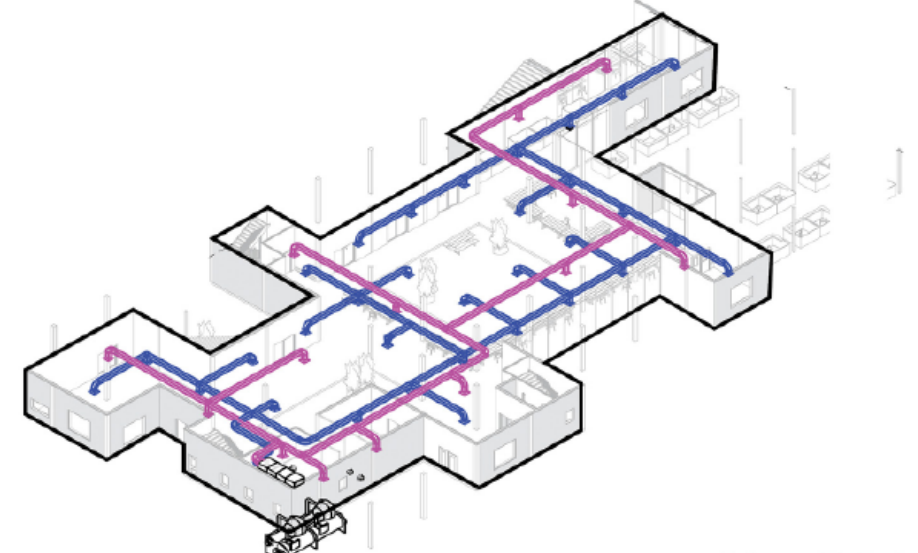
Structural plan Underground Parking (s:1/500)



15 BY 15 Meter Detailed Structural Model

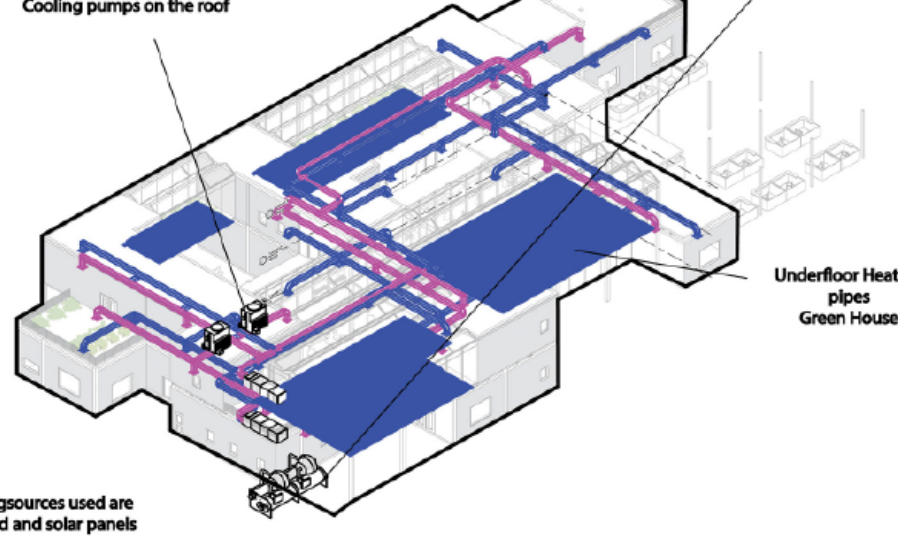


Market HVAC system Second Floor



Cooling pumps on the roof

Underground Heating Pump



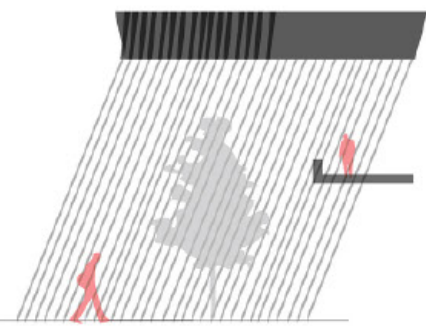
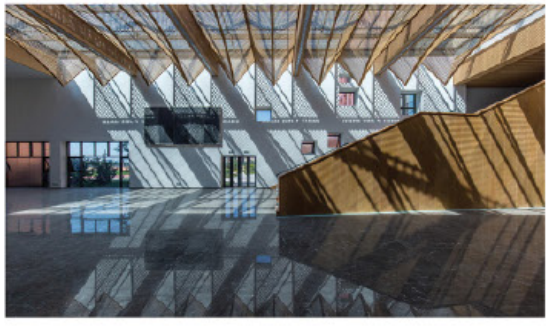
The heating sources used are underground and solar panels

Underfloor Heating pipes Green House

Market HVAC and Geothermal system



Interior view of Market Courtyard



The intention is to create a playful, engaging atmosphere in the interior market courtyard by bringing in a rhythm of strip shadows.
 Inspiration design: Tianjin High-tech Zone First School by Ren Jun Studio



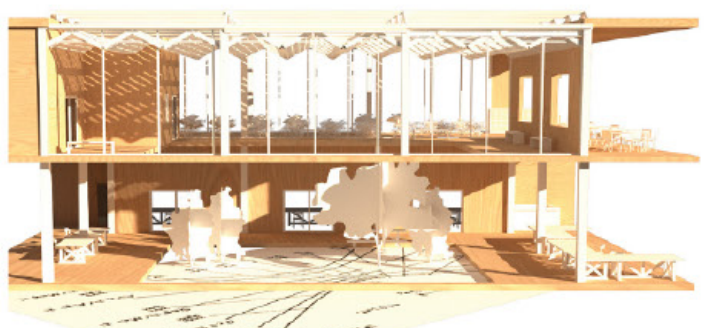
Integration of lighting with urban ground



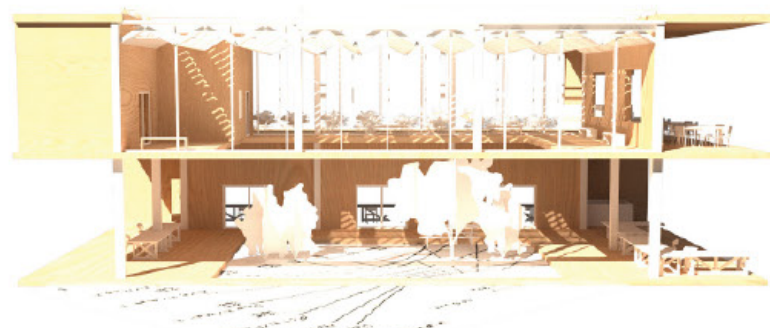
Integration of lighting with urban furniture



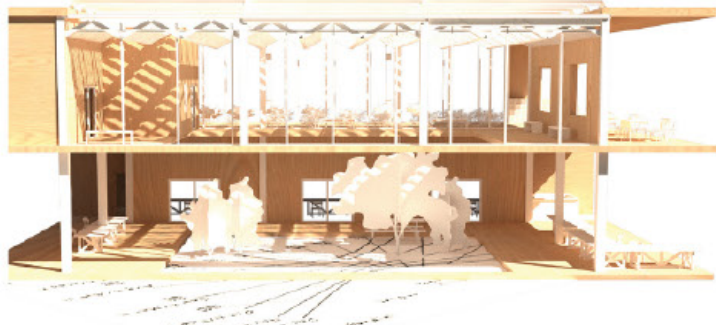
Creating ambient light for use of market space at night



Winter (December at 16 pm)



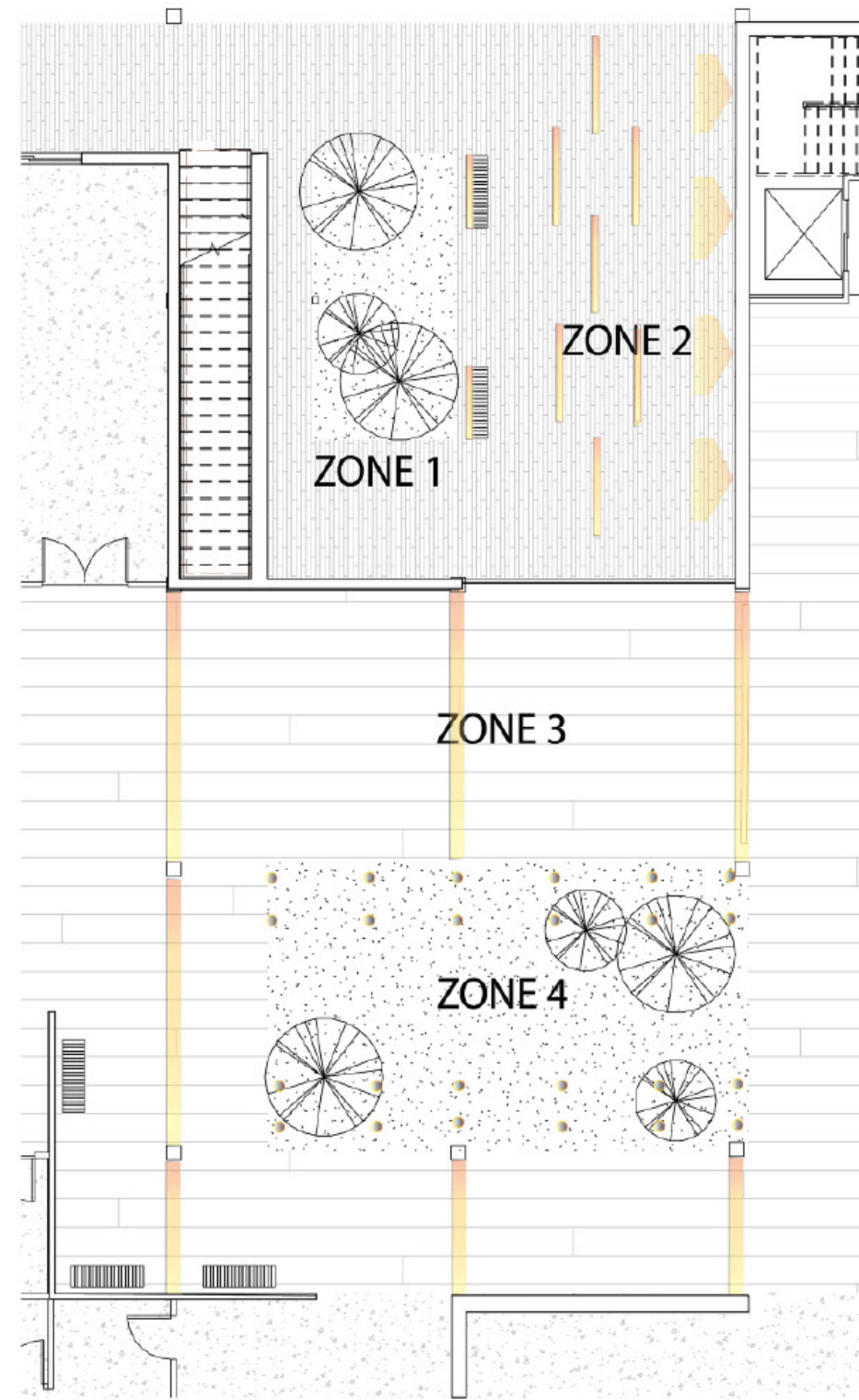
Summer (July at 16 pm)



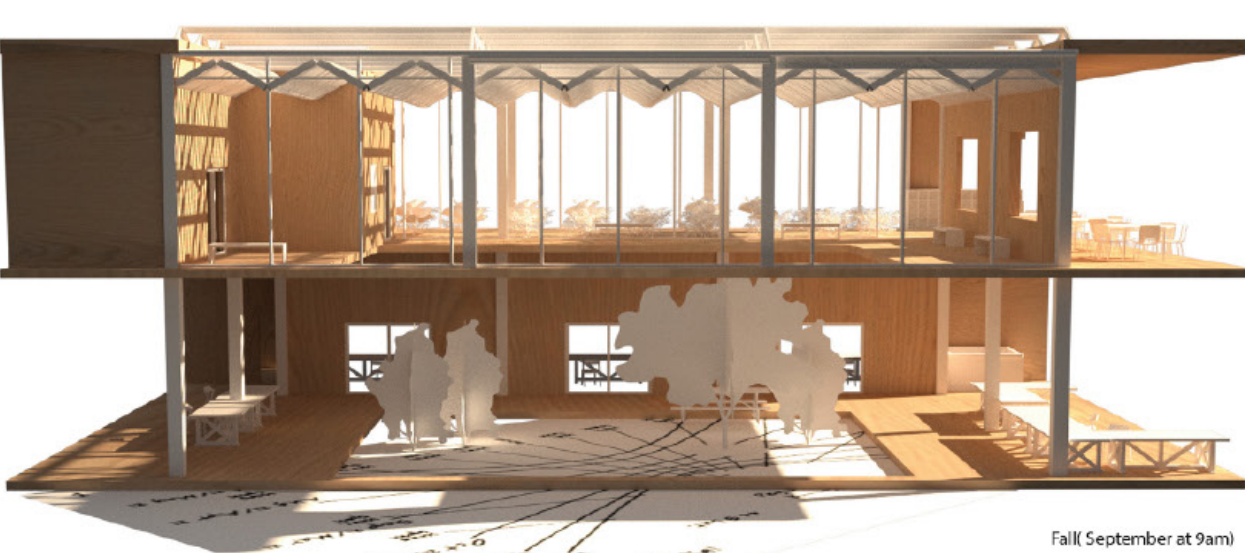
Fall (September at 16 pm)



Winter(December at 9 am)



- Empty Lamp, Vibia:**
 The Empty outdoor lighting integrates light within a single piece of urban furniture. 2 x LED STRIP 24V 8.6W LED 3550K CRI >70 1247 lm 73 lm/W
- Trif Lane, Kuba:**
 installed in the paving of the courtyard, light strips are arranged in different lengths. Welcoming with a warm light
- Nano Spots-SIMS:**
 The LED Focal lights is installed in the outer edge of skylight of courtyard. 3000K CRI >80 2274.17 lm 98.87 lm/W
- Linear LED lighting for ceilings - Gustafs D-Line:**
 The integrated linear lighting with timber beams to provide



Fall(September at 9am)



Cladding Wood



Brick Wall



Using frosted glass on second floor facade



Using wood screen around the openings to create interactive facade for visitors as well as allowing the light in
 The wood pattern mimicking the form of brick



Market Northern Facade