

SÃO PAULO
REPAIR AND CONSOLIDATE.
RE-THINKING SOCIAL HOUSING
THROUGH ASSEMBLAGES

A RELATIONAL APPROACH OF LIVING TOGETHER

Beatrijs Kostelijk

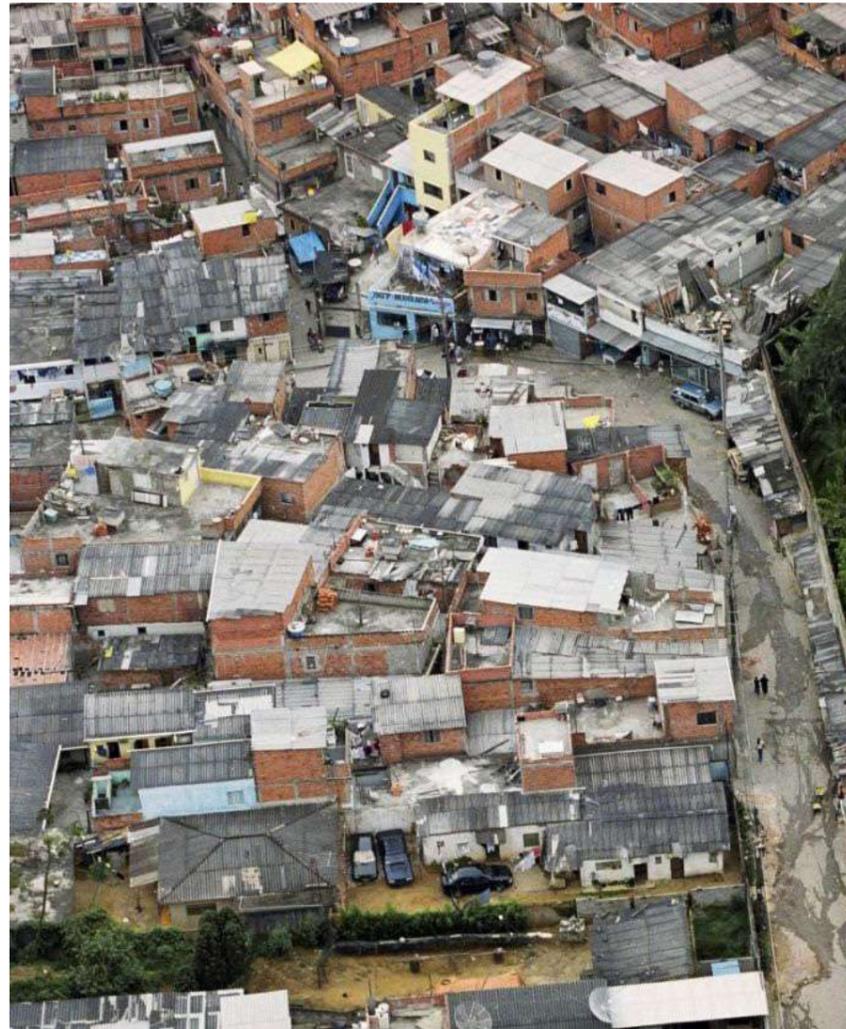
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Problem Field and Research Question

BACKGROUND

SÃO PAULO



(Source: <https://www.theguardian.com/cities/2017/nov/29/sao-paulo-injustice-tuca-vieira-inequality-photograph-paraisopolis>).

Rapid urbanisation:
Housing crisis
squatter settlements: favelas

BACKGROUND

SÃO PAULO



(Source: <https://www.theguardian.com/cities/2017/nov/29/sao-paulo-injustice-tuca-vieira-inequality-photograph-paraisopolis>).

Inequality
Fear of violence
Fortified enclave (Teresa Calderia, 2017)

BACKGROUND

SÃO PAULO



Image: famous picture by photographer Tuca Vieira of segregation and inequality through the fortified enclave in a favela in Paraisópolis, São Paulo, 2004 . Source: <https://www.theguardian.com/cities/2017/nov/29/sao-paulo-injustice-tuca-vieira-inequality-photograph-paraisopolis>, 2017).

Social inequality and segregation regulated through space

BACKGROUND

PROBLEM STATEMENT



(source: author's image)

Auto-construction in environmental risk areas
Inadequate living conditions.
Unsustainable and
Segregated ways of life trigger environmental challenges to
the whole fabric of the city.

Peripheral urbanization

People illegally occupy land, auto-construct their own homes, and after 5 years of illegal occupation, infrastructure is implemented by the municipality.¹

This type of urbanization "*refers to modes of the production of space that (a) operate with a specific temporality and agency, (b) engage transversally with official logics, (c) generate new modes of politics, and (d) create highly unequal and heterogeneous cities.*"²

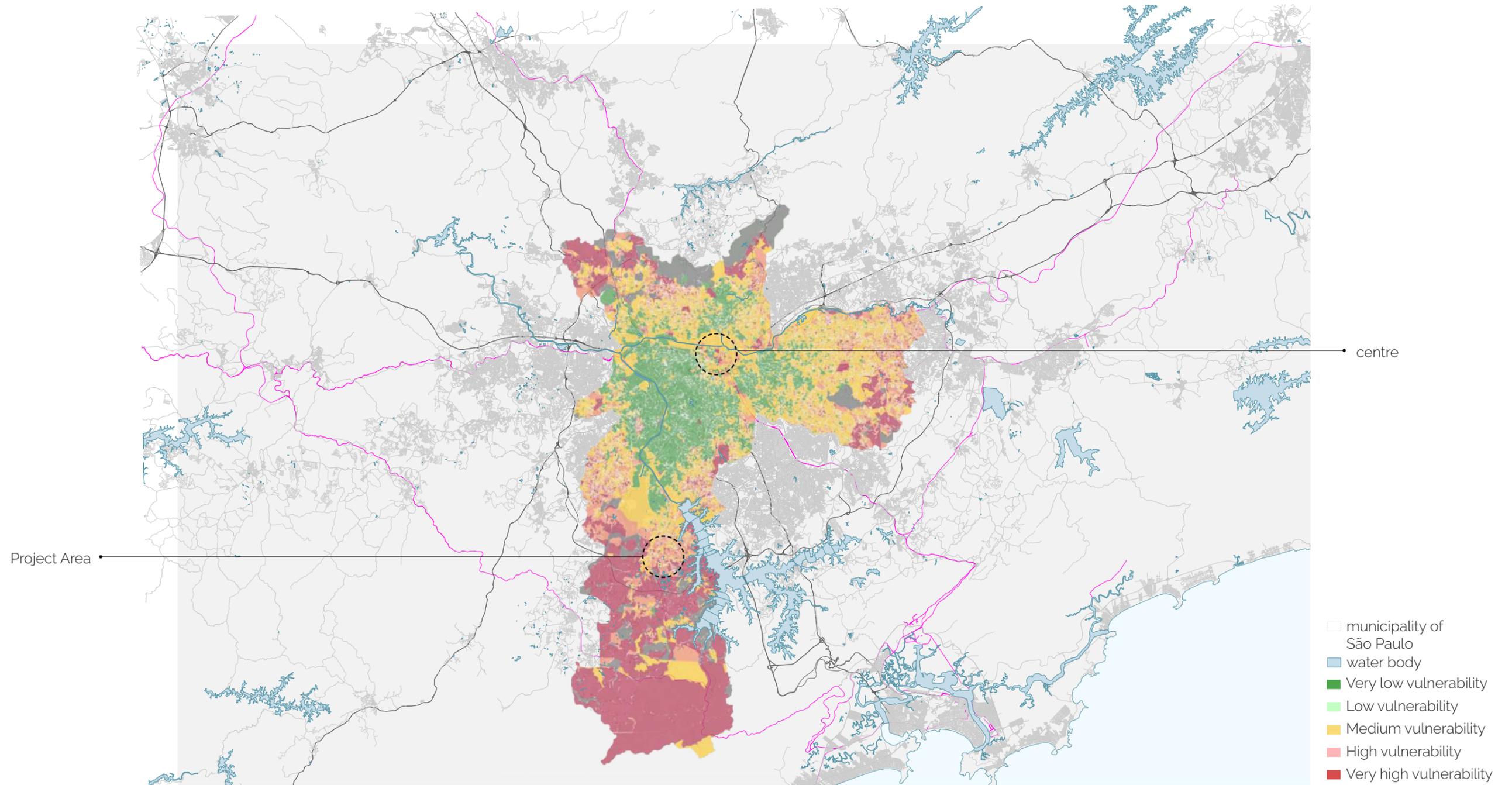
A very different reality than what we know here in the Global North.

¹ Caldeira, T. P. R. (2017). Peripheral urbanization: Autoconstruction, transversal logics, and politics in cities of the global south. *Environment and Planning D: Society and Space*, 35(1), 3–20. <https://doi.org/10.1177/02637758166584792>

² Ibid.

BACKGROUND

PROBLEM STATEMENT

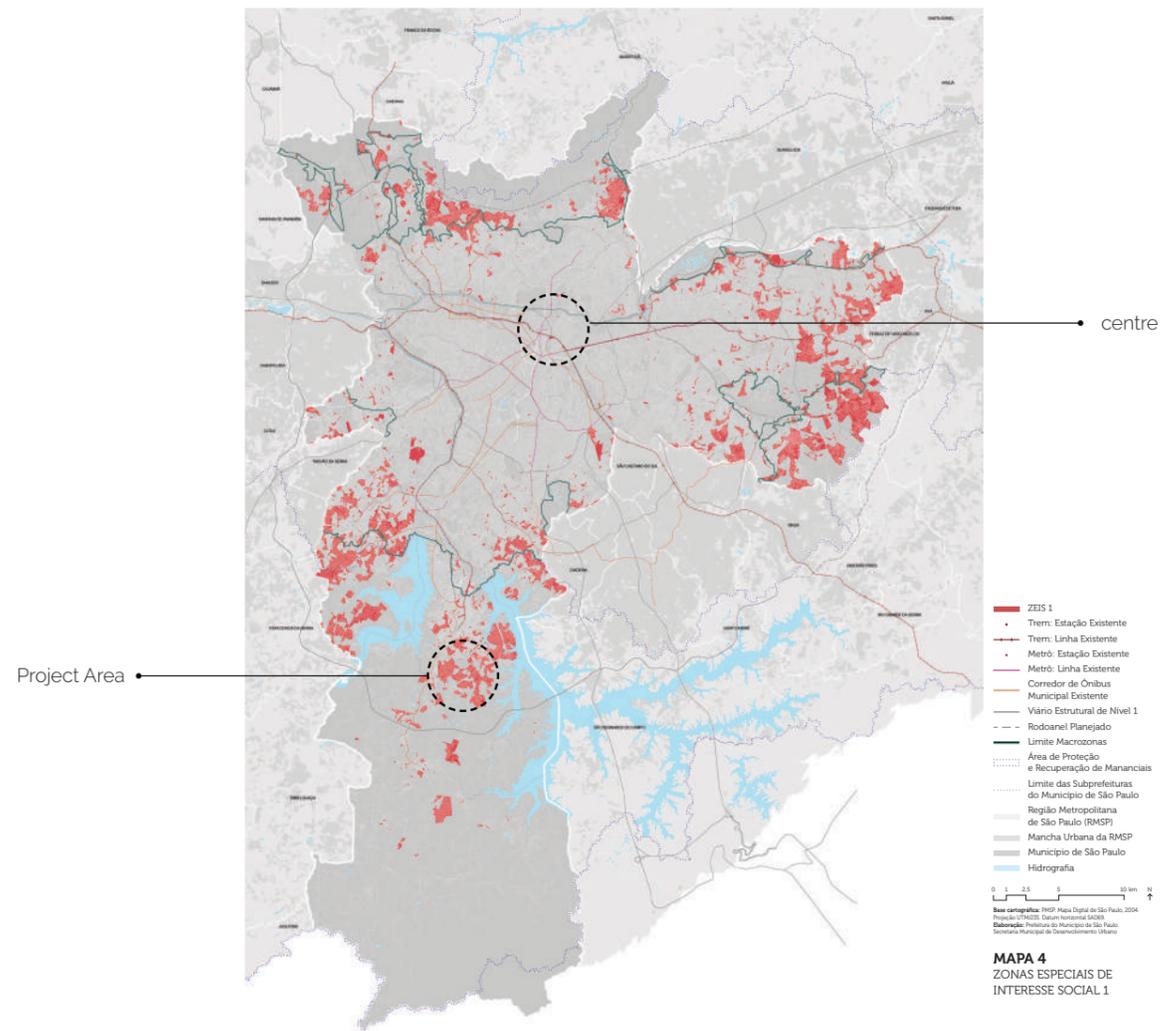


(source: Goto E. A., Suarez A. M., Ye H. (2022). Spatial analysis of social vulnerability in São Paulo city, Brazil.)

vulnerability increases towards the southern periphery of the city.

BACKGROUND

PROBLEM STATEMENT

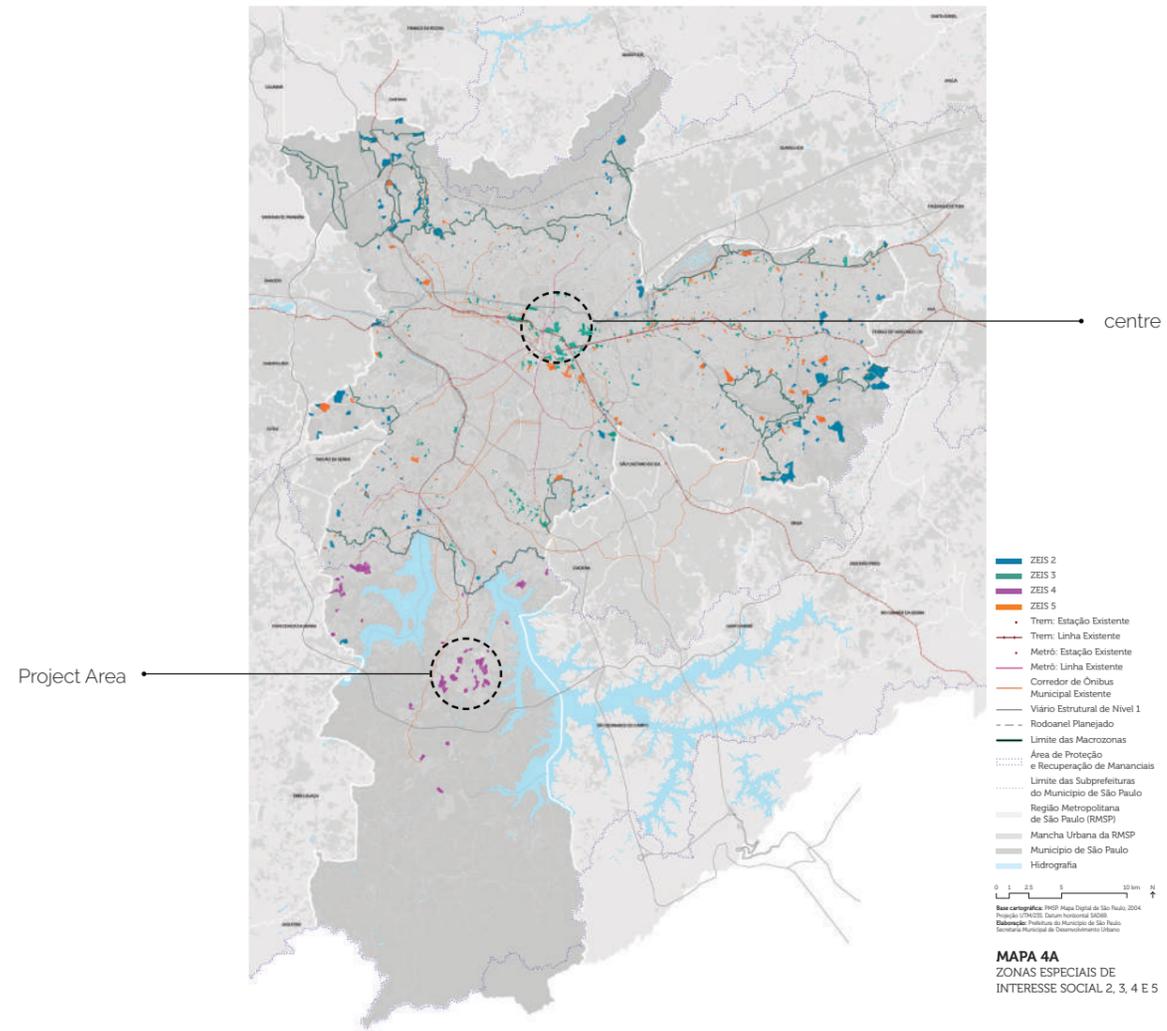


(Source: Plano Director Estratégico do Município de São Paulo, 2014)

ZEIS 1 for (illegally) occupied land (PDE)
Special Zones of Social Interest

BACKGROUND

PROBLEM STATEMENT



(Source: Plano Director Estratégico do Município de São Paulo, 2014)

ZEIS4 for vacant land located in headwater or environmental protection areas. (PDE)

BACKGROUND

SEGREGATION



(Source: Arquitetura JAA, 2018. from: <https://arquiteturajaa.com.br/portfolio/chacara-do-conde/>. Edited by author).

Conjunto Habitacional Chácara do Conde on ZEIS 4, Grajaú,
with informal settlements in the background.

Top-down

Efficiency

Segregation even within the same income groups

BACKGROUND

BINARY OPPOSITIONS

POOR		RICH
PUBLIC	COLLECTIVE	PRIVATE
BOTTOM-UP		TOP-DOWN
FIXED		ADAPTABLE
LOW-RISE		HIGH-RISE
INTERIOR		EXTERIOR
TRADITIONAL		MODERN
EFFICIENCY		RESILIENCE
NATURE		CULTURE
NEIGHBORHOOD	BLOCK	UNIT

Dichotomies characterizing
the unsustainable housing
development in Grajaú, São
Paulo

RESEARCH QUESTION

ASSEMBLAGE THINKING IN ARCHITECTURAL DESIGN

How may **assemblage thinking** in architectural and urban design contribute to creating an socio-ecological **inclusive** housing scheme in Grajaú, São Paulo?

RESEARCH QUESTION

ASSEMBLAGE THINKING IN ARCHITECTURAL DESIGN

What is assemblage thinking?

"The 'holding together' of heterogeneous elements"

- Deleuze and Guattari

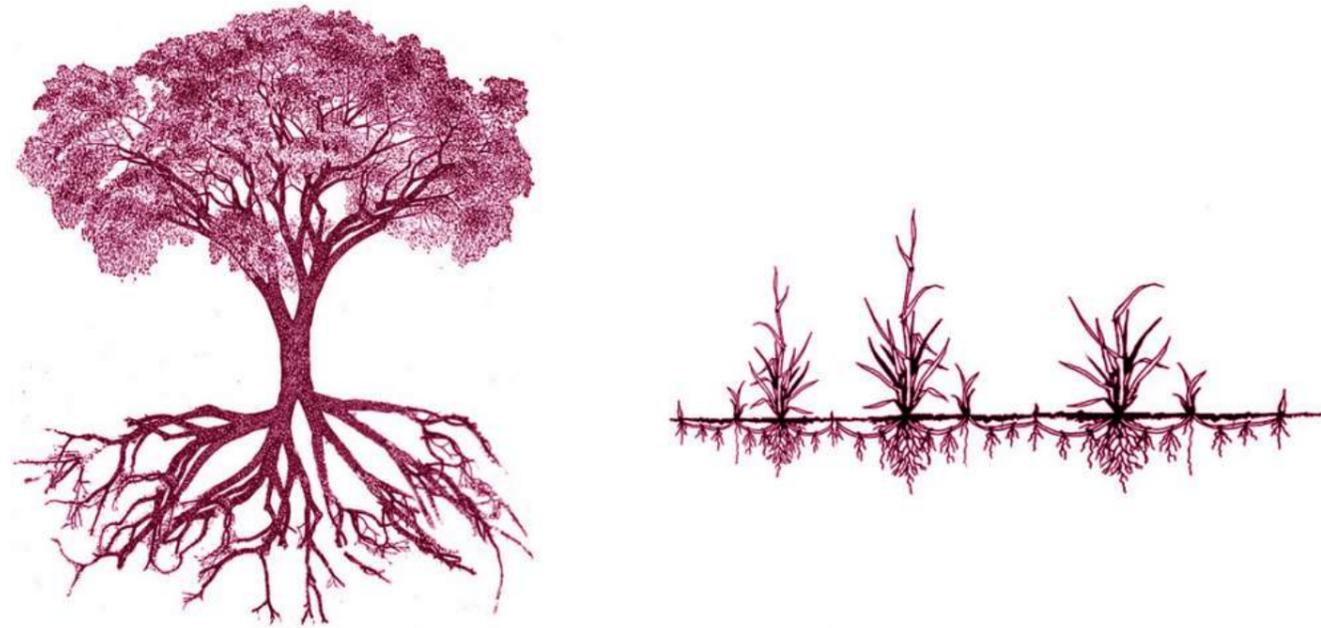
(A Thousand Plateaus: Capitalism and Schizophrenia, 1987 p. 323).

Core Features:

- "Relations of exteriority" not the entity itself, but its relations define or give meaning to it.
 - Anti-essentialism negating any existing binaries as no thing can be essentialised or reduced to one polarity.
 - The notions of:
 - Territorialization stabilize or structure a situation
 - Deterritorialization destabilize or destructure the relations of a situation
 - Reterritorialization restructure the relations of situation in a different way
- where the opportunity lies for social change

THEORETICAL FRAMEWORK

ASSEMBLAGE THINKING



(Source: Gloushenkova K. and Murray K. n.d. from: <https://www.themantle.com/philosophy/rhizome-american-translation>).

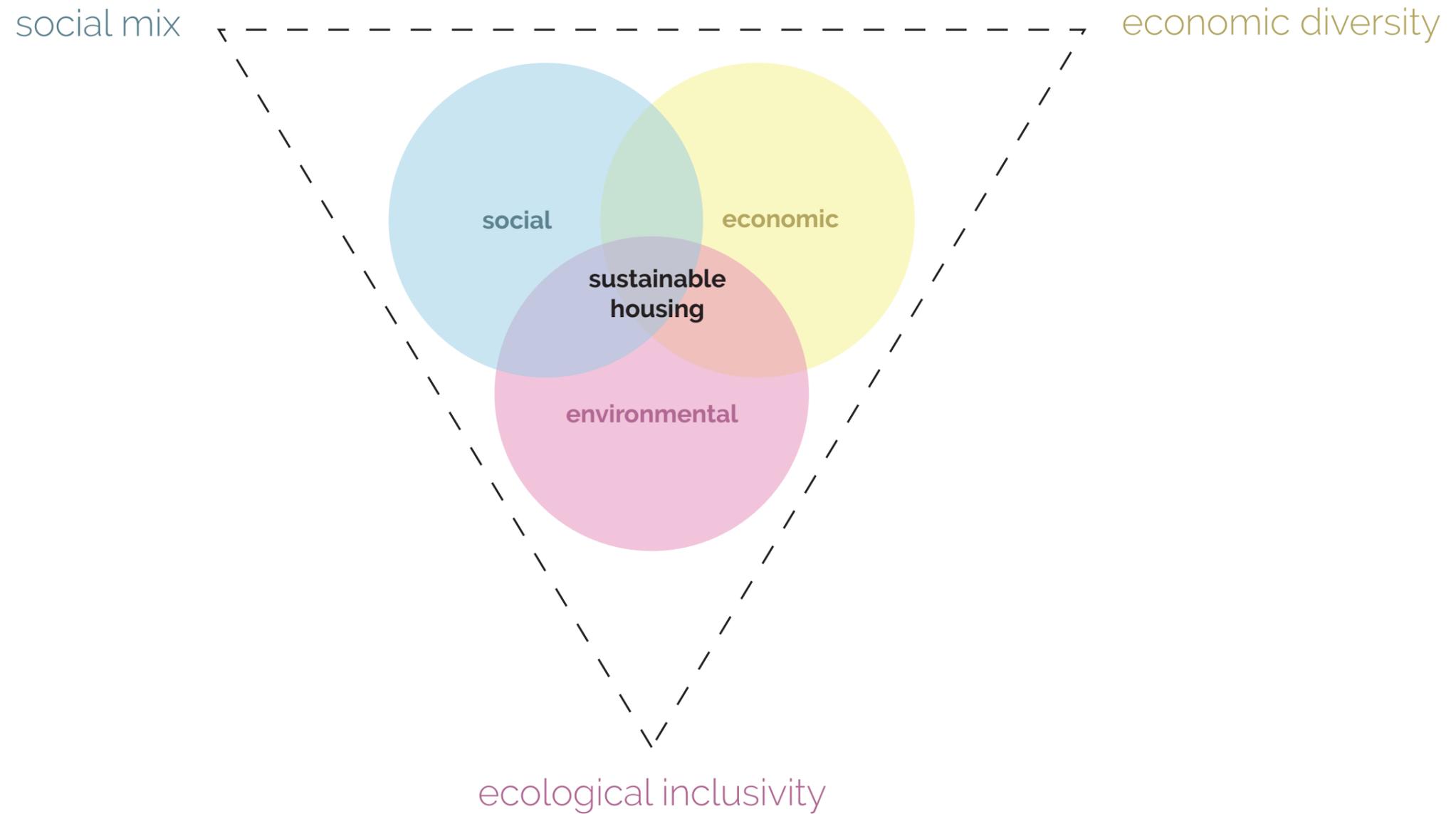
Hierarchical or tree thinking
versus

assemblage or rhizomatic thinking.

Acknowledging that space is always a coproduction of both human and non-human actors, such as organizations, digital technologies, other life forms, stories, lives, events and desires that are entangled across space and time.

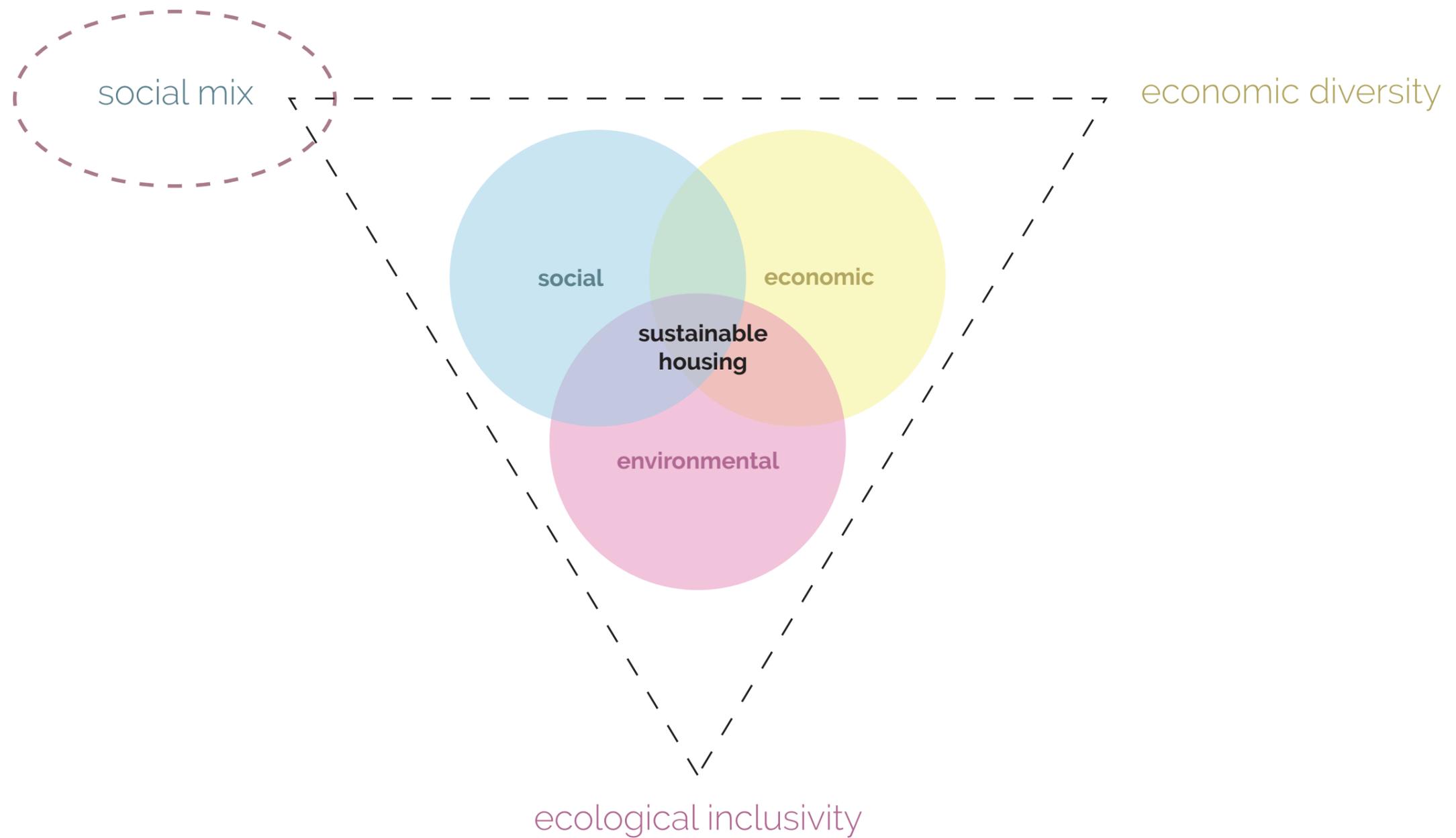
DESIGN HYPOTHESIS

CO-EXISTENCE OF HETEROGENEOUS ELEMENTS



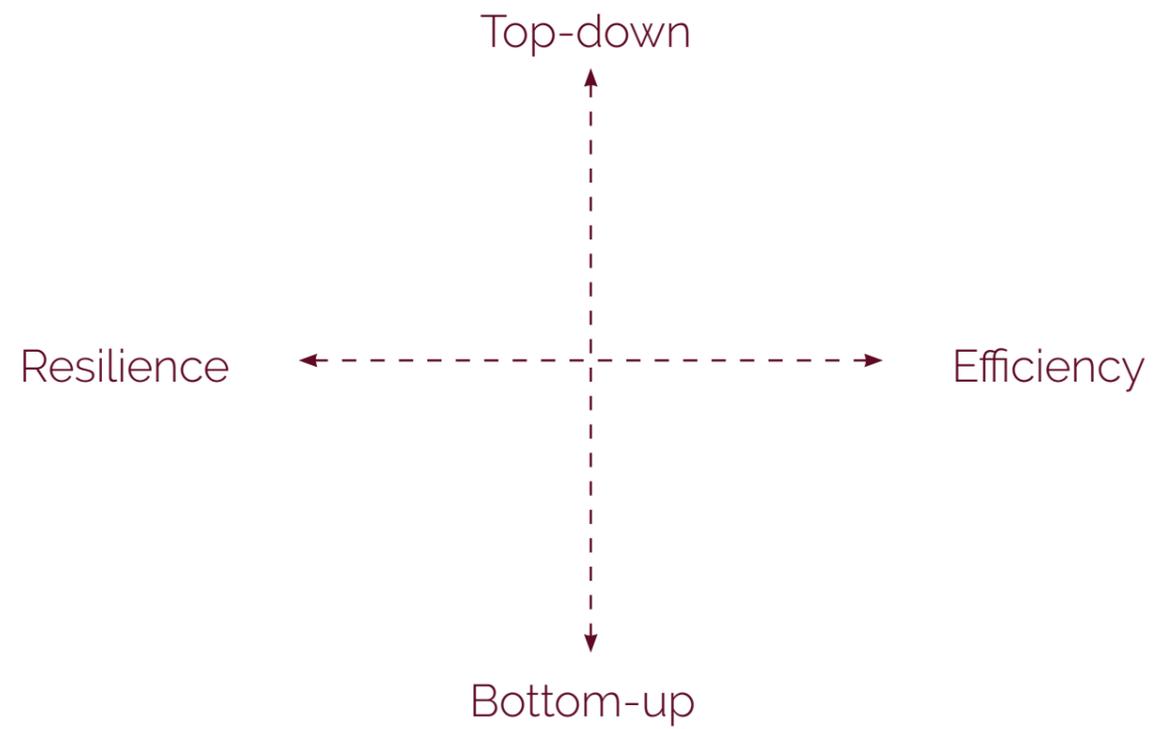
DESIGN HYPOTHESIS

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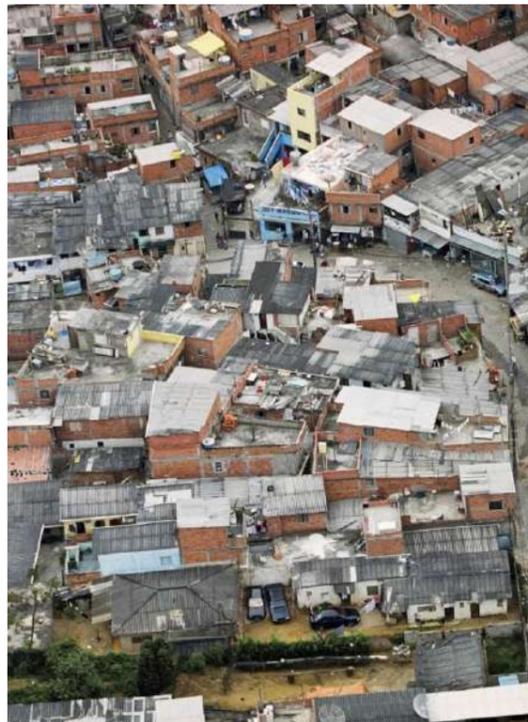
DESIGN HYPOTHESIS

TRADE-OFF



DESIGN HYPOTHESIS

TRADE-OFF



(Source: The Guardian, 2017).



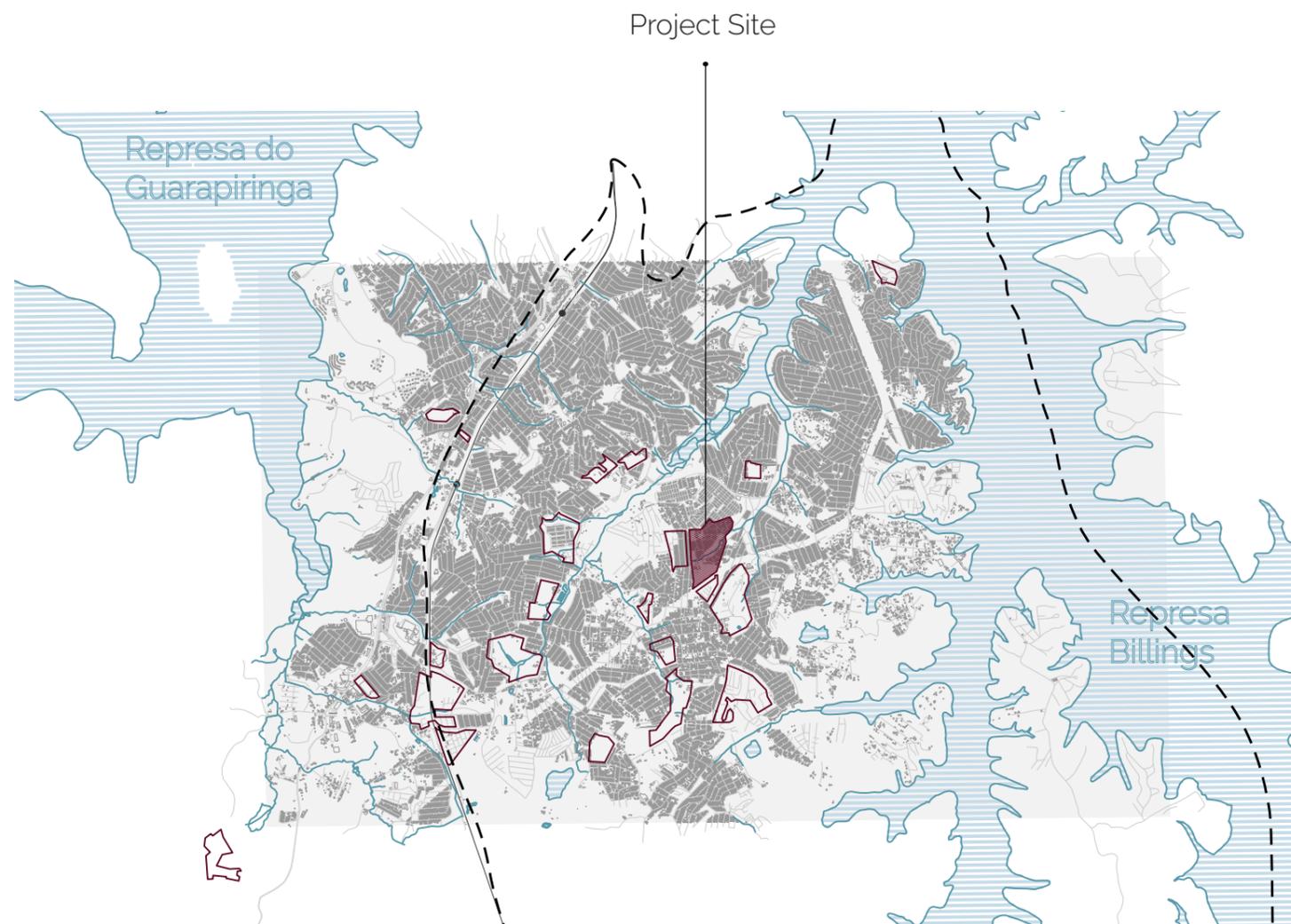
(Source: Arquitetura JAA, 2018. from: <https://arquiteturajaa.com.br/portfolio/chacara-do-conde/>. Edited by author).

2 opposing examples
of social housing
development in Grajaú, São
Paulo.

Project Site

PROJECT SITE

ANCHIETA



- Anchieta
- ZEIS 4
- Railway
- ⋯ Grajaú
- water body

(Source: Data from GeoSampa, author's image)

Anchieta: a ZEIS 4 area that has been illegally occupied by 1063 families since 2013.

PROJECT LOCATION

OCCUPATION PROCESS ATLANTIC FOREST



(Source: Google Earth, 2023).

PROJECT LOCATION

OCCUPATION PROCESS



(Source: Google Earth, 2023).

PROJECT LOCATION

OCCUPATION PROCESS



(Source: Google Earth, 2023).

PROJECT LOCATION

OCCUPATION PROCESS

people start occupying the creek area



(Source: Google Earth, 2023).

PROJECT LOCATION

OCCUPATION PROCESS



(Source: Google Earth, 2023).

in 2018 these people wer relocated with th help of TETO housing organization.

PROJECT LOCATION

OCCUPATION PROCESS



(Source: Google Earth, 2023).

Status today
A school being developed on the north-
western part of the site

PROJECT LOCATION

ANCHIETA

Project Site



(Source: author's image).

Atlantic forest
Connected to Billings reservoir
through creek.
Most important object in the
Brazilian home: water filter.

PROJECT LOCATION

DRAINAGE



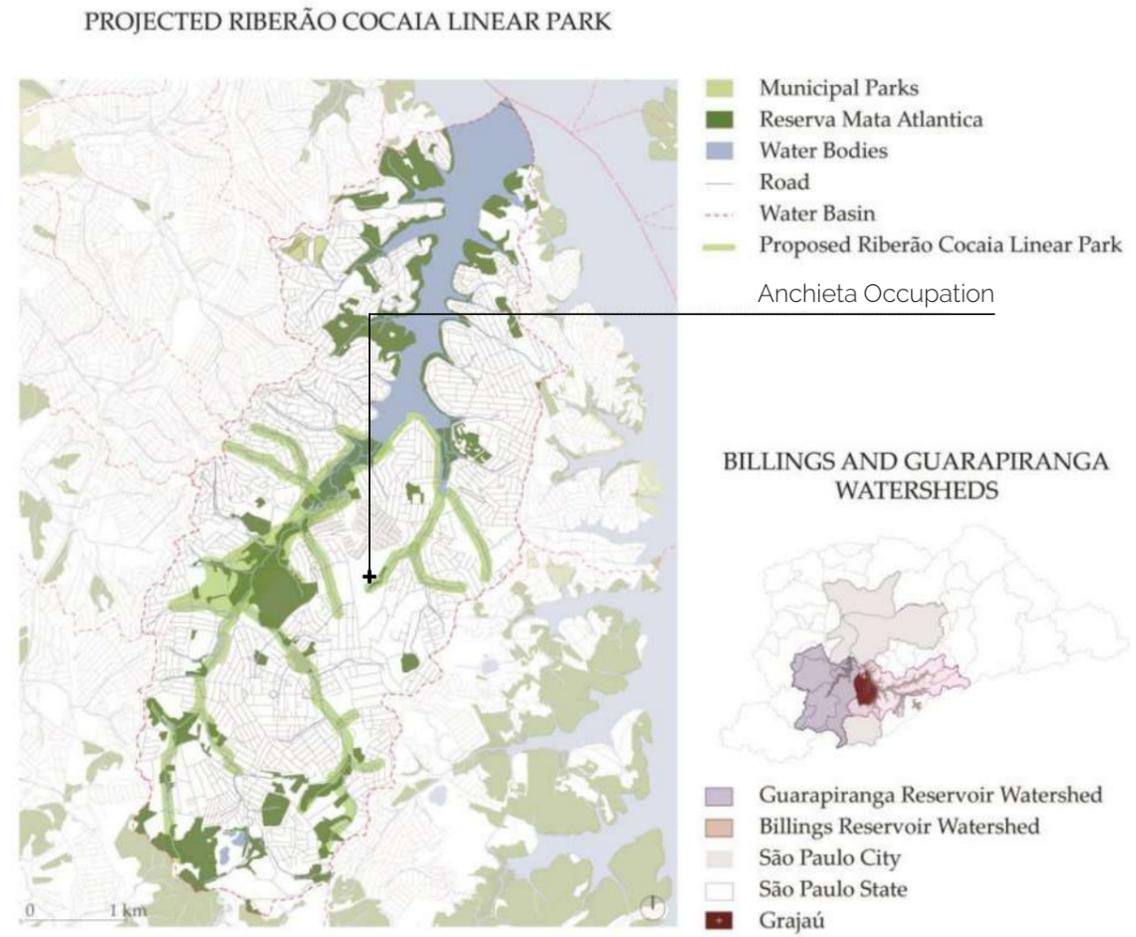
- Spring
- Drainage
- - - Anchieta
- water body

(Source: Data from GeoSampa, author's image)

atlantic forest,
creek leading towards the
billings reservoir, which
provides the city with drining
water, and natural springs.

PROJECT LOCATION

PROPOSED LINEAR PARK



(Source: map redrawn by the authors of InFORMA Ocupação Anchieta! with data from SVMA/PMSP Laboratório de Habitação e Assentamentos Humanos—LabHab/FAUUSP.)

proposed linear park as a bufferzone
between the settlements and the
headwaters.

PROJECT LOCATION

DRAINAGE



(Source: drawing by Peabiru TCA (2022), edited by author.)

ASSEMBLAGE MAP

I identified the assemblages in Anchieta, in order to identify helpful interventions that act as a catalyst for the reterritorialization of a more diverse and inclusive neighbourhood.

Anchieta occupation consists of 1063 families

Anchieta Institute: landowner --> conflicting interests

In 2019 the Anchieta occupation movement received assistance from an architectural advisory bureau called Peabiru, who developed an urbanization plan for the site in negotiation with the occupants.

distance as order against complex of the

Hydrography
 ● Anchieta
 □ Distrito do Grajaú
 ■ Topografia
 ■ Represas
 ■ Bacia Hidrográfica
 ■ Sub-bacia Reservoir
 (Source: GeoSampa)

Zoning - PDE
 ● Anchieta
 □ Distrito do Grajaú
 ■ Represas
 ■ Zonas de Proteção Ambiental
 ■ Macrozona de Contorno Urbano e Lixo Sólido
 ■ Macrozona de Contorno e Qualidade Urbana e Ambiental
 ■ Macrozona de Intervenção Urbana e Ambiental
 ■ Macrozona de Proteção Ambiental Urbana e Ambiental
 (Source: GeoSampa)

ZEBs
 ● Anchieta
 □ Distrito do Grajaú
 ■ Represas
 ■ ZEB 4
 ■ ZEB 5
 ■ ZEB 6
 ■ ZEB 7
 ■ ZEB 8
 ■ ZEB 9
 ■ ZEB 10
 ■ ZEB 11
 ■ ZEB 12
 ■ ZEB 13
 ■ ZEB 14
 ■ ZEB 15
 ■ ZEB 16
 ■ ZEB 17
 ■ ZEB 18
 ■ ZEB 19
 ■ ZEB 20
 (Source: GeoSampa)

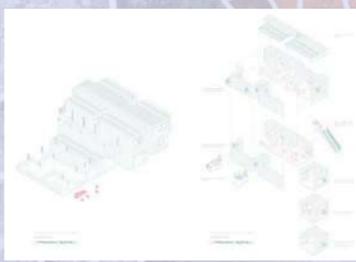
NATIONAL UNION OF POPULAR HOUSING MOVEMENTS (UNMP)



(source: Rio on Watch, 2022)



Construction of embryo-house developed by Peabiru (image by Torbica A., 2022)



Typological map of the embryo-house (drawing by Jodtowska A., 2022)

since 2013

OCUPAÇÃO ANCHIETA

MOVIMENTO ANCHIETA






peabiru
 Technical and Architectural Advisory bureau



Centro Gaspar Garcia de Direitos Humanos
 Gaspar Garcia Center for Human Rights



UNIVERSITY OF MICHIGAN

Taubman College: In 2016 the first contact with the University of Michigan arises, based on the relationship between its research professors with the Gaspar Garcia Center.

strong sense of community because of a shared cause: the struggle for housing.

protests via WhatsApp, paper flyers, and word of mouth.

RIGHT TO HOUSING

ENVIRONMENT

conflicting desires: desire to build and own a house versus the desire to restore and protect the creek area.

4 Natural Springs

Atlantic Forest

Plants Species



Giant Cutgrass



Water Primrose



Wild Radish



Water Willow



Brachiara Grass



TETO
 NGO for housing

Minha Sampa

Action network for a fairer, more inclusive and participatory São Paulo

VAMOS LIMPAR O RIO?

Water management project

Arq.Futuro

Platform for teaching and research on the urban environment

ANCHIETA GRAJAÚ INSTITUTE (IAG)

NGO, landowner of Anchieta

sabesp

Waste management company

emae

Water and energy company

FLUXUS

Ecological design company

Homes in Anchieta inform to the municipal water system hoses, known as gato. Some store water in blue tanks at top of their dwelling.

Peabiru proposal: the benchmark

PEABIRU PROJECT

CURRENT SITUATION



(Source: drawing by Peabiru TCA (2022), edited by author.)

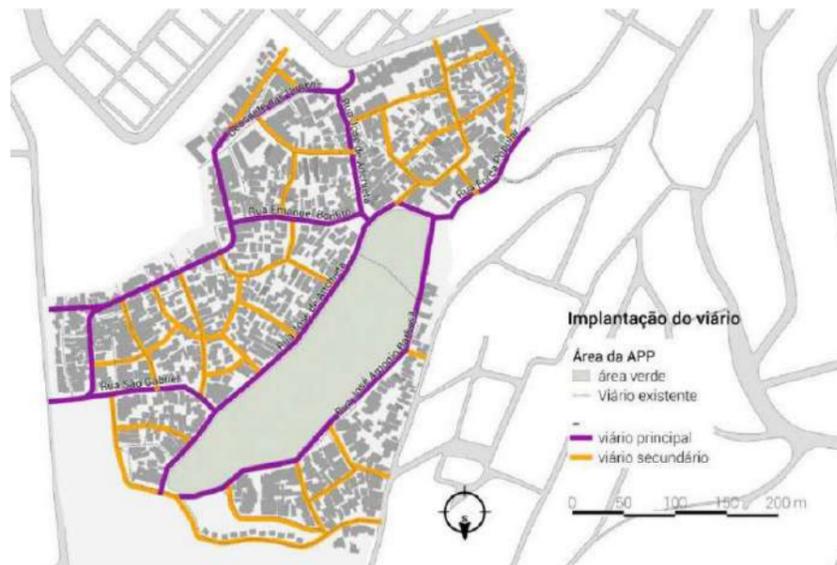
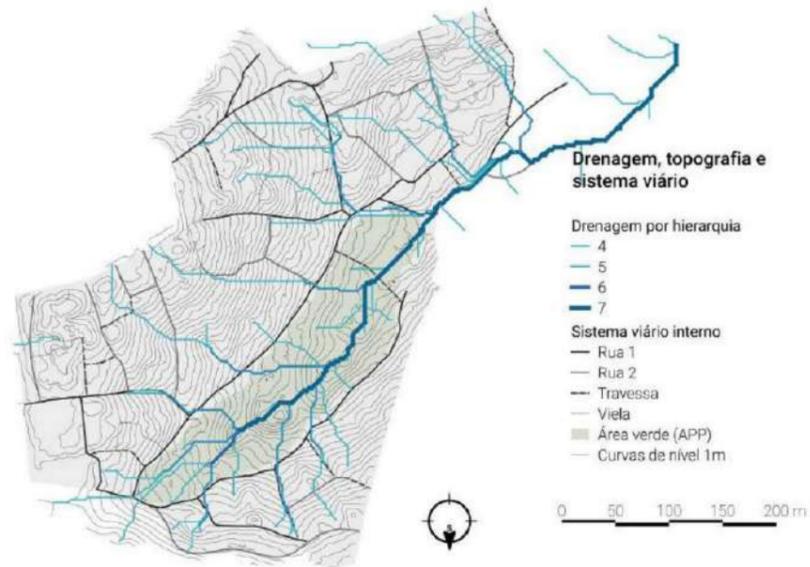
PEABIRU AUTO-URBANIZATION PLAN



(Source: drawing by Peabiru TCA (2022), edited by author.)

PEABIRU PROJECT

NEGOTIATION: NOBODY LEAVES.
THAT'S THE PREMISE.



(Source: drawings by Peabiru TCA, 2022)

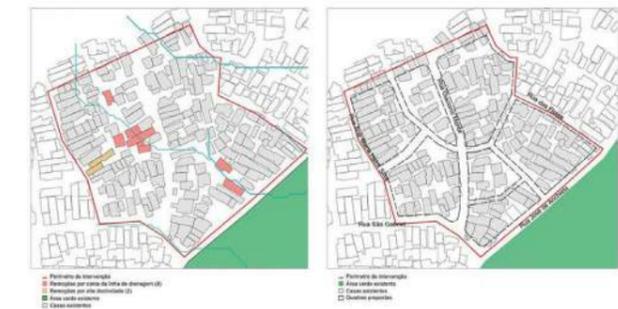
Step 1

Analysis of risk areas because of:
- flooding (natural drainage line)
- land slides (steep slopes).



Step 2

Removal of dwellings
on risk areas.



Step 3

Opening up of:
- the road system
- unbuilt spaces (green areas)



Step 4

Parcellation



PEABIRU PROJECT

AUTO-URBANISATION



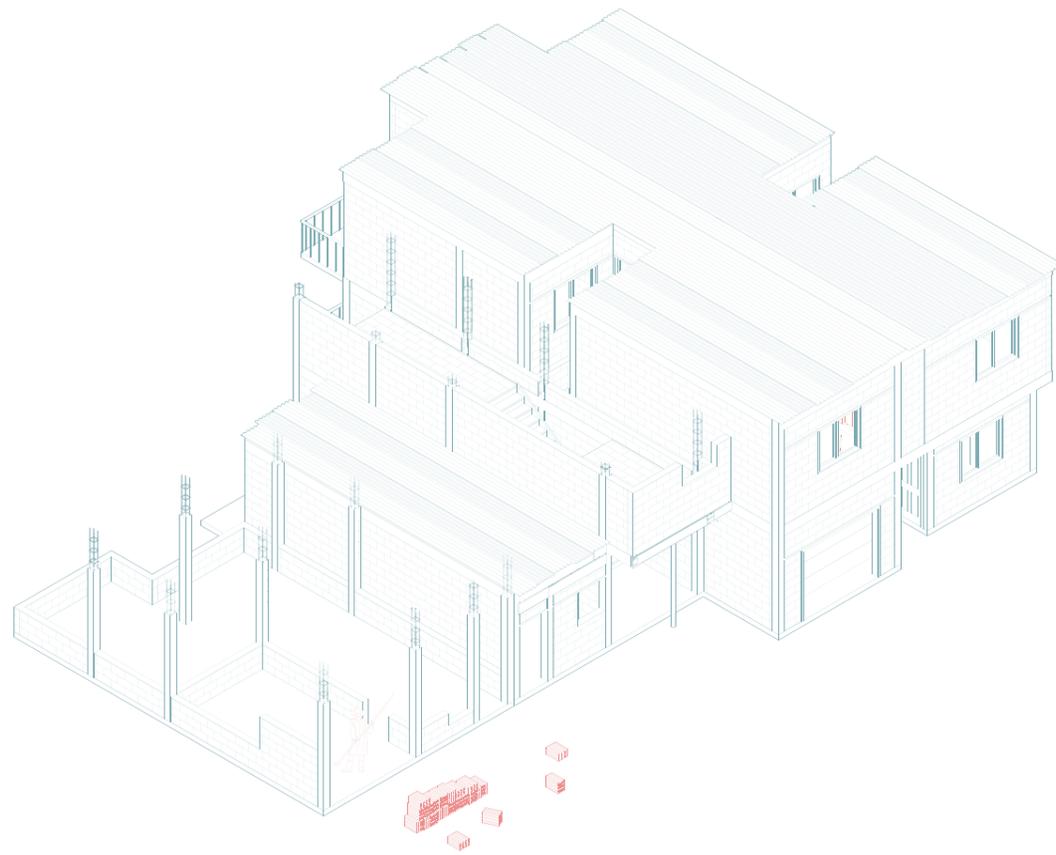
image taken by Angelina Torbica, 2022

Auto-urbanization plan: acupunctural implementation of embryo houses.

PEABIRU PROJECT

AUTO-URBANISATION

Embryo house:
auto-constructed dwelling that has incremental growth and adaptability possibilities

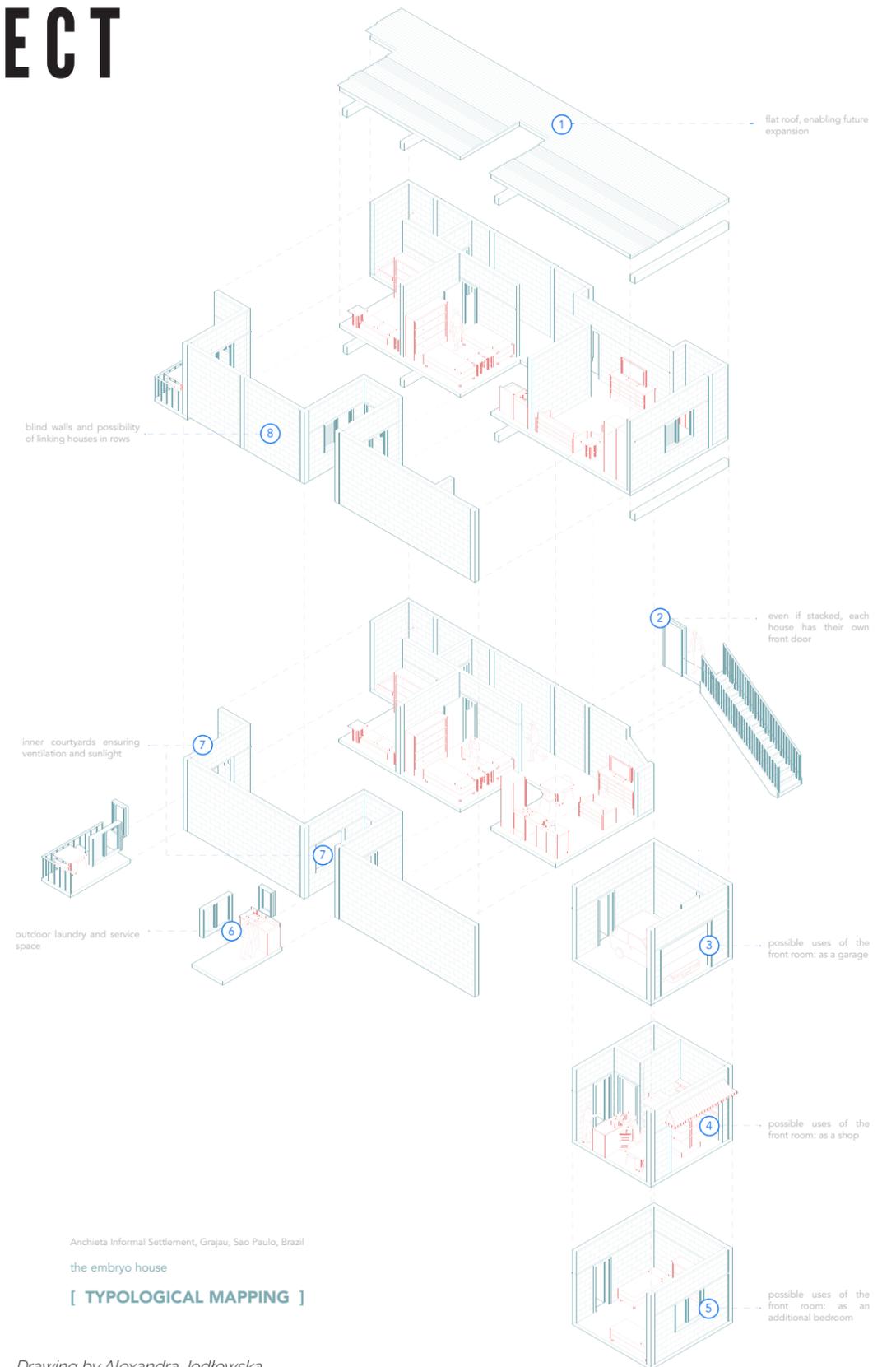


Anchieta Informal Settlement, Grajau, Sao Paulo, Brazil

the embryo house

[TYPOLOGICAL MAPPING]

Drawing by Alexandra Jodłowska



Anchieta Informal Settlement, Grajau, Sao Paulo, Brazil

the embryo house

[TYPOLOGICAL MAPPING]

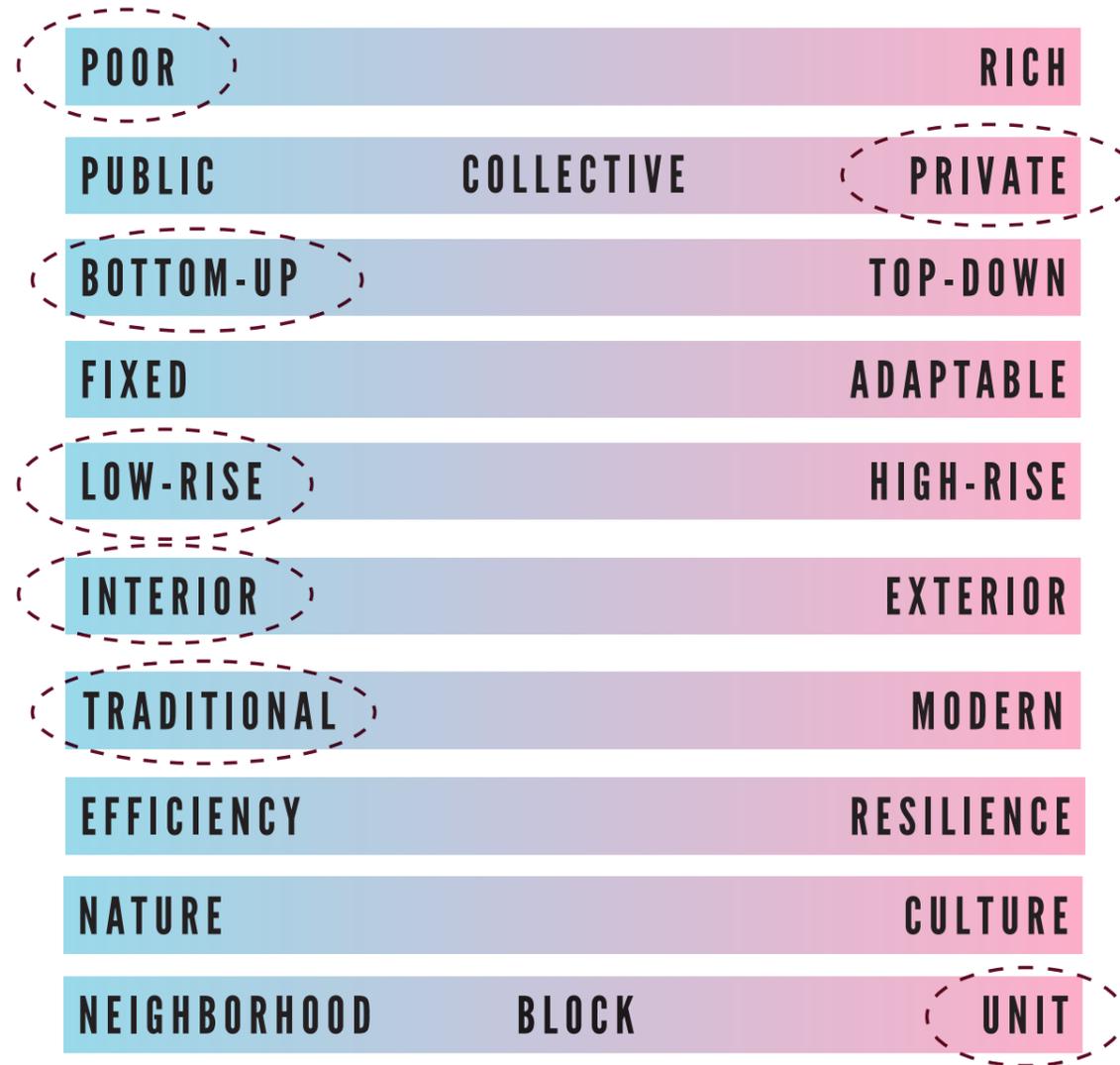
Drawing by Alexandra Jodłowska

PEABIRU PROJECT

POLARITIES

Qualities

- Grassroot/rhizomatic organisation.
- Emancipation and empowerment of residents
- Incremental growth
- Based on existing urban fabric and environmental risks.
- Community center



Critique

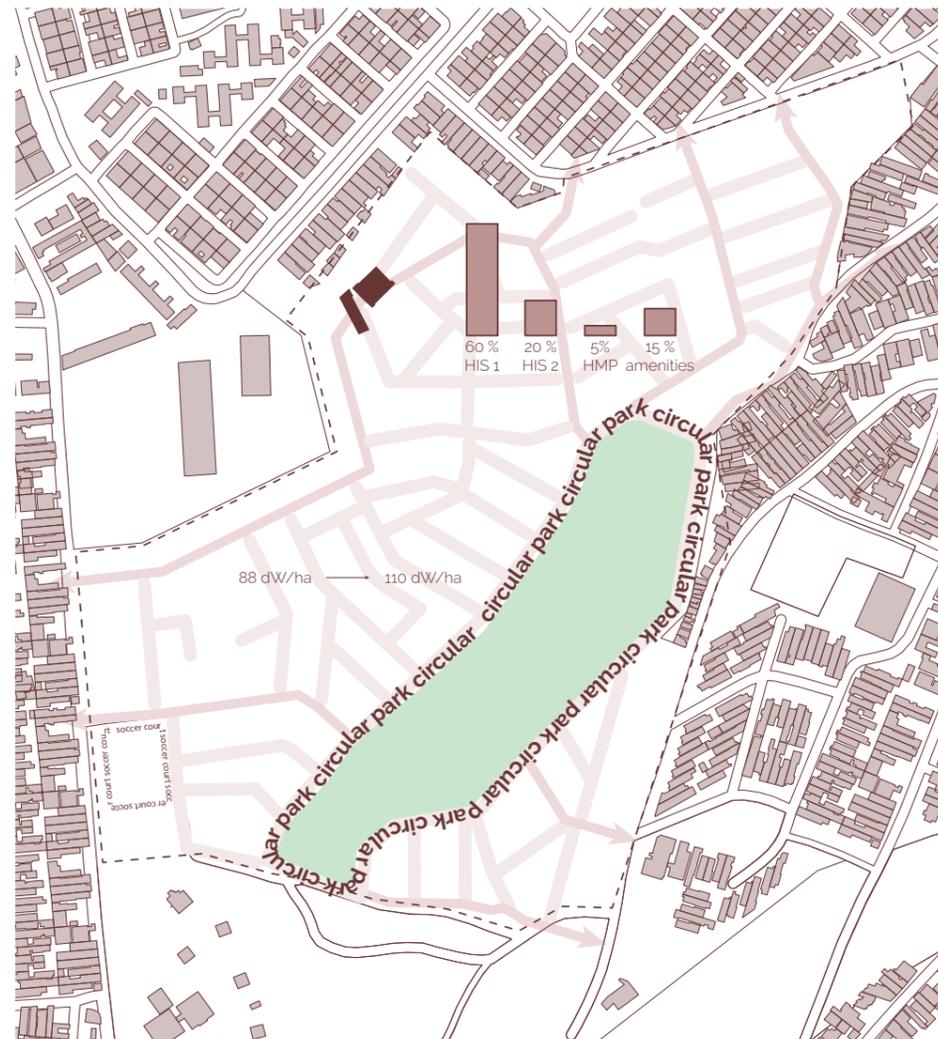
- Homogeneous
- Disregarding the quality of the public space and collective facilities
- Isolated
- Low density

Design proposal

PROGRAM OF REQUIREMENTS

Keep

- community centre
- spaces for worship
- football field
- existing roadpattern



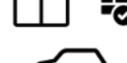
Add

- diversity of building types
- construction education centre
- playground, sports fields, etc
- public space
circular park

Density goal
110 Dw/ha

INCOME GROUPS

LIFESTYLES

GROUP	X MINIMUM WAGE	OCCUPATION	FAMILY SIZE	LIFESTYLE
<p>< HIS 1</p> <p>\$</p>	<p><1 min. wage <R\$1.302</p>	<p>Informal shop owner</p>	<p> </p>	<p>  </p> <p>Informal shops Incremental growth Rent-out room Live/work unit</p>
<p>HIS 1</p> <p>\$\$</p>	<p>1-3 min. wage R\$1.302 - R\$3.906</p>	<p>Carpenter</p>	<p> </p>	<p>   </p> <p>Formal and informal shops car owner Rent-out room</p>
<p>HIS 2</p> <p>\$\$\$</p>	<p>3-6 min. wage R\$5.208 - R\$7.812</p>	<p>Teacher</p>	<p> </p>	<p>  </p> <p>Formal and informal shops car owner Collective spaces</p>
<p>HMP</p> <p>\$\$\$\$</p>	<p>6-12 min. wage R\$9.114 - R\$14.322</p>	<p>Official</p>	<p> </p>	<p>  </p> <p>Formal shops Car owner Elevator Privacy</p>

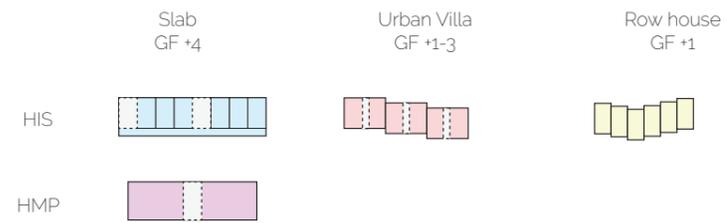
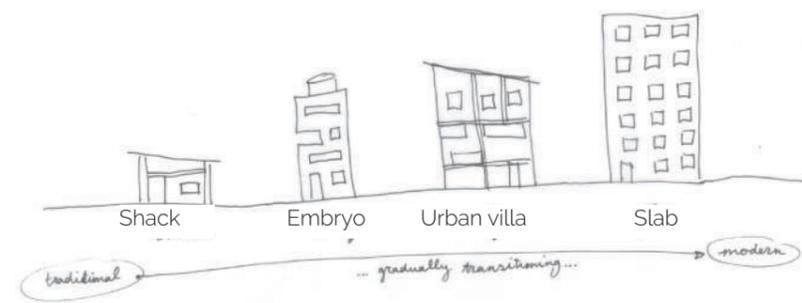
INCOME GROUPS

LIFESTYLES

GROUP	UNIT SIZE	ROOMS	GROUND FLOOR
< HIS 1 \$	30-60 m ²	living room 2 bedrooms 1 bathroom	Extra bedroom Rent-out room Informal shop
HIS 1 \$\$	30-60 m ²	(collective) living room 2-4 bedrooms 1-2 bathroom	Garage space (In)formal Shop
HIS 2 \$\$\$	40-60 m ²	(collective) living room 2-4 bedrooms 1-2 bathroom	Garage space (In)formal Shop
HMP \$\$\$\$	70-80 m ²	living room 4 bedrooms 2 bathrooms	Garage space Formal shops

TYPOLOGICAL STRATEGY

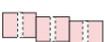
PROMOTE SOCIAL MIX THROUGH TYPOLOGICAL MIX



Avoid stigmatization
Avoid polarization

TYPOLOGICAL STRATEGY

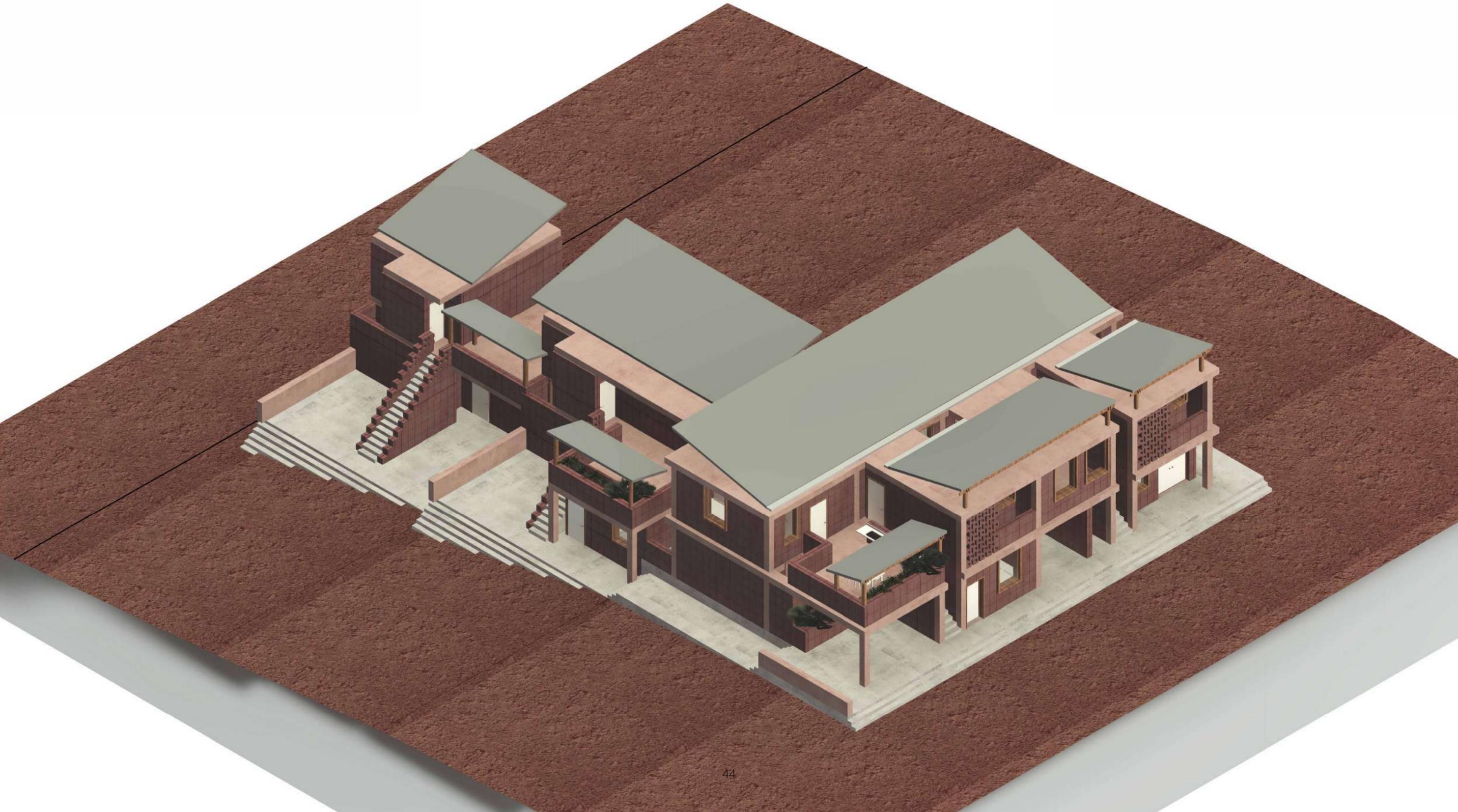
PROMOTE SOCIAL MIX THROUGH TYPOLOGICAL MIX

TPOLOGY	GROUP	OWNERSHIP	ACCESS SYSTEM
Embryo house 	HIS 1 \$  HMP \$\$\$	built with sweat equity on Community Land	street access
Affordable housing slab 		rent to own on Community Land	gallery
Urban villa 		buy on Community Land	2 units per entrance
Private housing slab 		buy on free market	Private entrances with elevator.

Types within types

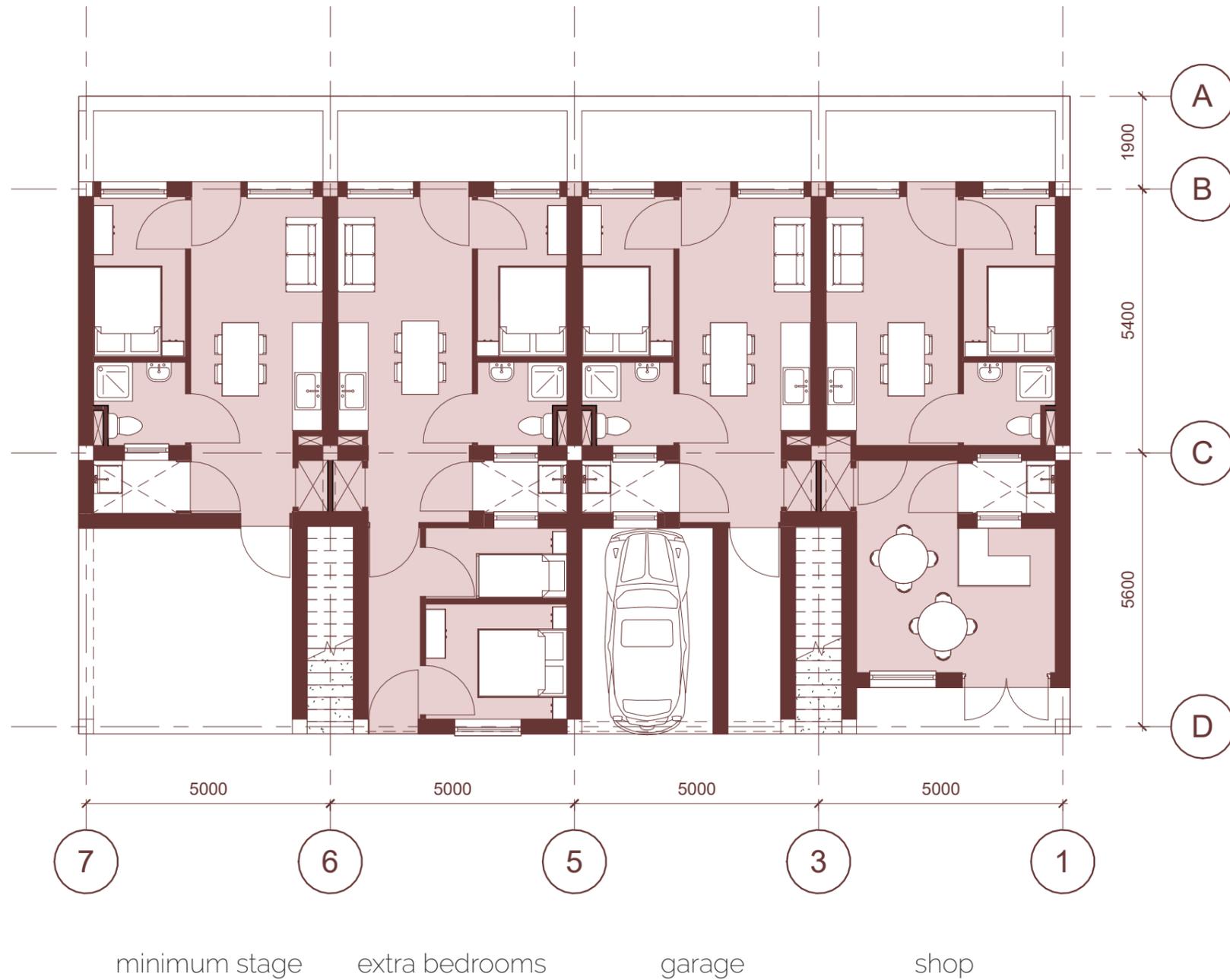
TYOLOGICAL STRATEGY

EMBRYO HOUSE



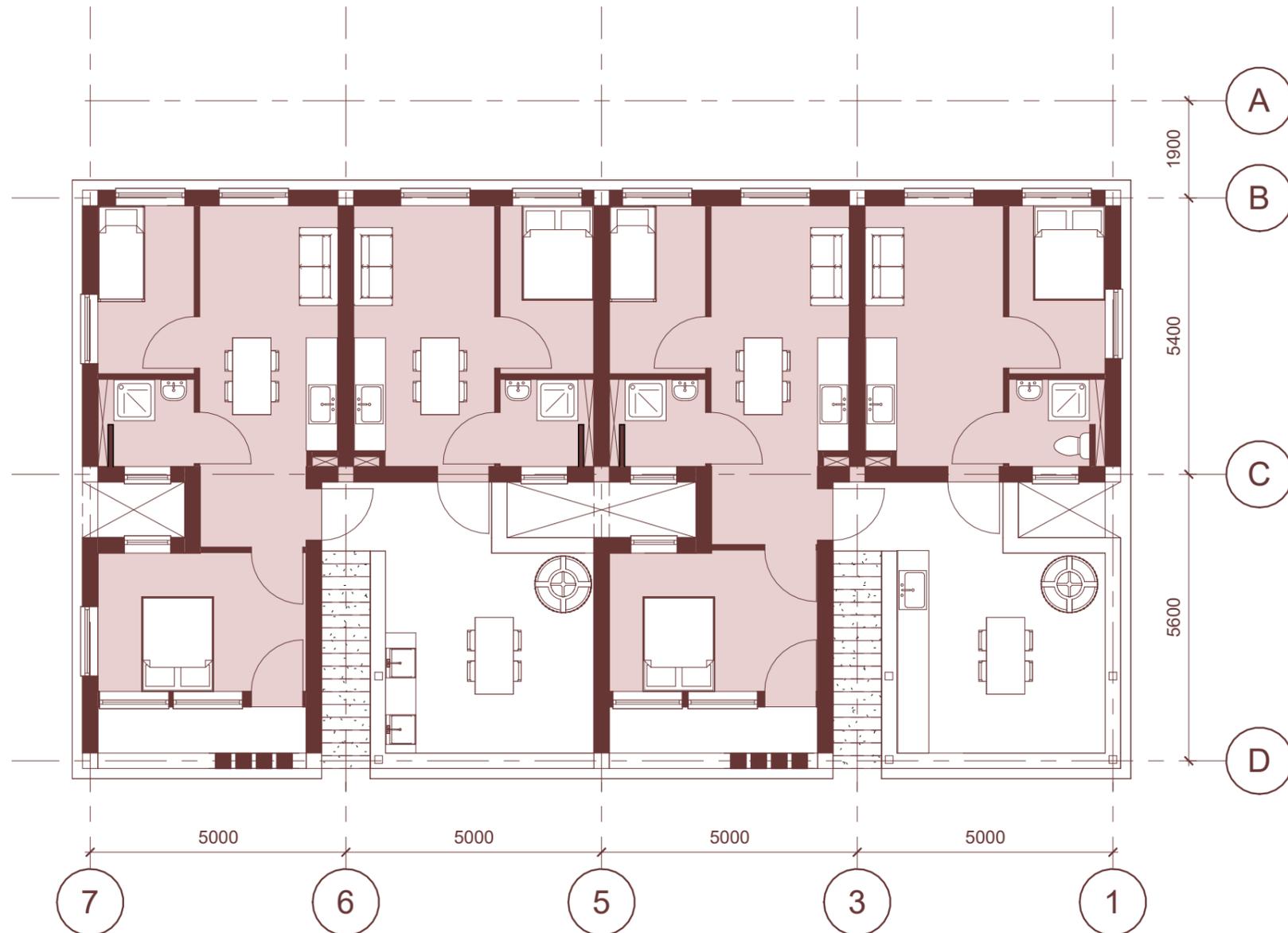
TYPOLOGICAL STRATEGY

EMBRYO HOUSE GROUND FLOOR



TYOLOGICAL STRATEGY

EMBRYO HOUSE FIRST FLOOR



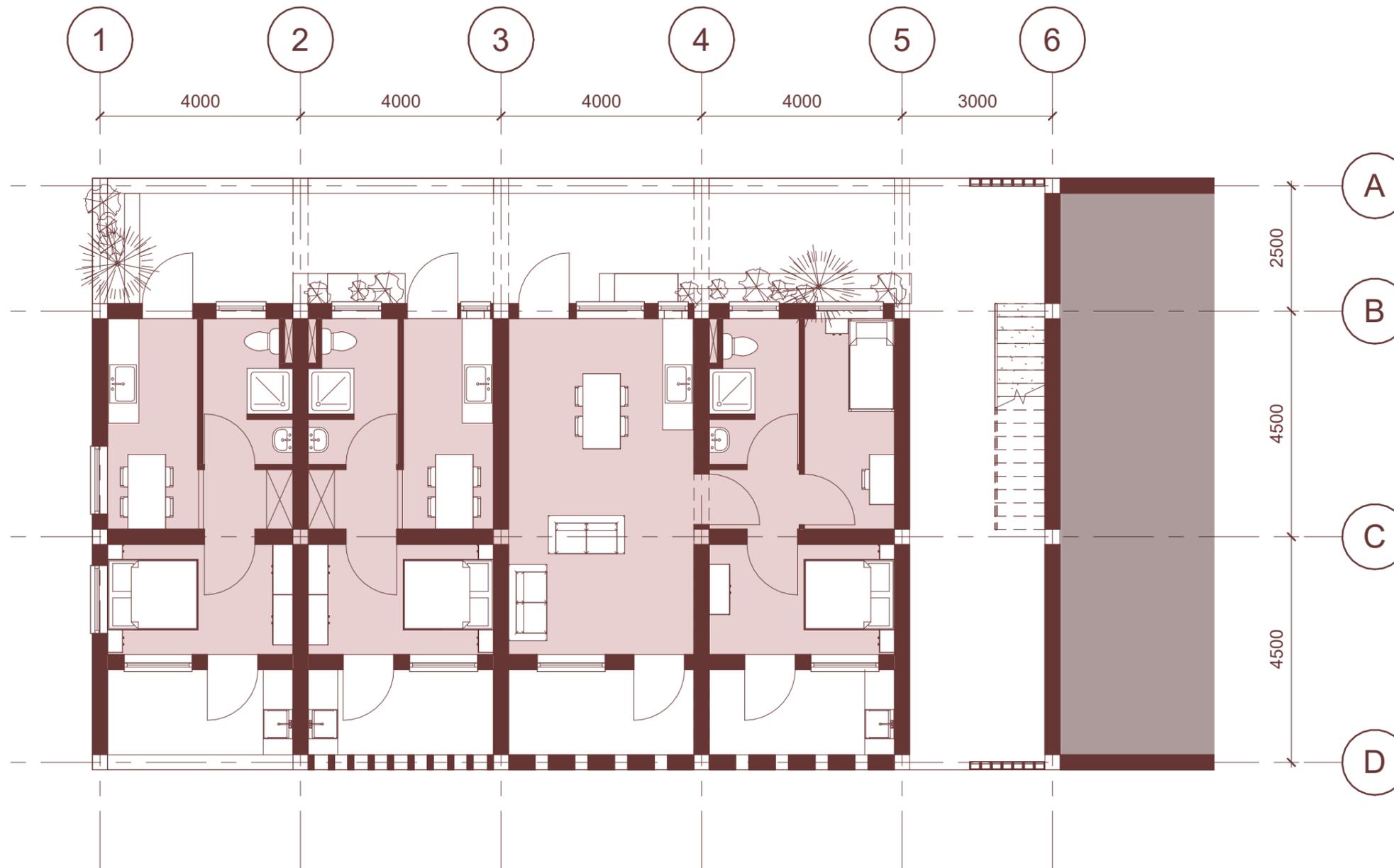
TYOLOGICAL STRATEGY

HIS SLAB



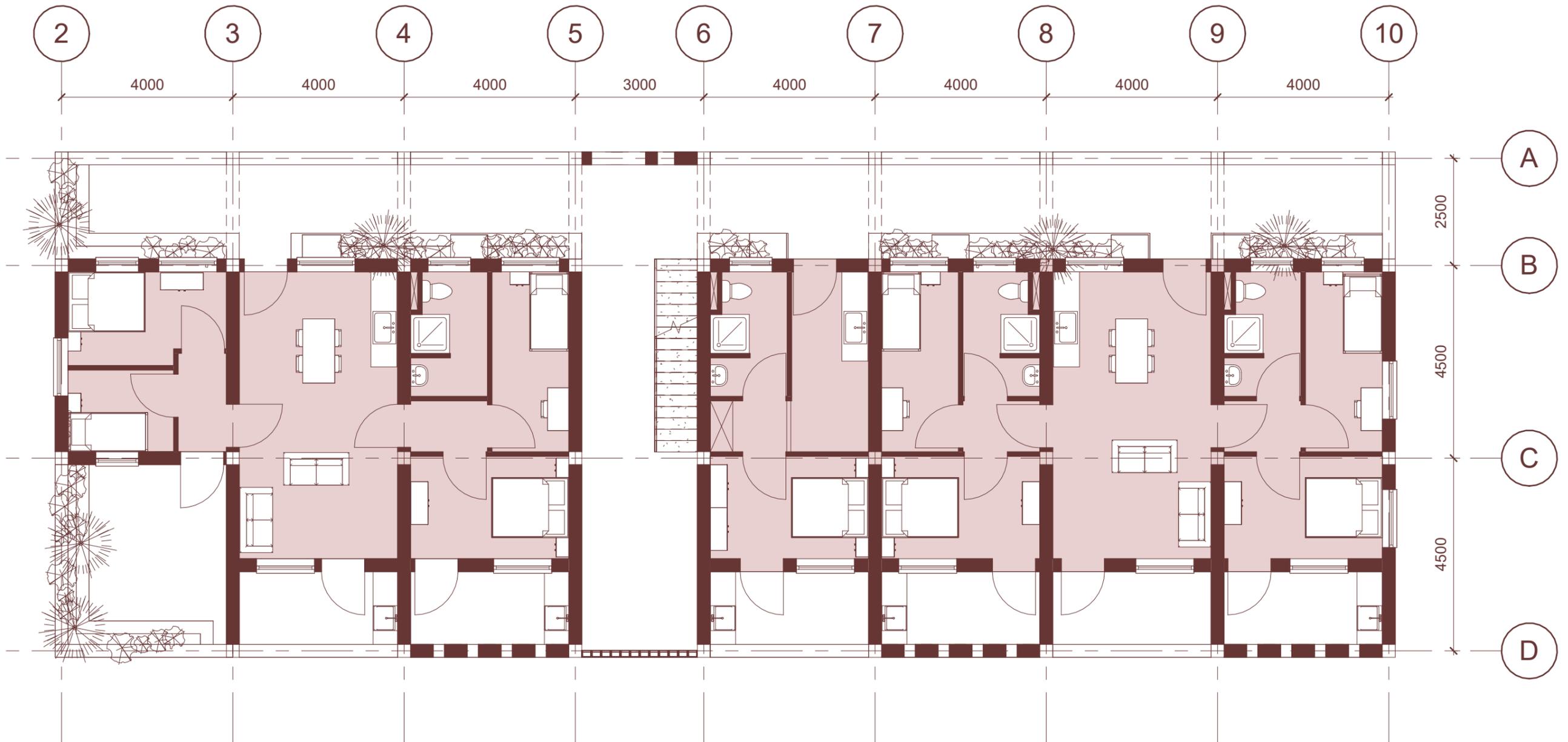
TYOLOGICAL STRATEGY

HIS SLAB GROUND FLOOR



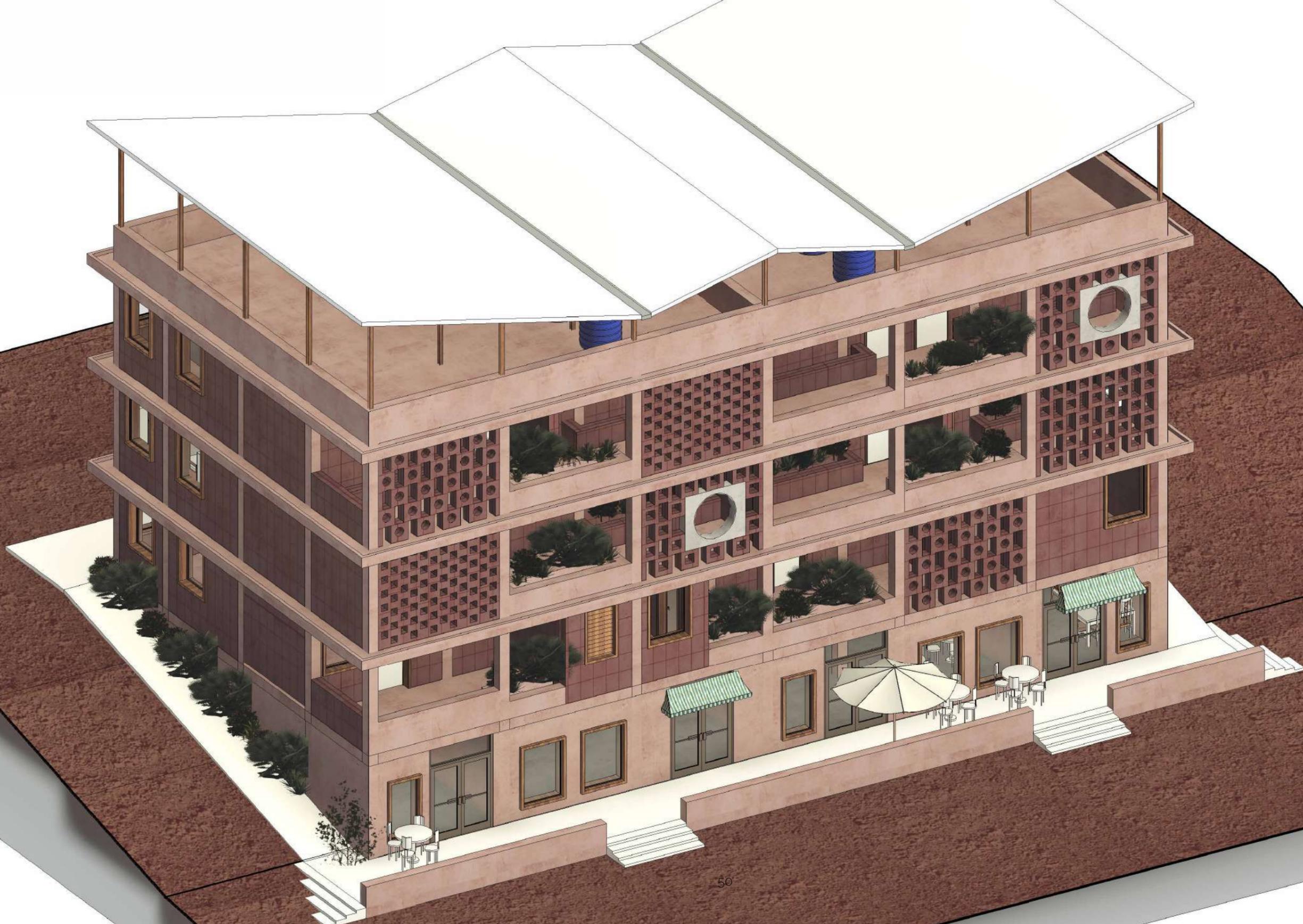
TYPOLOGICAL STRATEGY

HIS SLAB FIRST FLOOR



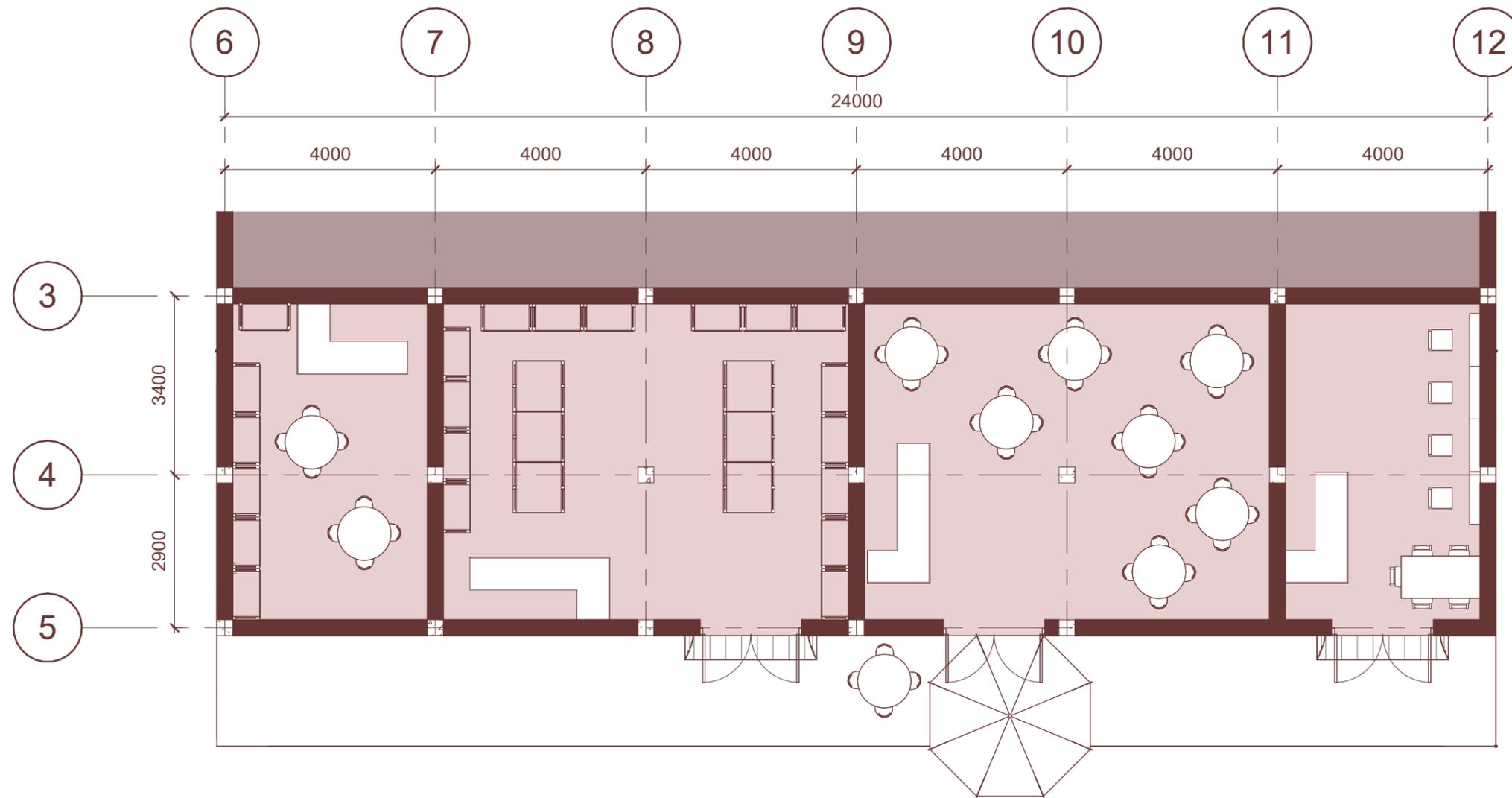
TYOLOGICAL STRATEGY

URBAN VILLA



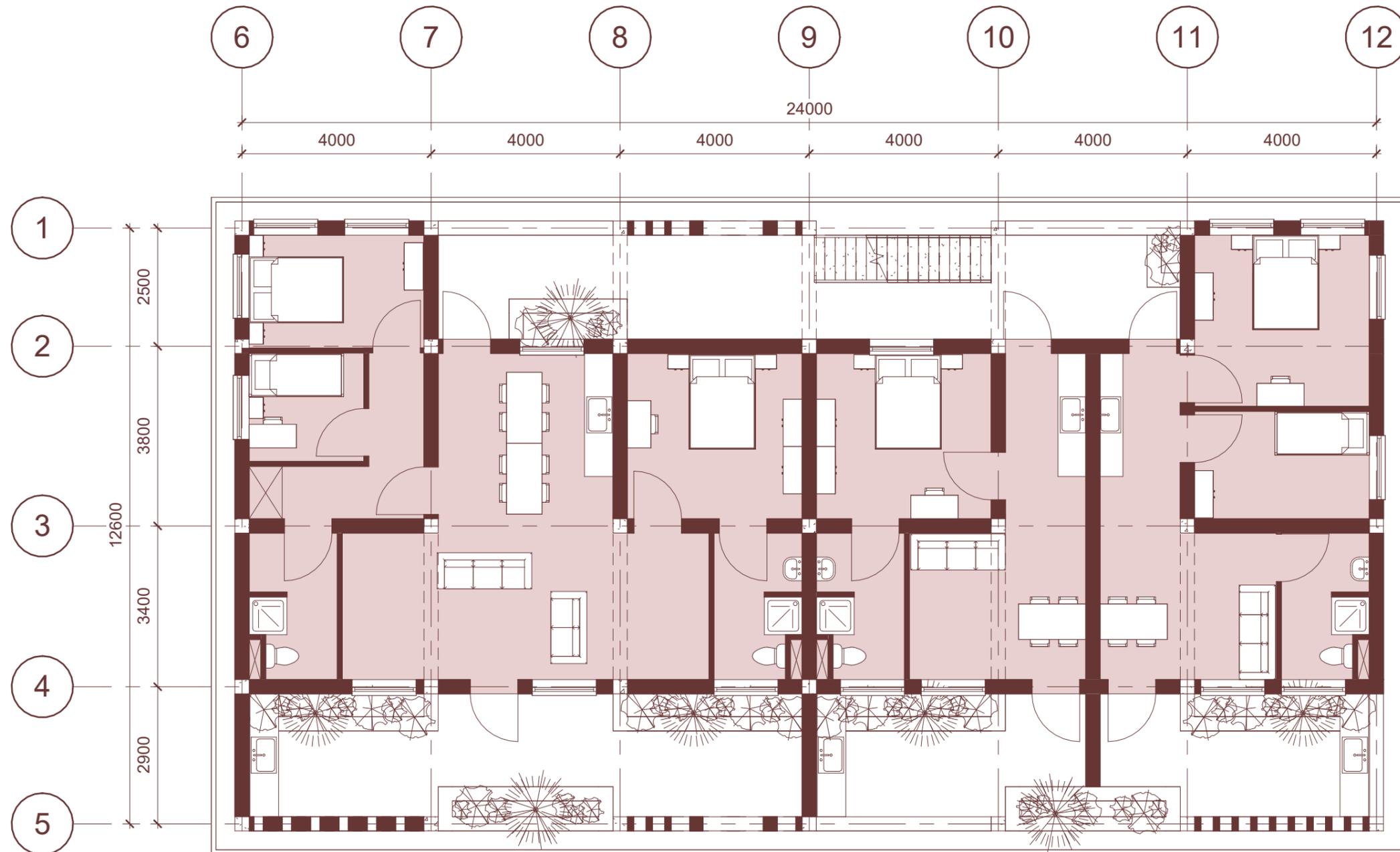
TYPOLOGICAL STRATEGY

URBAN VILLA GROUND FLOOR



TYOLOGICAL STRATEGY

URBAN VILLA FIRST FLOOR



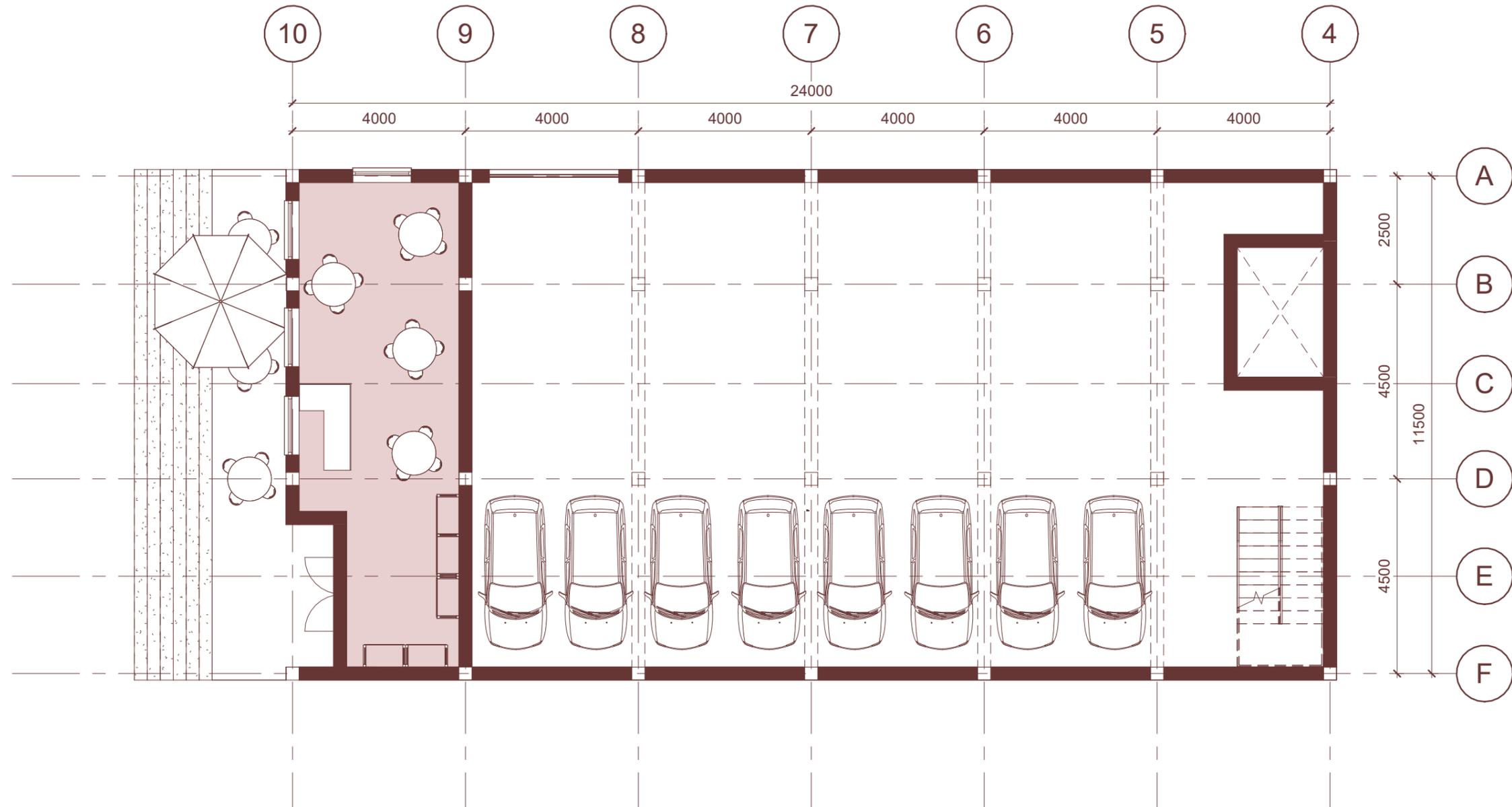
TYPOLOGICAL STRATEGY

HMP SLAB



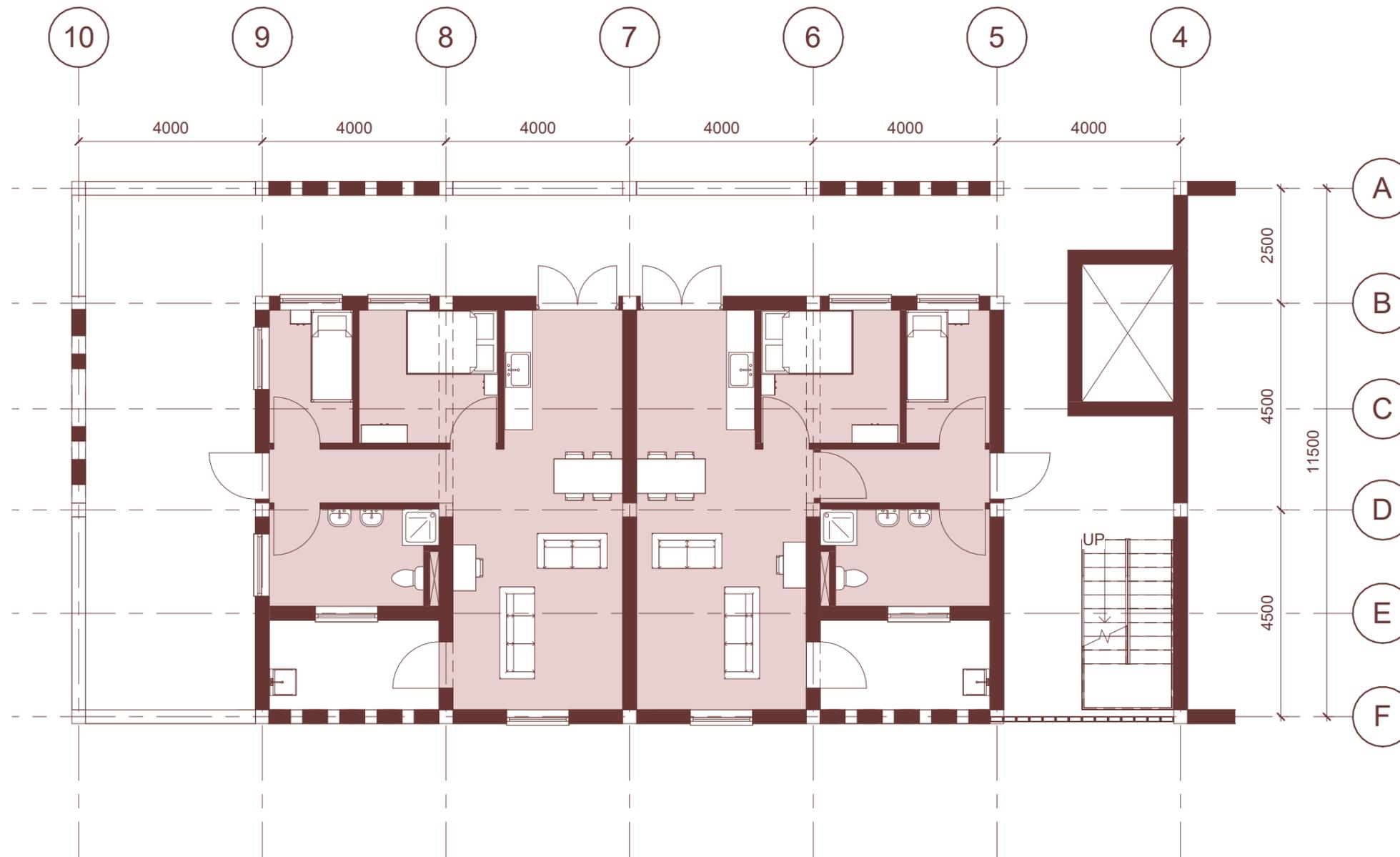
TYPOLOGICAL STRATEGY

HMP SLAB GROUND FLOOR



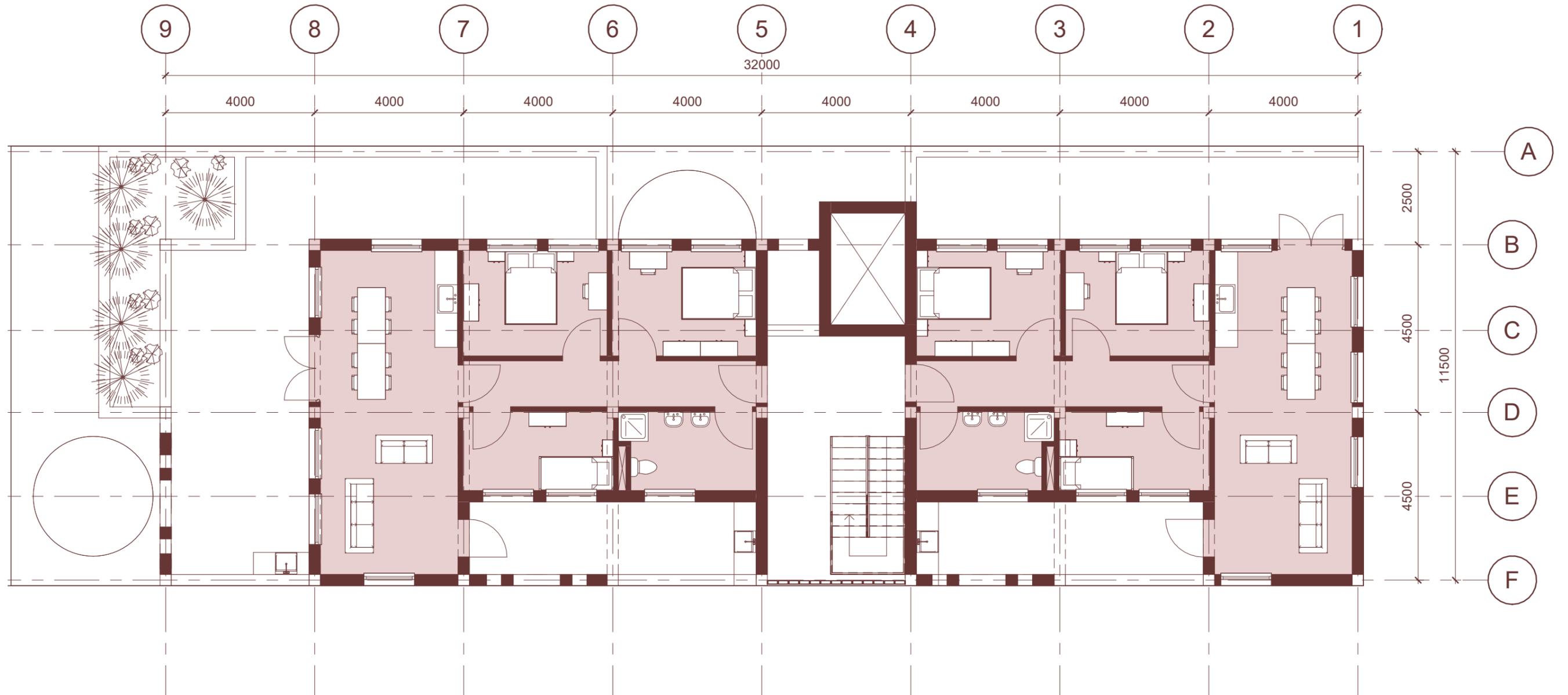
TYOLOGICAL STRATEGY

HMP SLAB FIRST FLOOR



TYOLOGICAL STRATEGY

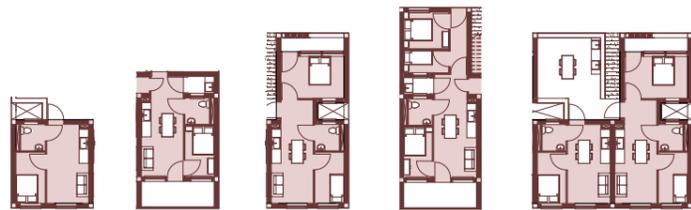
HMP SLAB SECOND FLOOR



TYPES WITHIN TYPES

UNIT SIZES

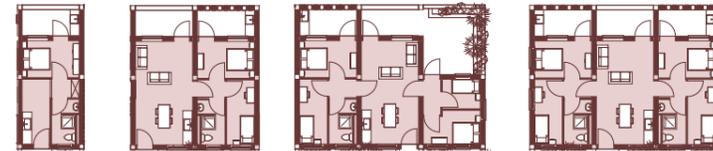
EMBRYO



23 m² 26 m² 37 m² 41 m² 30 m²/family
co-living

HIS 1 HIS 1 HIS 1 HIS 1 HIS 1

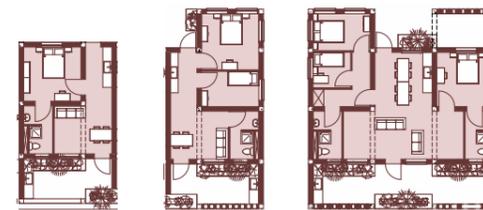
HIS SLAB



24 m² 48 m² 33 m²/family
co-living 37 m²/family
co-living

HIS 1 HIS 2 HIS 1 or 2 HIS 1 or 2

URBAN VILLA



36 m² 44 m² 42 m²/family
co-living

HIS 1 HIS 2 HIS 1 or 2

HMP SLAB



64 m² 92 m²

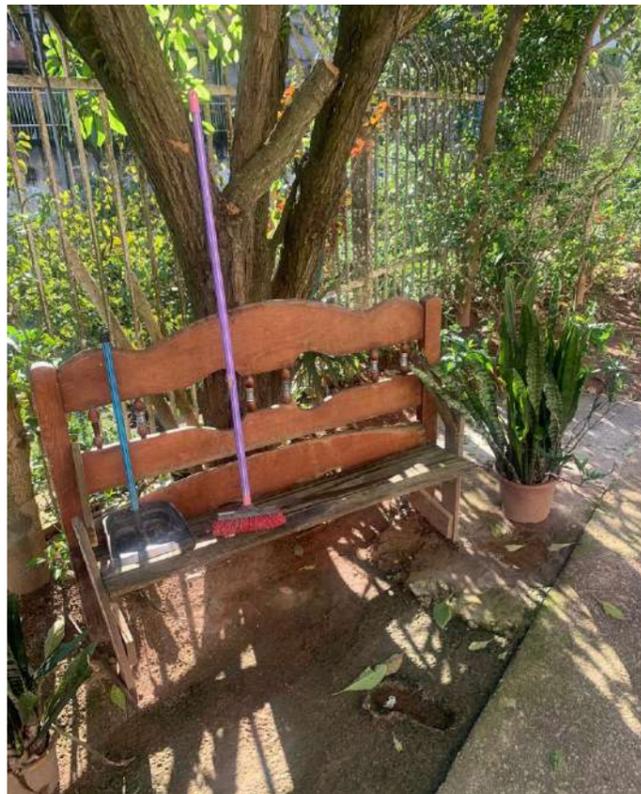
HMP HMP

HIS 1

HMP

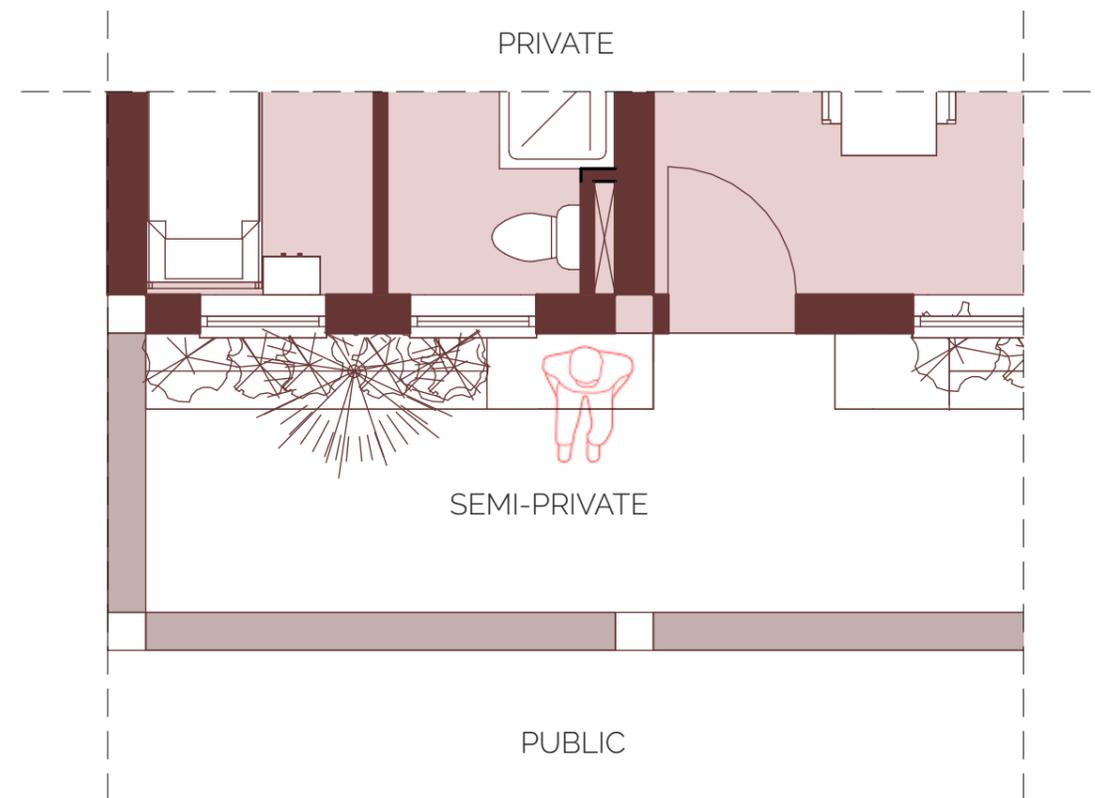
PRIVATE TO PUBLIC

NATURE CULTURE ASSEMBLAGE



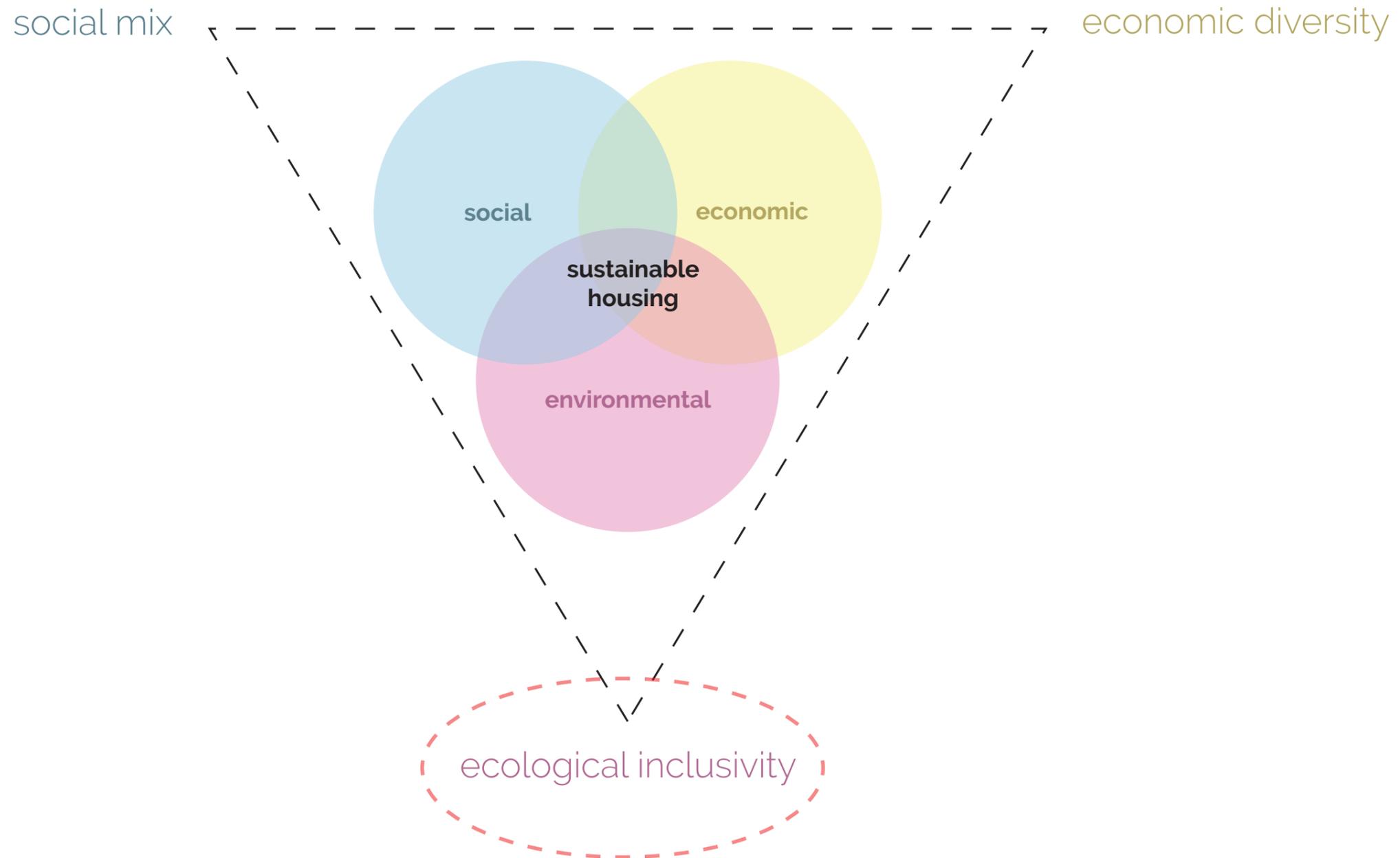
(Image taken by author at Santo Amaro V. Showing an important afro-brazilian religious practice: espada-de-são-jorge.)

Local practices implemented in design

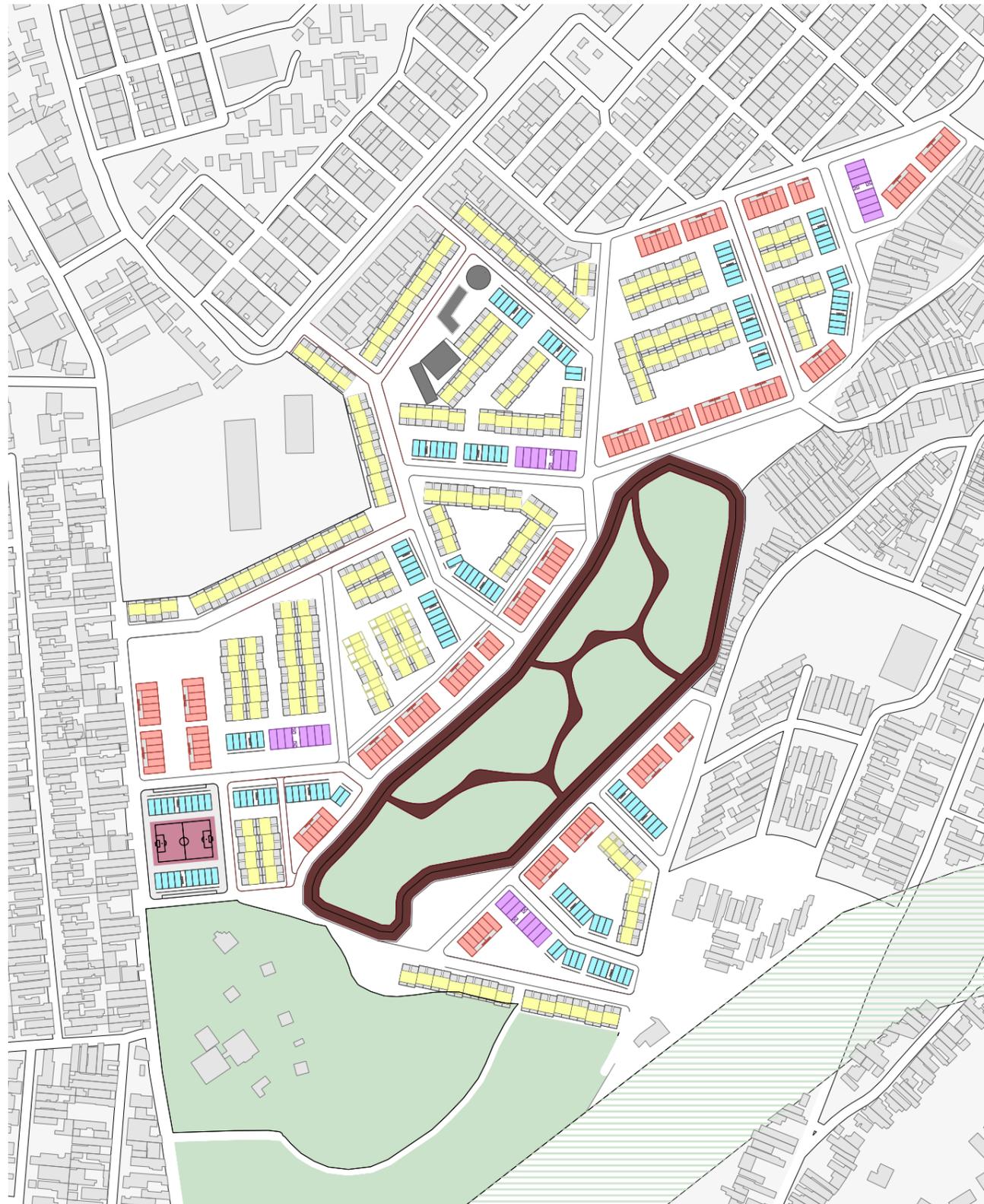


PRIVATE TO PUBLIC

NATURE CULTURE ASSEMBLAGE



URBAN STRATEGY



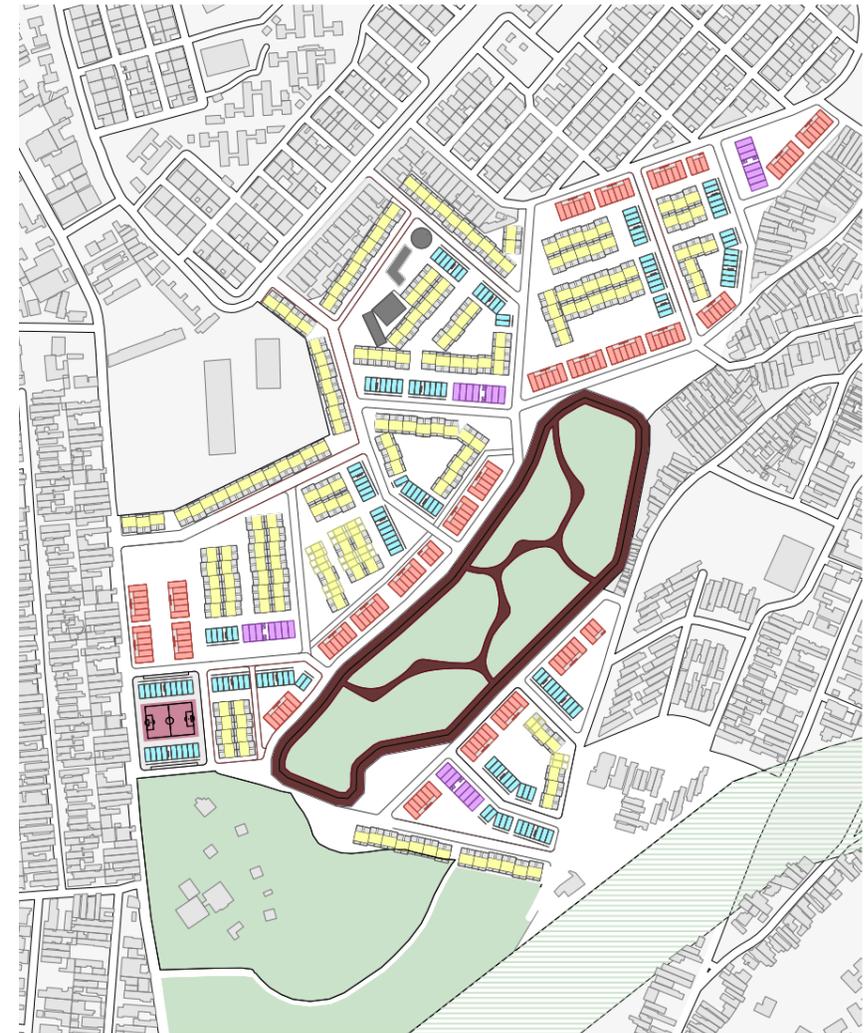
URBAN STRATEGY

PEABIRU URBANIZATION PLAN

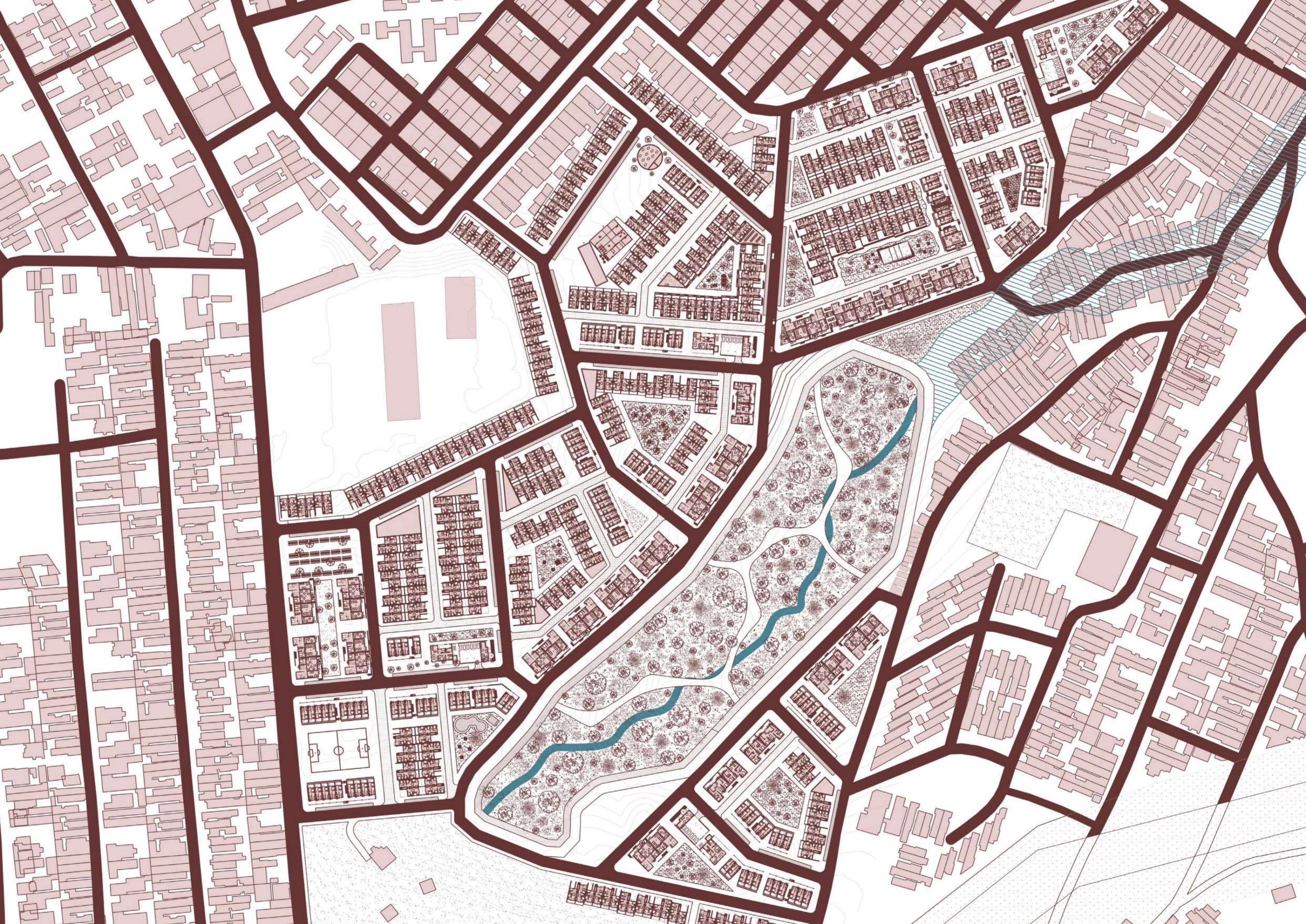


dwellings HIS: 1036

NEW URBAN PROPOSAL

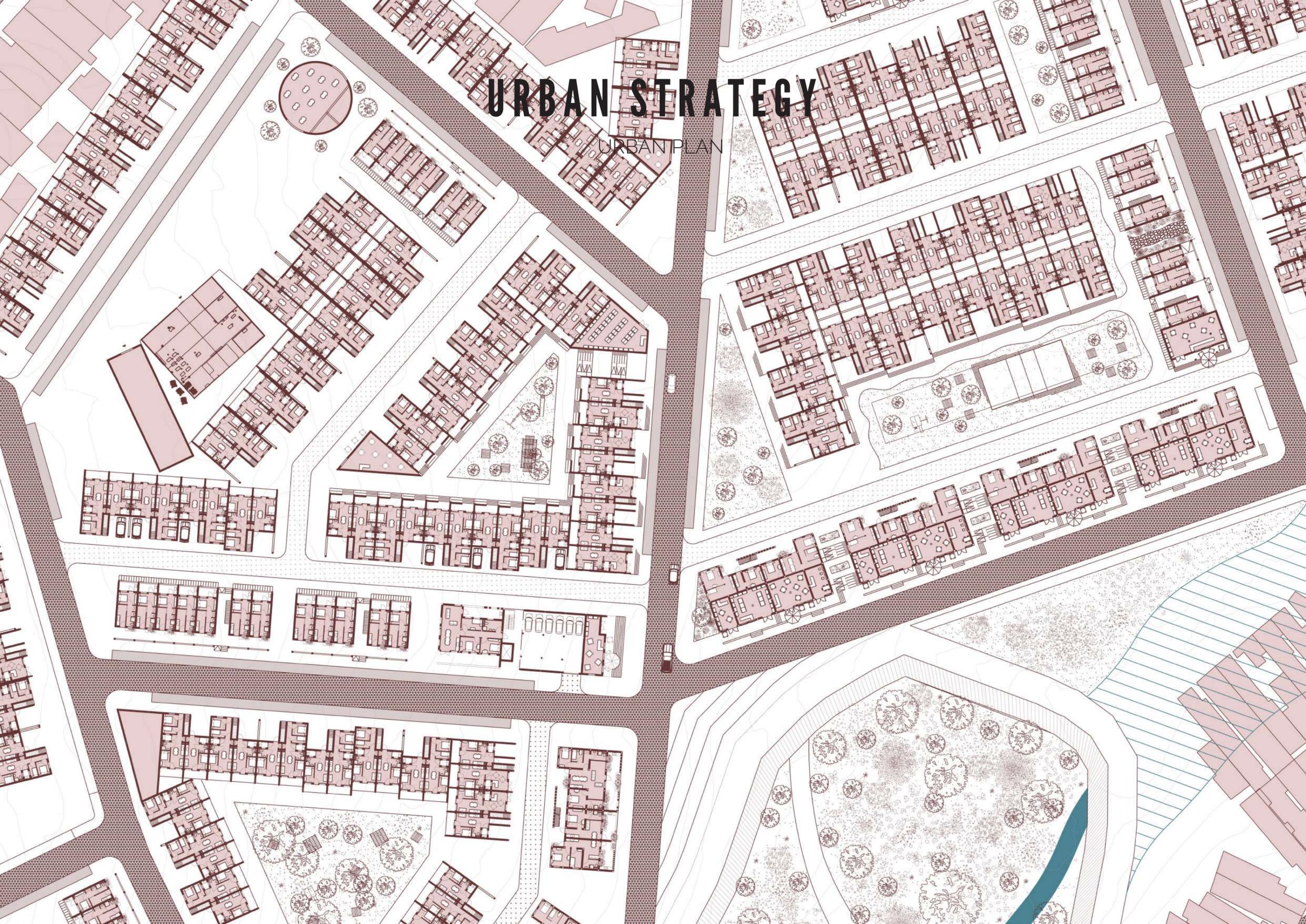


dwellings HIS 1: 1226
dwellings HIS 1: 223
dwellings HMP: 36
Total: 1485



URBAN STRATEGY

URBAN PLAN



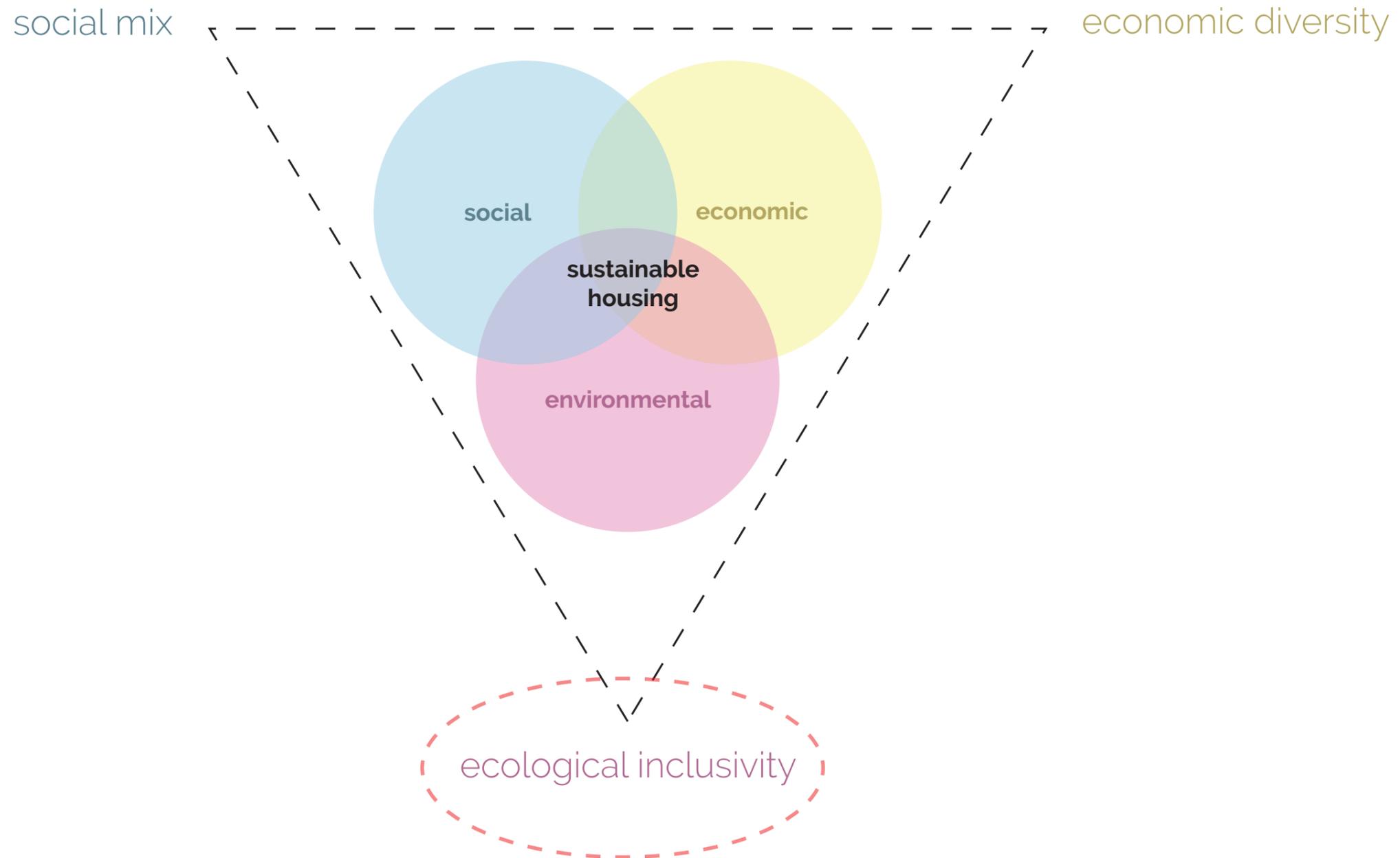
URBAN STRATEGY

URBAN PLAN



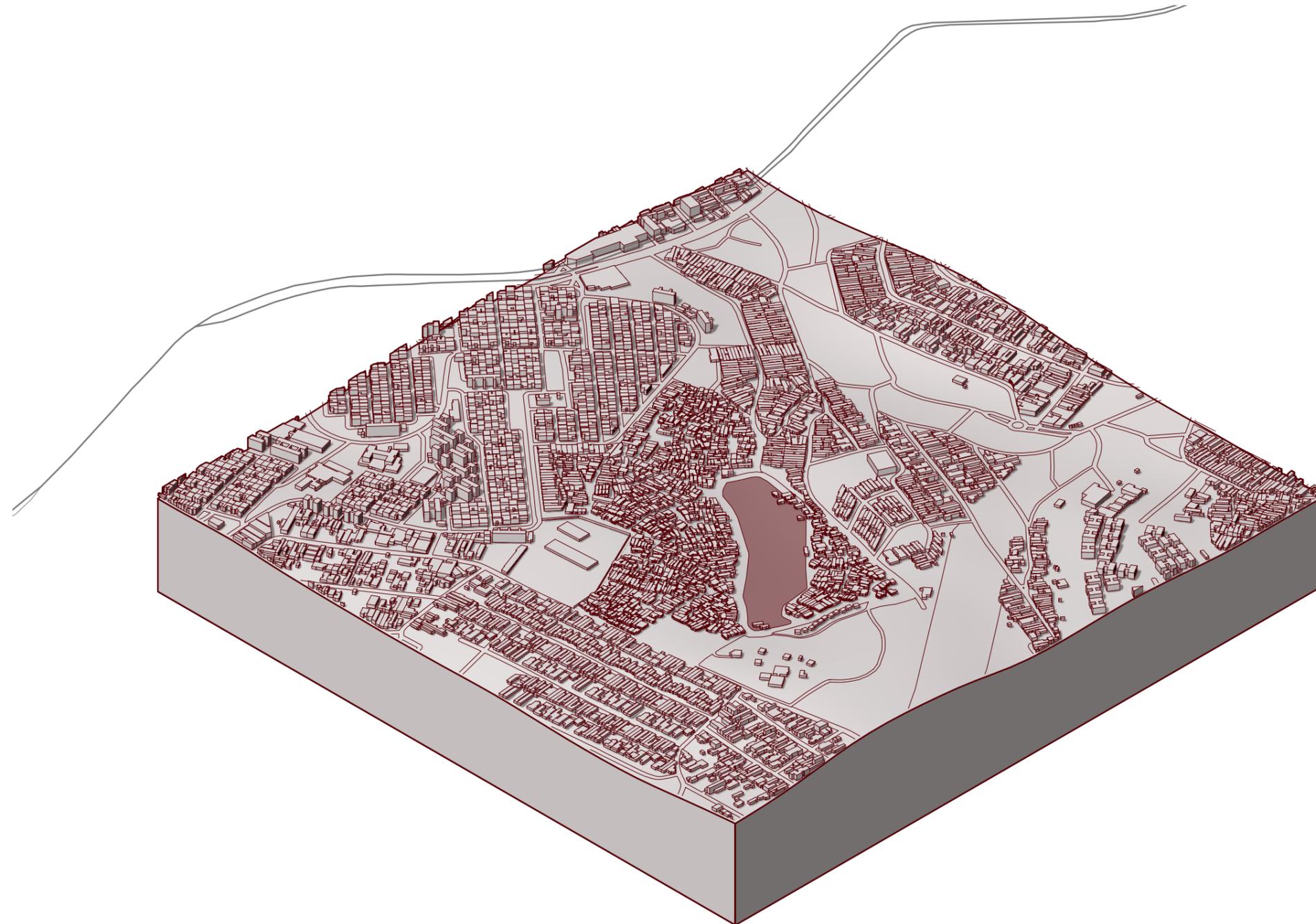
ANTIMONOCULTURE

ECONOMIC DIVERSITY



DENSITY

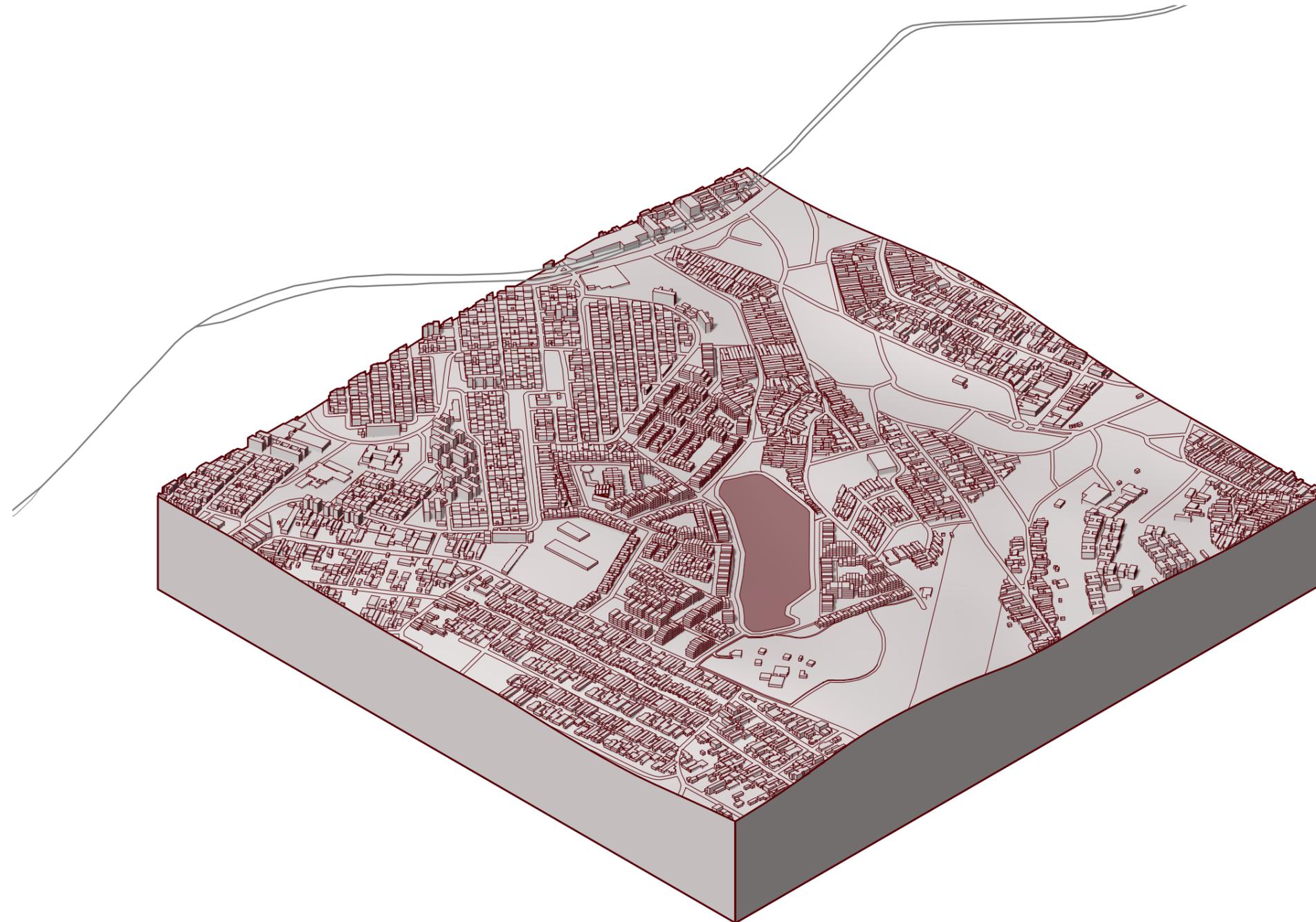
ANCHIETA



85 Dw/ha

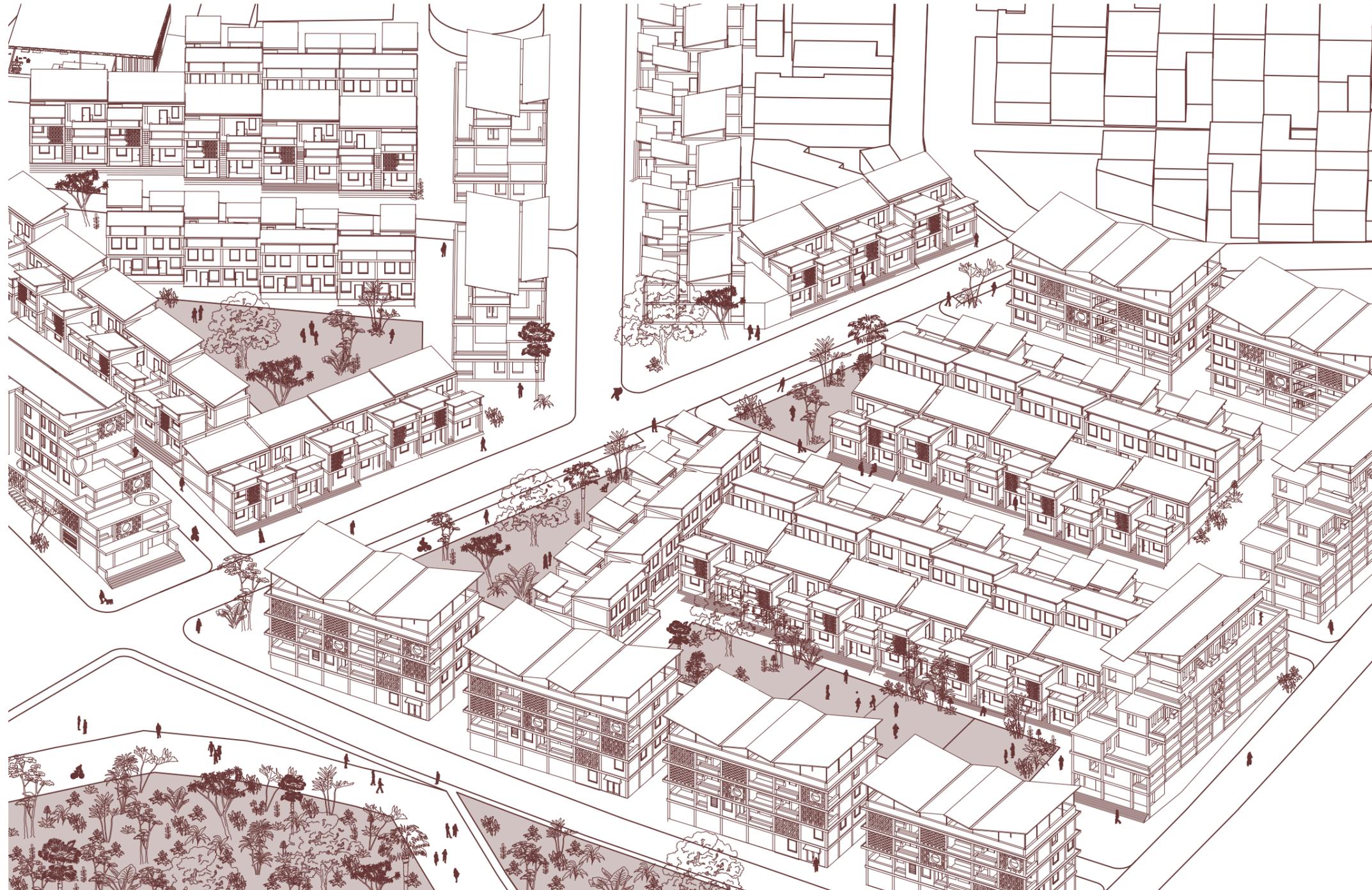
DENSITY

NEW PROPOSAL



111 Dw/ha

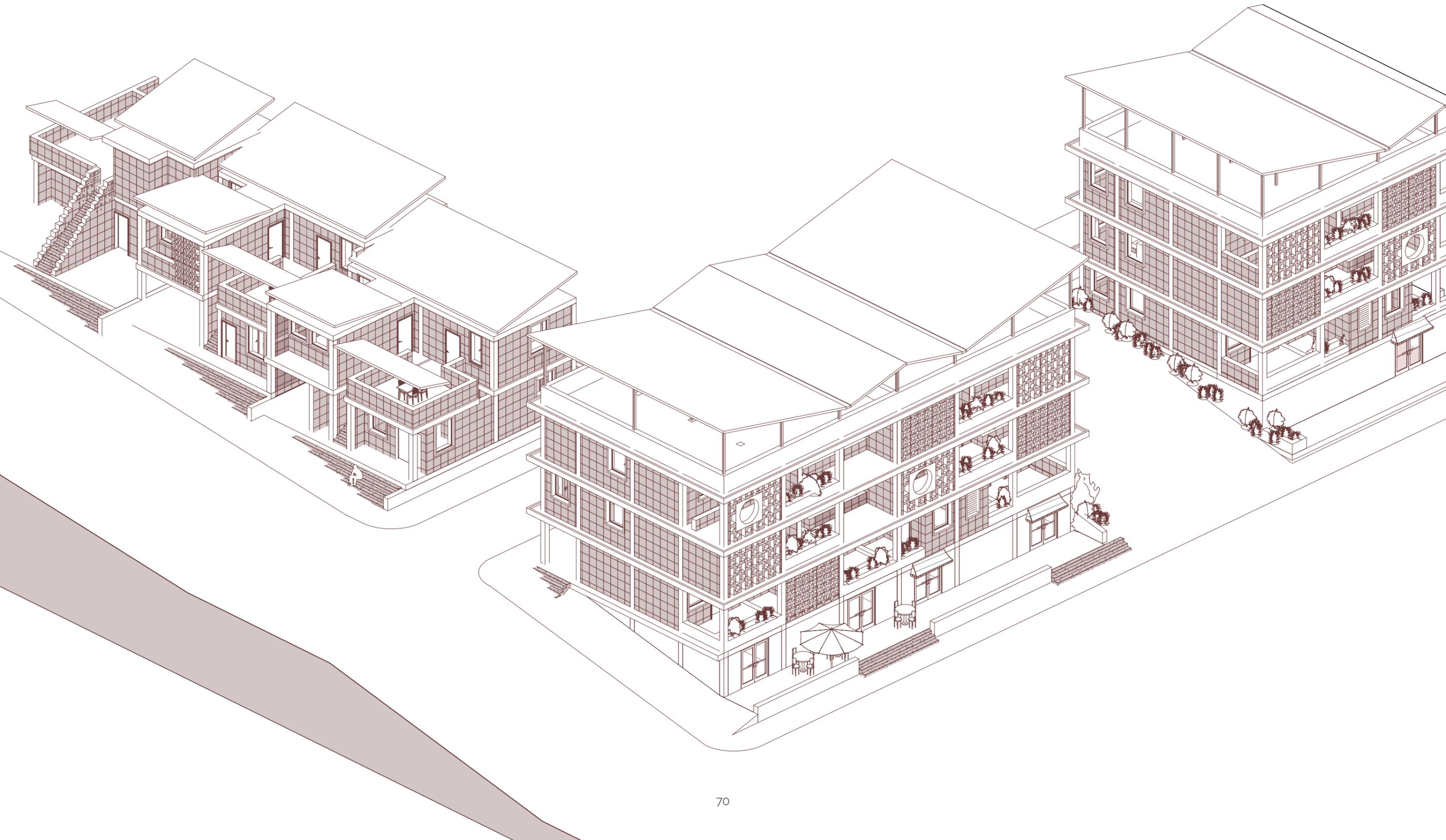
CLUSTER STRATEGY



CLUSTER STRATEGY



CLUSTER STRATEGY



CLUSTER STRATEGY

SECTION

Urban villa

HMP slab

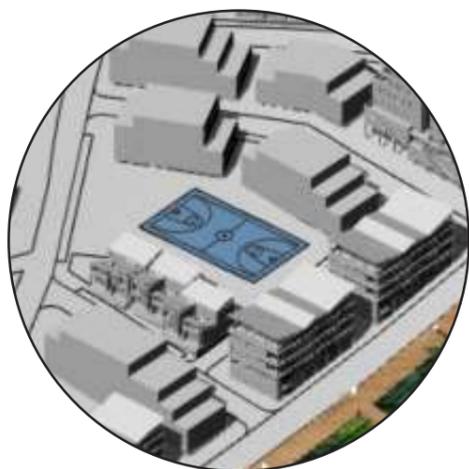
Embryo House

HIS slab

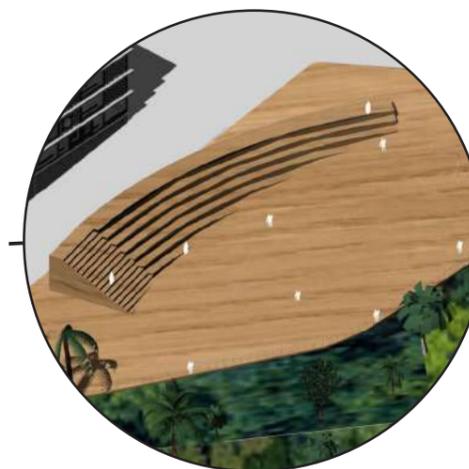


PUBLIC AMENITIES

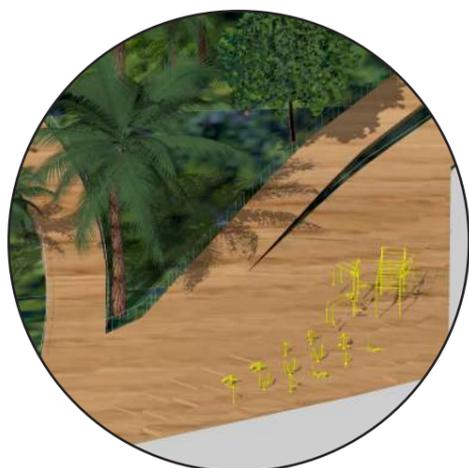
CIRCULAR PARK



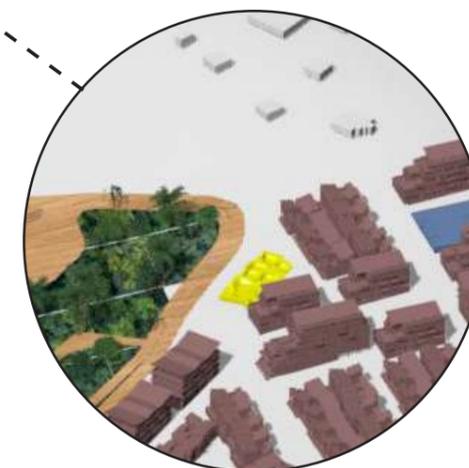
Sports Courts +
Picknick + Playground



Amfitheater + Circular
Park



Urban Fitness + Chess
+ Circular park



Skatepark +
Playground + Picknick

Materiality and Managerial Strategy

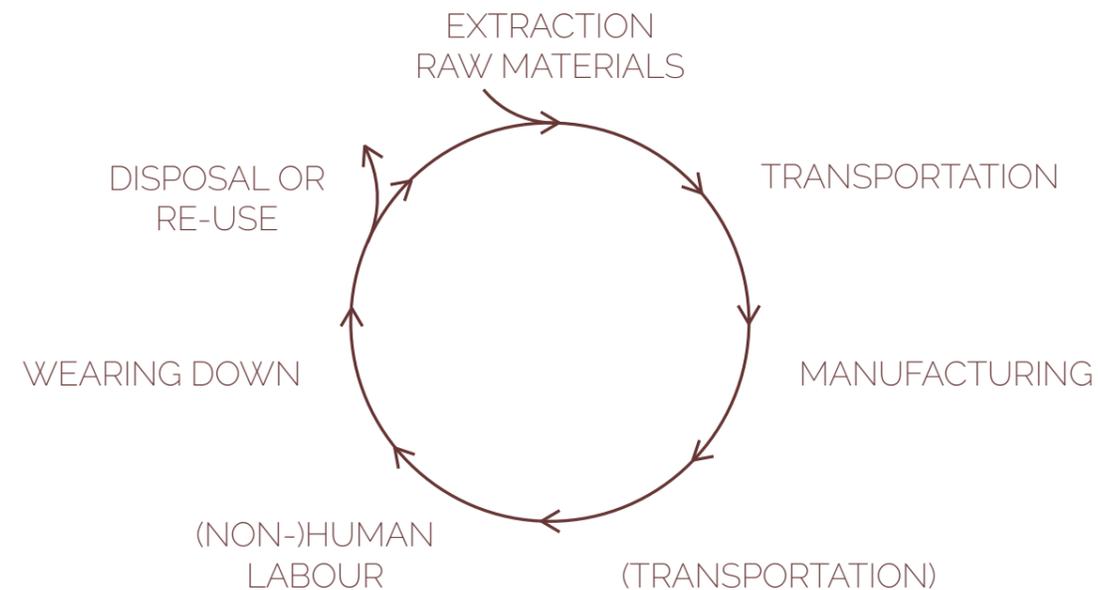
MATTER AND MATERIALITY:

FOLLOW THE MATERIAL

The ethical question of how to *follow the material*:

"Following the flow of matter."
- Deleuze and Guattari (1987, p. 373)

"The ethical gesture to *follow the material* in the field of architecture is recognise the economies, the labour, the handling and shaping, the wearing down and final disposal of all those goods and services we comfortably enfold ourselves in."
- Thomas (2007, p.2)

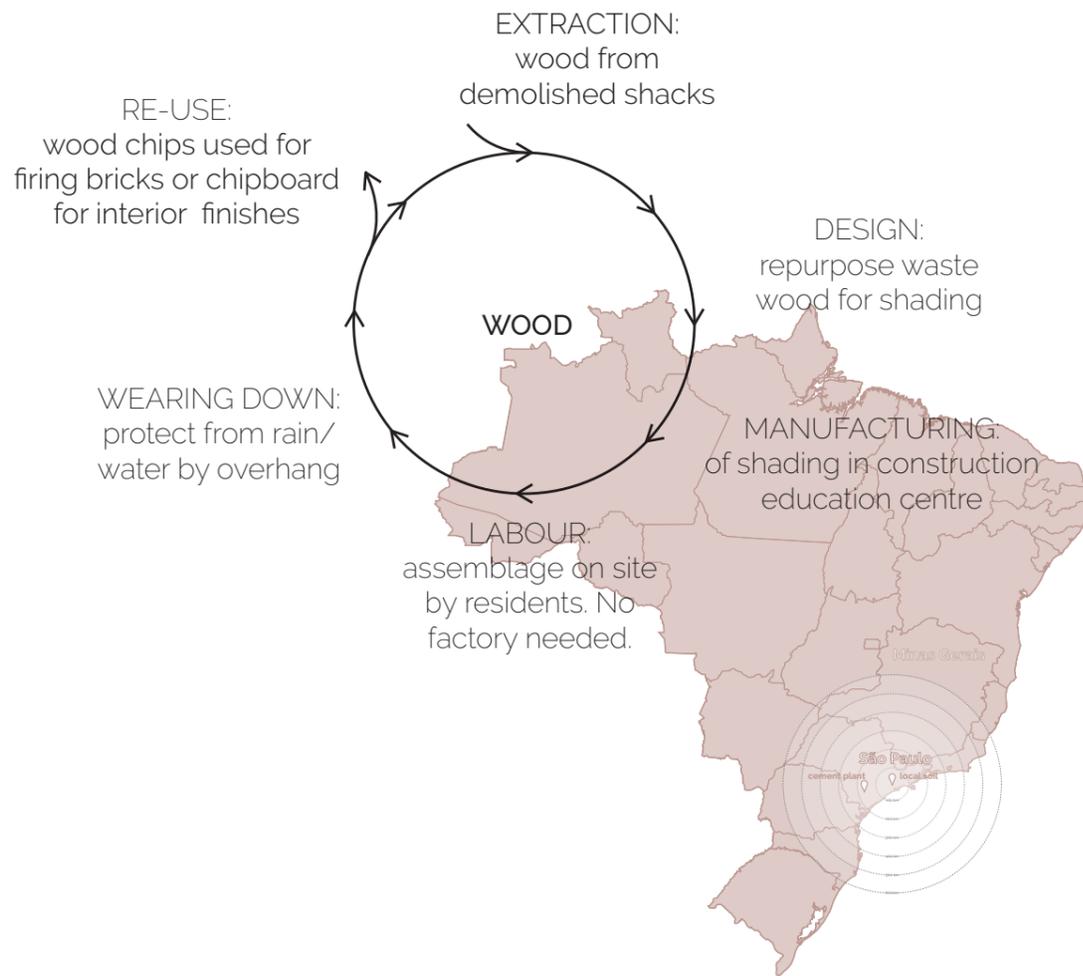


"Allowing material to have a say in the structures we create"
- DeLanda (2004, p. 21)

"..move toward novel combinations of *material expressivity* and *formed materiality*"
- Hélène Frichot (2013, p 91)

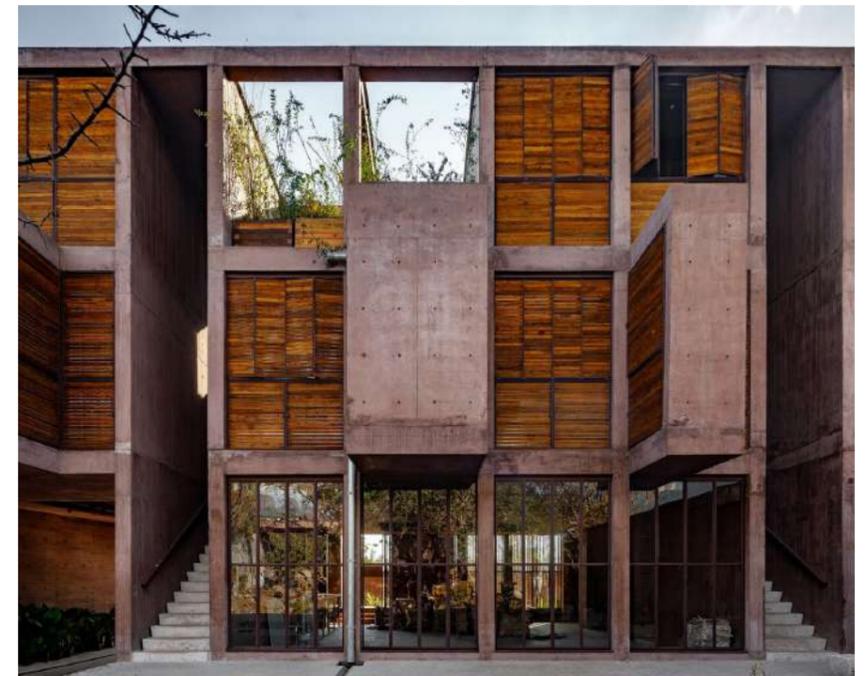
MATTER AND MATERIALITY:

FLOW OF MATERIALS

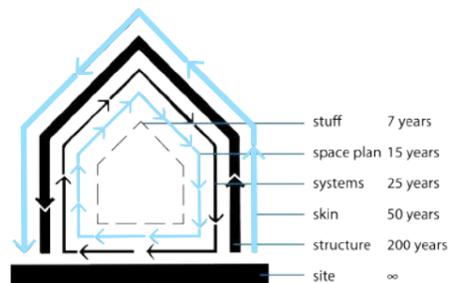


source: author's images

shading made from waste wood source: archdaily (2022)



OPEN BUILDING PRINCIPLE



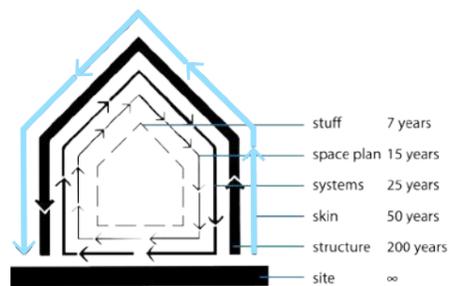
MATTER AND MATERIALITY:

FLOW OF MATERIALS



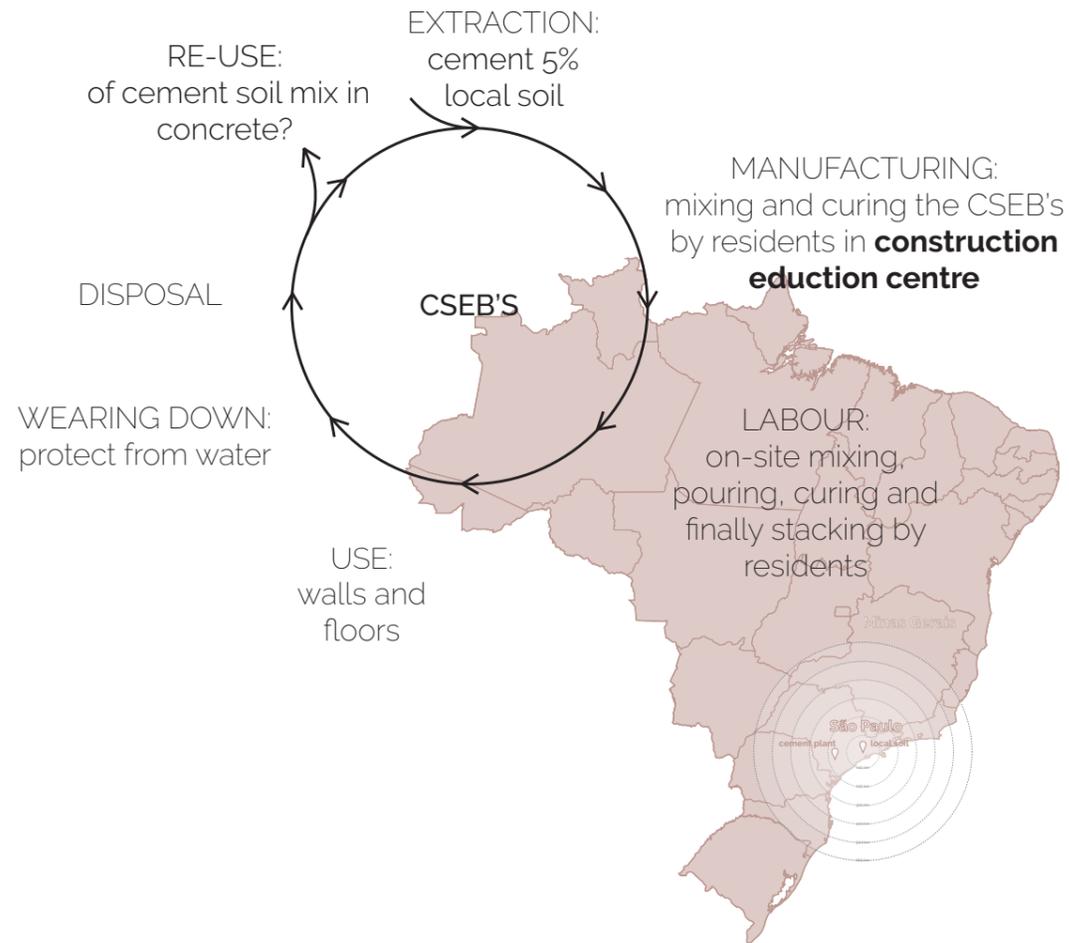
source: author's images

OPEN BUILDING PRINCIPLE

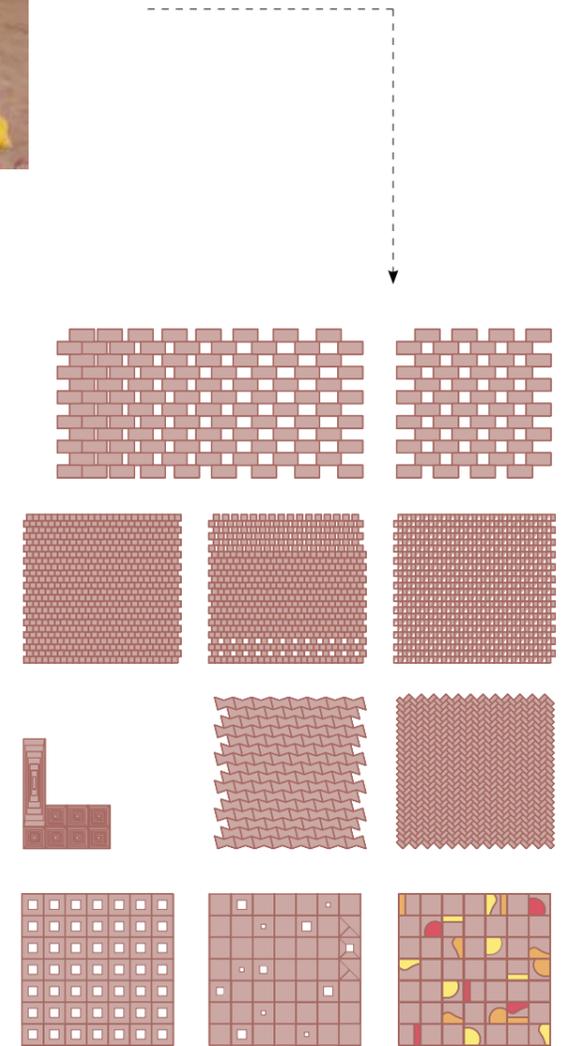


MATTER AND MATERIALITY:

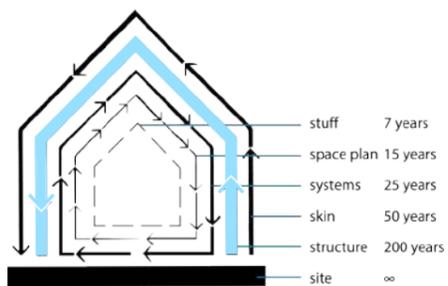
FLOW OF MATERIALS



design exercise CSEB's



OPEN BUILDING PRINCIPLE



MATTER AND MATERIALITY:

WASTE MANAGEMENT OF IOT'S AND SLAG

Usually, mining waste is disposed of in dams, but this choice offers environmental and security problems.

Mariana dam rupture in 2015:

“The waste - a liquid mix of water, sands and clays - killed 19 people, destroyed villages, left hundreds homeless, and killed fish and aquatic life as it flowed on down the bigger River Doce to the sea more than 600km away.”

- The Guardian (2016)

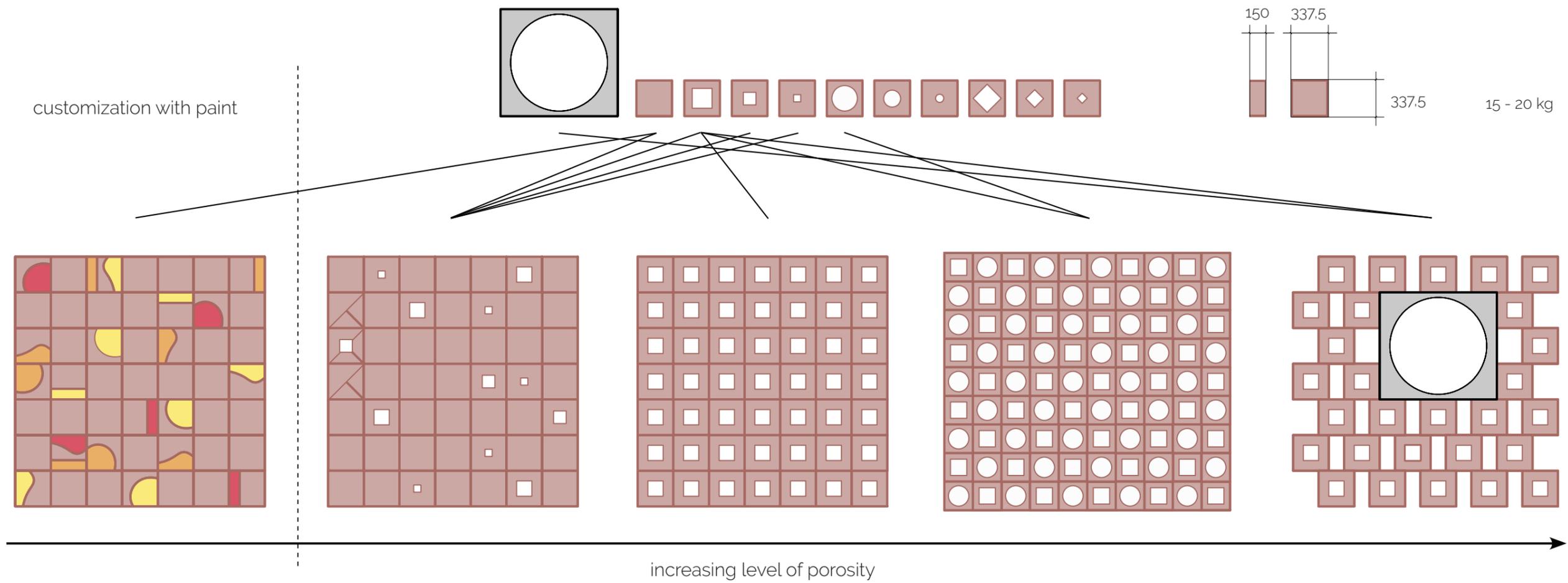


The use of mining waste in construction can contribute to the reduction of environmental impacts caused by the mining industries in Brazil.

If used in construction on a large scale, it tackles the 8th, 9th, 11th, and 12th sustainable goals: providing clean water and sanitation, make cities more sustainable, and preserve the life on land and below water.

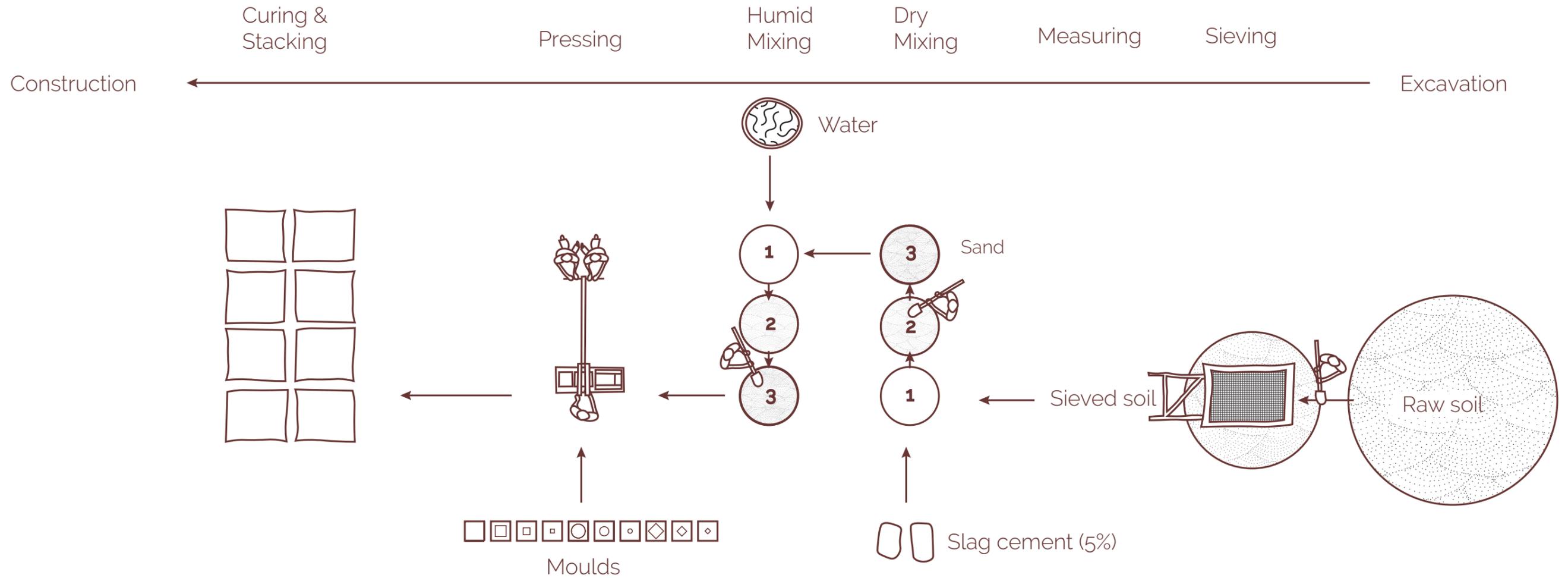
MATERIAL EXPRESSIVITY

BUILDING ELEMENTS



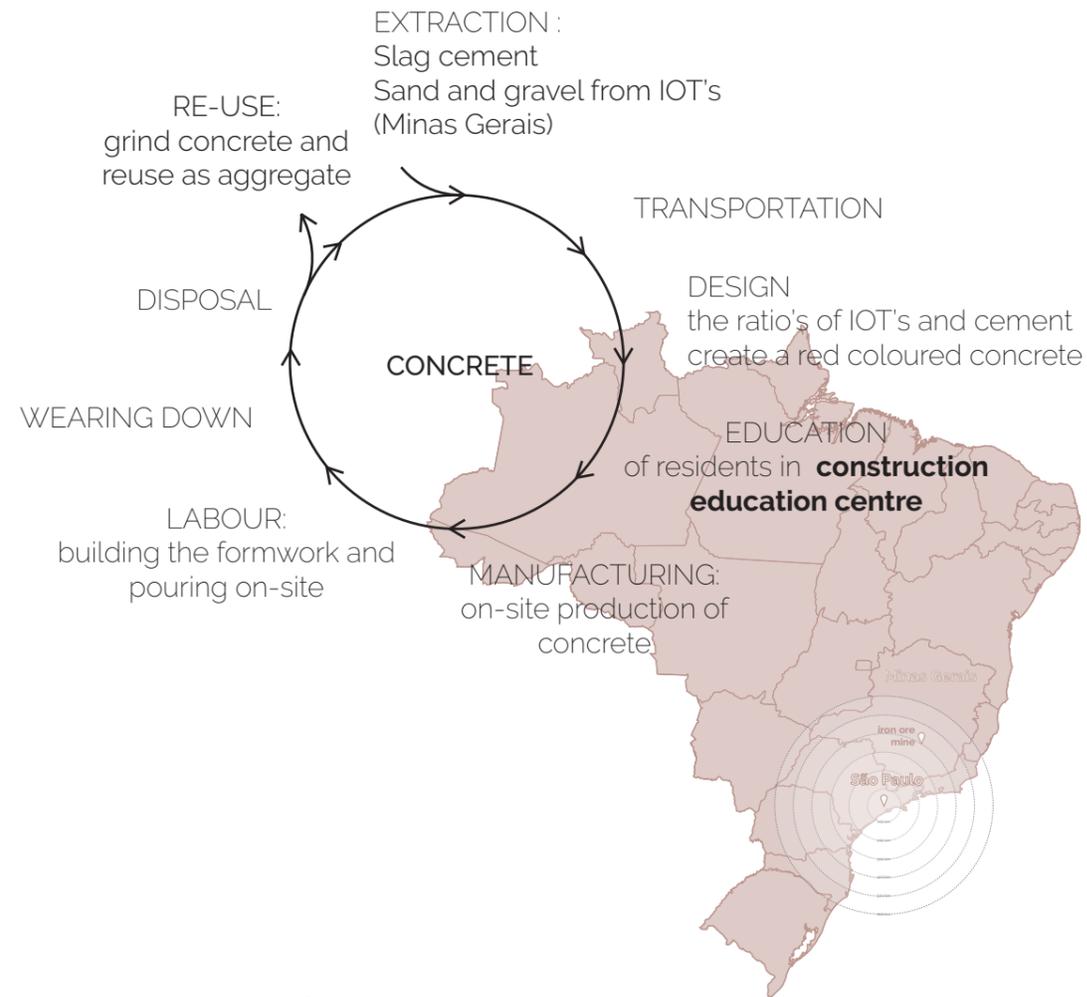
MATERIAL EXPRESSIVITY:

TECTONICS CSEB'S



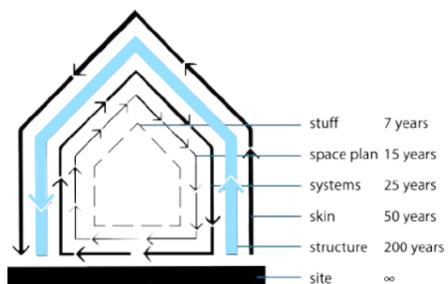
MATTER AND MATERIALITY:

FLOW OF MATERIALS



IOT's contain high levels of iron oxide, causing a red colour.

OPEN BUILDING PRINCIPLE



MATERIAL EXPRESSIVITY

EMBRYO HOUSE



In-situ red pigmented IOT concrete



Waste wood shading



Stabilized Compressed Earth Blocks

MATERIAL EXPRESSIVITY

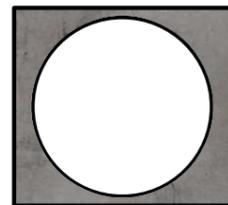
HIS SLAB



In-situ red pigmented IOT concrete



Precast concrete



Precast concrete element



Waste wood shading



Stabilized Compressed Earth Blocks

MATERIAL EXPRESSIVITY

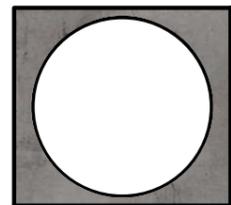
URBAN VILLA



In-situ red pigmented IOT concrete



Precast concrete



Precast concrete element



Waste wood shading



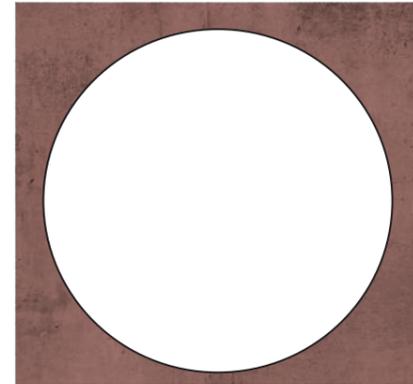
Stabilized Compressed Earth Blocks

MATERIAL EXPRESSIVITY

HMP SLAB



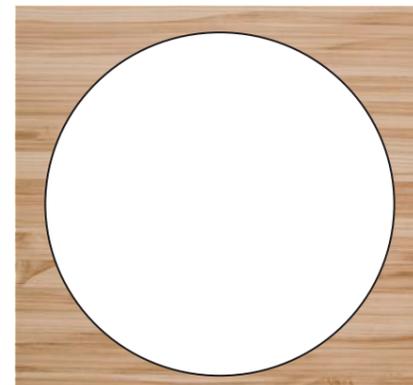
In-situ red pigmented IOT concrete



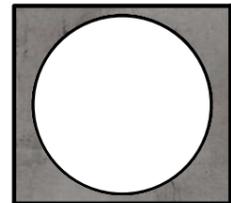
Precast IOT concrete elements



Precast concrete



Wooden pine (endemic to brazil) elements



Precast concrete element



Waste wood shading



Stabelized Compressed Earth Blocks

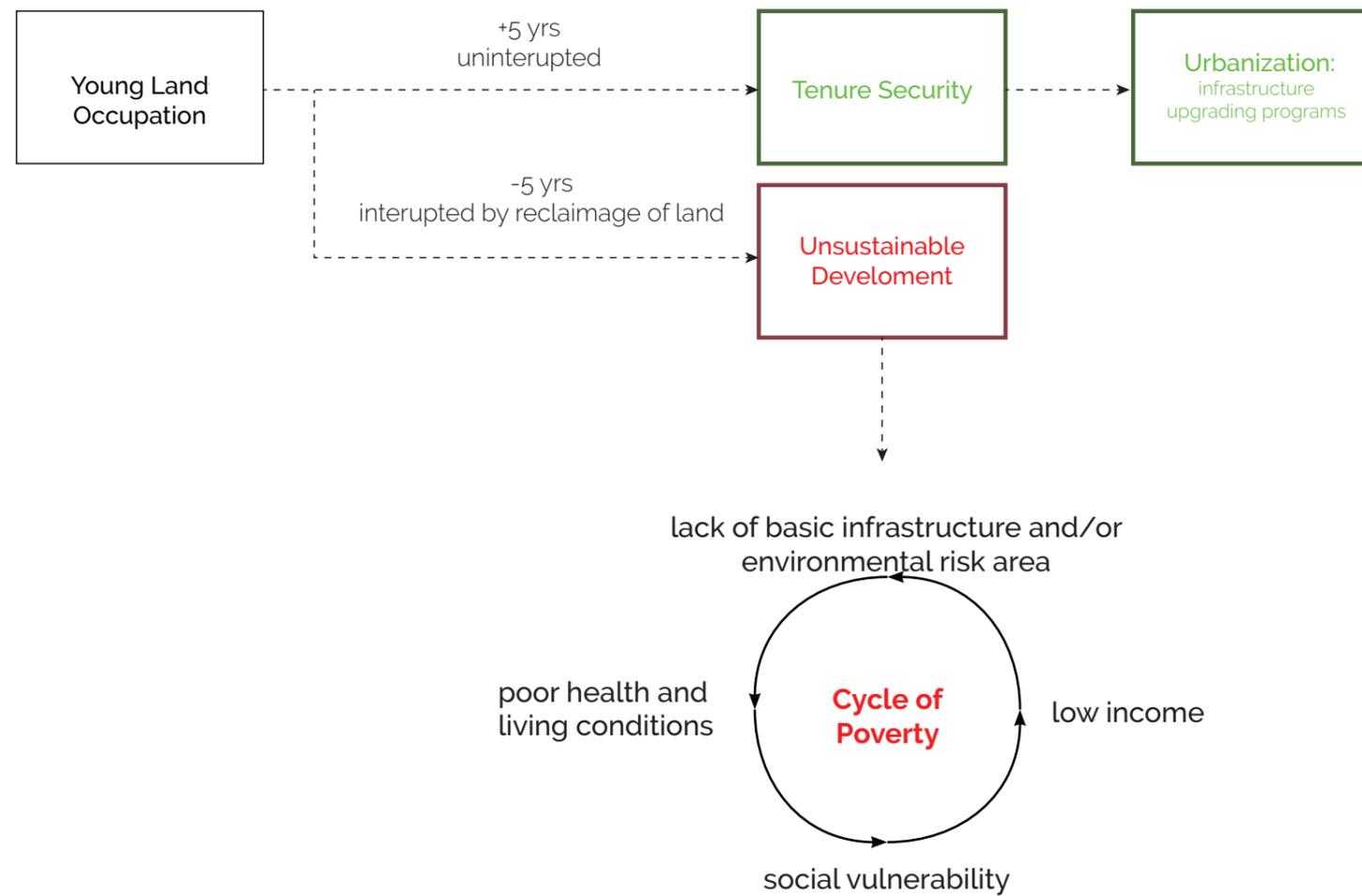
MATERIAL EXPRESSIVITY

RETERRITORIALIZATION

Reterritorialize the conception of the materials used in order to promote sustainable construction practices and material usage.

MANAGERIAL STRATEGY

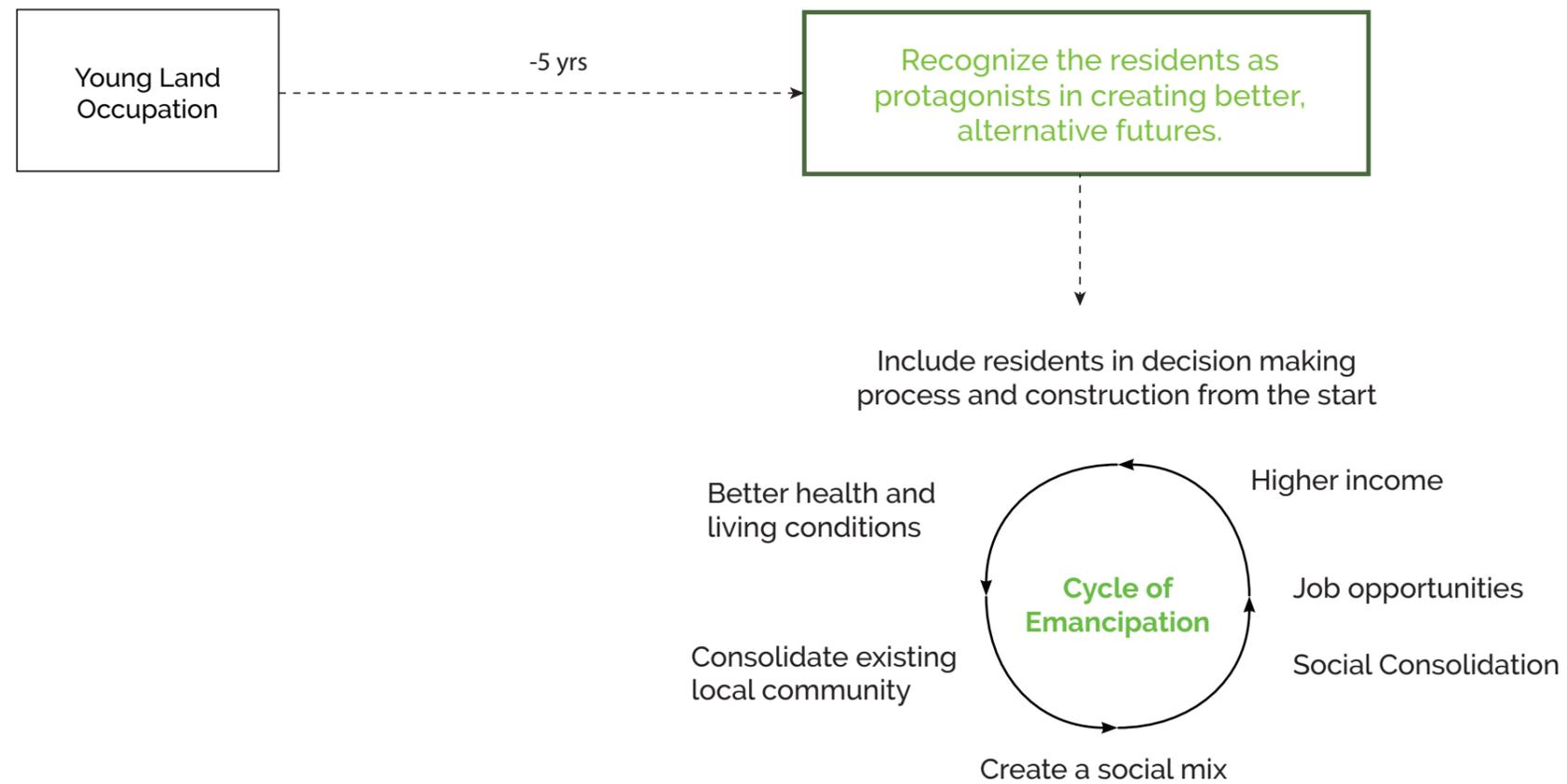
CURRENT DEVELOPMENT PRACTICES



(Source: Walker, A. P. P., & De Alarcón, M. A. (2018). The Competing Social and Environmental Functions of Private Urban Land: The Case of an Informal Land Occupation in São Paulo's South Periphery. *Sustainability*, 10(11), 4160. <https://doi.org/10.3390/su10114160>)

MANAGERIAL STRATEGY

CURRENT DEVELOPMENT PRACTICES



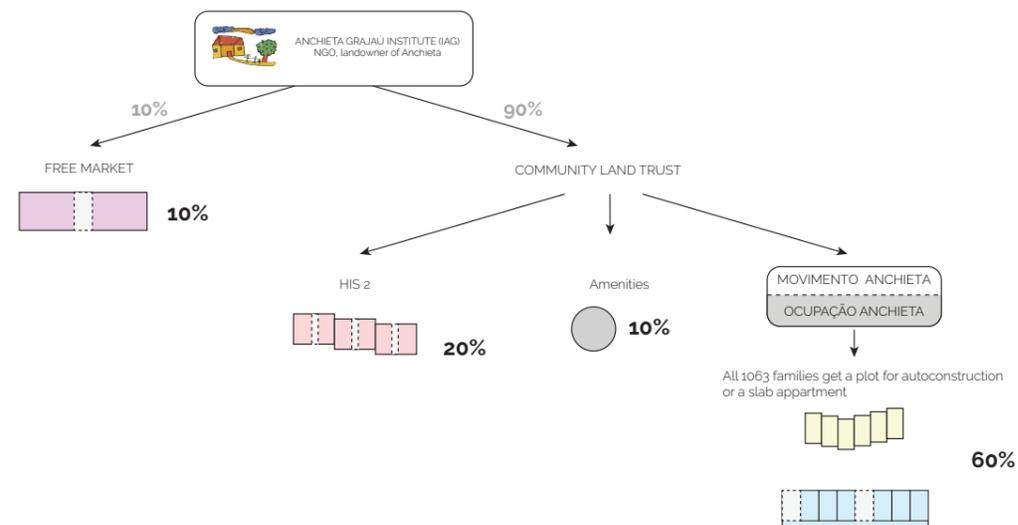
(Source: Walker, A. P. P., & De Alarcón, M. A. (2018). The Competing Social and Environmental Functions of Private Urban Land: The Case of an Informal Land Occupation in São Paulo's South Periphery. *Sustainability*, 10(11), 4160. <https://doi.org/10.3390/su10114160>)

MANAGERIAL STRATEGY

OWNERSHIP

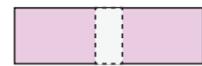


LAND DIVISION



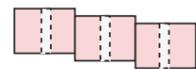
MANAGERIAL STRATEGY

TYPOLOGICAL OWNERSHIP



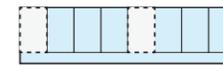
Buy

on free market



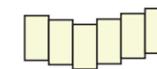
Buy

on Community Land



Rent-to-own

on Community Land



Built with sweat equity

on Community Land

Sweat equity:
increase in value, that is created as a direct result of hard work by the owner(s). It is the preferred mode of building equity for low-income residents, since they may be unable to contribute much financial capital.



construction education centre



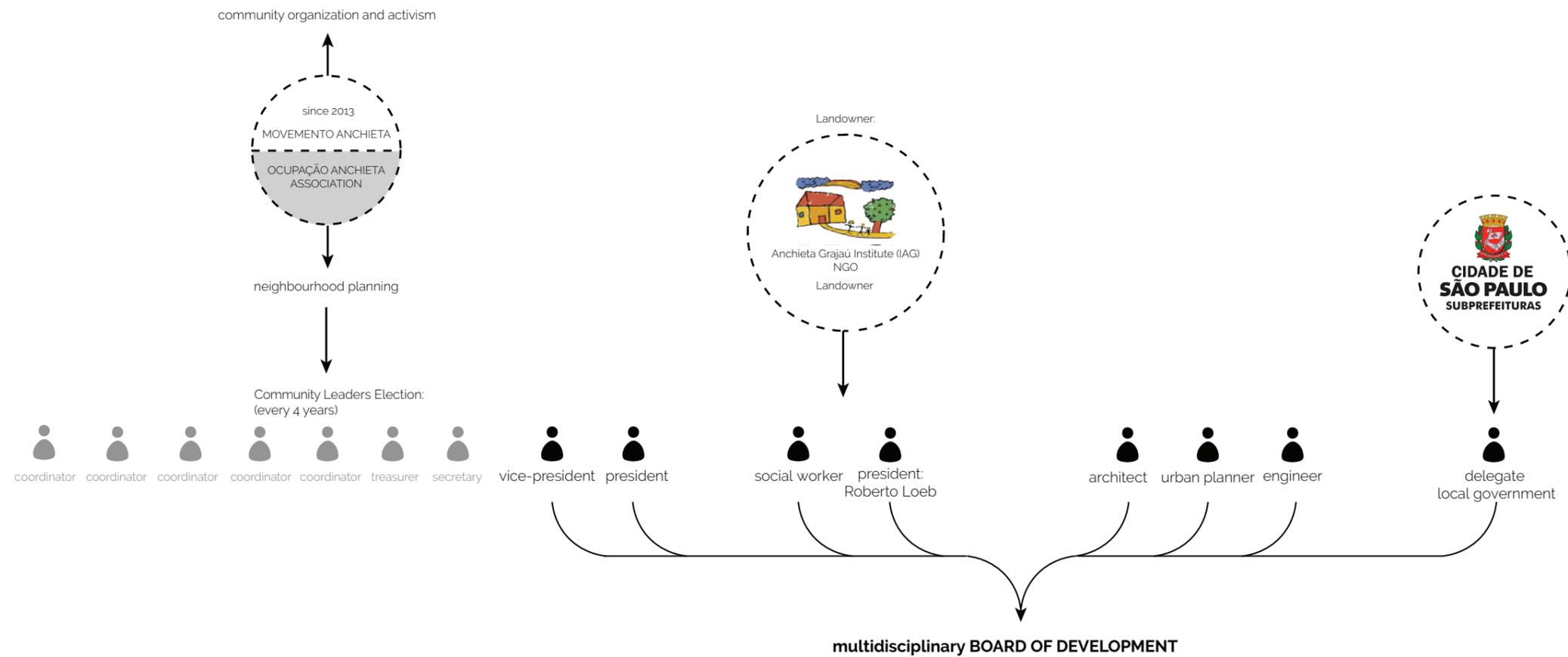
Emancipation of the residents of Anchieta by giving them **tacit knowledge** of new construction methods, connecting them with the neighbourhood, and giving them a sense of belonging and agency.

MANAGERIAL STRATEGY

ORGANIZATION

Manage Housing Development in the case of a Young Informal Land Occupation

grassroot organisation: community based planning
the right to adequate housing and the right to a healthy environment



MANAGERIAL STRATEGY

PHASING



Preserve

- Community centre
- Church
- Soccer court
- Atlantic forest

dwellings

- 1063 shacks

MANAGERIAL STRATEGY

PHASING



Add

HIS slab: 68 dwellings

MANAGERIAL STRATEGY

PHASING



Available
68 units

Demolish
-56

MANAGERIAL STRATEGY

PHASING



MANAGERIAL STRATEGY

PHASING



Add

- Construction workshop
- Embryo: 76 units

MANAGERIAL STRATEGY

PHASING



Available
88 units

Demolish
77 shacks

MANAGERIAL STRATEGY

PHASING



MANAGERIAL STRATEGY

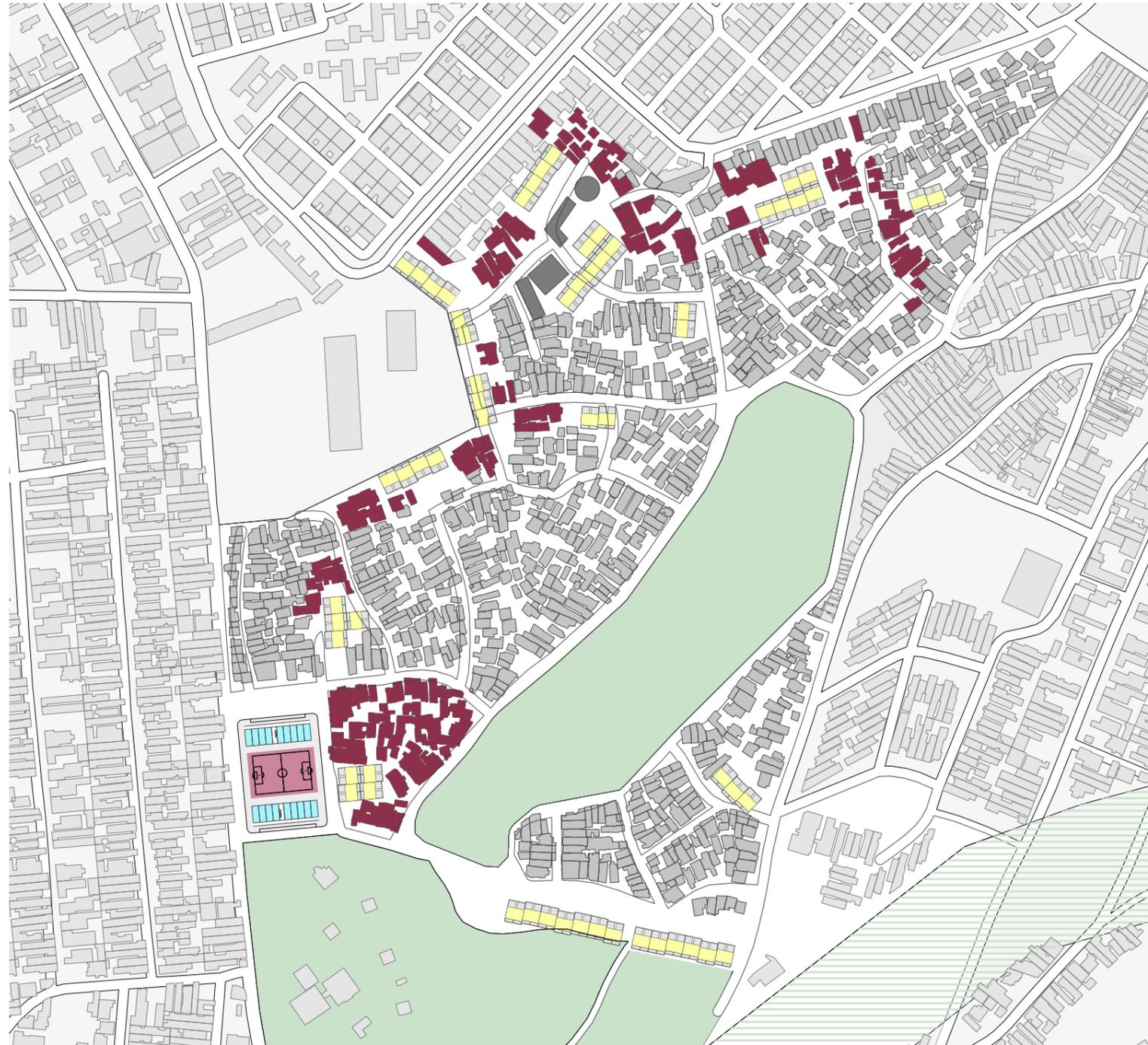
PHASING



Add
Embryo: 160 units

MANAGERIAL STRATEGY

PHASING



Available
171 units

Demolish
170 shacks

MANAGERIAL STRATEGY

PHASING



MANAGERIAL STRATEGY

PHASING



Add

Roads

87 HIS slab units

112 embryo units

10 urban villa units

MANAGERIAL STRATEGY

PHASING



Available
205 units

Demolish
-200 shacks

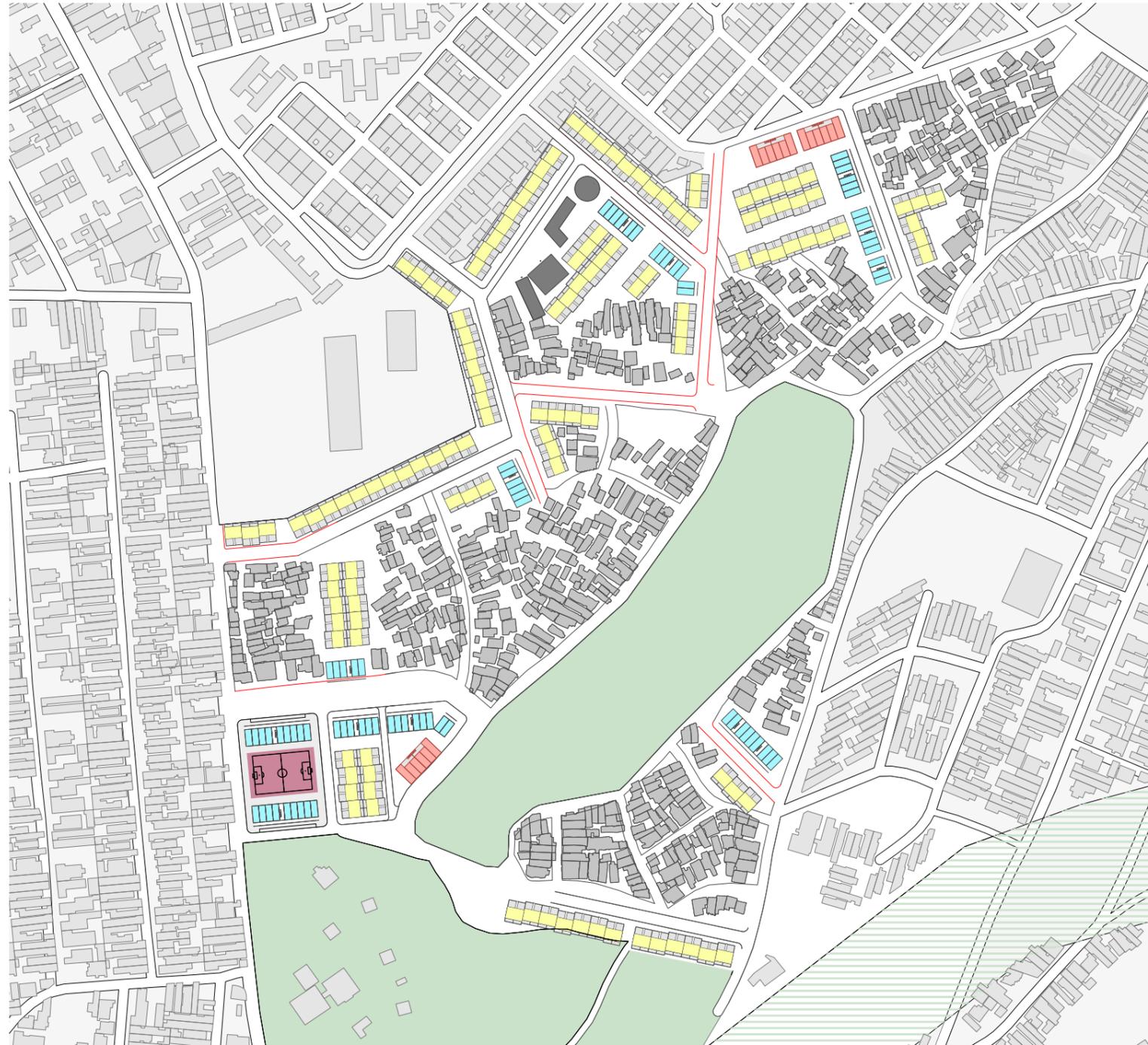
MANAGERIAL STRATEGY

PHASING



MANAGERIAL STRATEGY

PHASING



Add

Roads

129 HIS slab units

152 embryo units

20 urban villa units

MANAGERIAL STRATEGY

PHASING

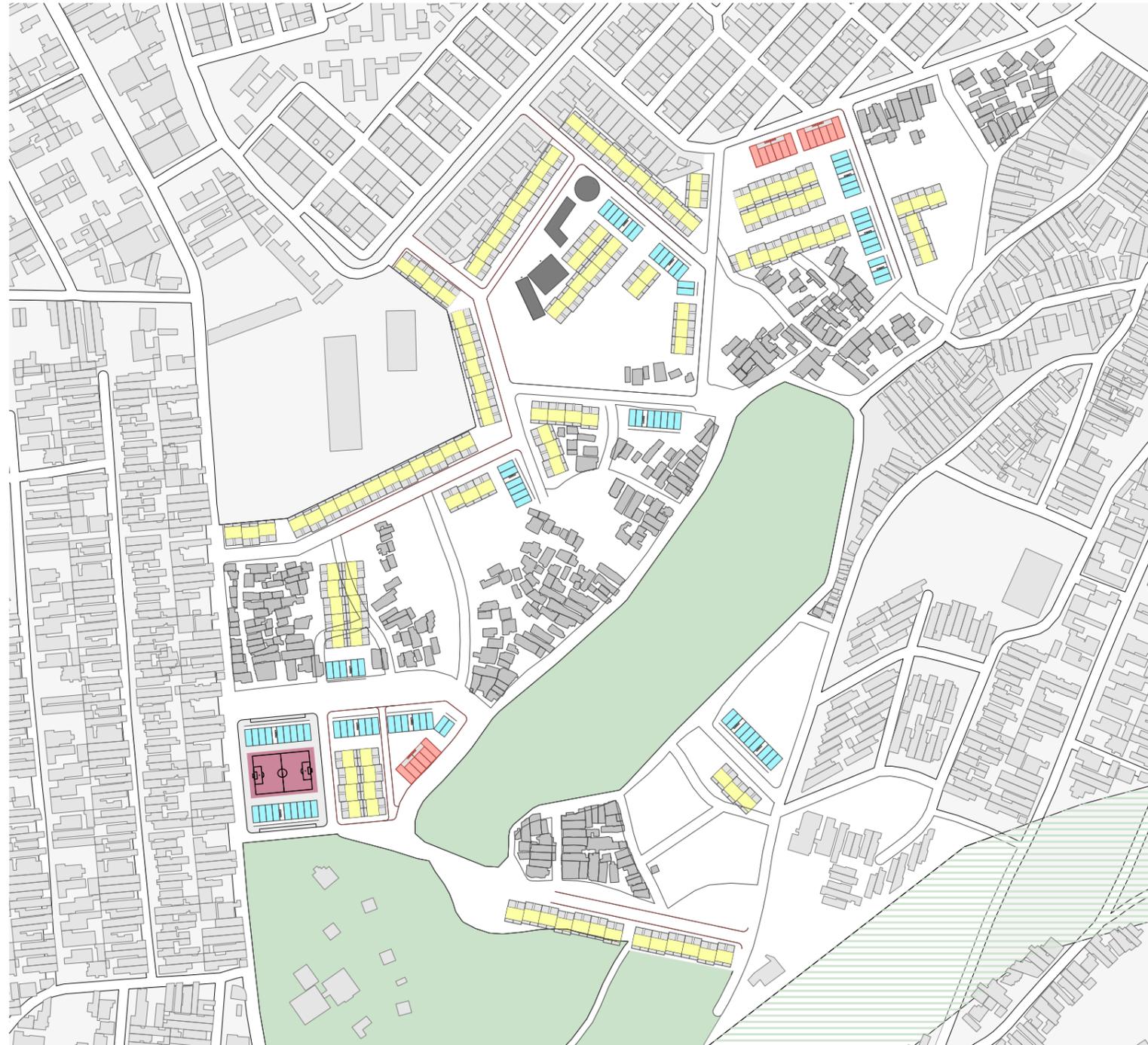


Available
300 units

Demolish
-282 shacks

MANAGERIAL STRATEGY

PHASING



MANAGERIAL STRATEGY

PHASING



Add

159 HIS slab units
132 embryo units
55 urban villa units

MANAGERIAL STRATEGY

PHASING



Available
364 units

Demolish
-347 shacks

MANAGERIAL STRATEGY

PHASING



MANAGERIAL STRATEGY

PHASING

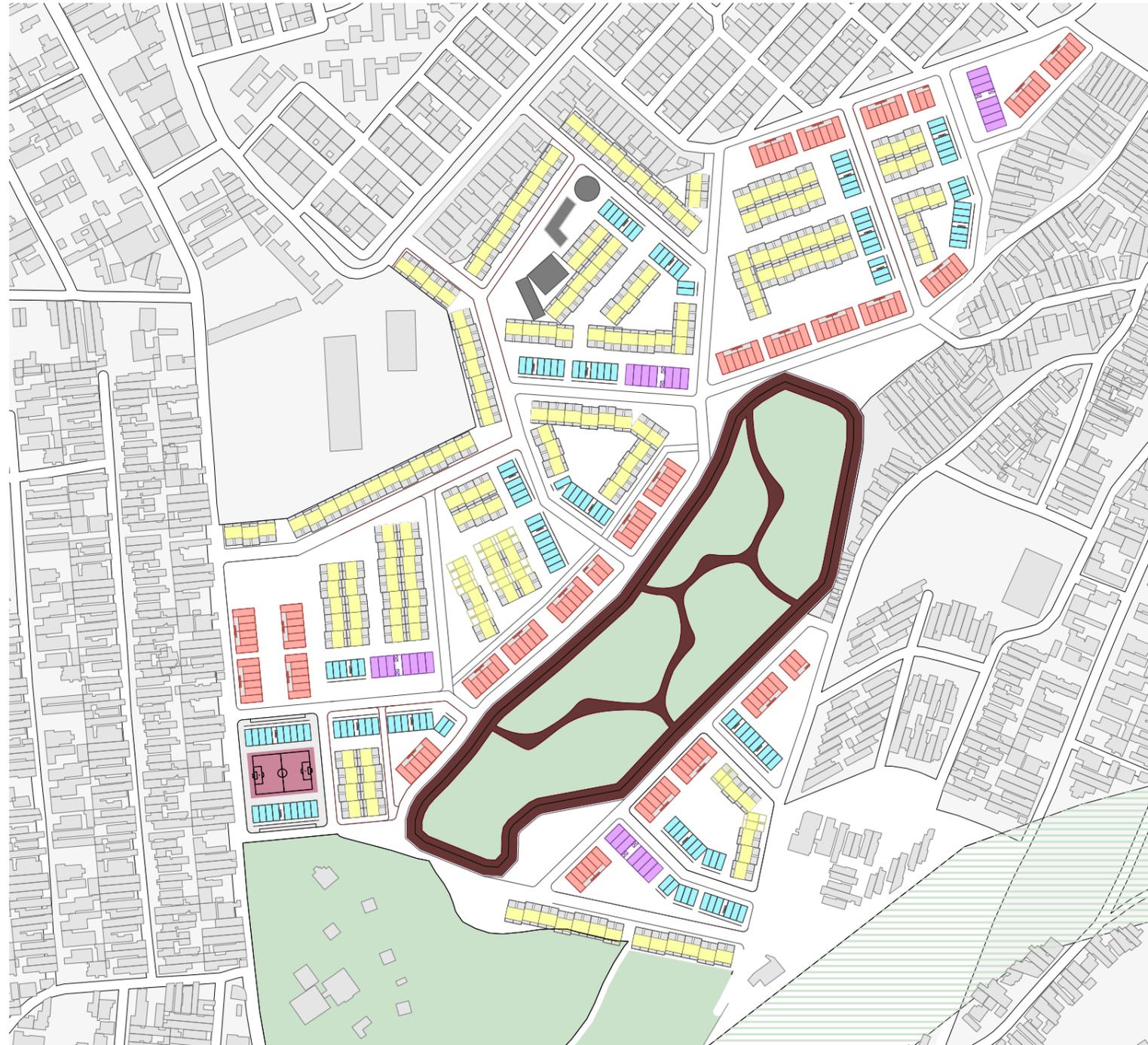


Add

- 24 HIS slab units
- 84 embryo units
- 180 urban villa units

MANAGERIAL STRATEGY

PHASING



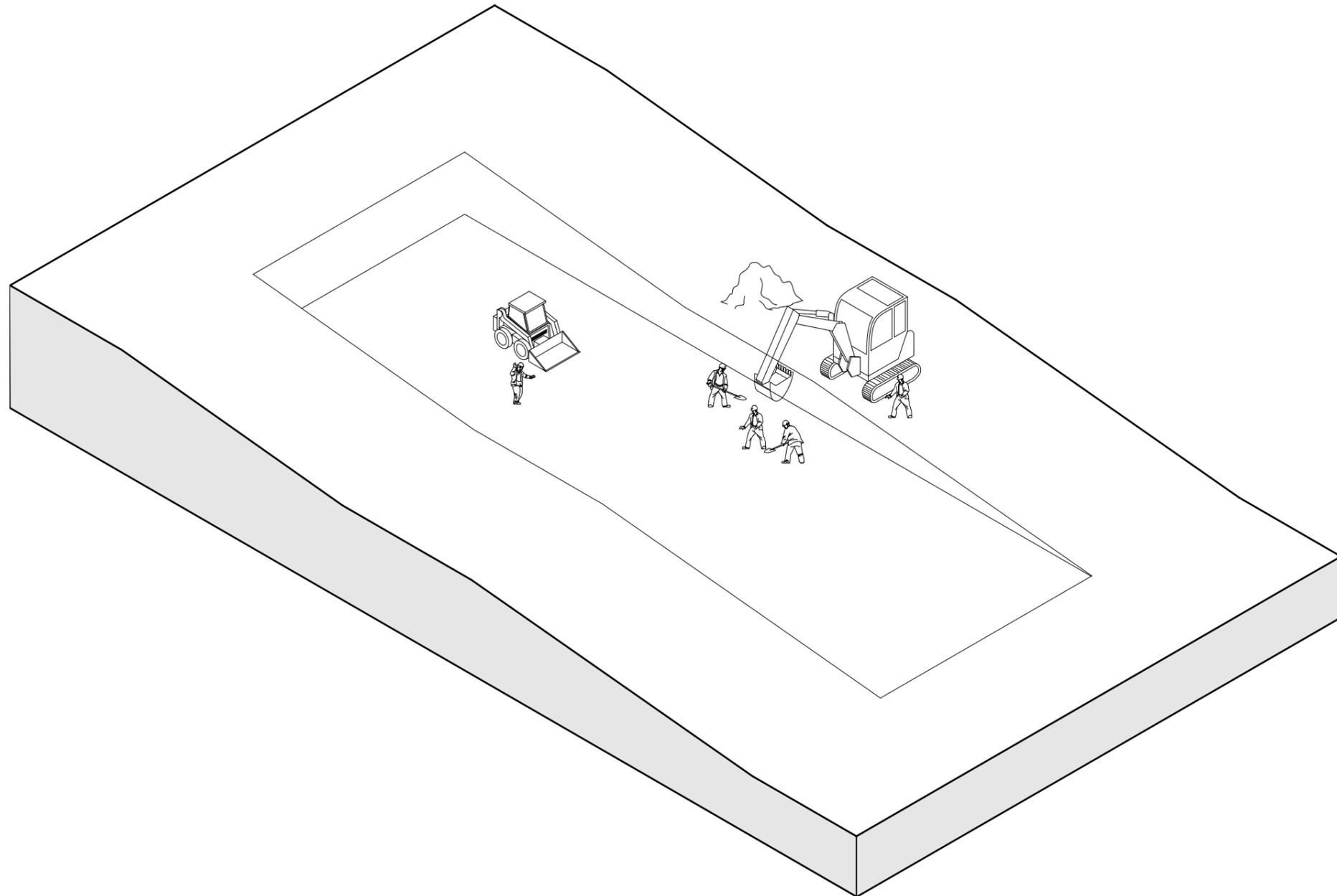
Add
36 HMP units

TOTAL
1485 units

Building technology

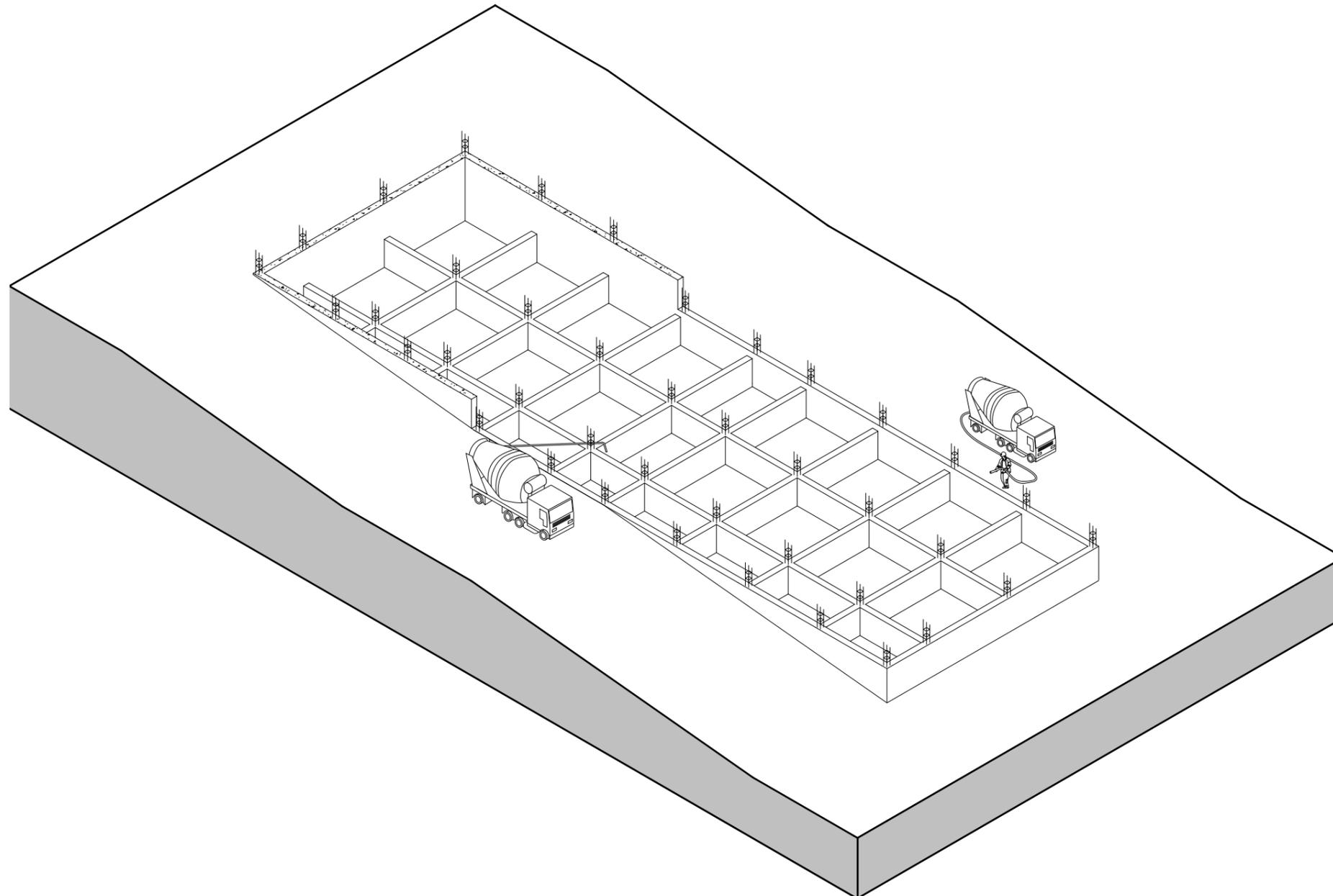
BUIDLING TECHNOLOGY

CONSTRUCTION PROCESS



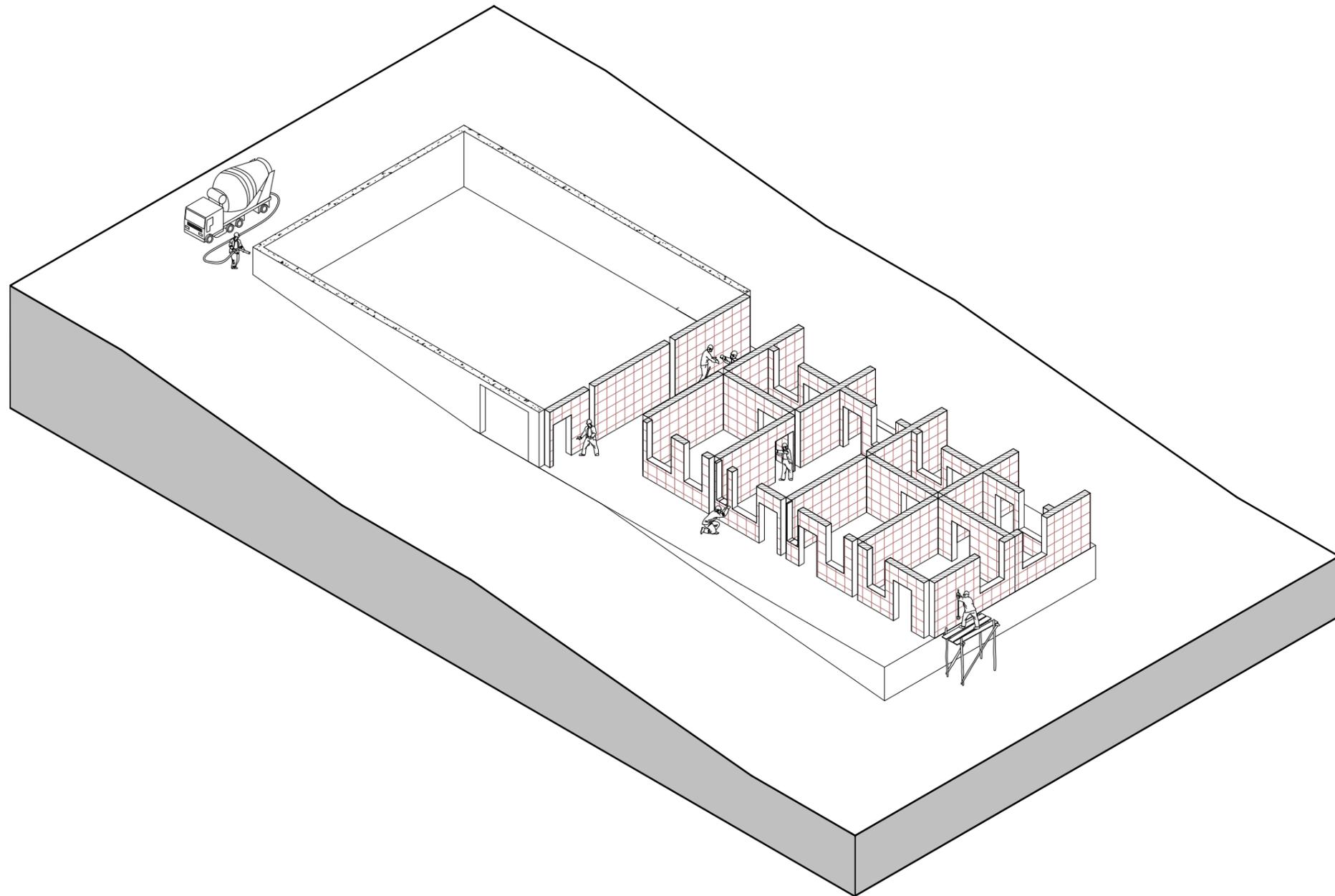
BUILDING TECHNOLOGY

CONSTRUCTION PROCESS



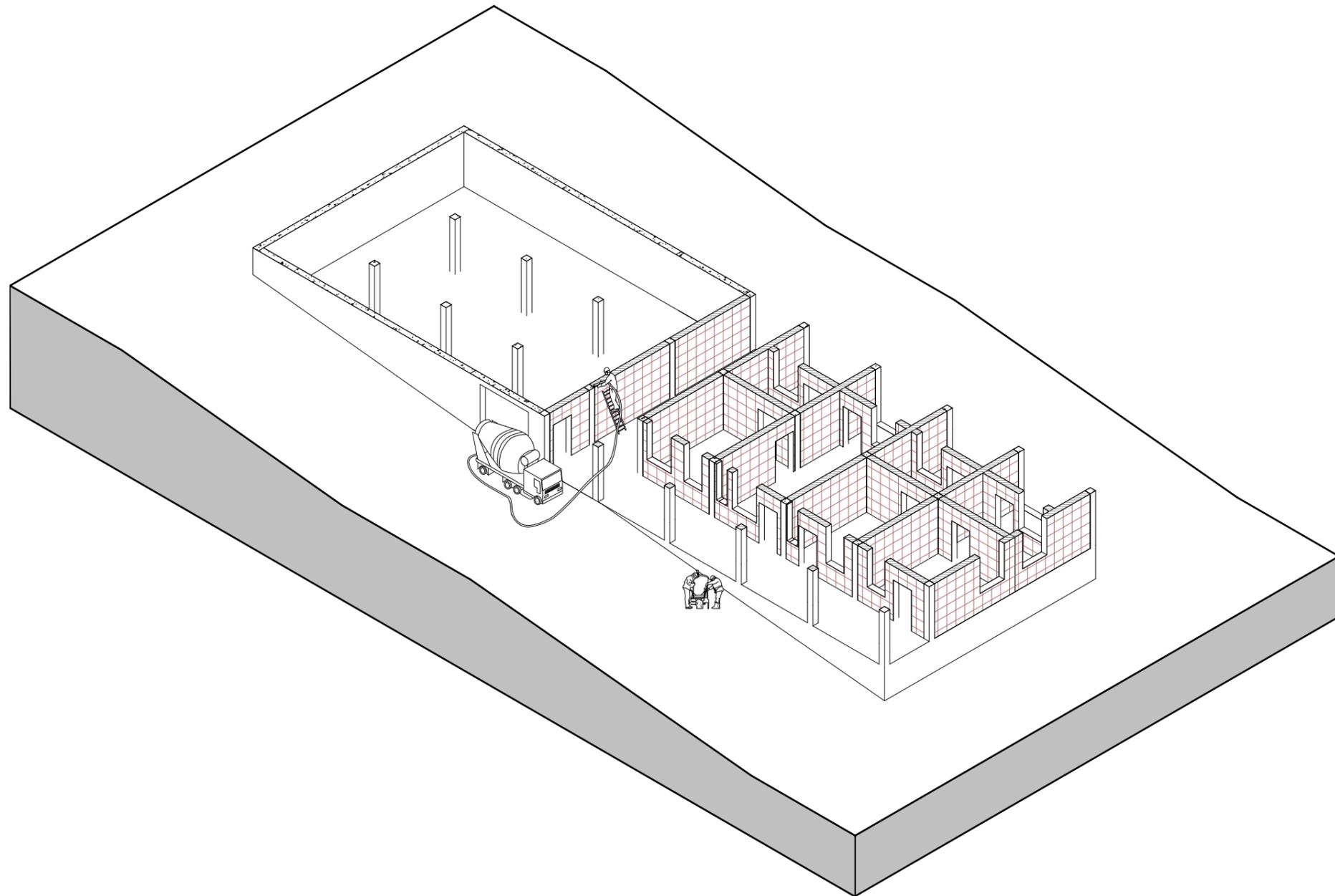
BUILDING TECHNOLOGY

CONSTRUCTION PROCESS



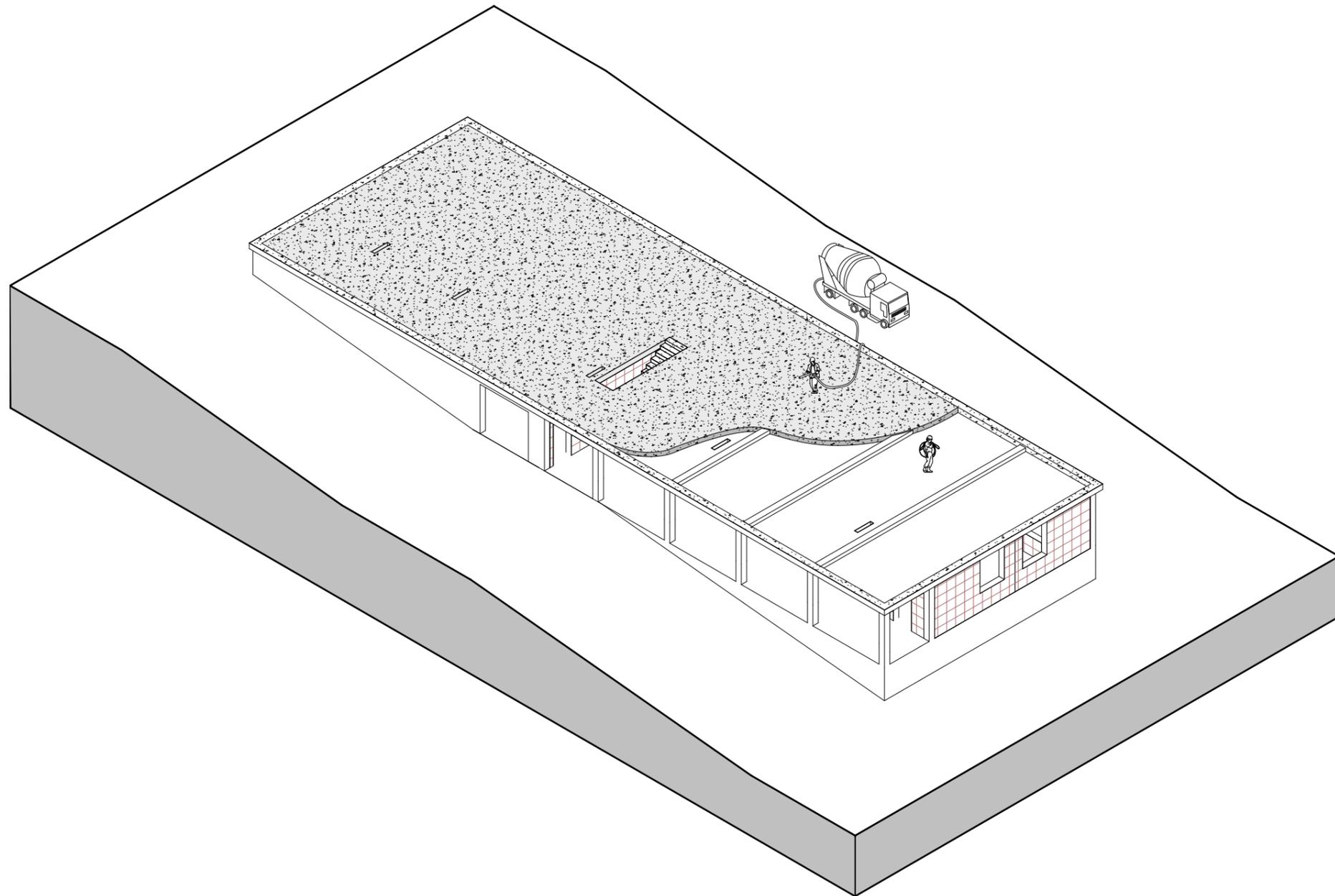
BUILDING TECHNOLOGY

CONSTRUCTION PROCESS



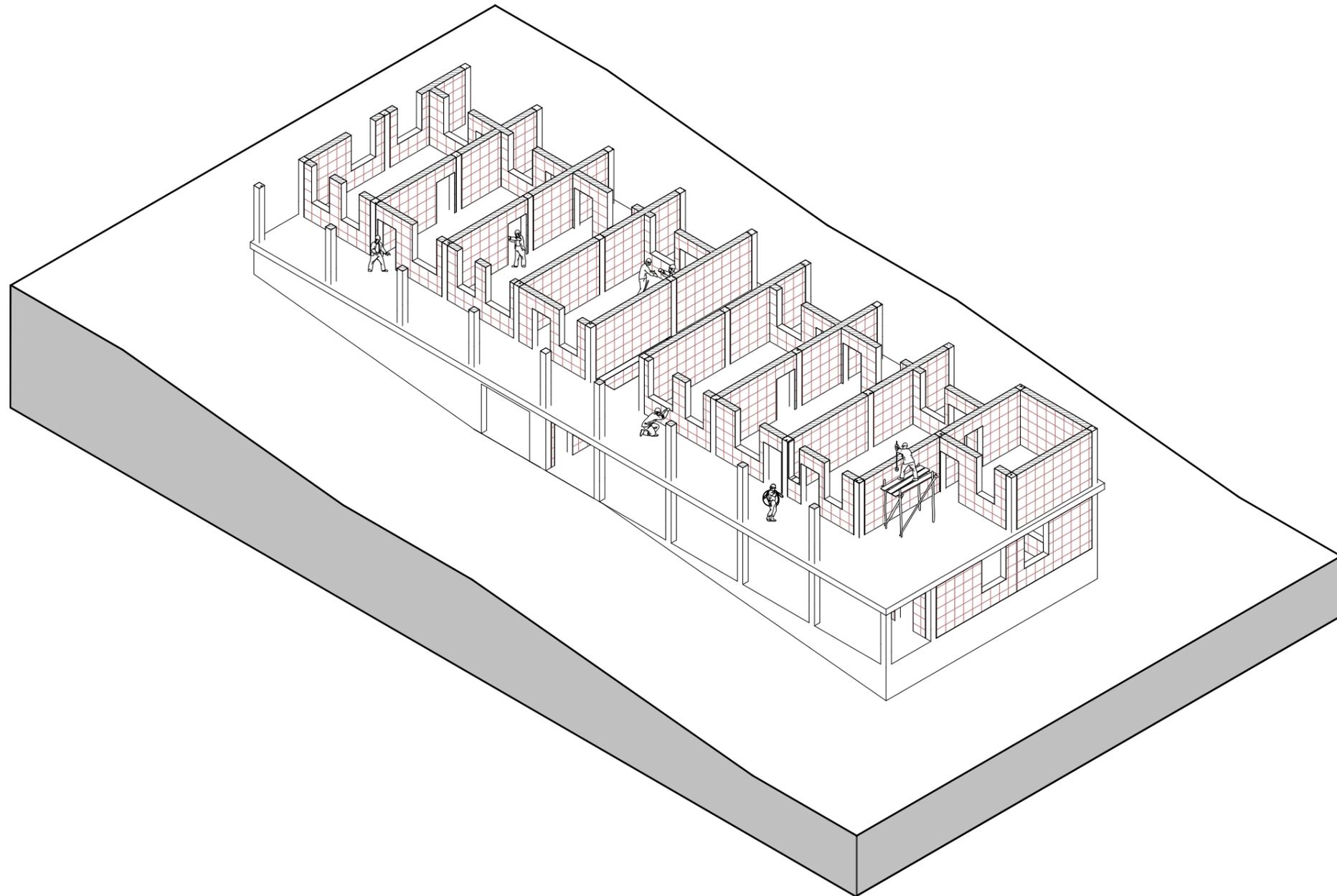
BUILDING TECHNOLOGY

CONSTRUCTION PROCESS



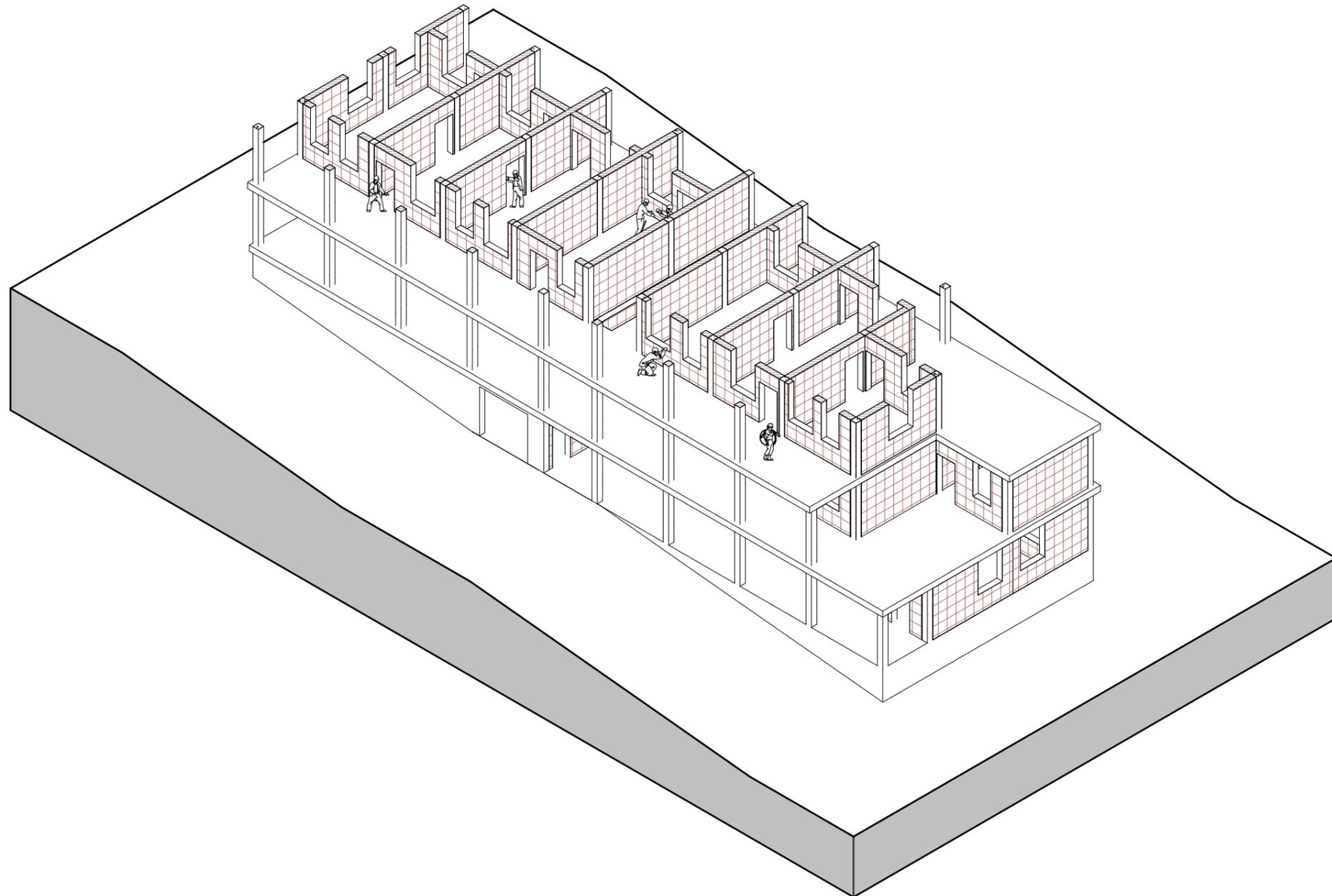
BUILDING TECHNOLOGY

CONSTRUCTION PROCESS



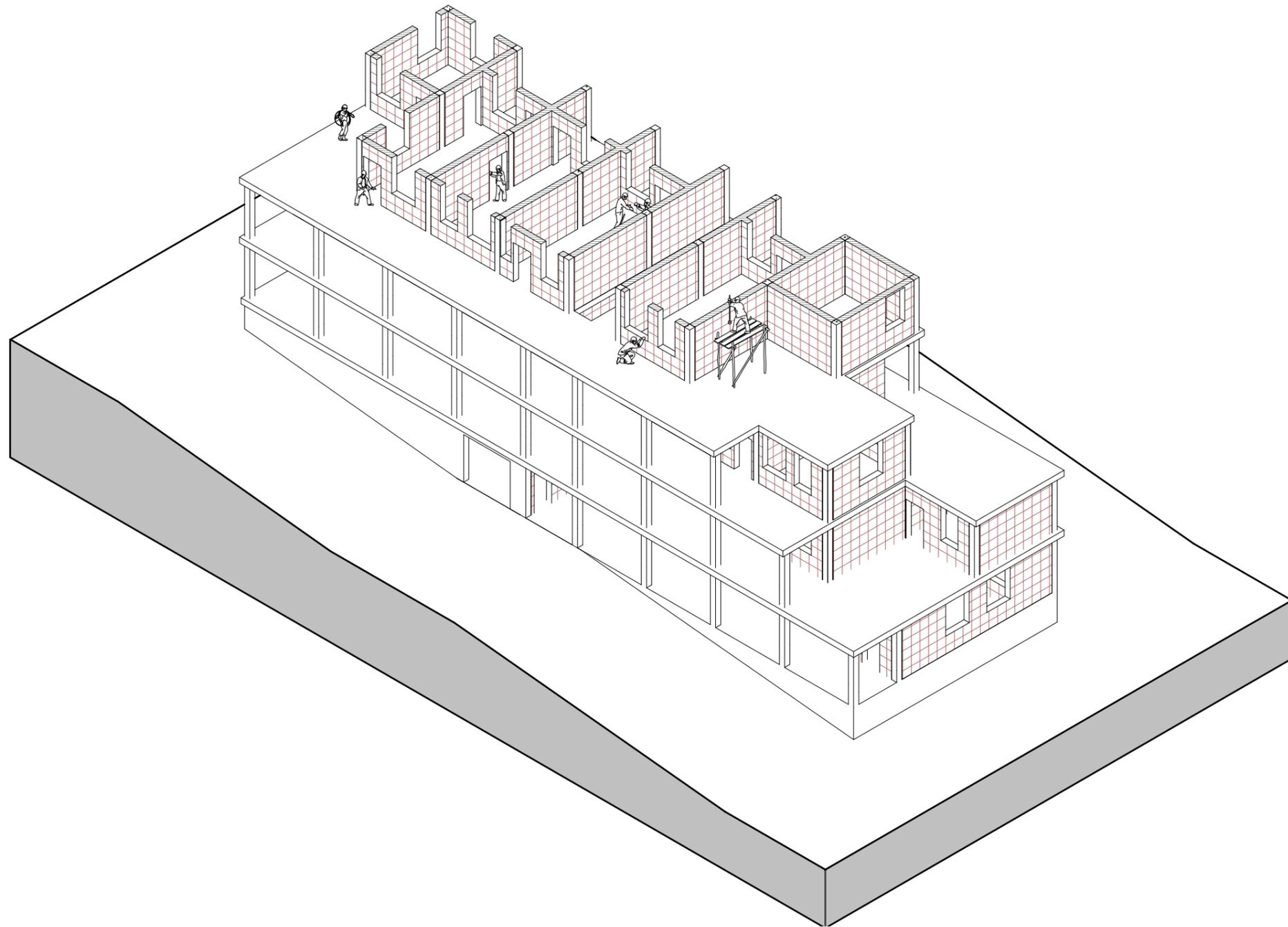
BUILDING TECHNOLOGY

CONSTRUCTION PROCESS



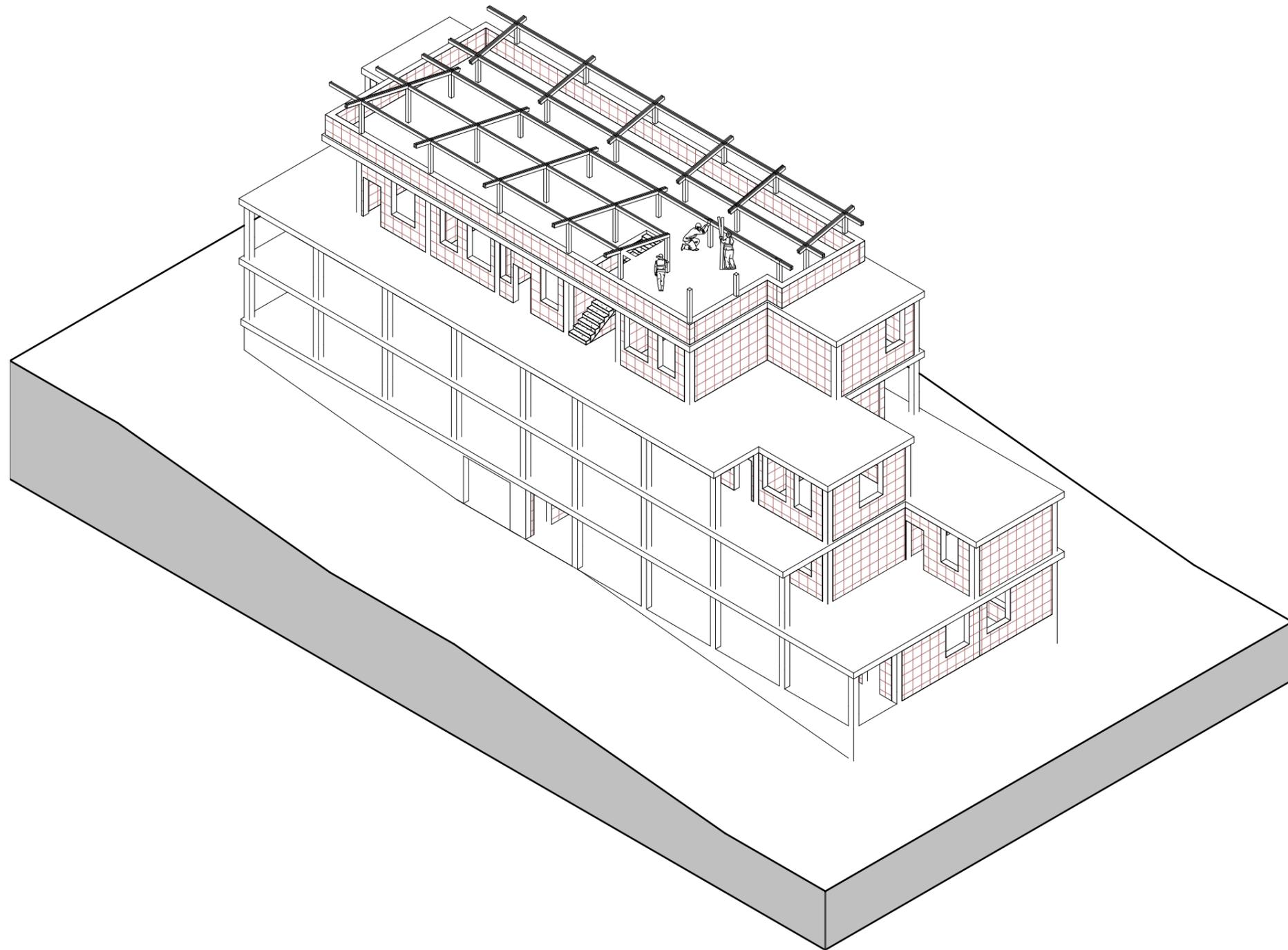
BUILDING TECHNOLOGY

CONSTRUCTION PROCESS



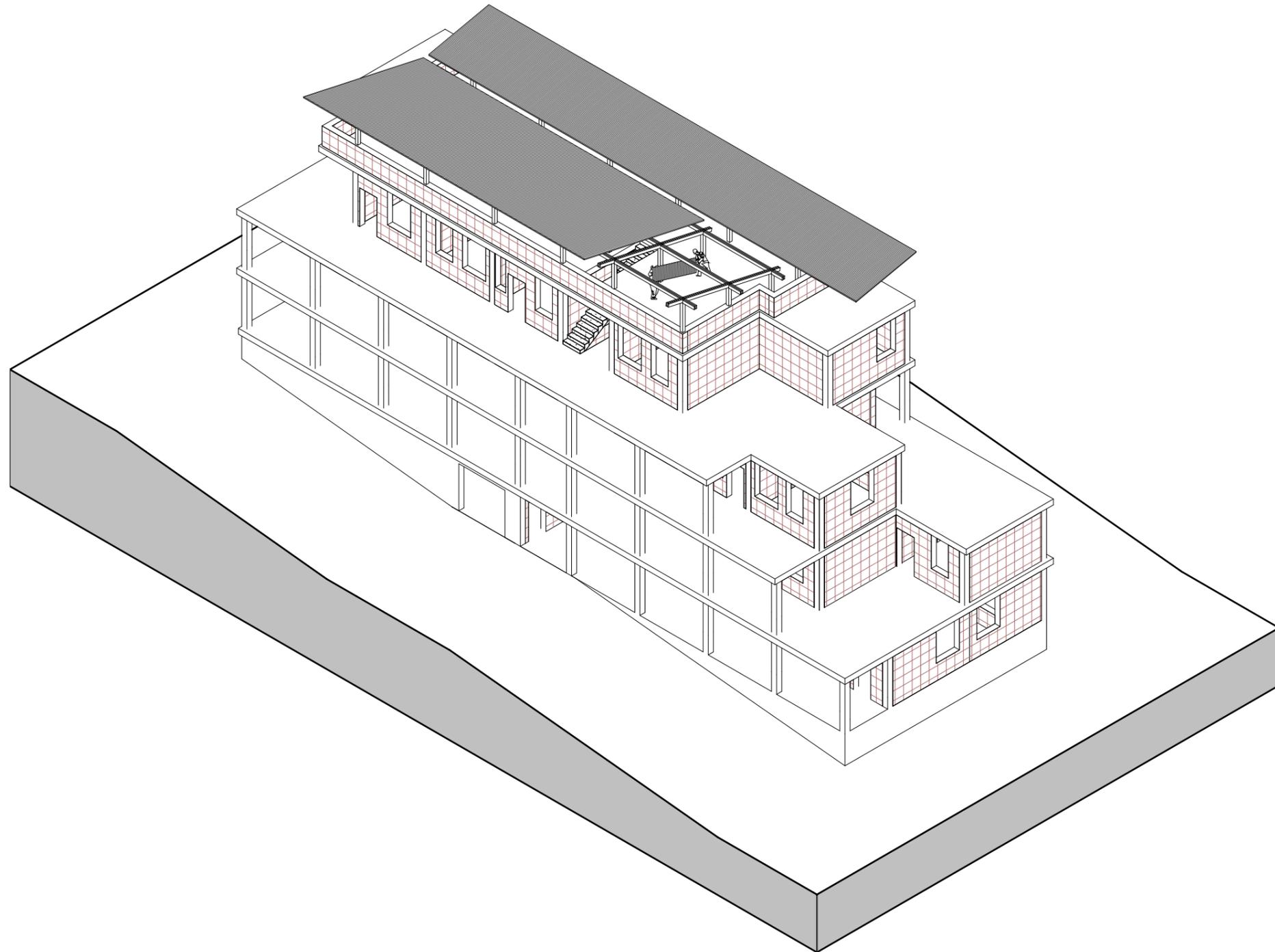
BUILDING TECHNOLOGY

CONSTRUCTION PROCESS



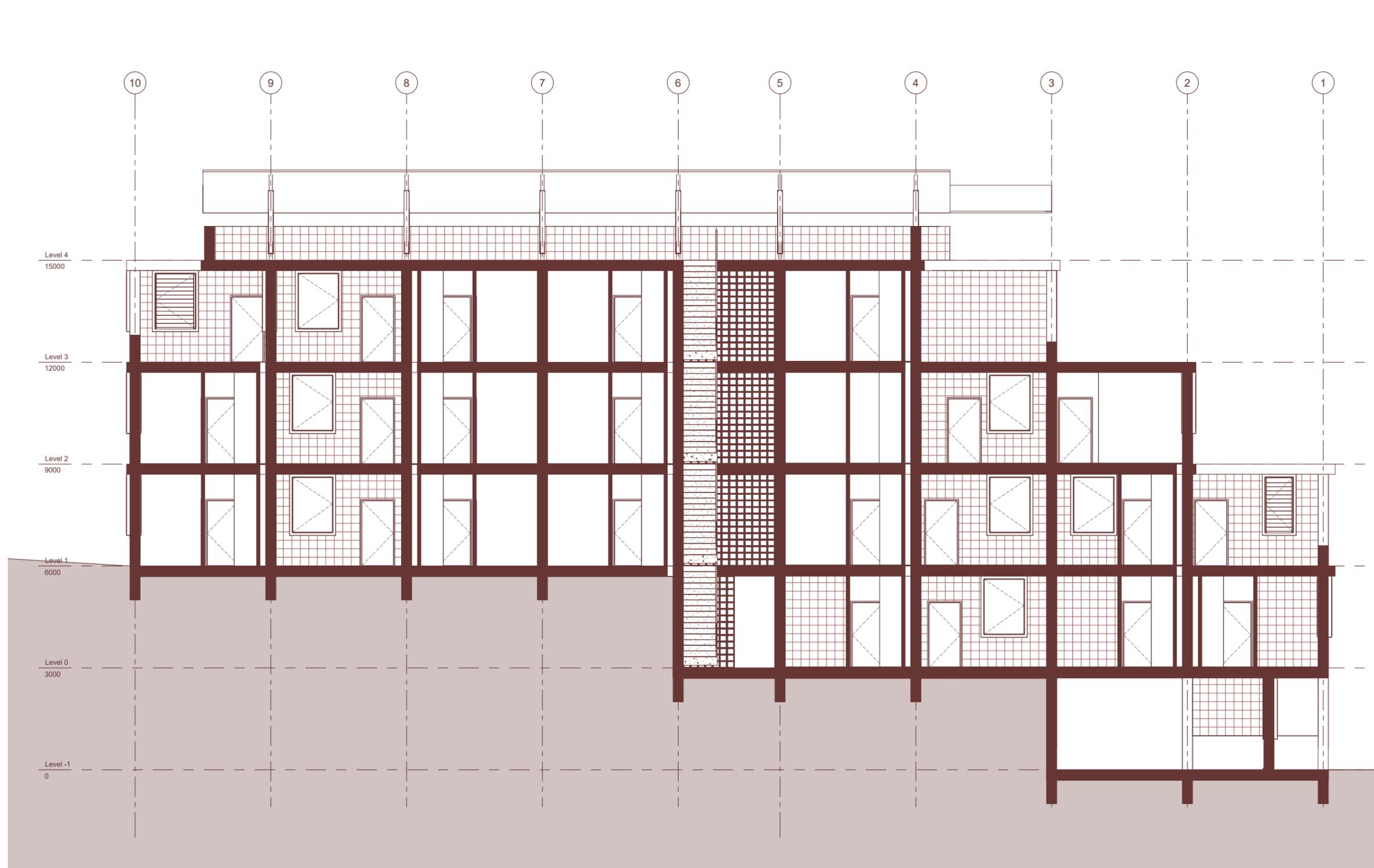
BUILDING TECHNOLOGY

CONSTRUCTION PROCESS



BUILDING TECHNOLOGY

HIS SLAB SECTION

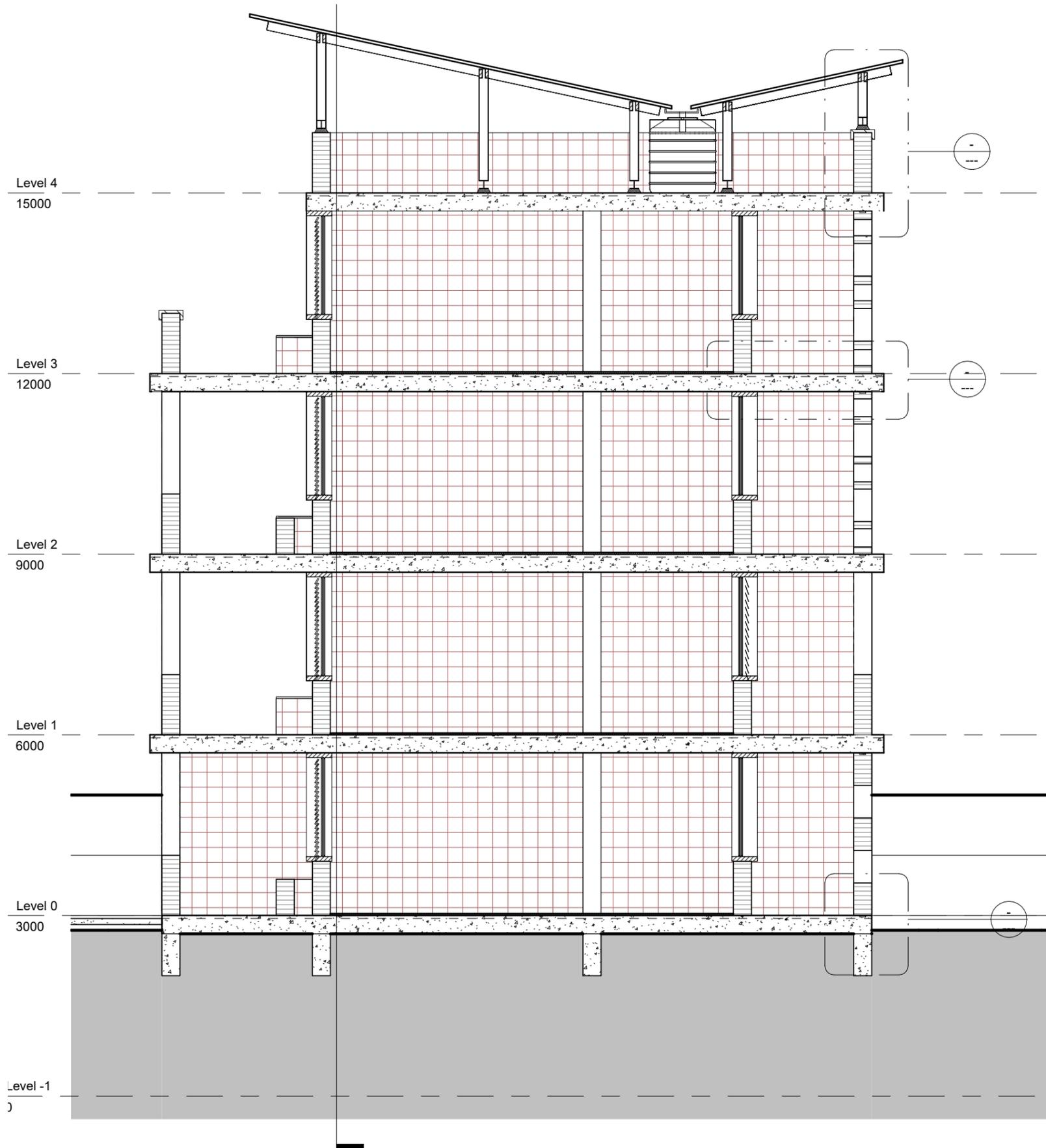


BUILDING TECHNOLOGY

HIS SLAB SECTION

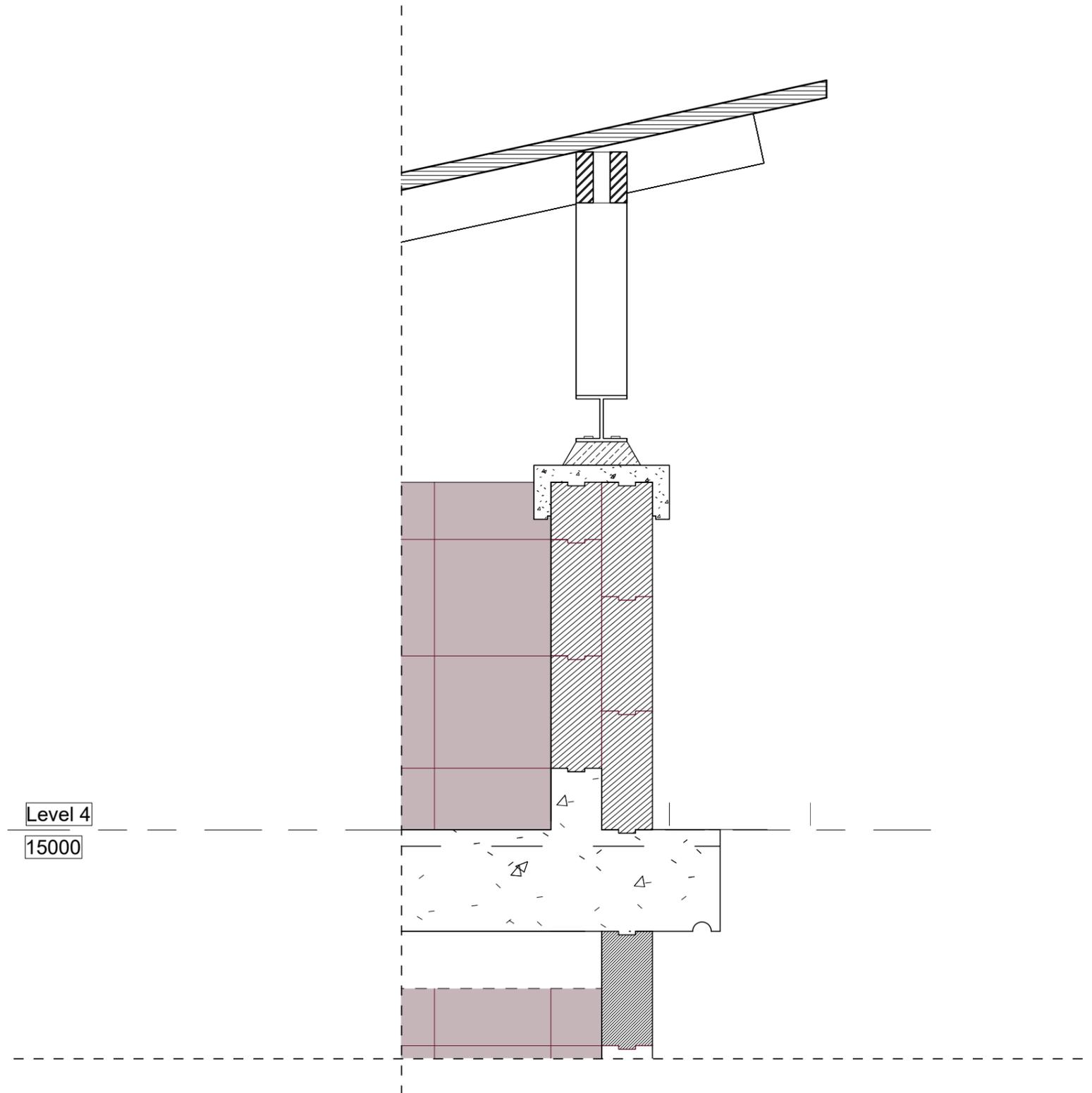


HIS SLAB SECTION 1:20



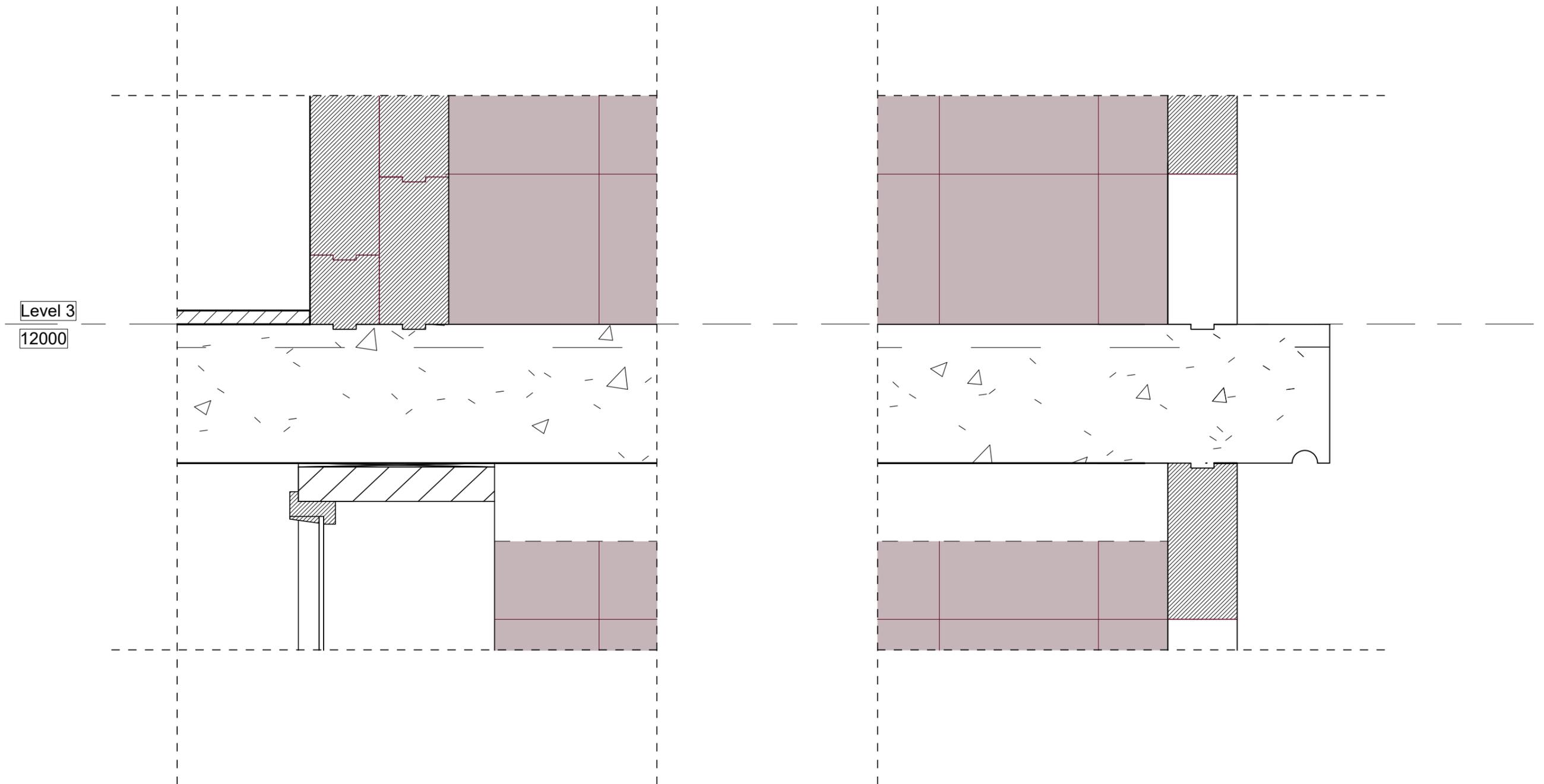
BUILDING TECHNOLOGY

ROOF SECTION 1:5



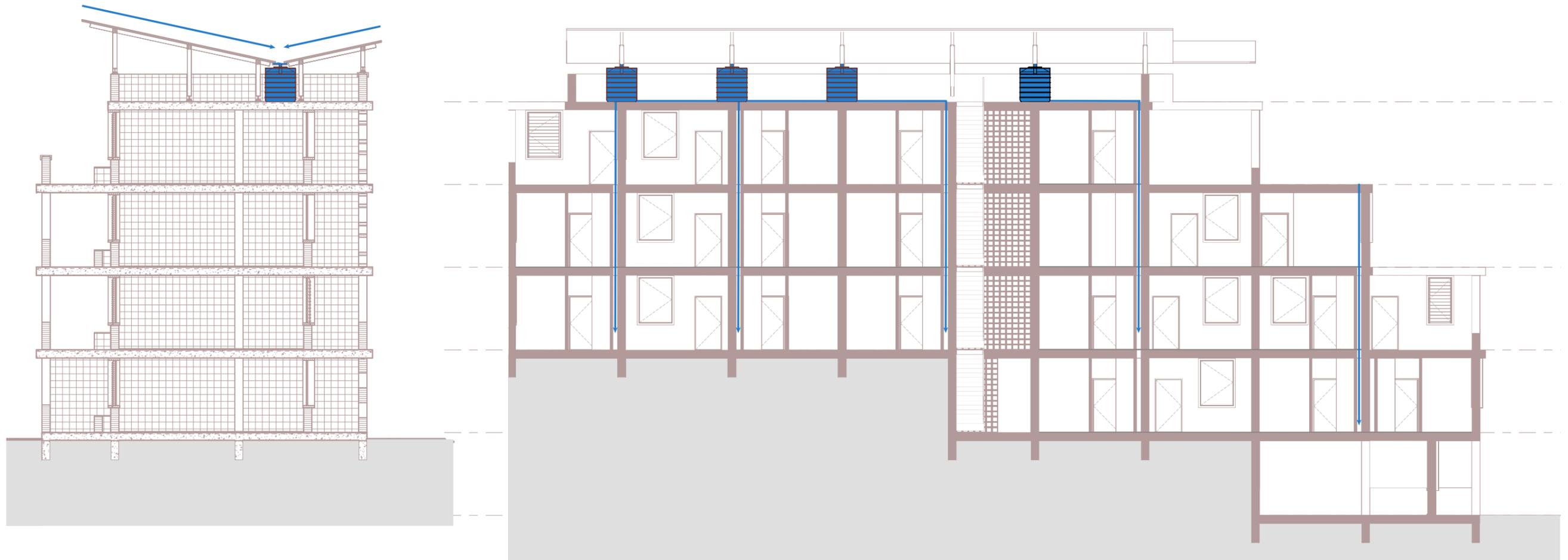
BUILDING TECHNOLOGY

FLOOR SECTION 1:5



CLIMATE DESIGN

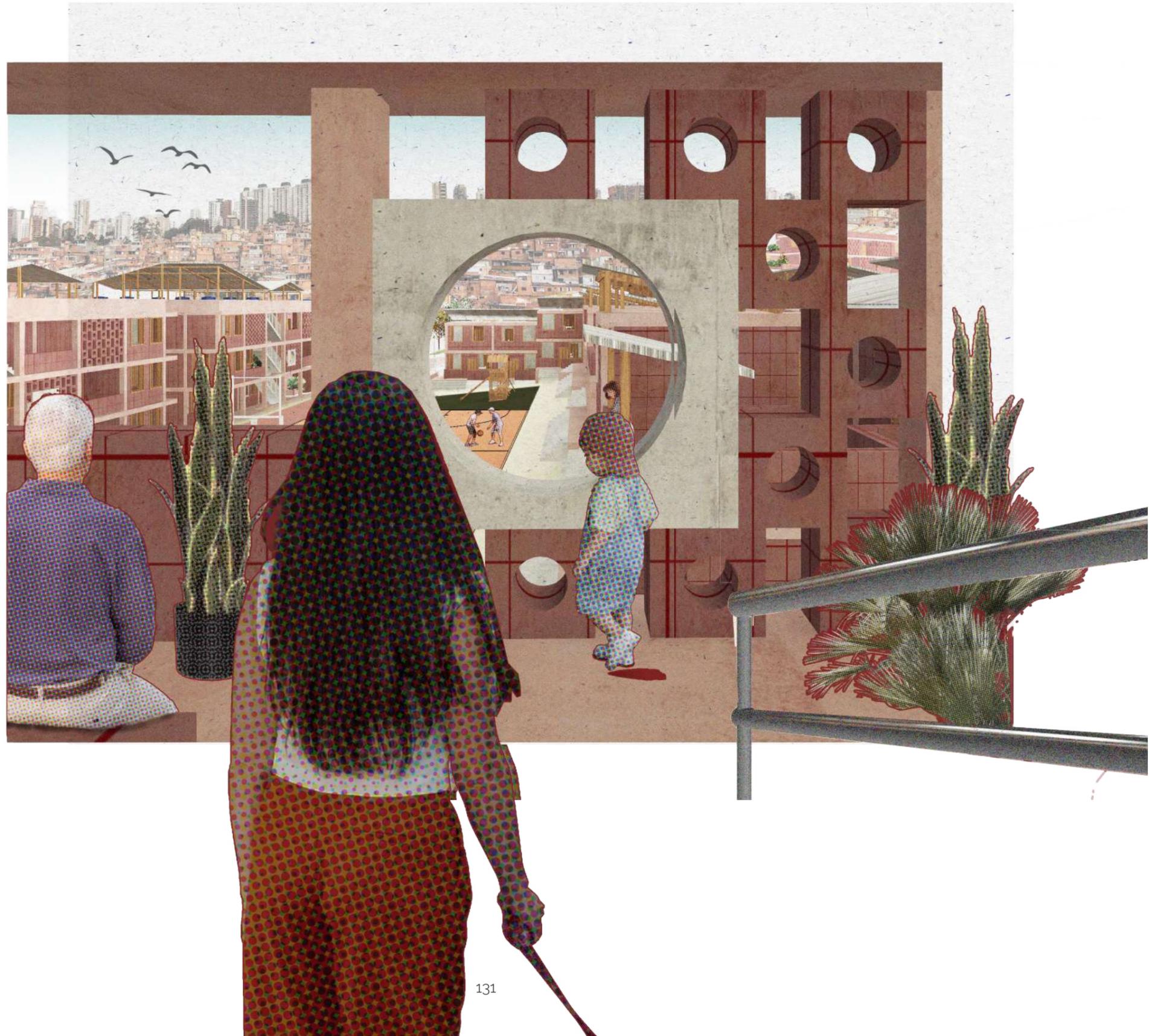
WATER MANAGEMENT



CLIMATE DESIGN

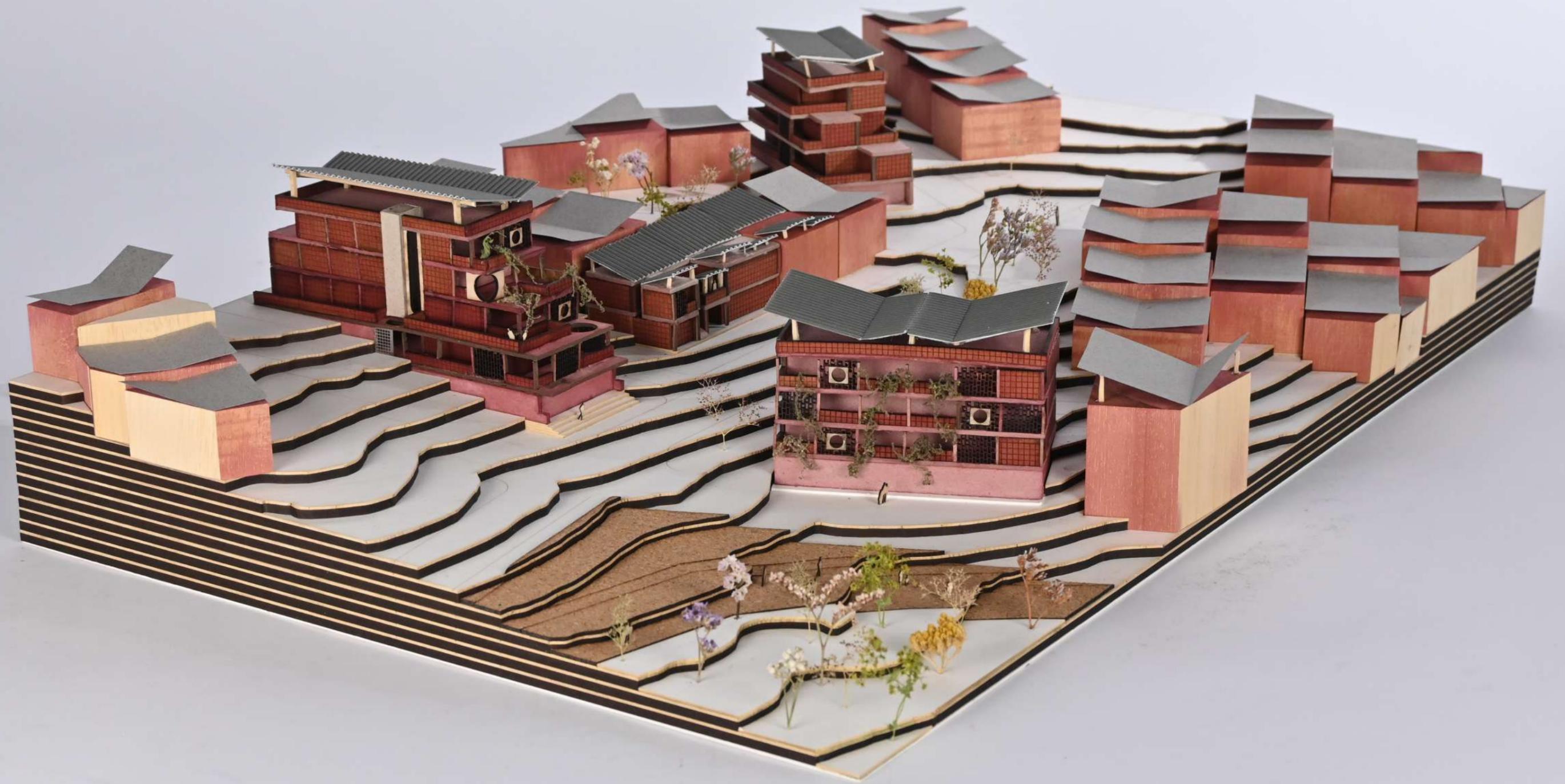
CROSS VENTILATION













CONCLUSION

BINARIES

POOR		RICH
PUBLIC	COLLECTIVE	PRIVATE
BOTTOM-UP		TOP-DOWN
FIXED		ADAPTABLE
LOW-RISE		HIGH-RISE
INTERIOR		EXTERIOR
TRADITIONAL		MODERN
EFFICIENCY		RESILIENCE
NATURE		CULTURE
NEIGHBORHOOD	BLOCK	UNIT

Co-existence of Difference
Diversity in built form on all scales
Common ground public spaces
Community engagement
Economic diversity
Biodiversity

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