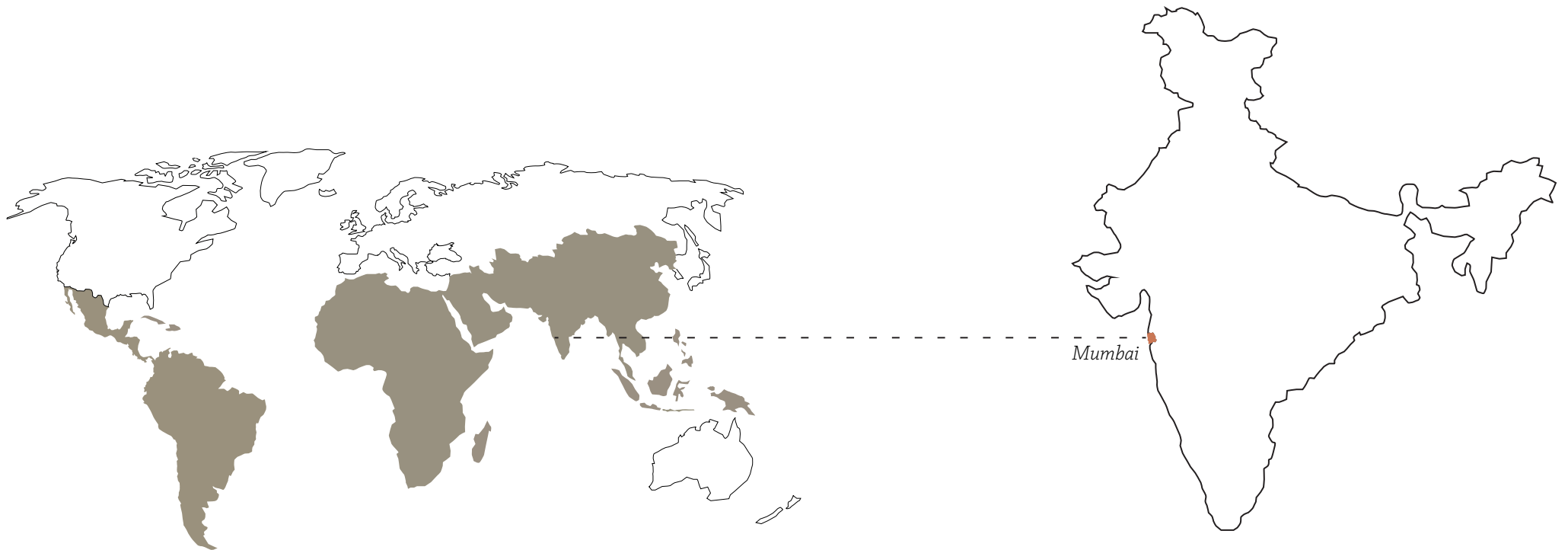


Activating Sri Prastha

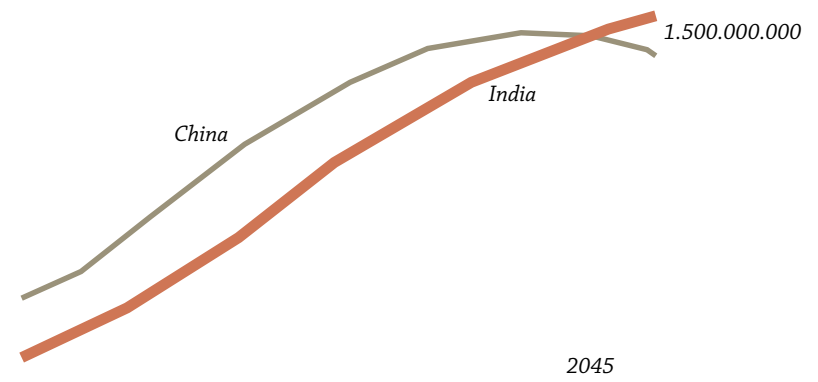
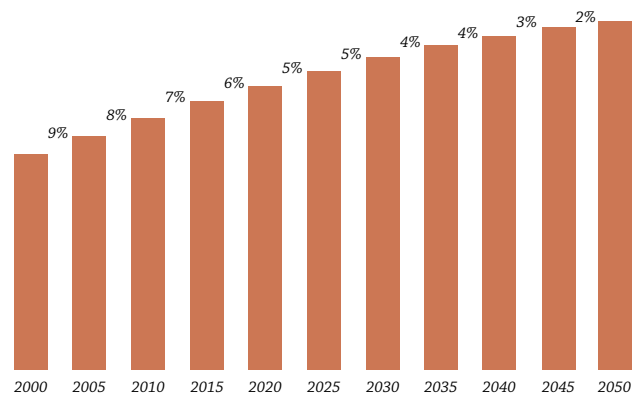
Rehabilitation | Mumbai's vacant housing stock

Introduction

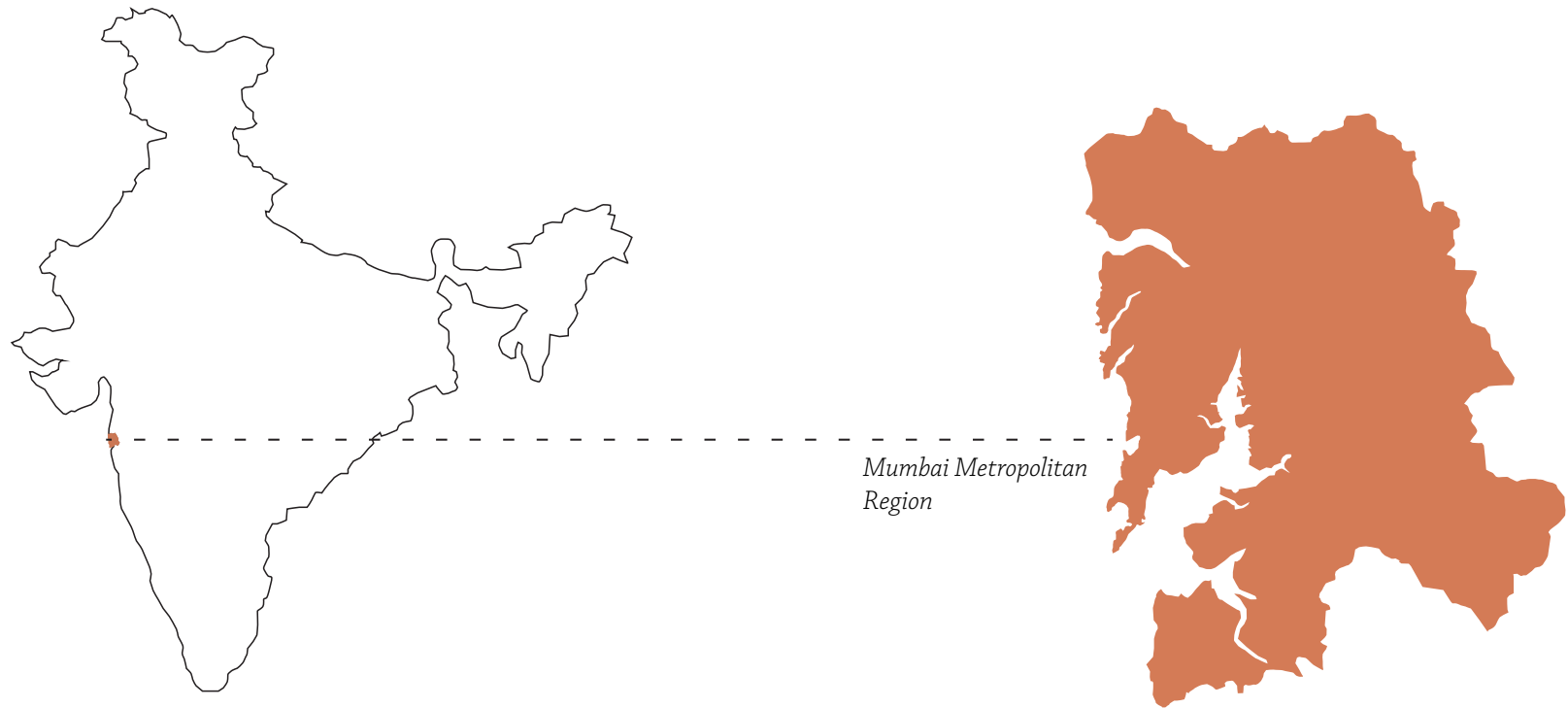
The Global South | India



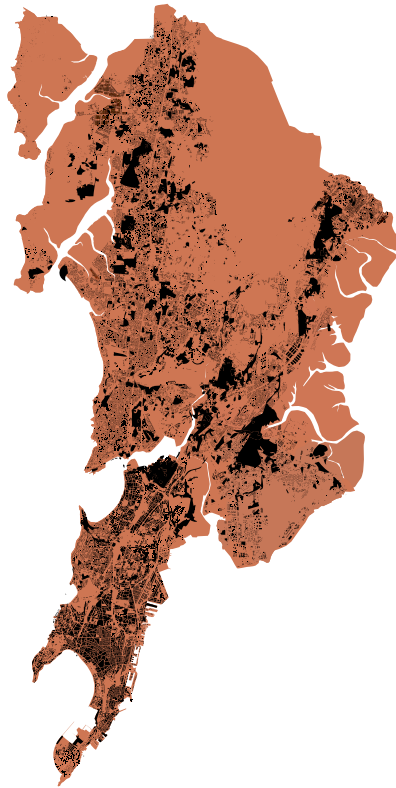
India



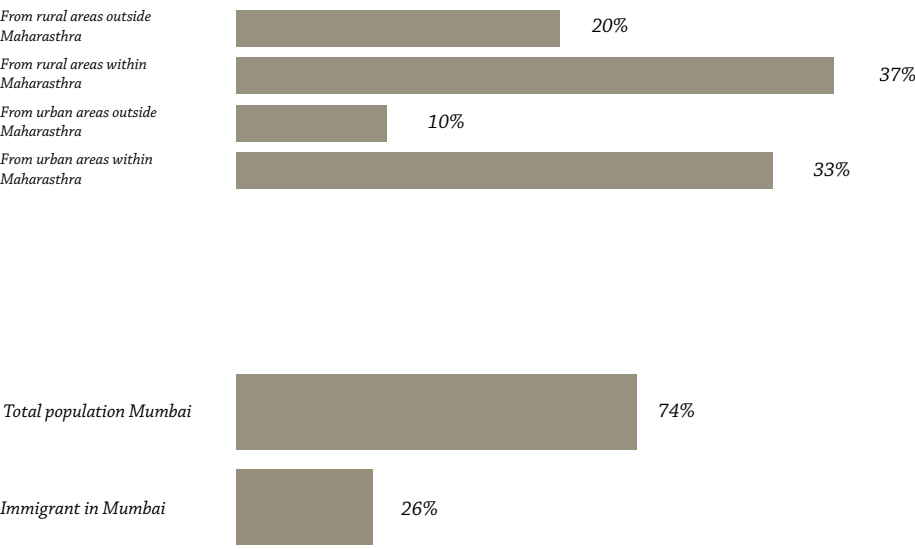
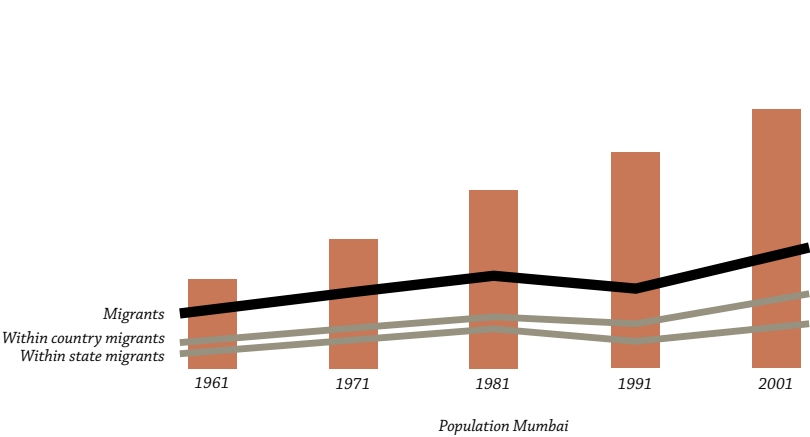
Mumbai Metropolitan Region



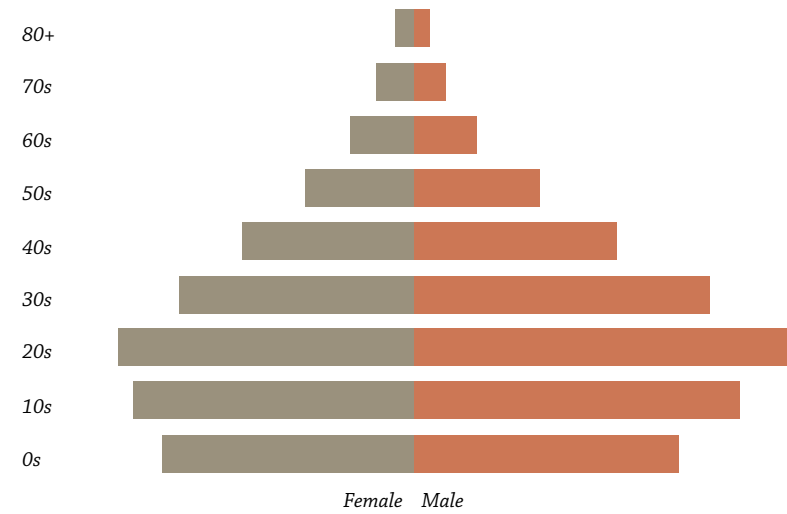
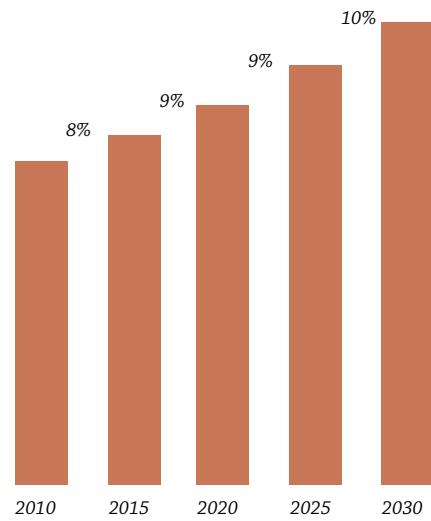
Mumbai Metropolitan Region



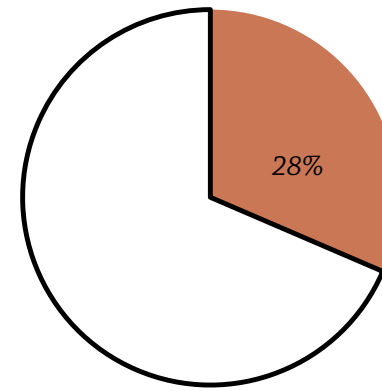
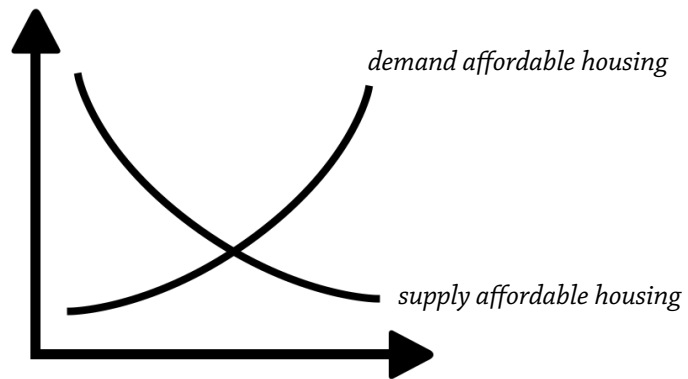
Mumbai Metropolitan Region | Migration



Mumbai Metropolitan Region | Population growth

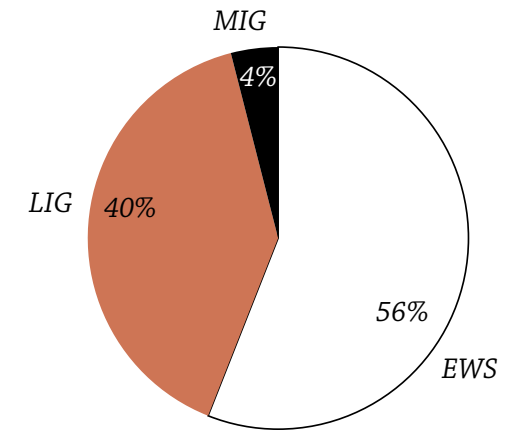
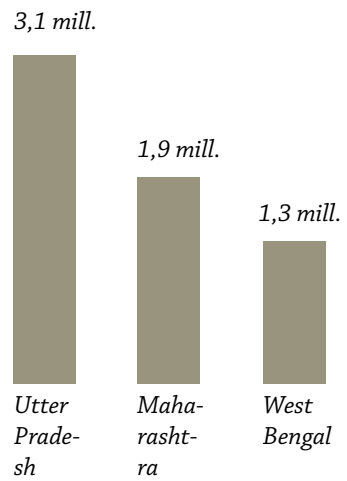


Mumbai Metropolitan Region | Imbalance



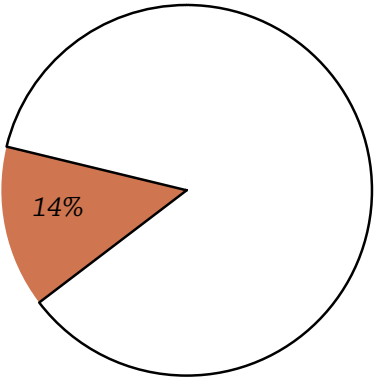
2011

Mumbai Metropolitan Region | Housing shortage



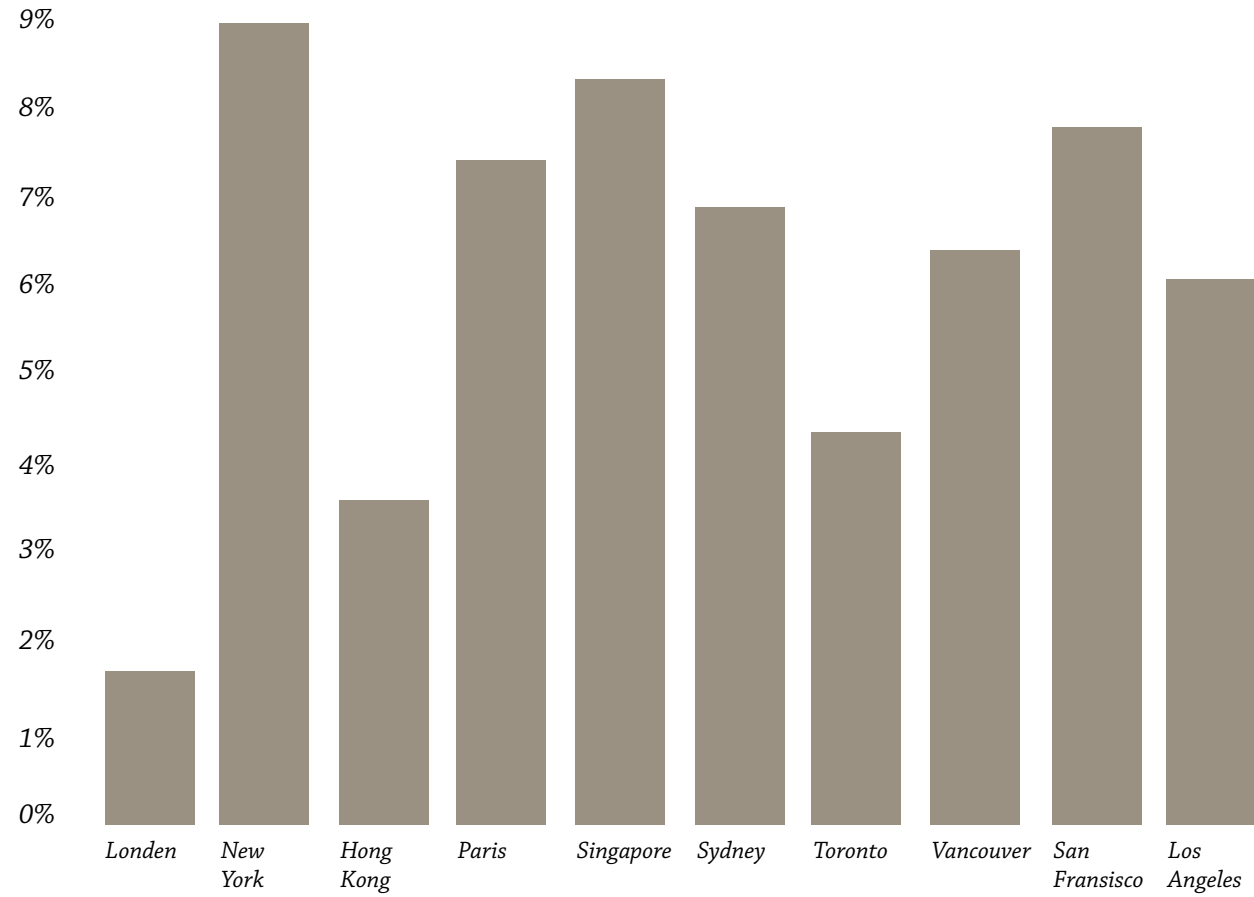
MIG - Middle Income Group
LIG - Low Income Group
EWS - Economically Weaker Section

Mumbai Metropolitan Region | Vacant housing

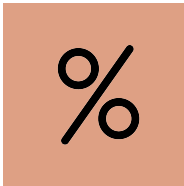
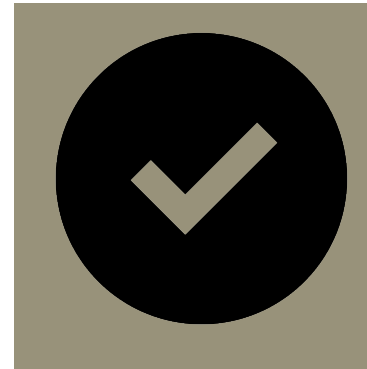


Mumbai Metropolitan Region

World | Vacant housing



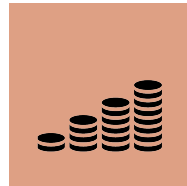
Reasons vacancy



low rental yields



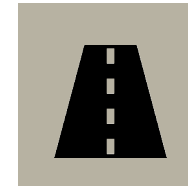
amount of paperwork



immigrants



water and electricity



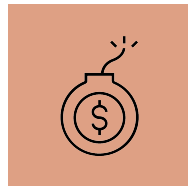
infrastructure



maintenance



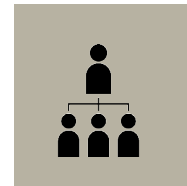
risk of renting out



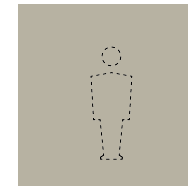
black money



unrealistic pricing



connectivity

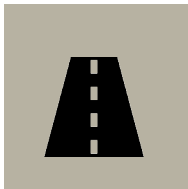


social networks



job possibilities

Government housing



infrastructure



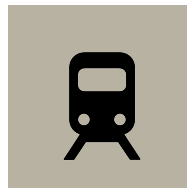
water and electricity



job possibilities



livelihood



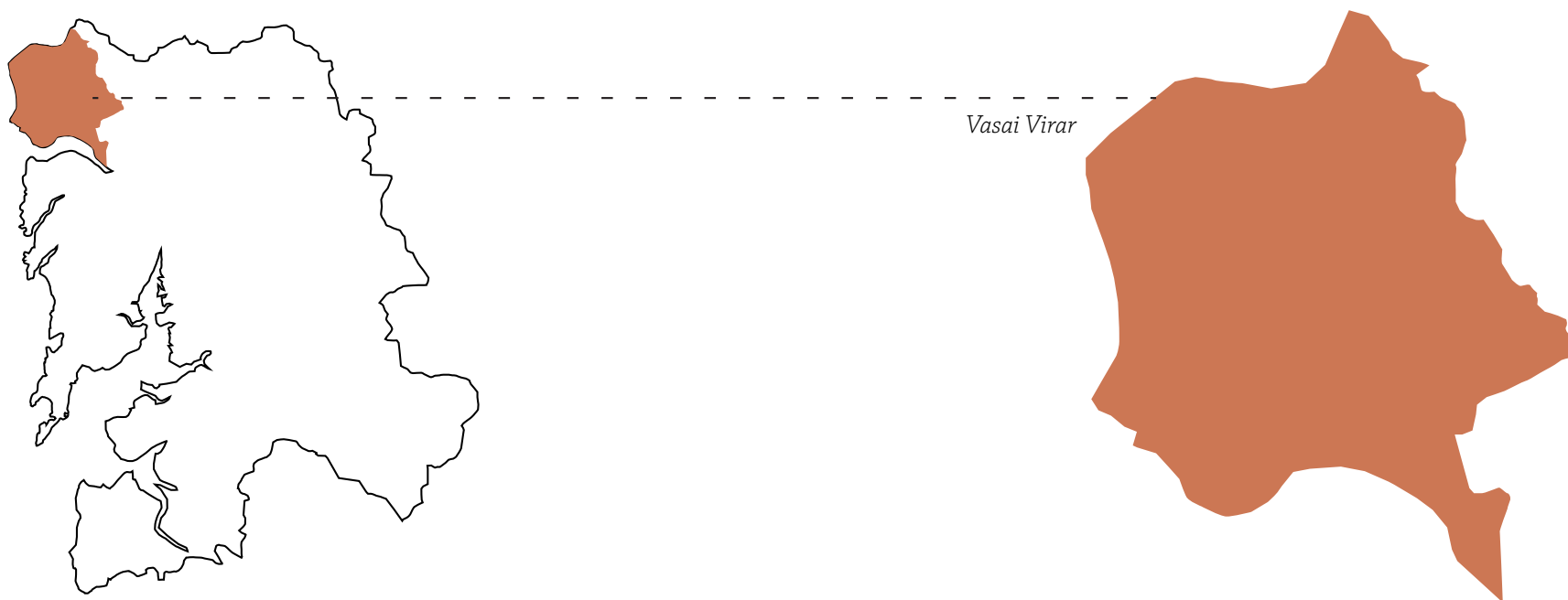
public transport



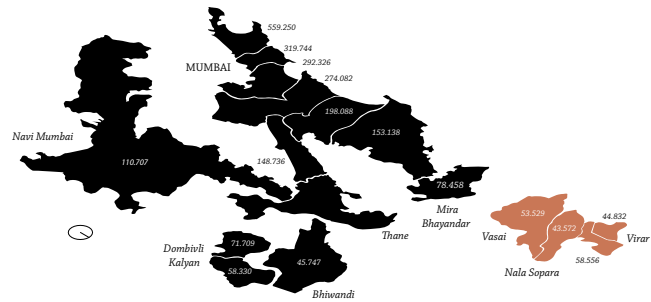
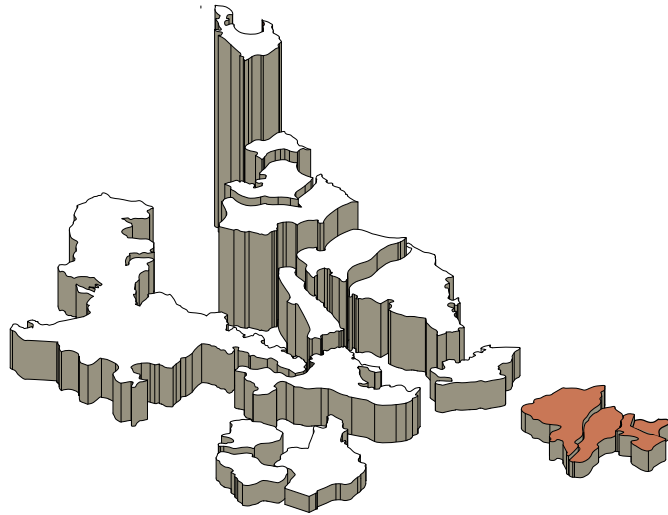
Research

How can the vacant existing housing stock contribute to solve the issue of the shortage of affordable housing in Mumbai, India?

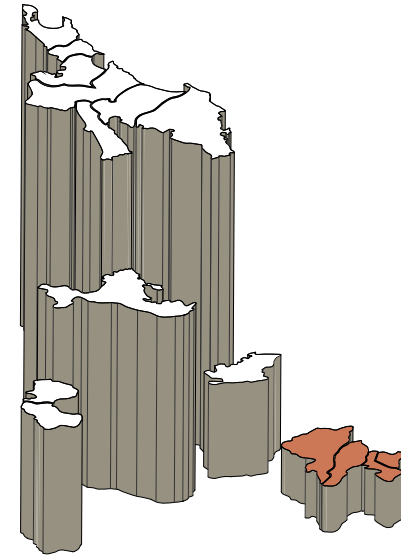
Vasai Virar



Vasai Virar | Affordability

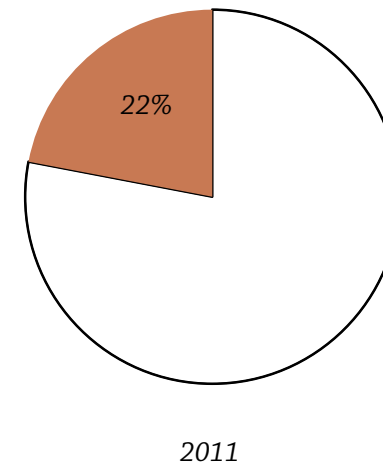
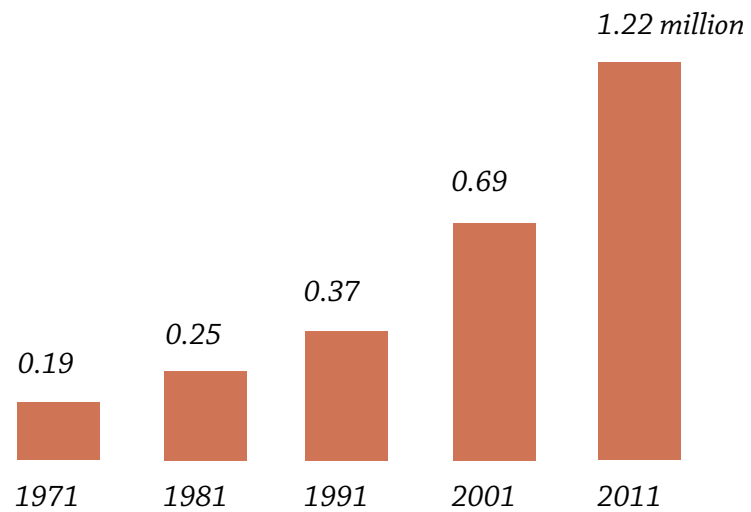


property prices

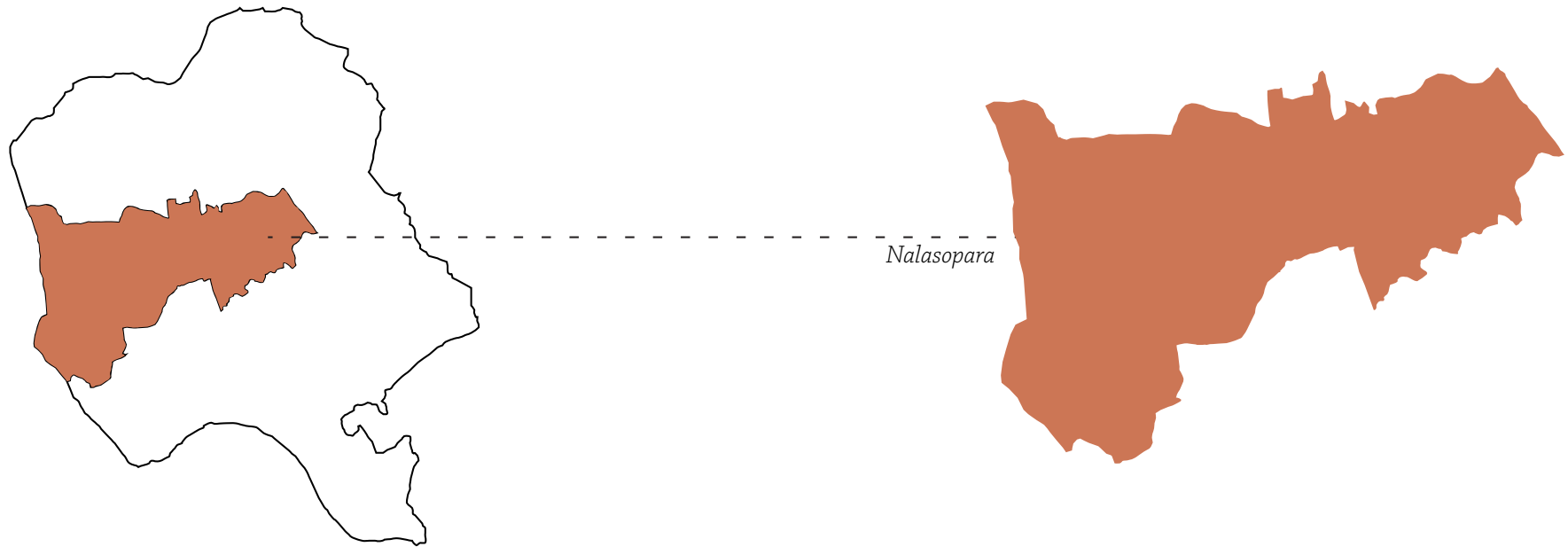


density

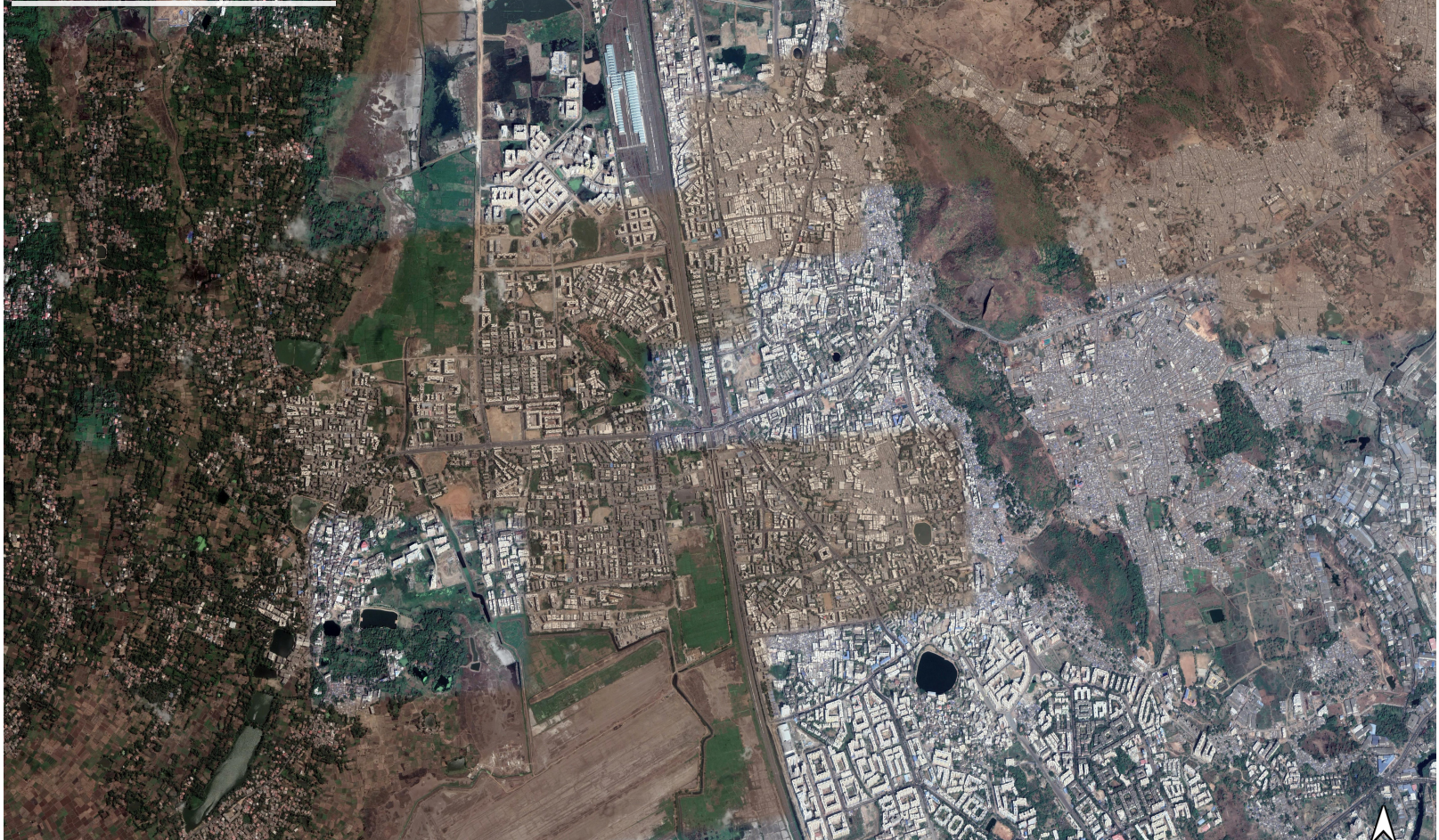
Vasai Virar | Population growth



Nalasopara



Nalasopara



Nalasopara | Growth



2002



2017

Nalasopara | Housing typologies



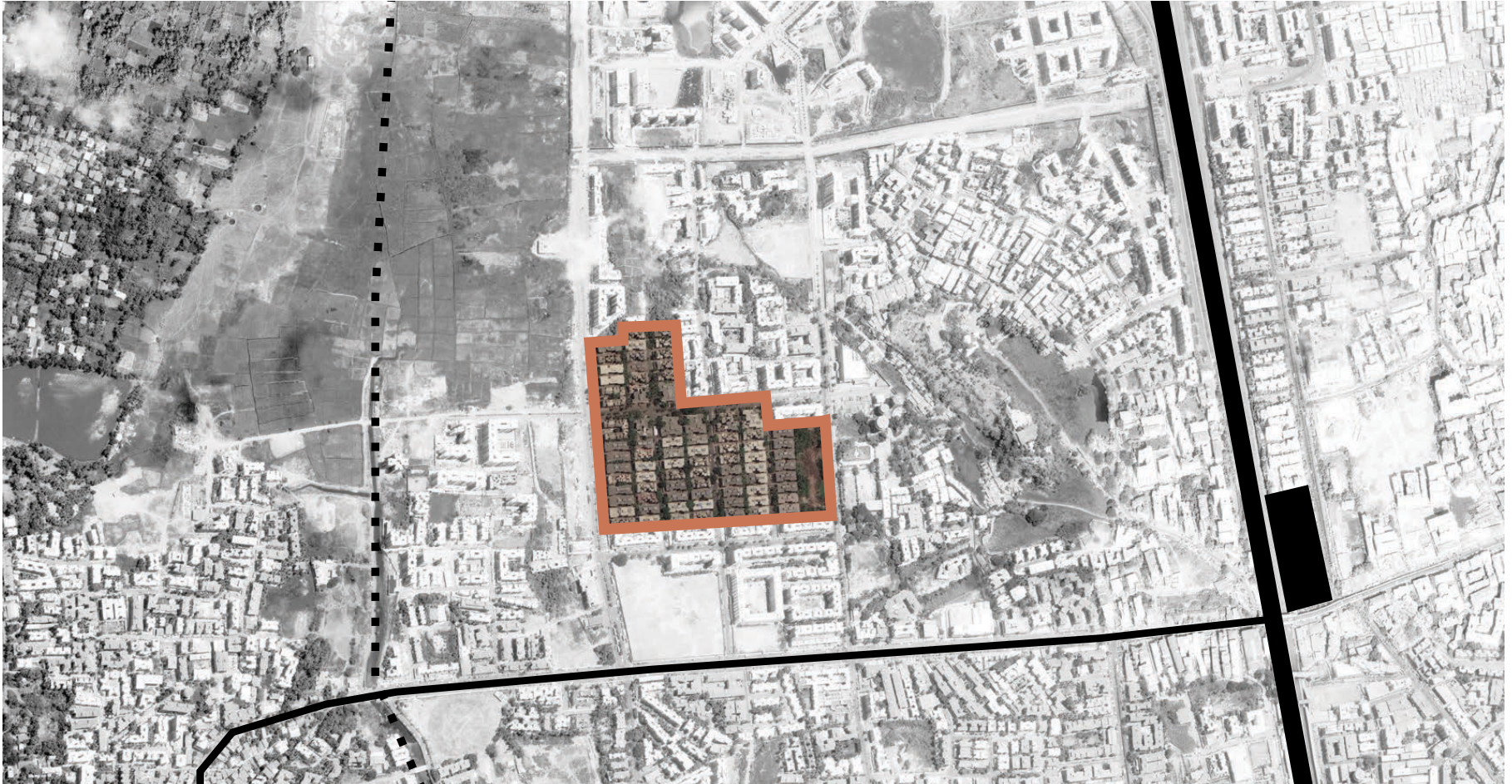
Nalasopara | Housing typologies



Nalasopara | Location



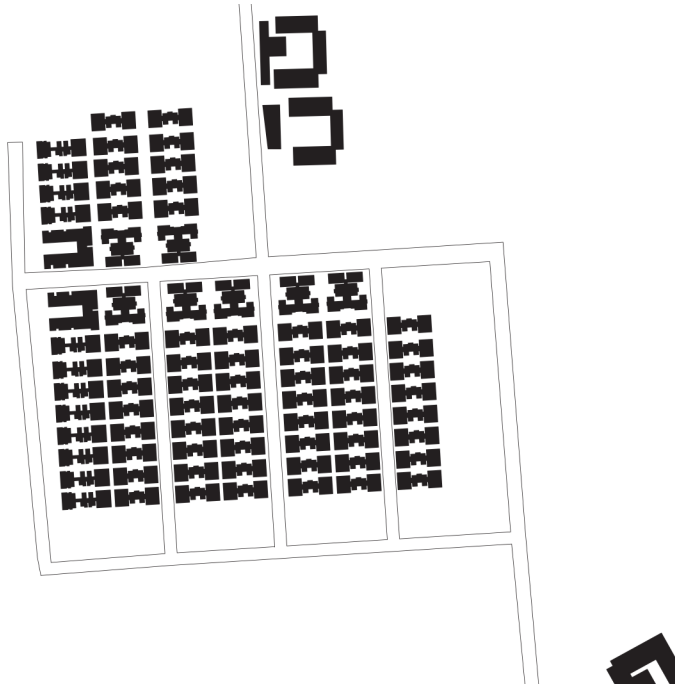
Nalasopara | Location



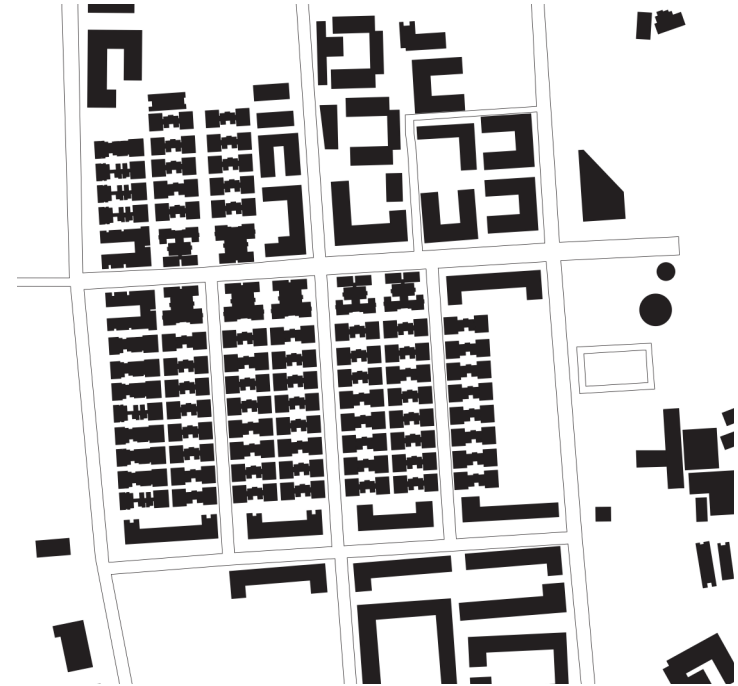
Nalasopara | Location



Sri Prastha | Growth

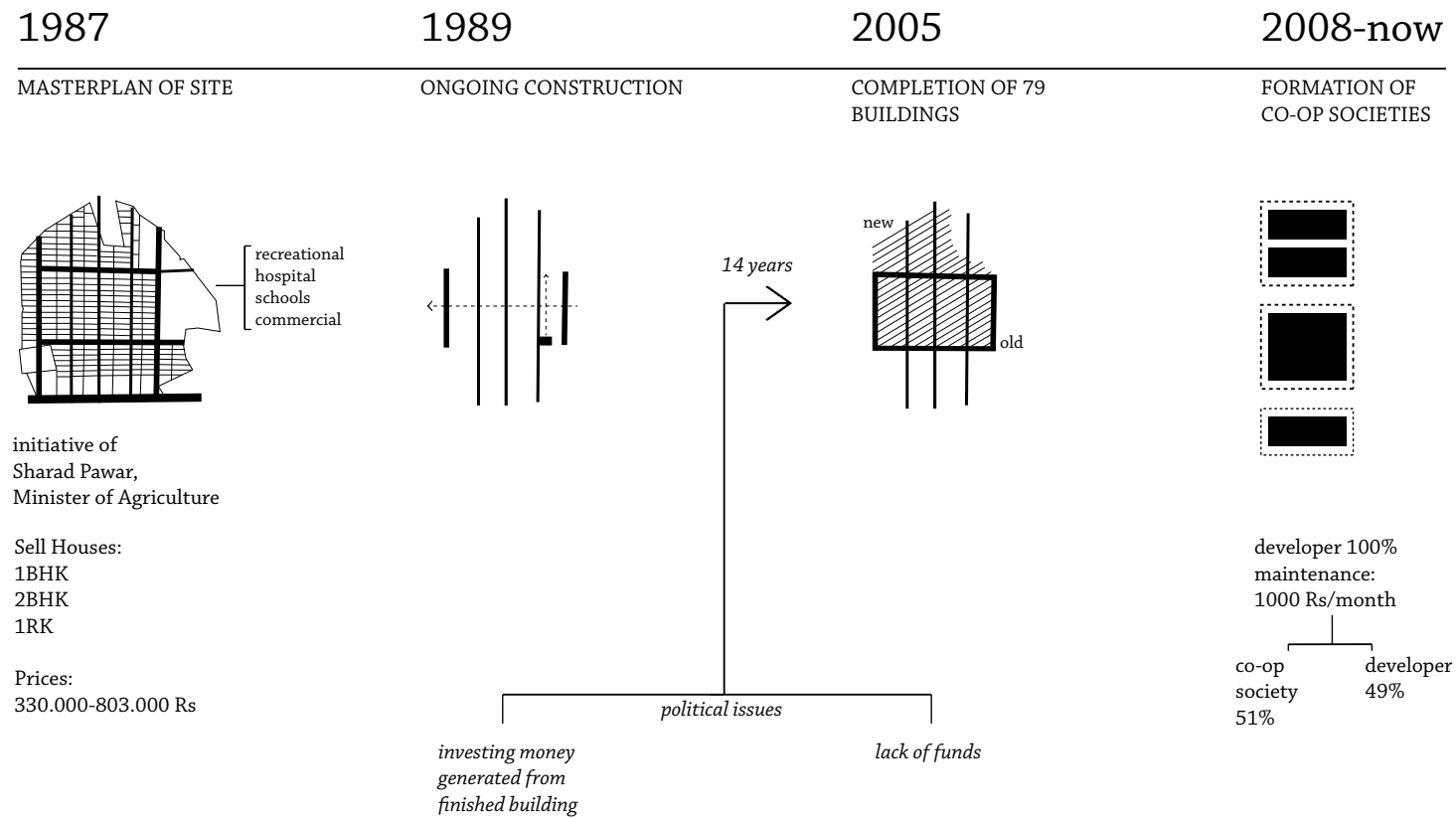


2005



2017

Sri Prastha | Timeline



Commercial | Amenities





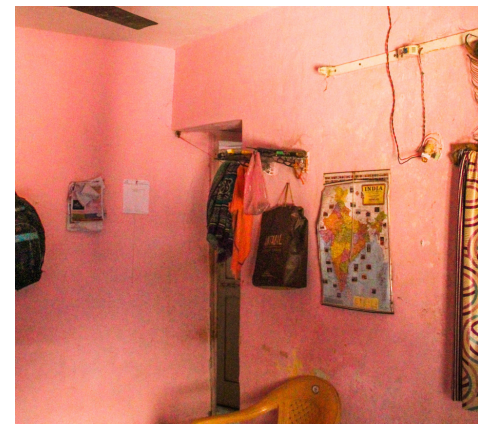








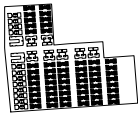




Sri Prastha | Building types

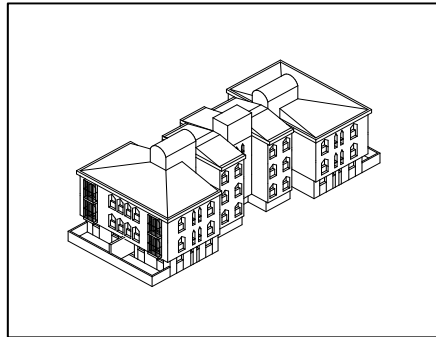
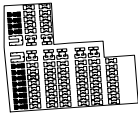
type 1

number of buildings: 58
number of dwellings: 18
dwelling types: 2
levels: 3
residents per building: 90



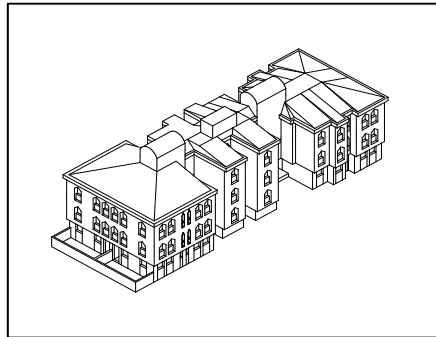
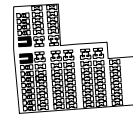
type 2

number of buildings: 12
number of dwellings: 18
dwelling types: 3
levels: 3
residents per building: 90



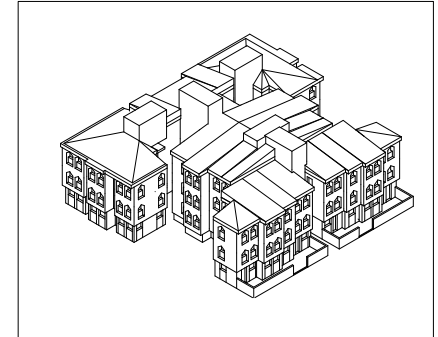
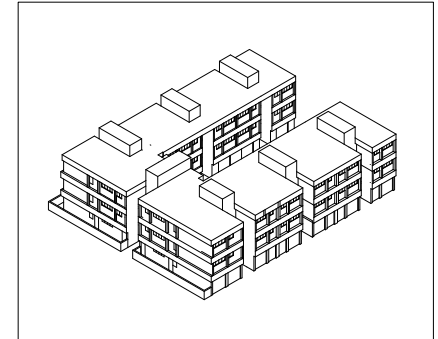
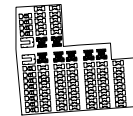
type 3

number of buildings: 2
number of dwellings: 32
dwelling types: 3
levels: 3
residents per building: 160

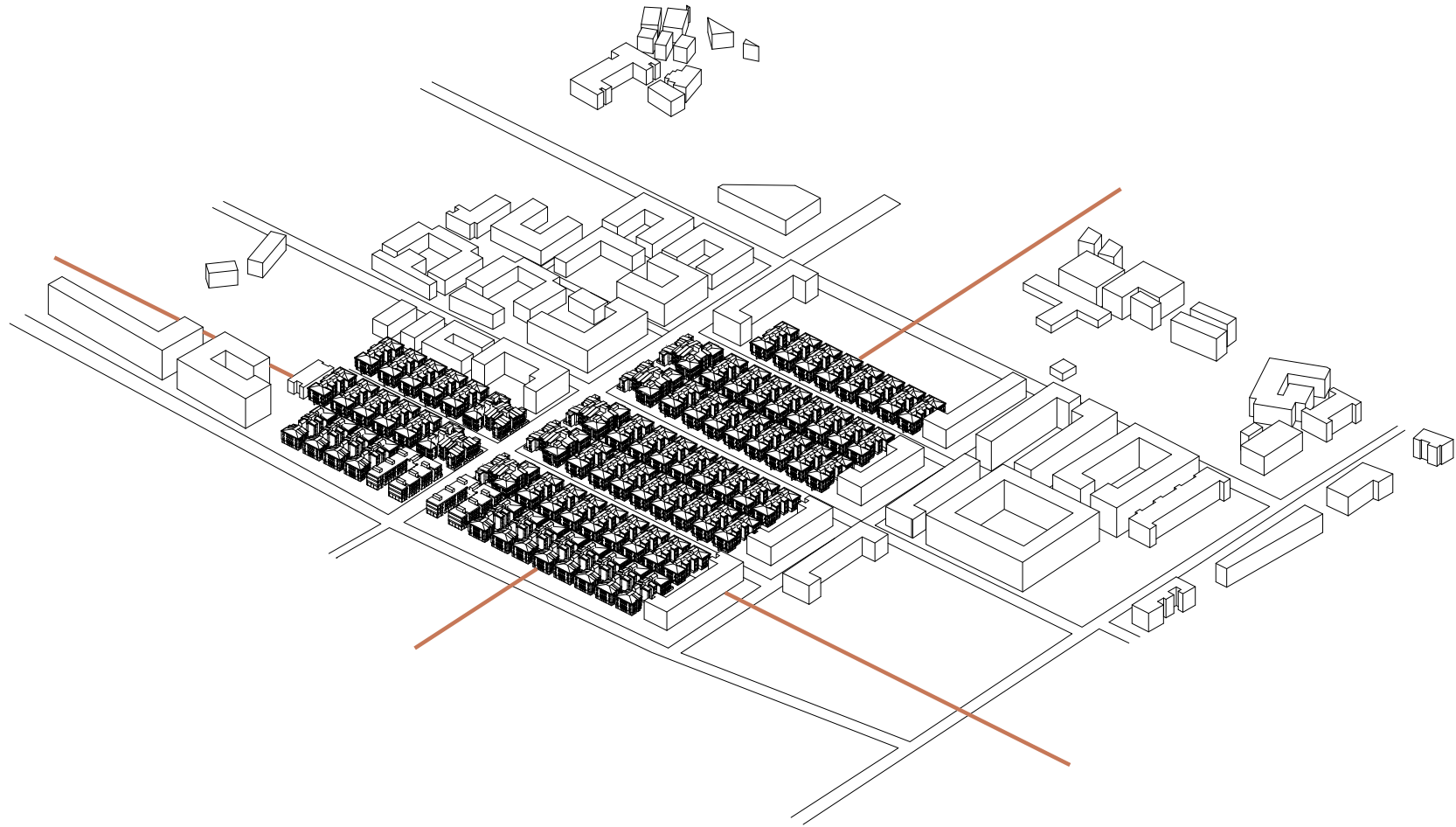


type 4

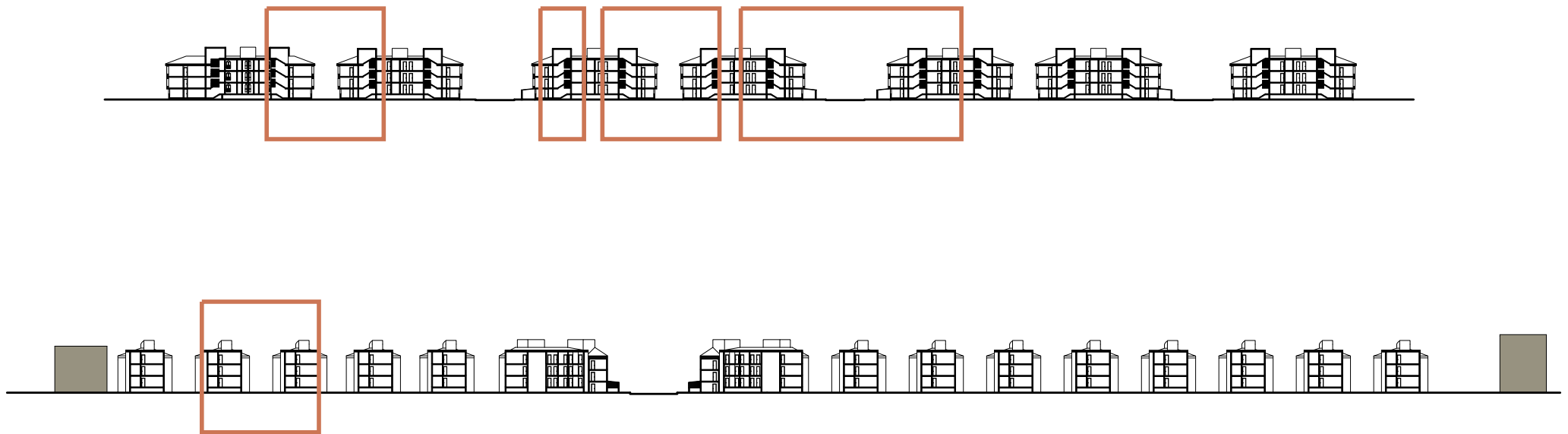
number of buildings: 7
number of dwellings: 30
dwelling types: 5
levels: 3
residents per building: 150



Sri Prastha



Sri Prastha | Sections



entrance building



staircase | entrance building

inbetween two buildings



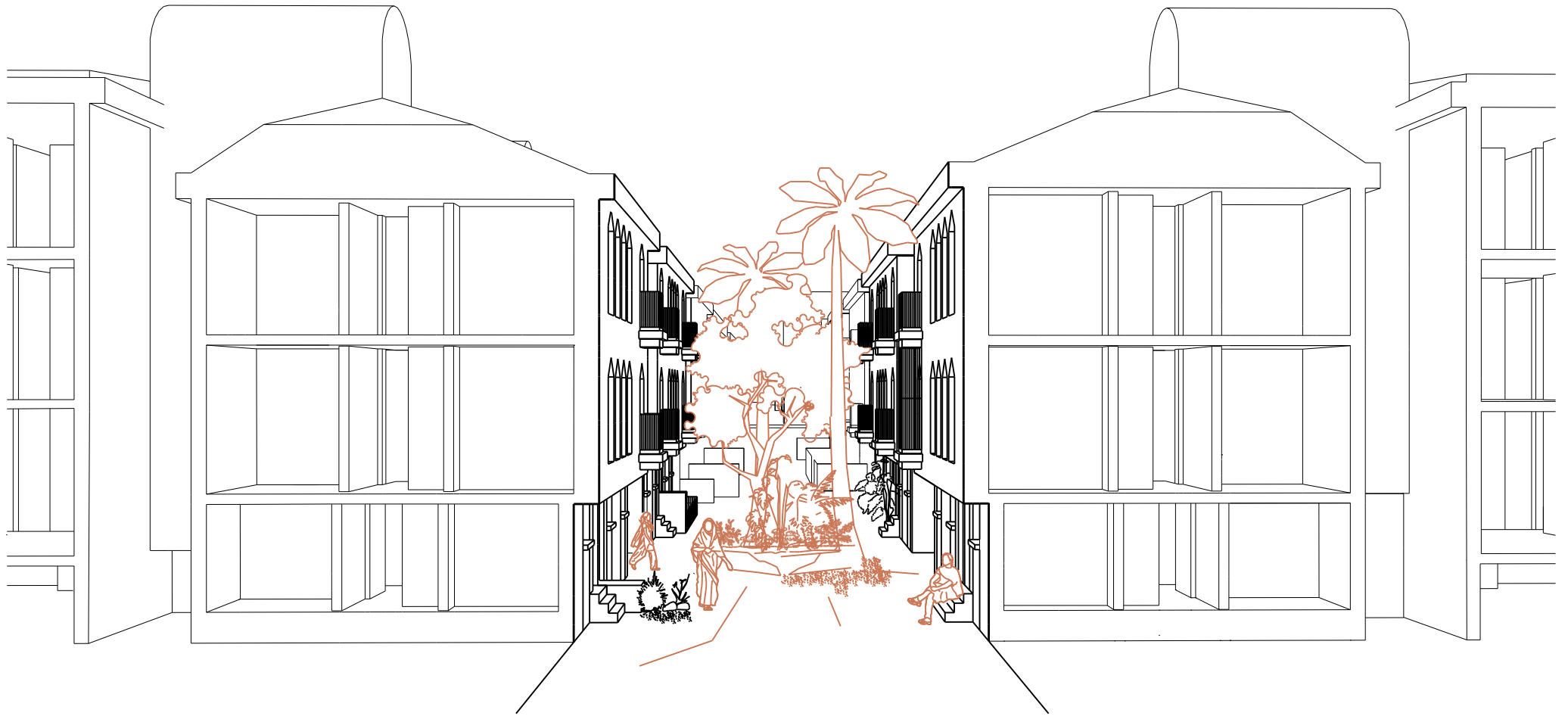
courtyard | parking | garbage

small street



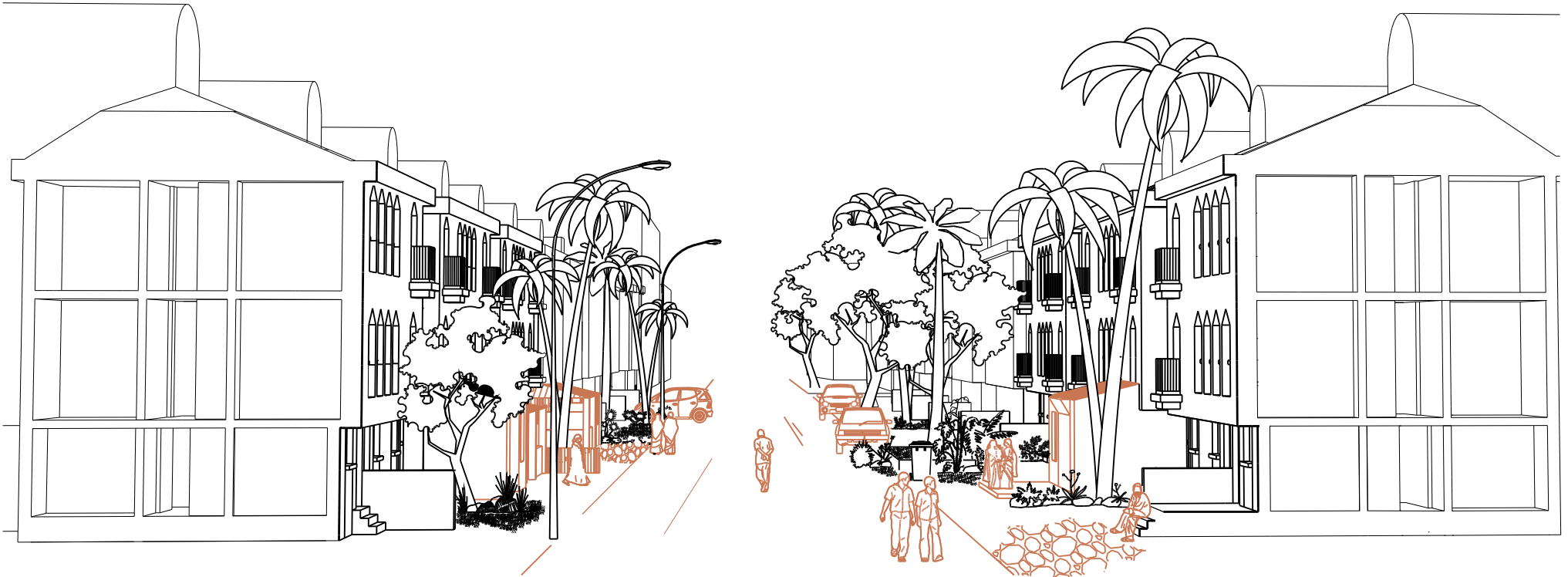
entrances to dwellings | green | house extensions

inbetween four buildings

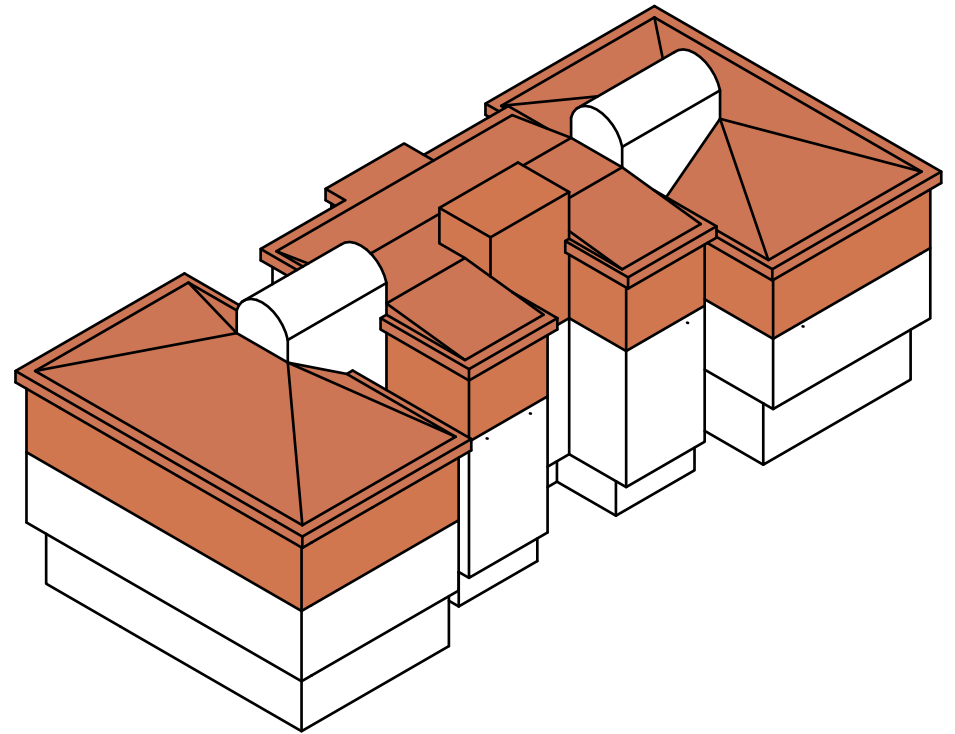
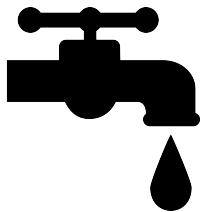
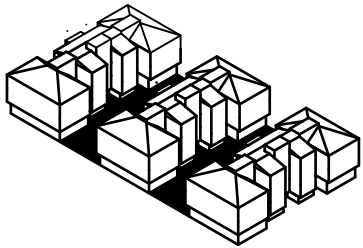
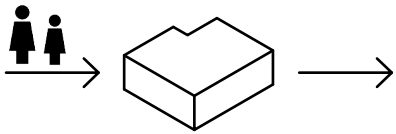


green | connection

big street



entrances to dwellings | parking | house extensions



Design question

***How can Sri Prastha be redeveloped as a project with high density,
without losing the qualities of the existing plan?***

Design question | Goals

Goals: How can Sri Prastha be redeveloped as a project with high density, without losing the qualities of the existing plan?

Activate the area

A place to start and a place to stay

Social

Economic

Inclusiveness and social cohesion

- creating spaces for minorities
- include everybody in future plans

Social centers

- shared open spaces
- community centers
- amenities

Densify area

- taller buildings
- changing house plot or size

Low-cost technologies

- affordable technologies and materials
- sustainable materials

Income-earning opportunities

- commercial areas
- small businesses

Social mix

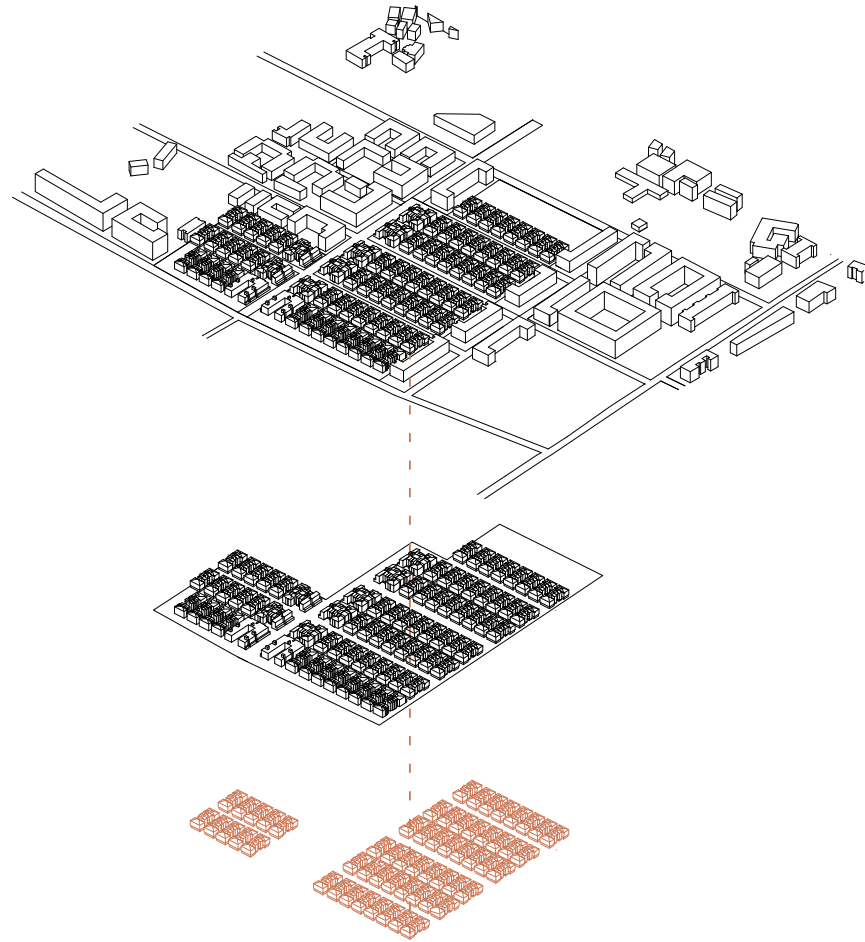
- creating spaces for EWS, LIG and MIG

Upgrade neighborhood value

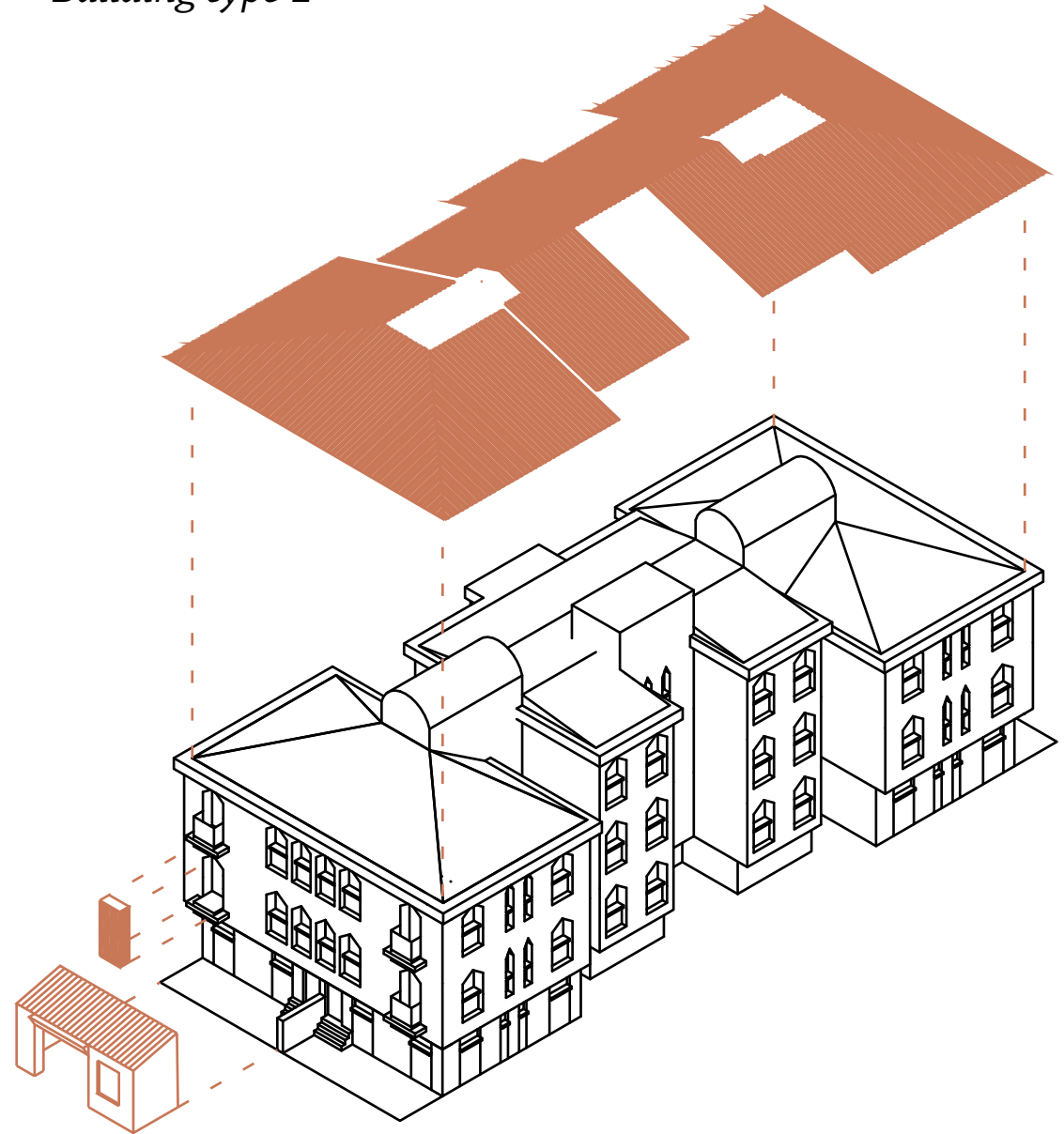
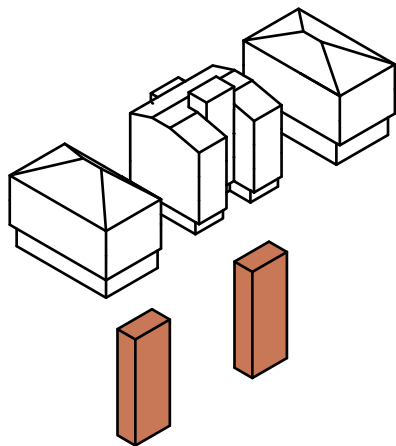
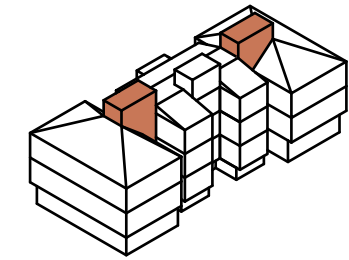
Cross financing

- creating opportunities to make profit for developers

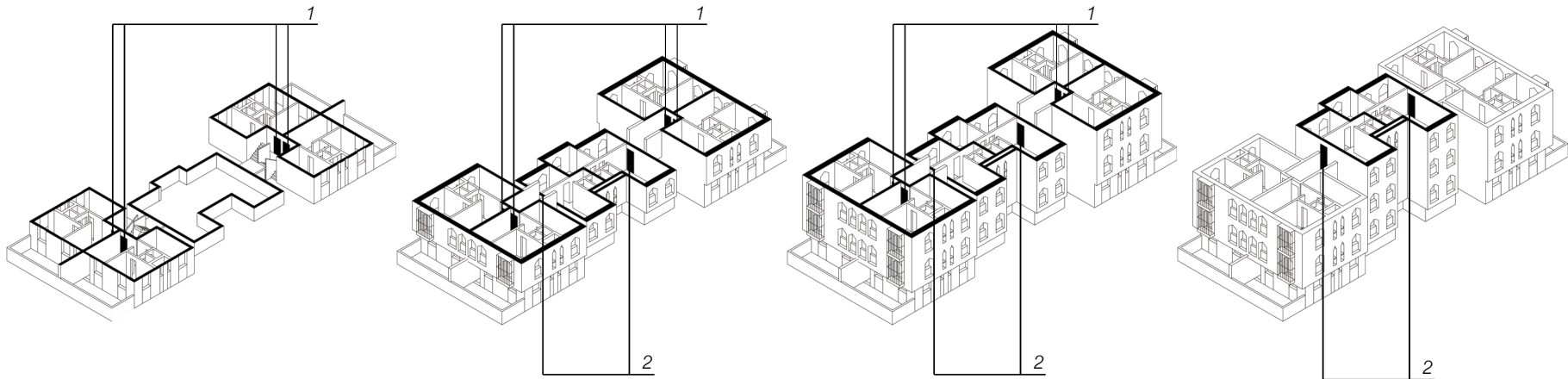
Focus | Building type 1



Building type 1



Building type 1



type 1

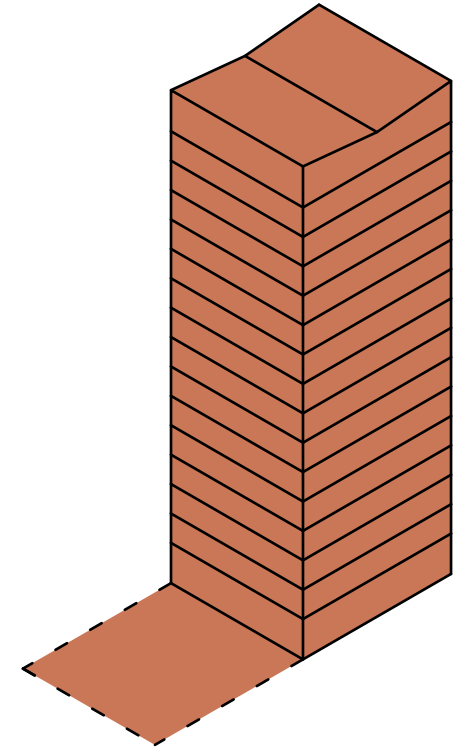
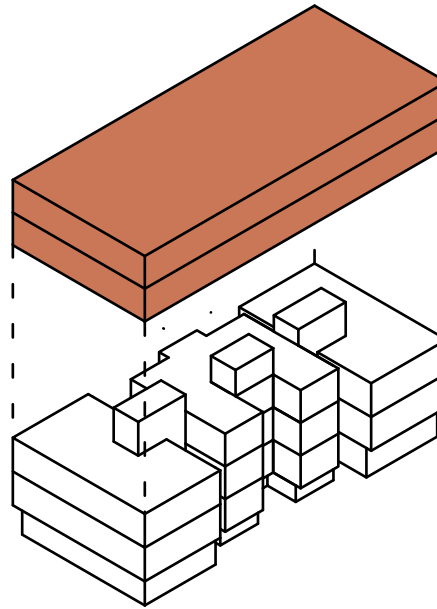
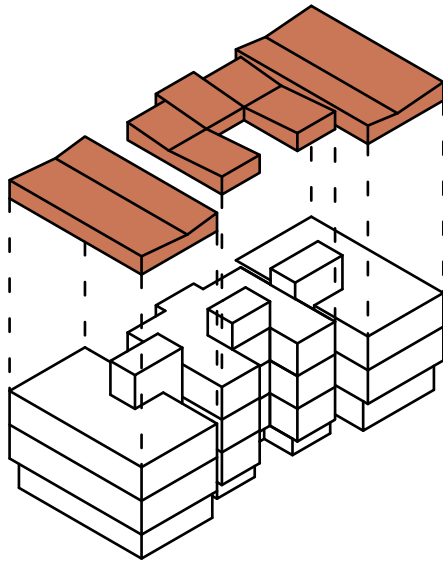
app. in building:	12
type:	1BHK
size:	40 m2 (516 sqft)
price:	567.600 Rs
income group:	LIG
total app. in area:	696

type 2

app. in building:	6
type:	1BHK/1RK
size:	47 m2/36 m2 (516 sqft/365 sqft)
price:	567.600 Rs/401.500 Rs
income group:	LIG
total app. in area:	174/174

Design approach

Design approach



-



-



-



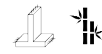
\$



LIG/MIG

2

0-12



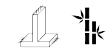
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EWS/LIG/MIG

min. 8

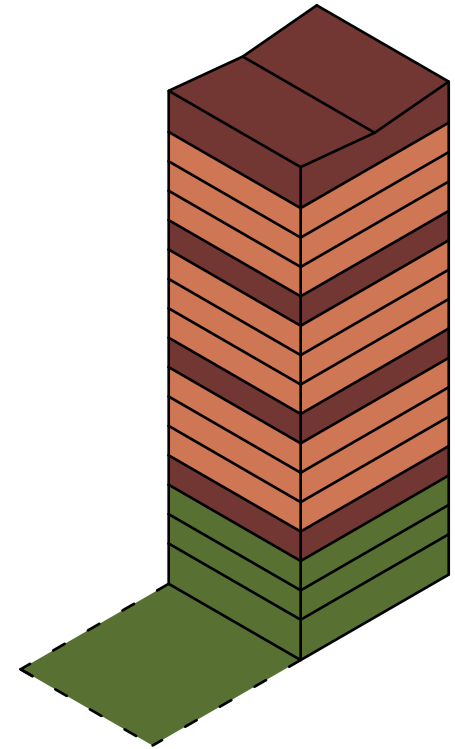
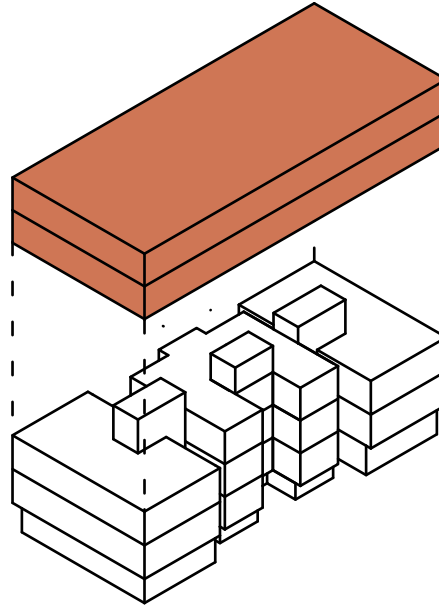
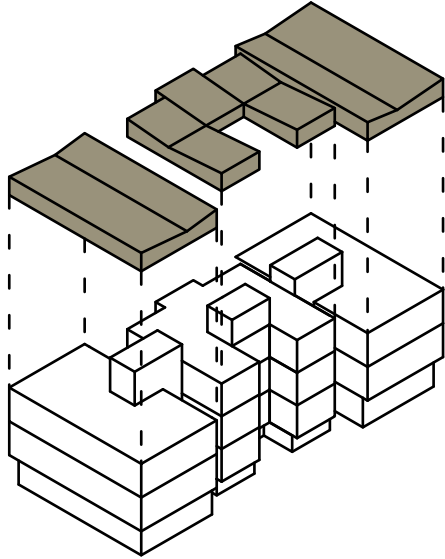
min. 18



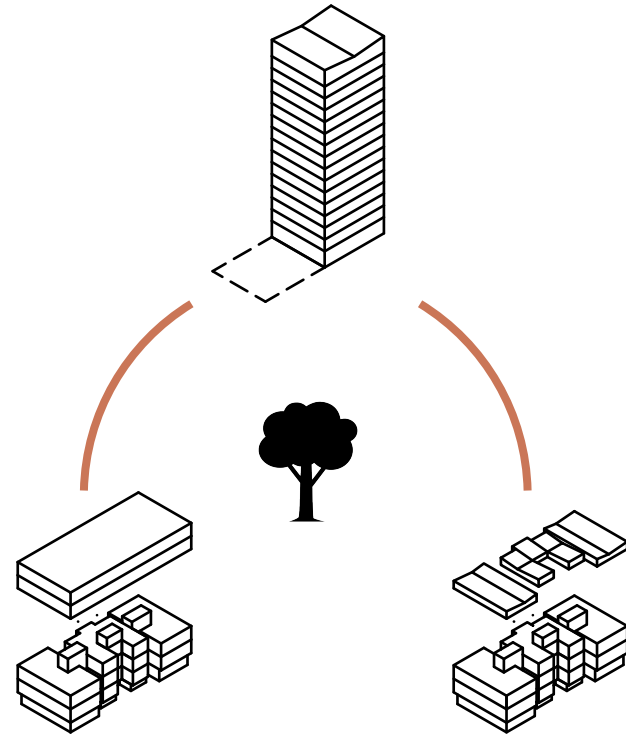
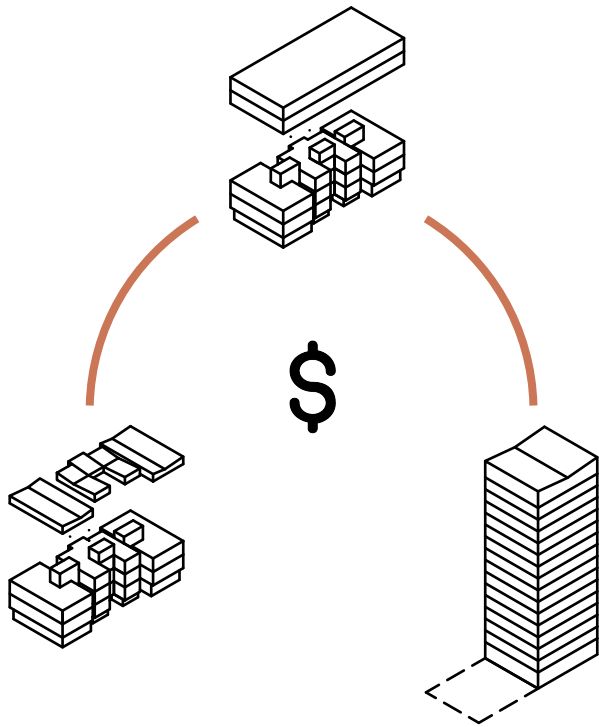
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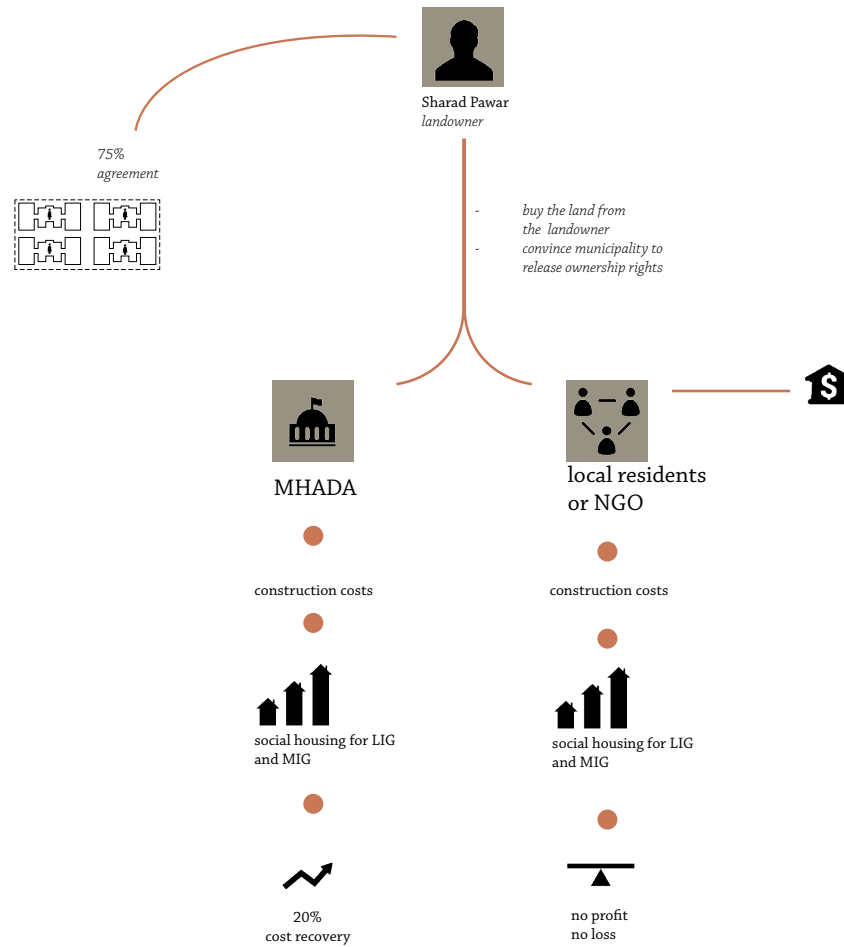
Design approach



Design approach

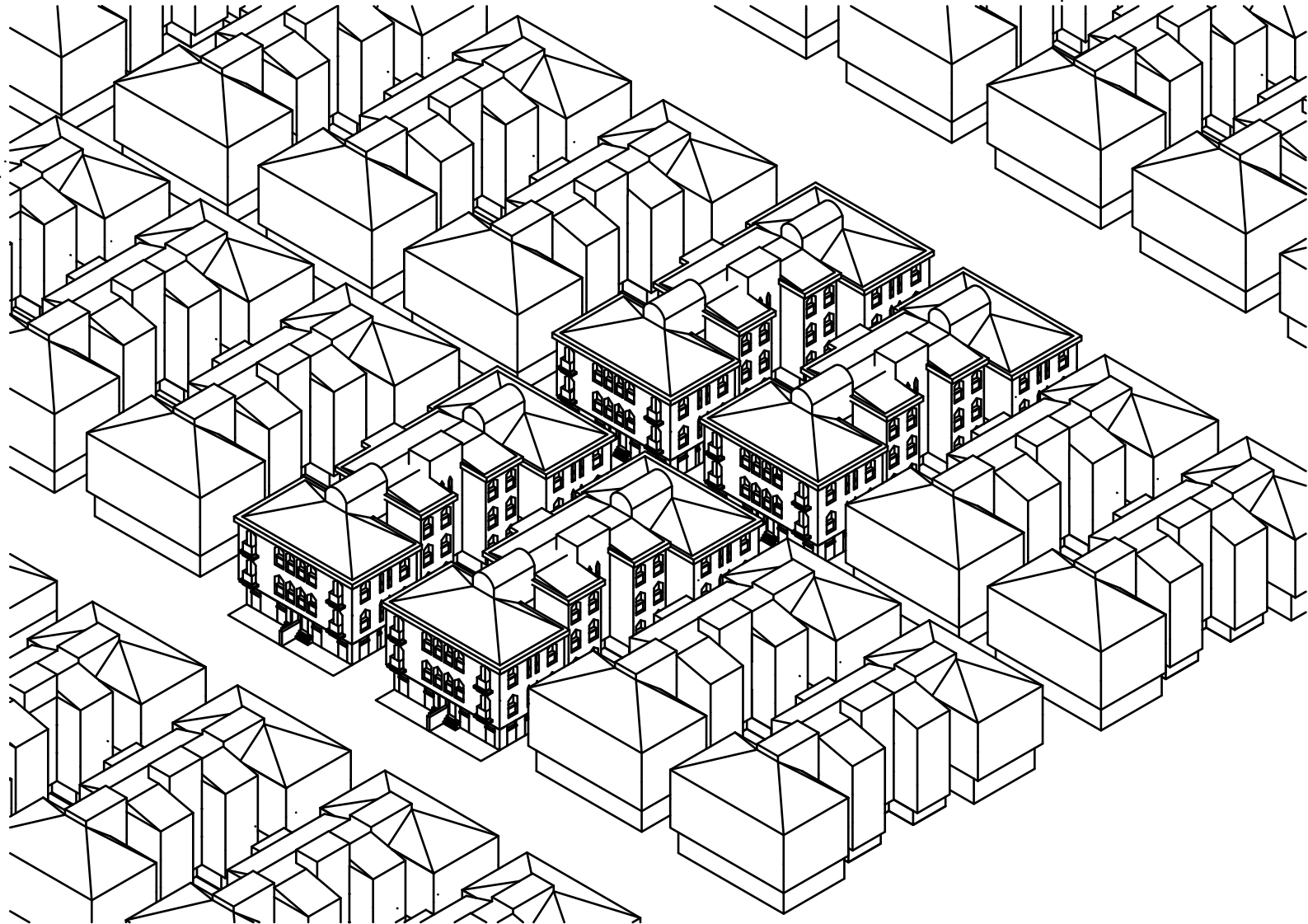


Financial approach

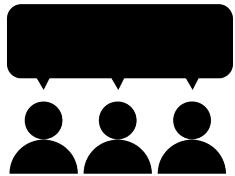
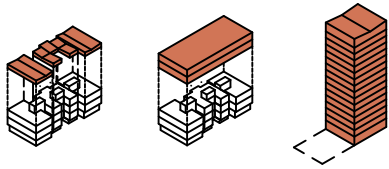


Design

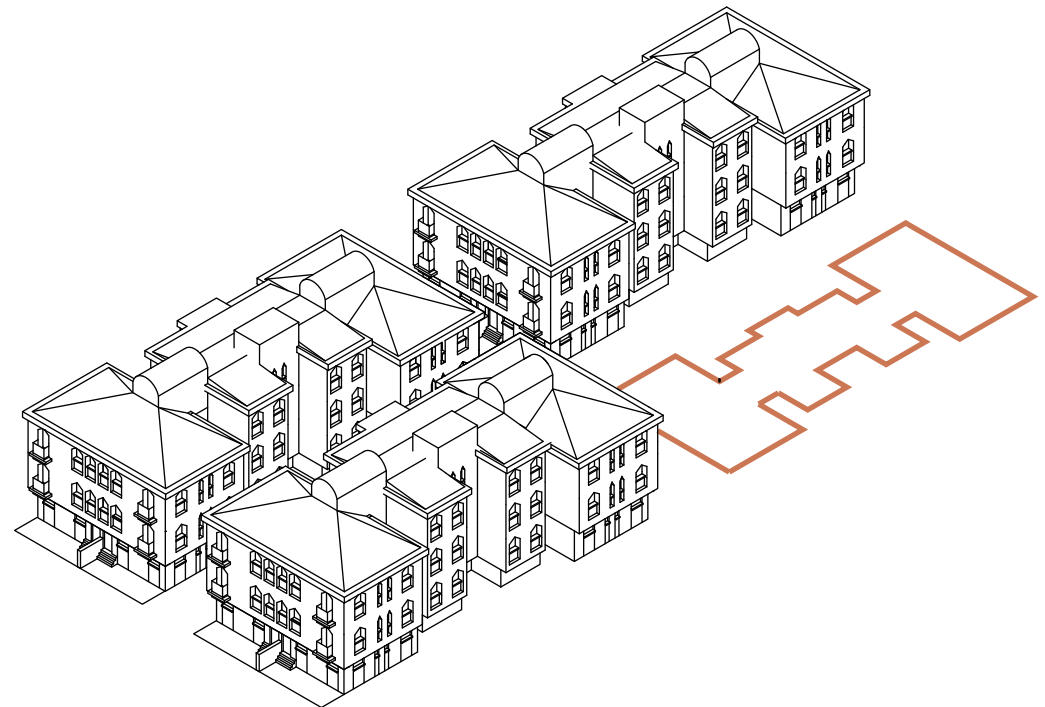
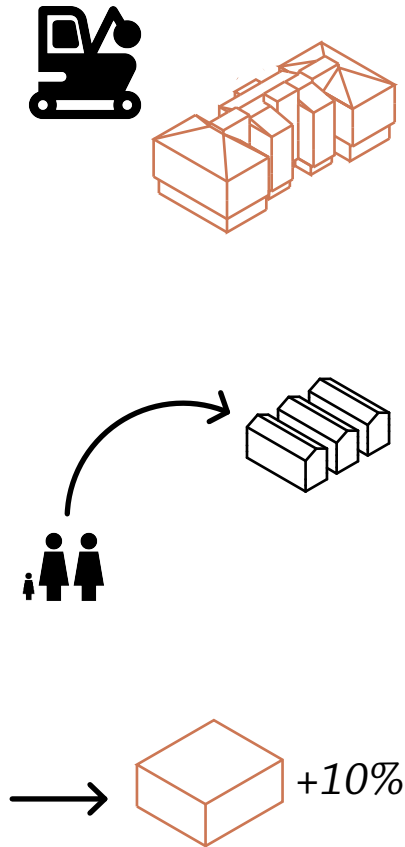
Urban block



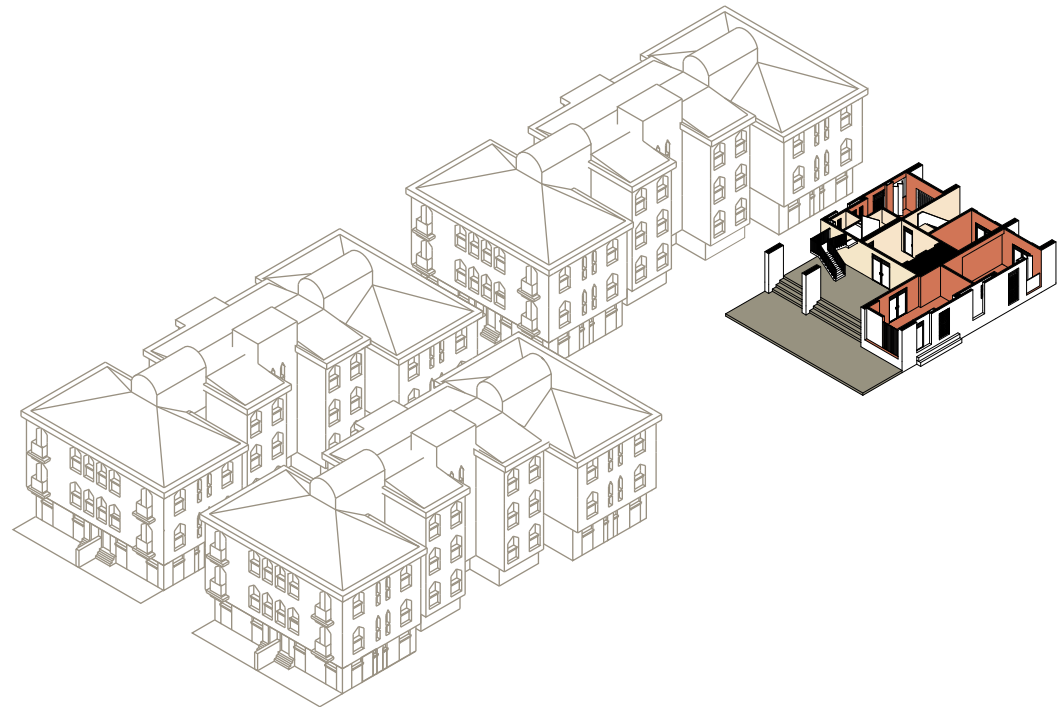
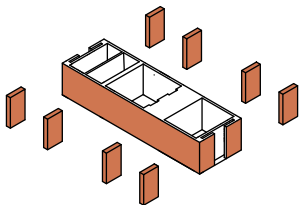
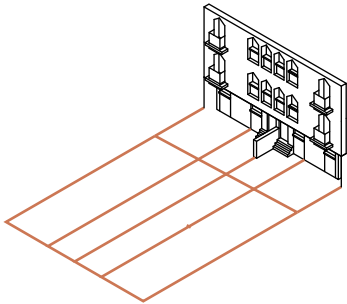
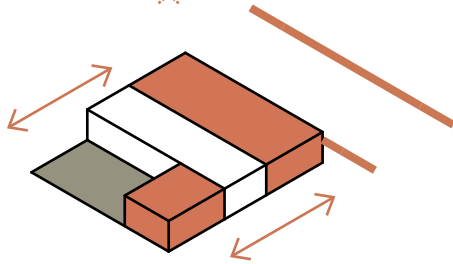
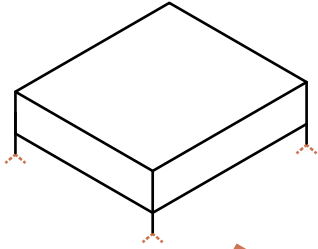
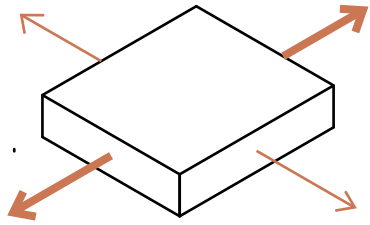
Urban block



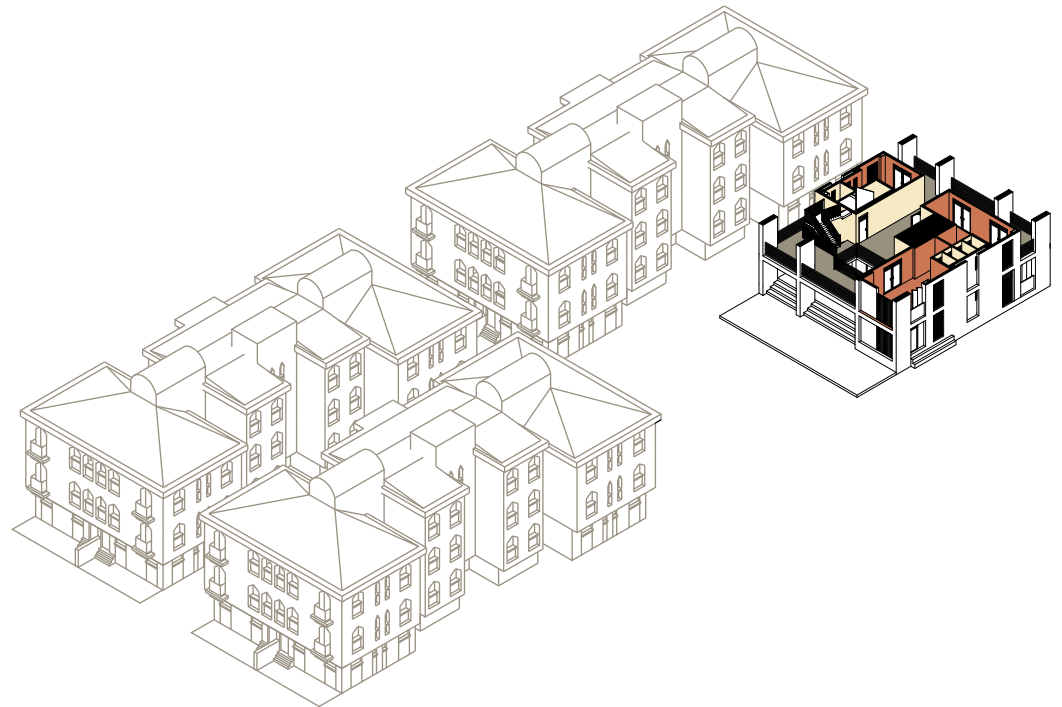
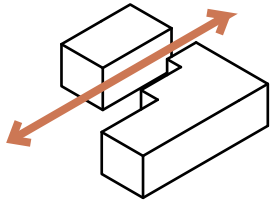
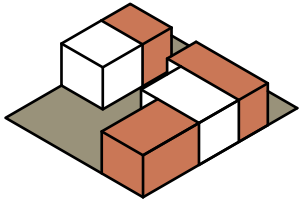
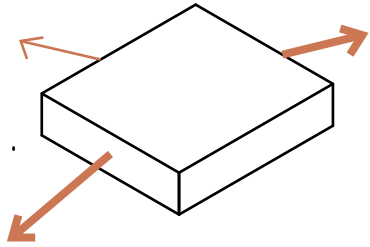
Option 1 | New building



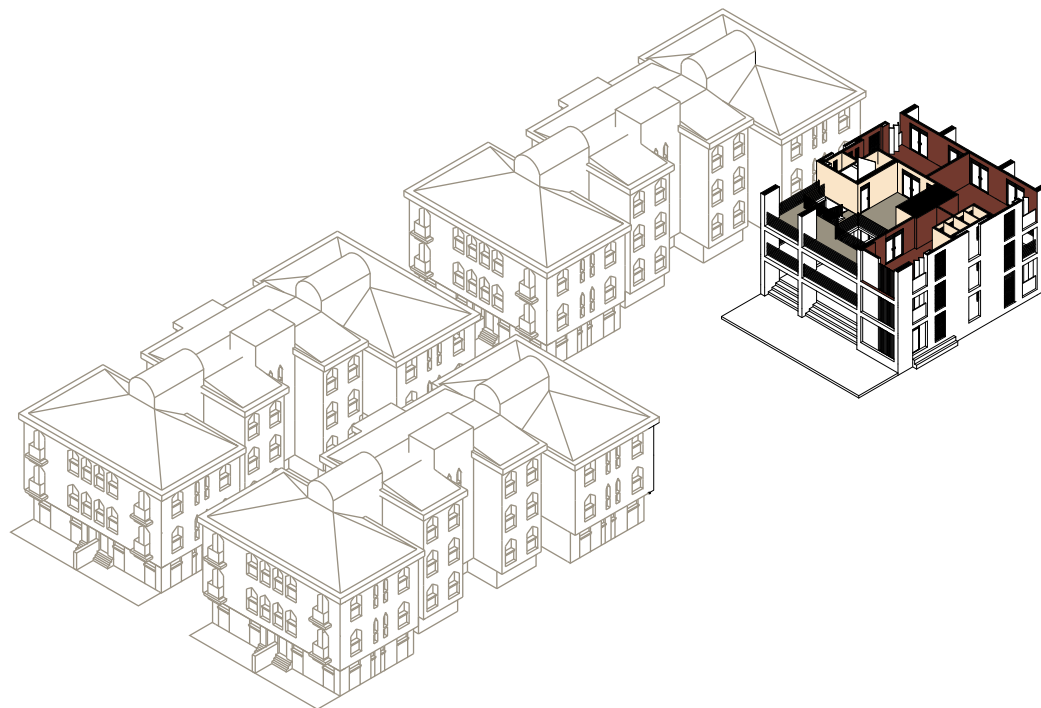
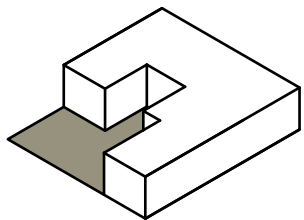
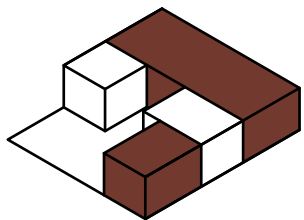
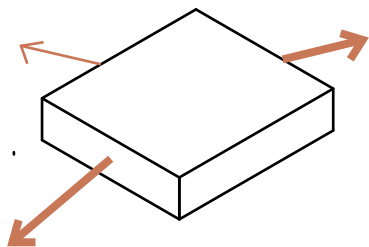
New building | Ground floor | Commercial



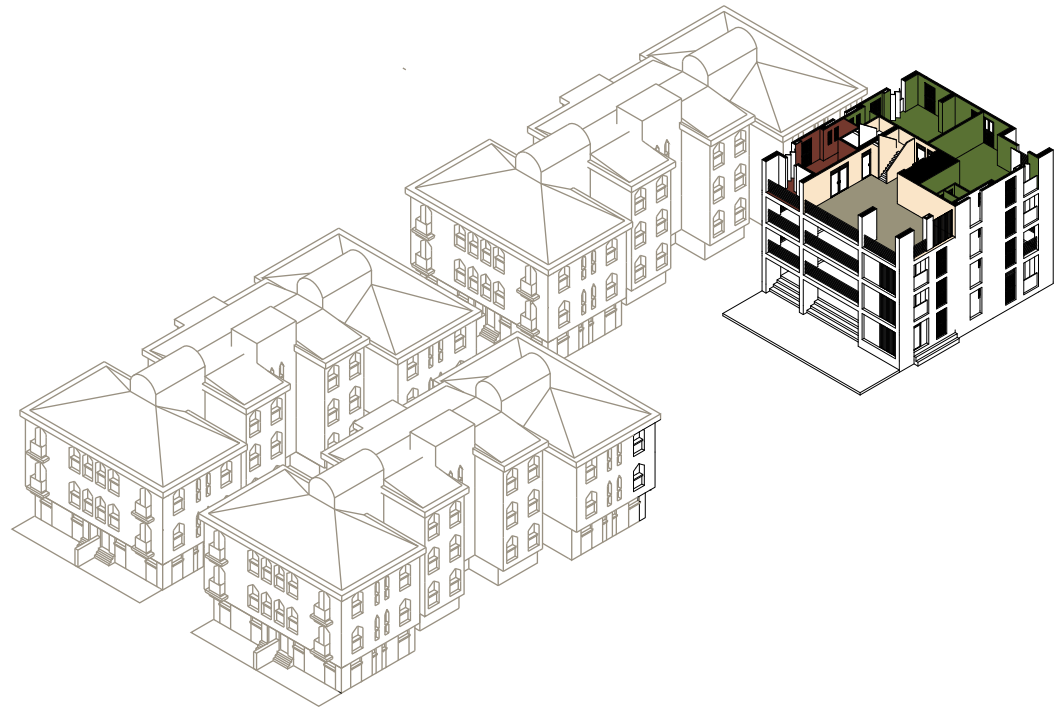
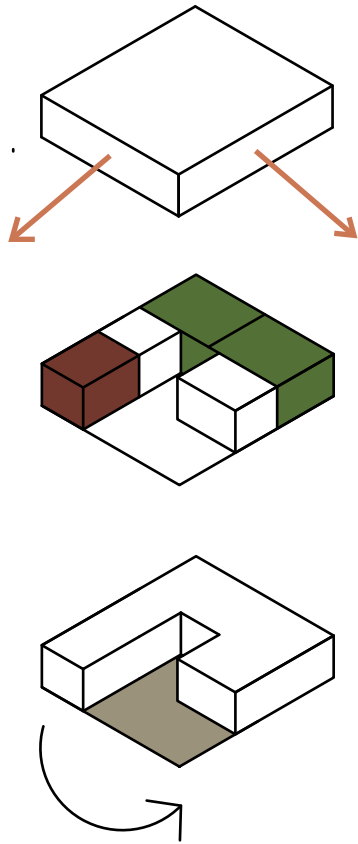
New building | First floor | Commercial



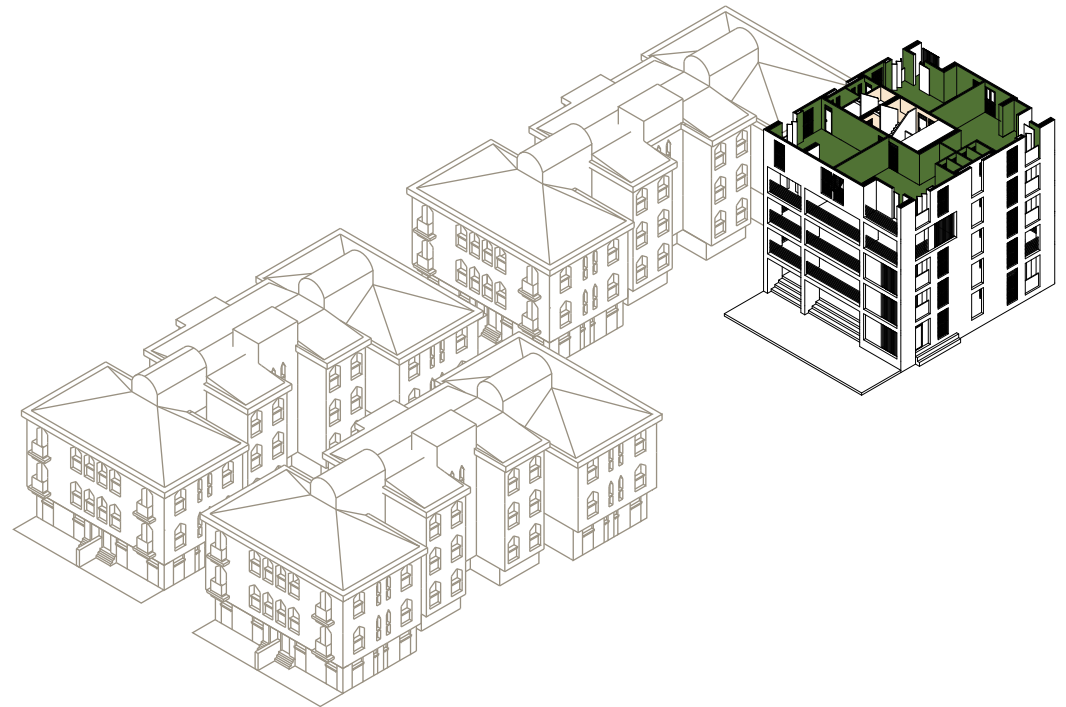
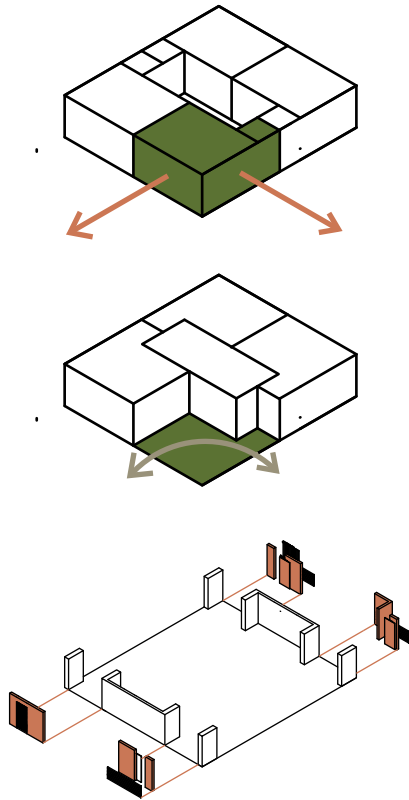
New building | Second floor | Amenities



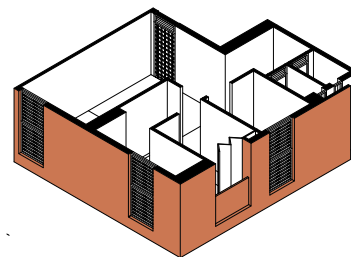
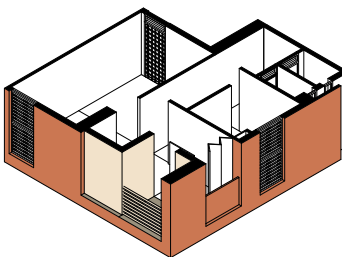
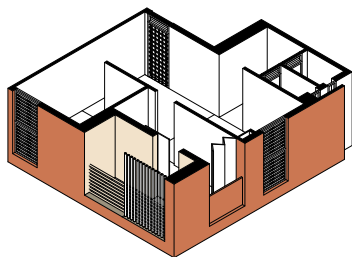
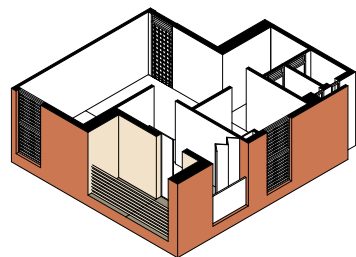
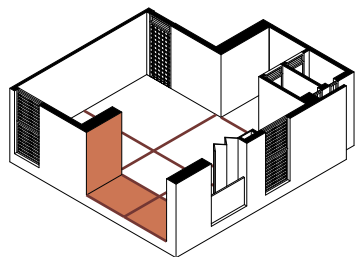
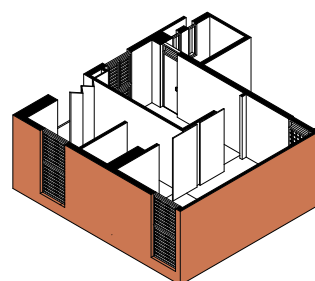
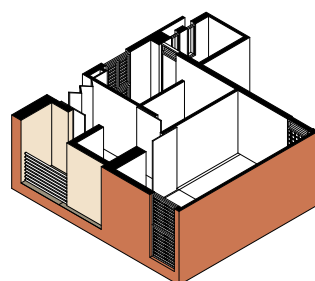
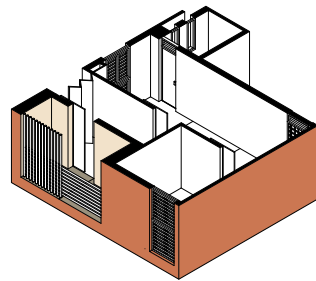
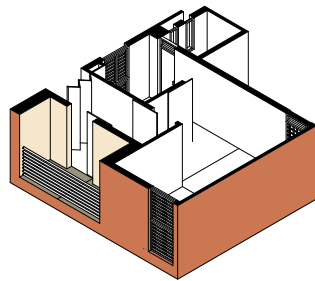
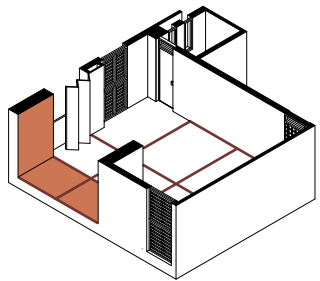
New building | Third floor | Community



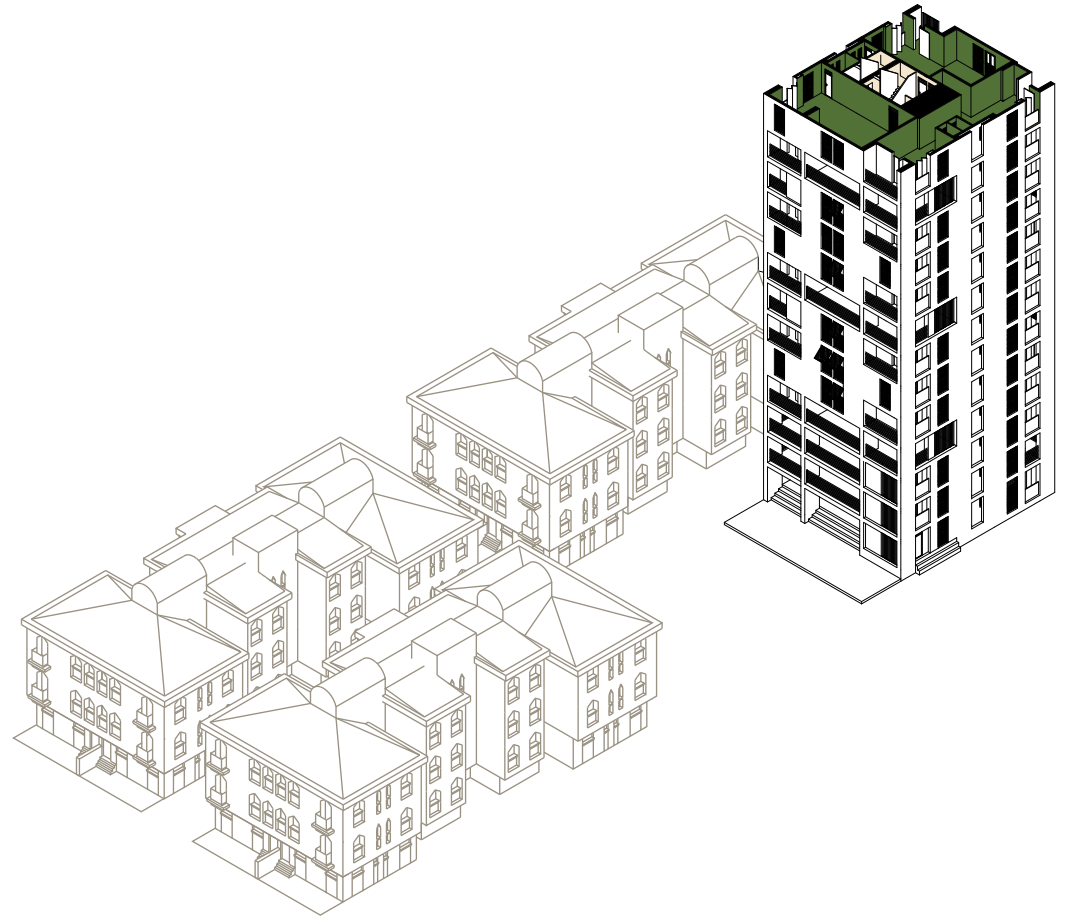
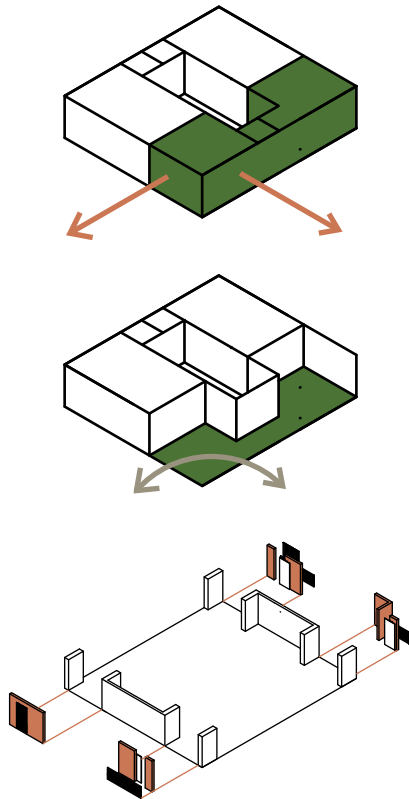
New building | Typical dwelling floor



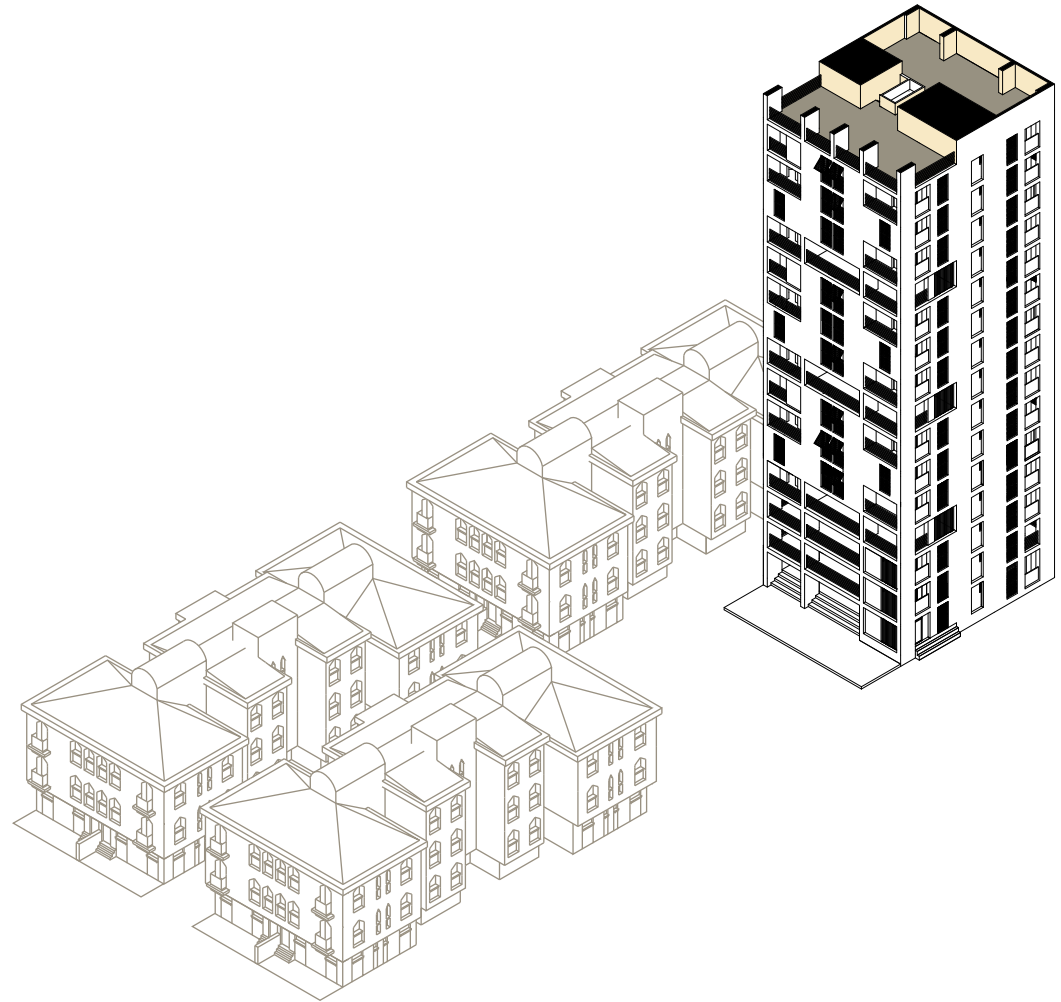
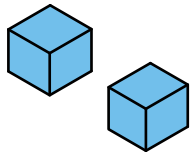
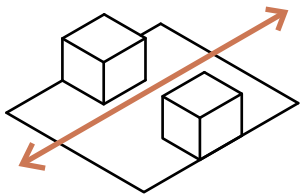
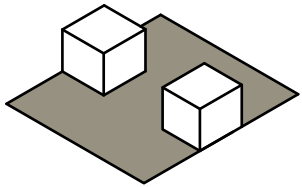
New building | Dwelling types

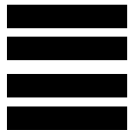


New building | MIG dwelling floor

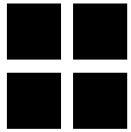


New building | Community roof





max. 16



39



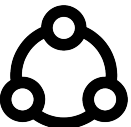
+/- 88



155 m²

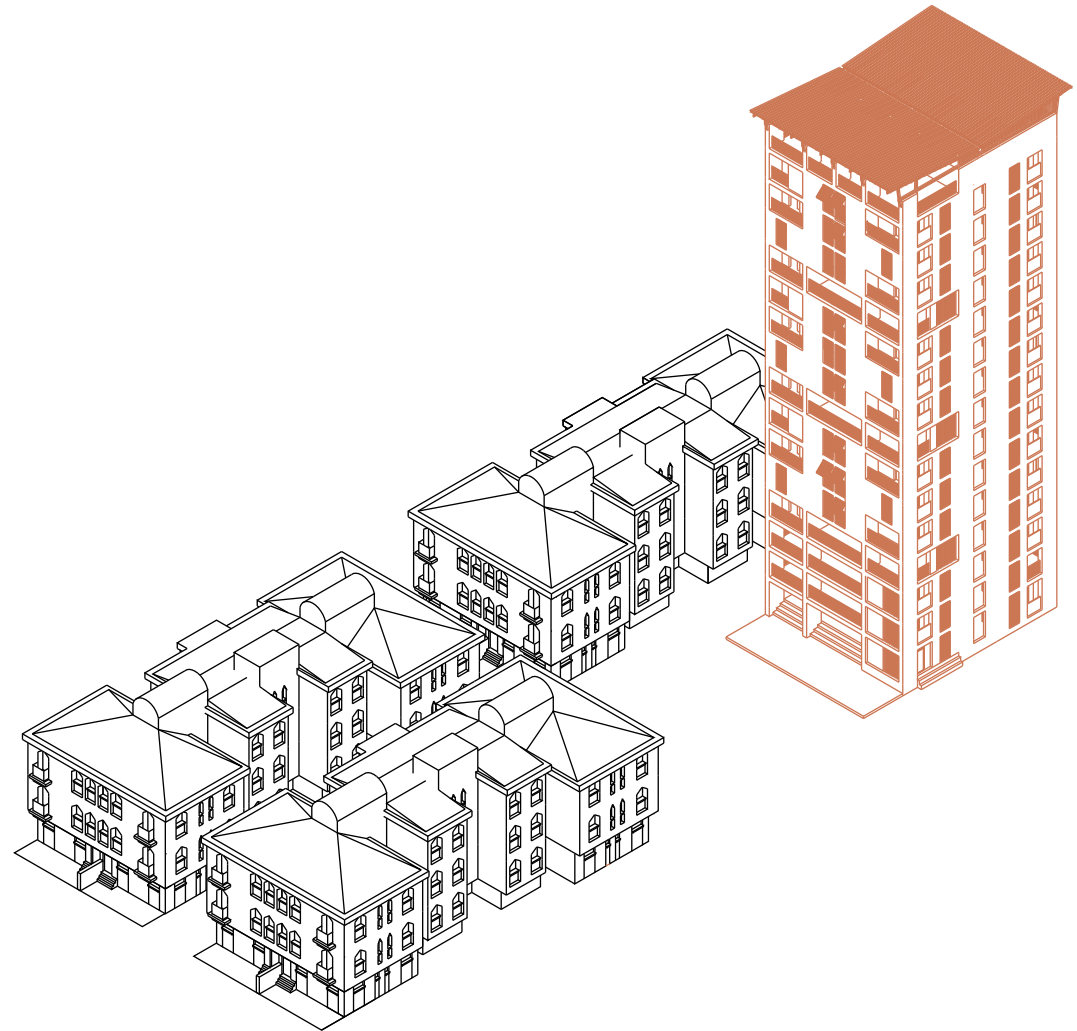


200 m²

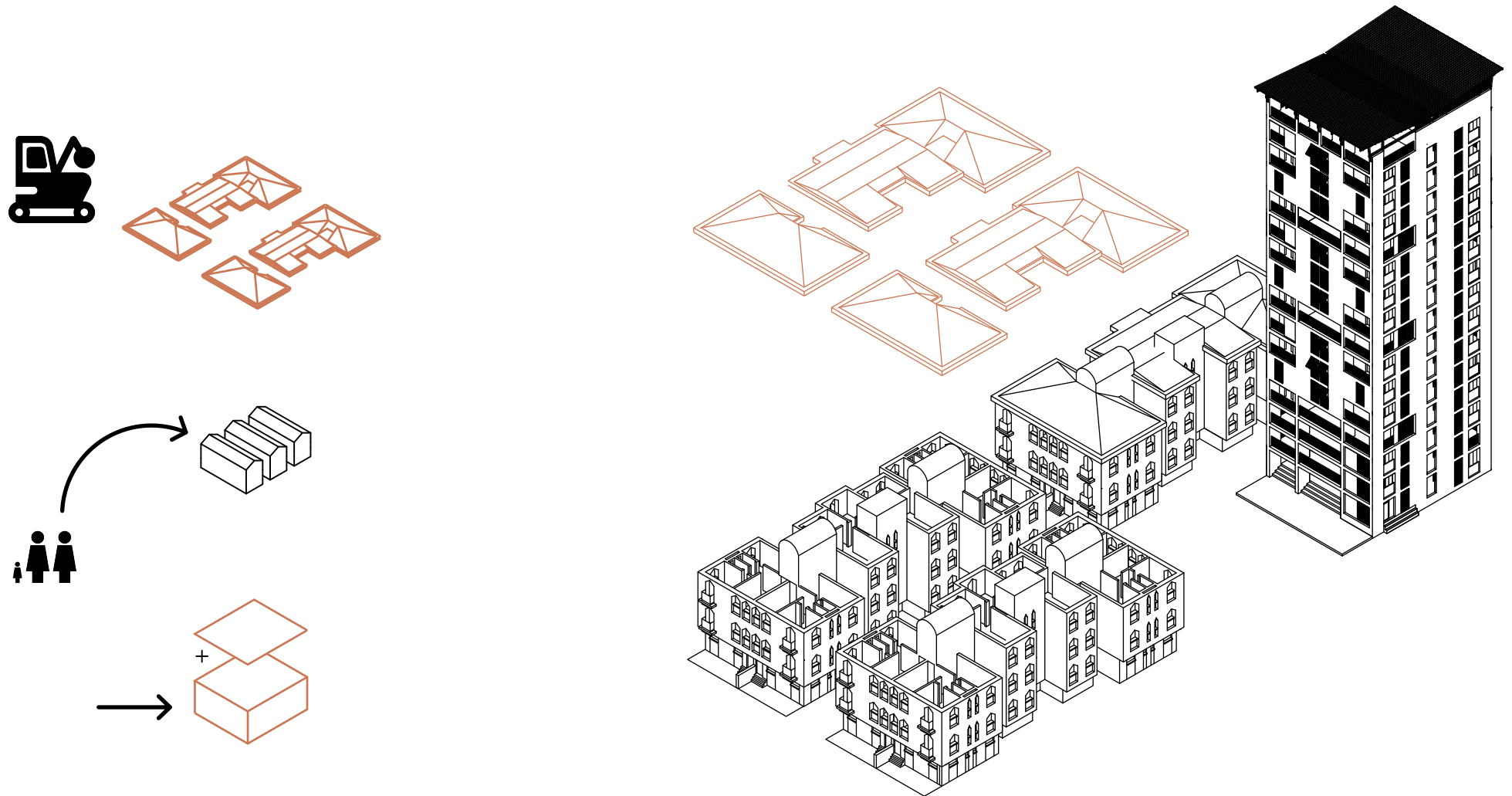


375

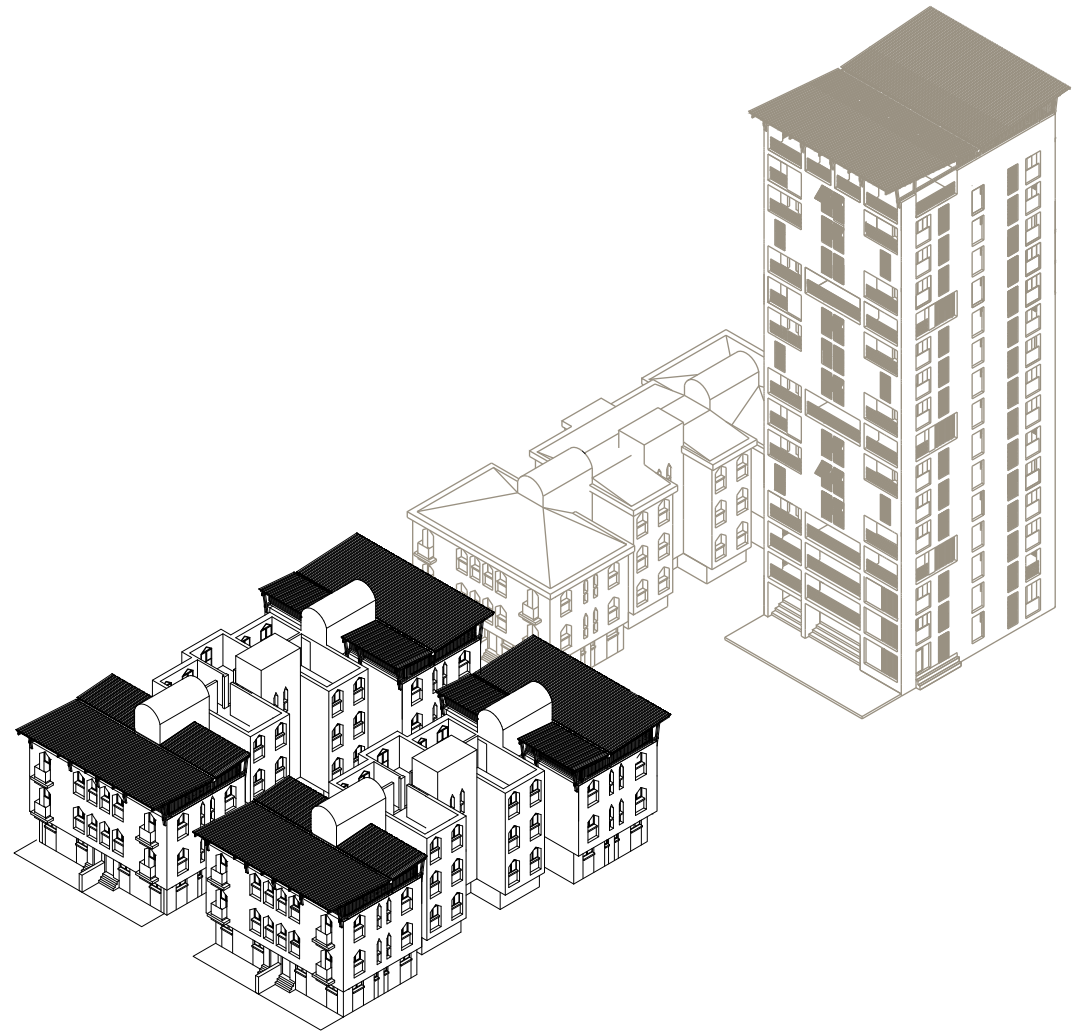
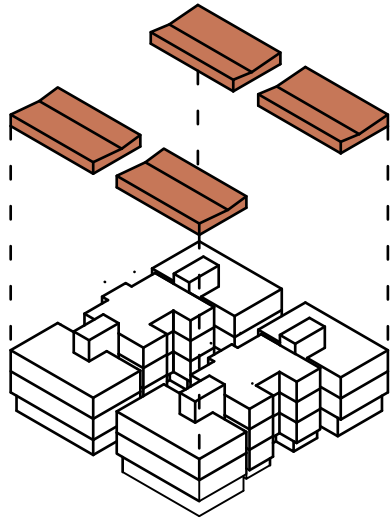
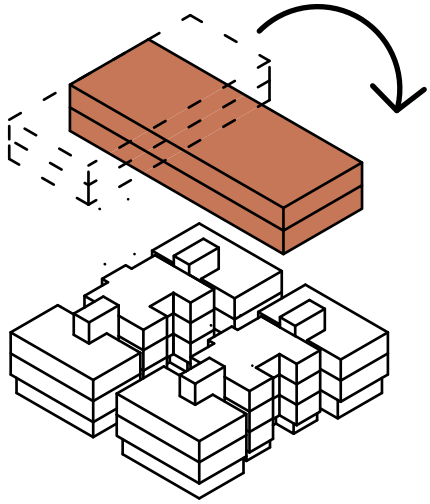
New building



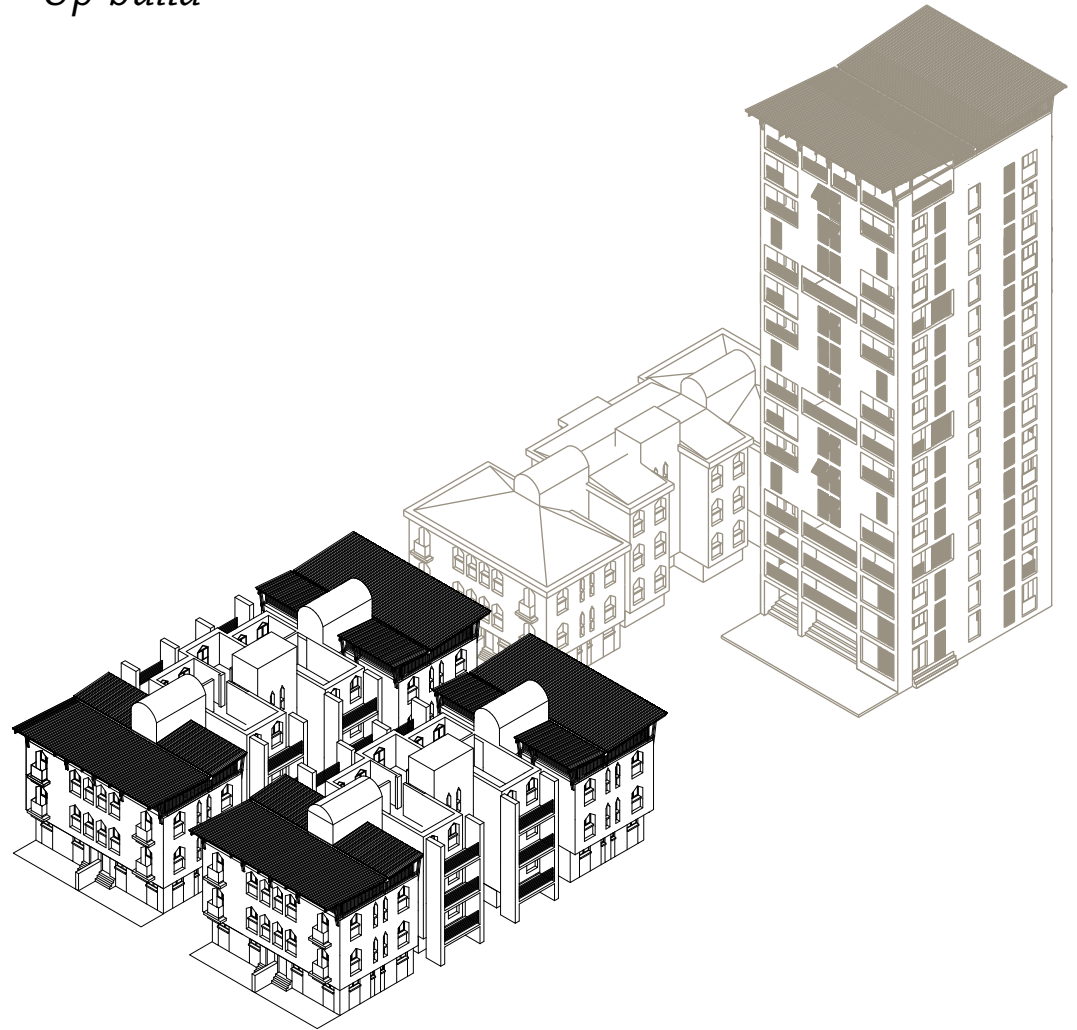
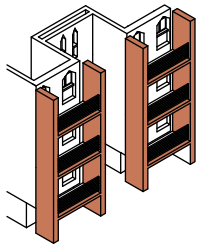
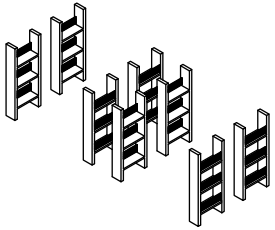
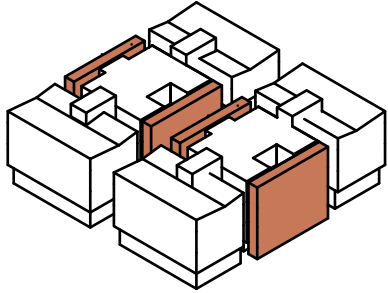
Option 2 | Up-build



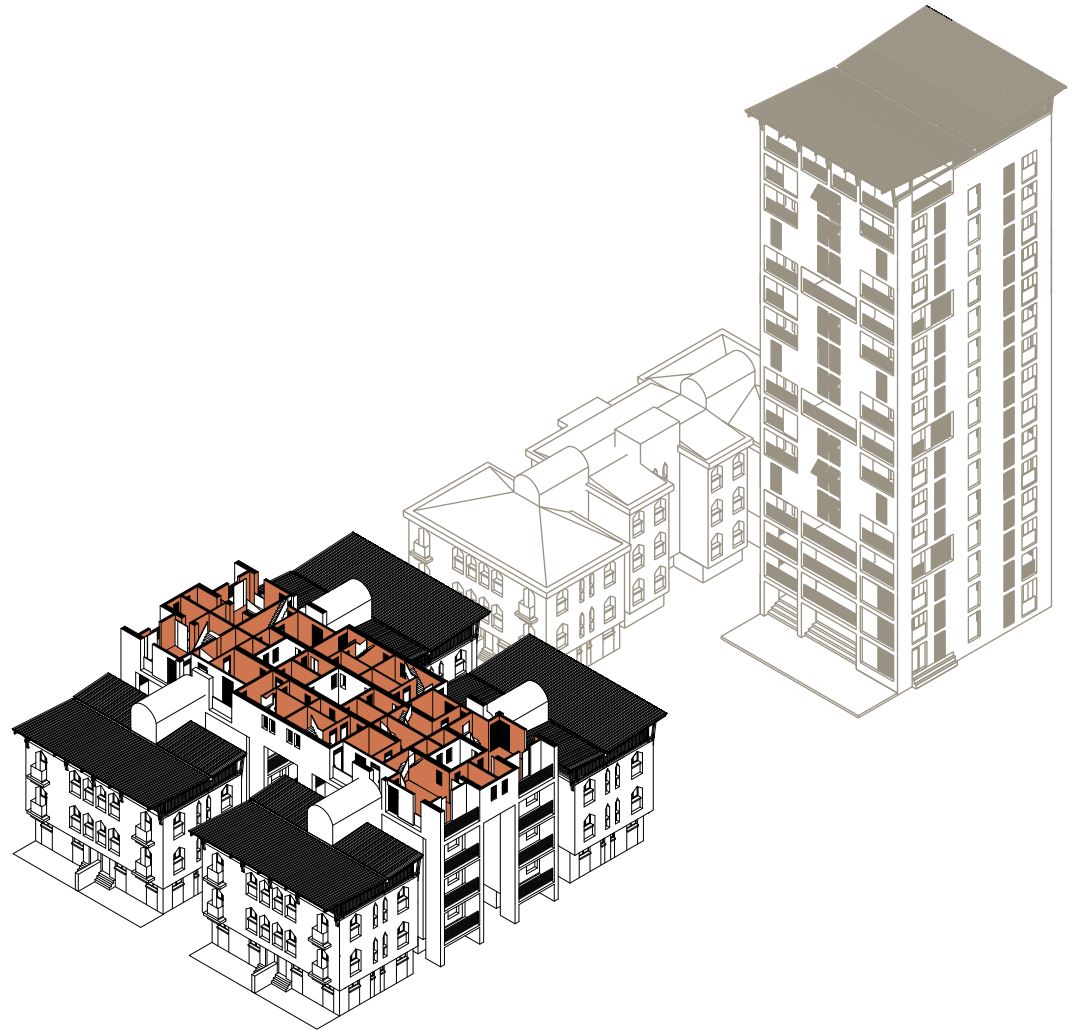
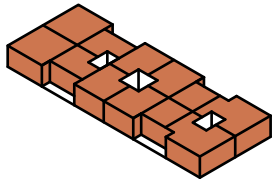
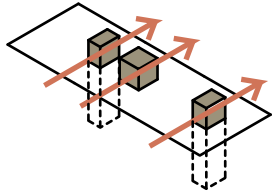
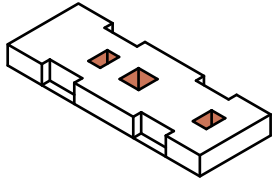
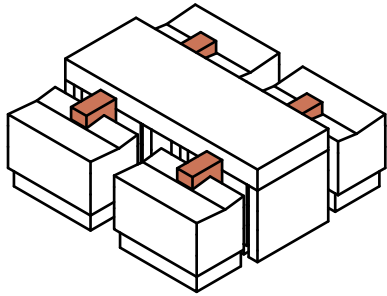
Up-build



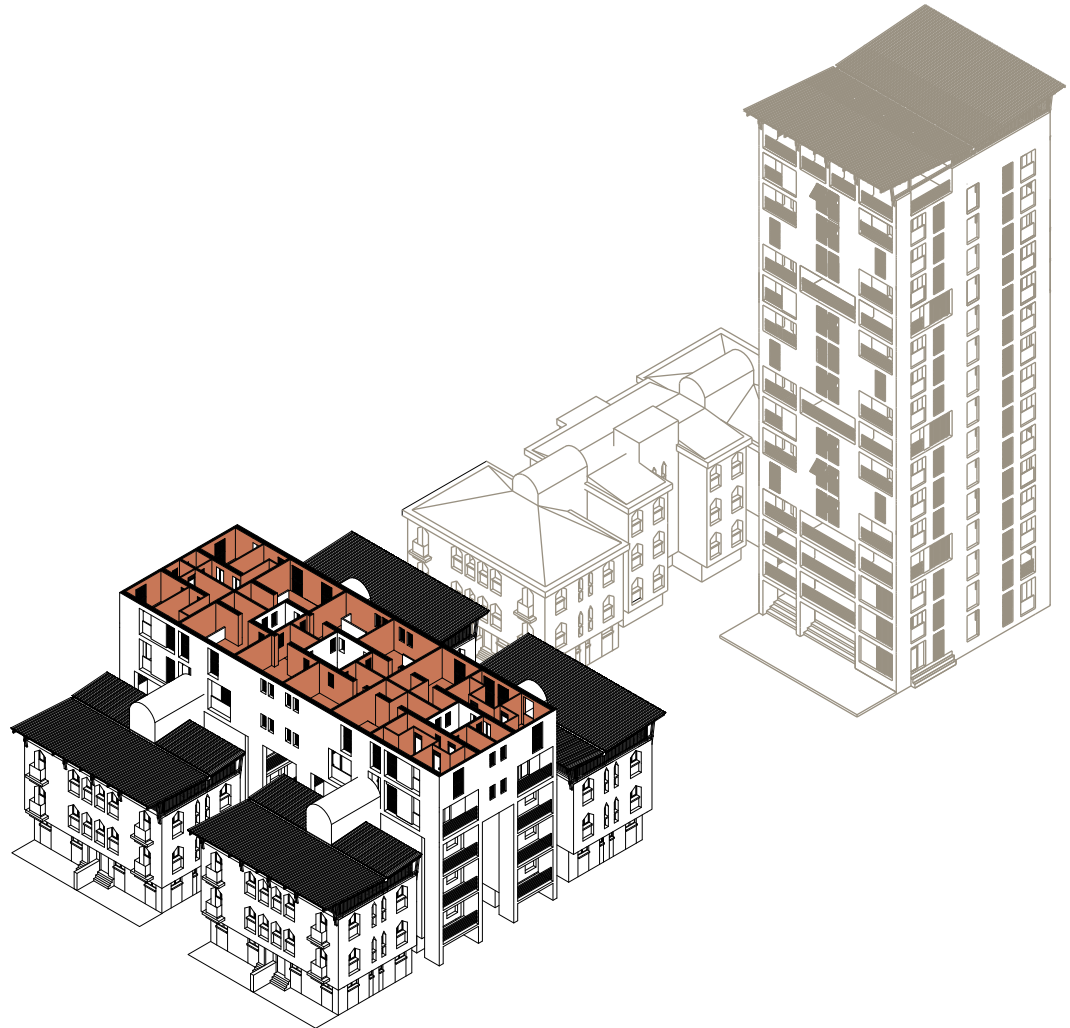
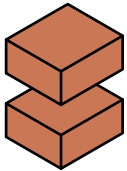
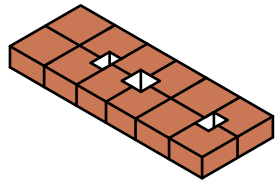
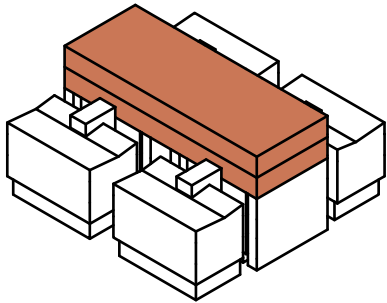
Up-build



Up-build

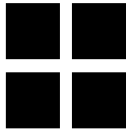


Up-build





2



12



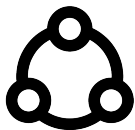
+/- 50



-

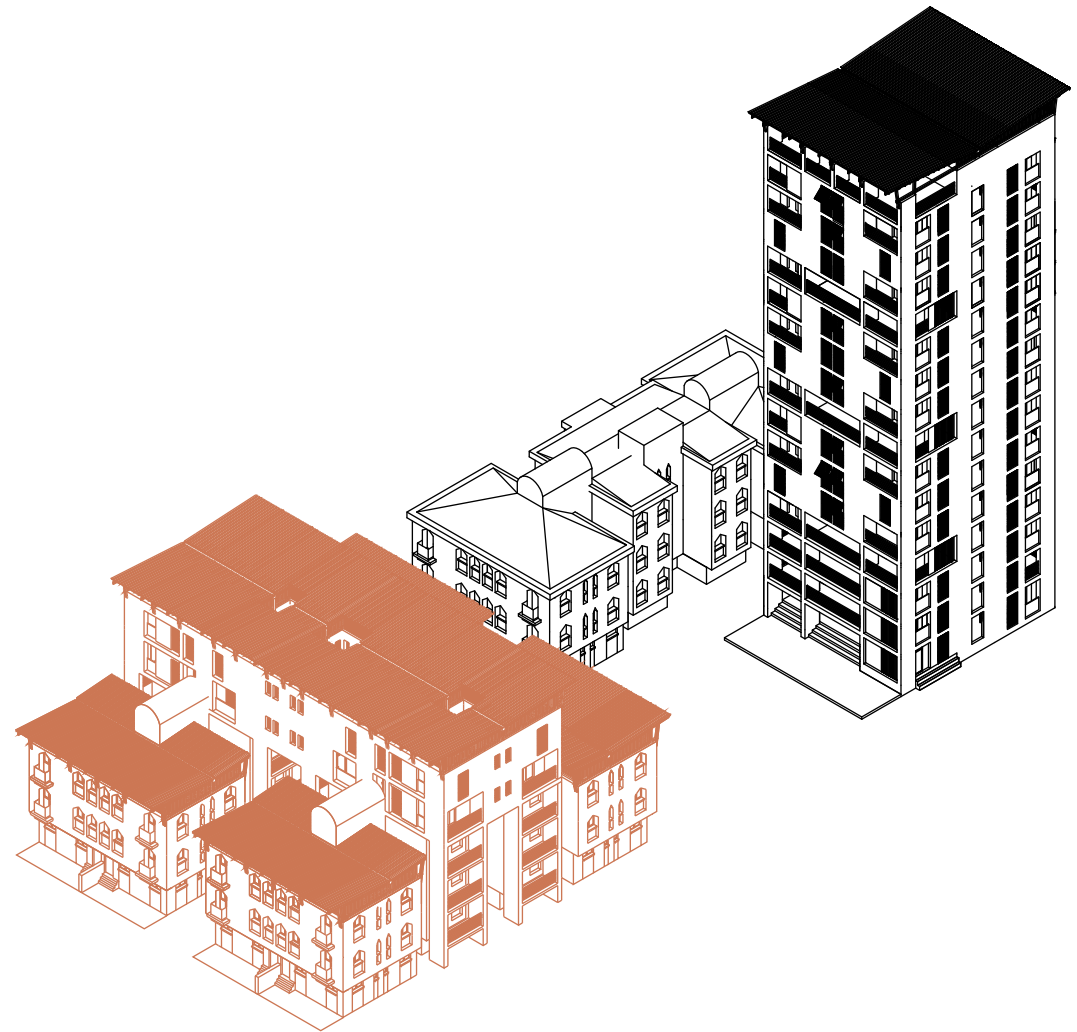


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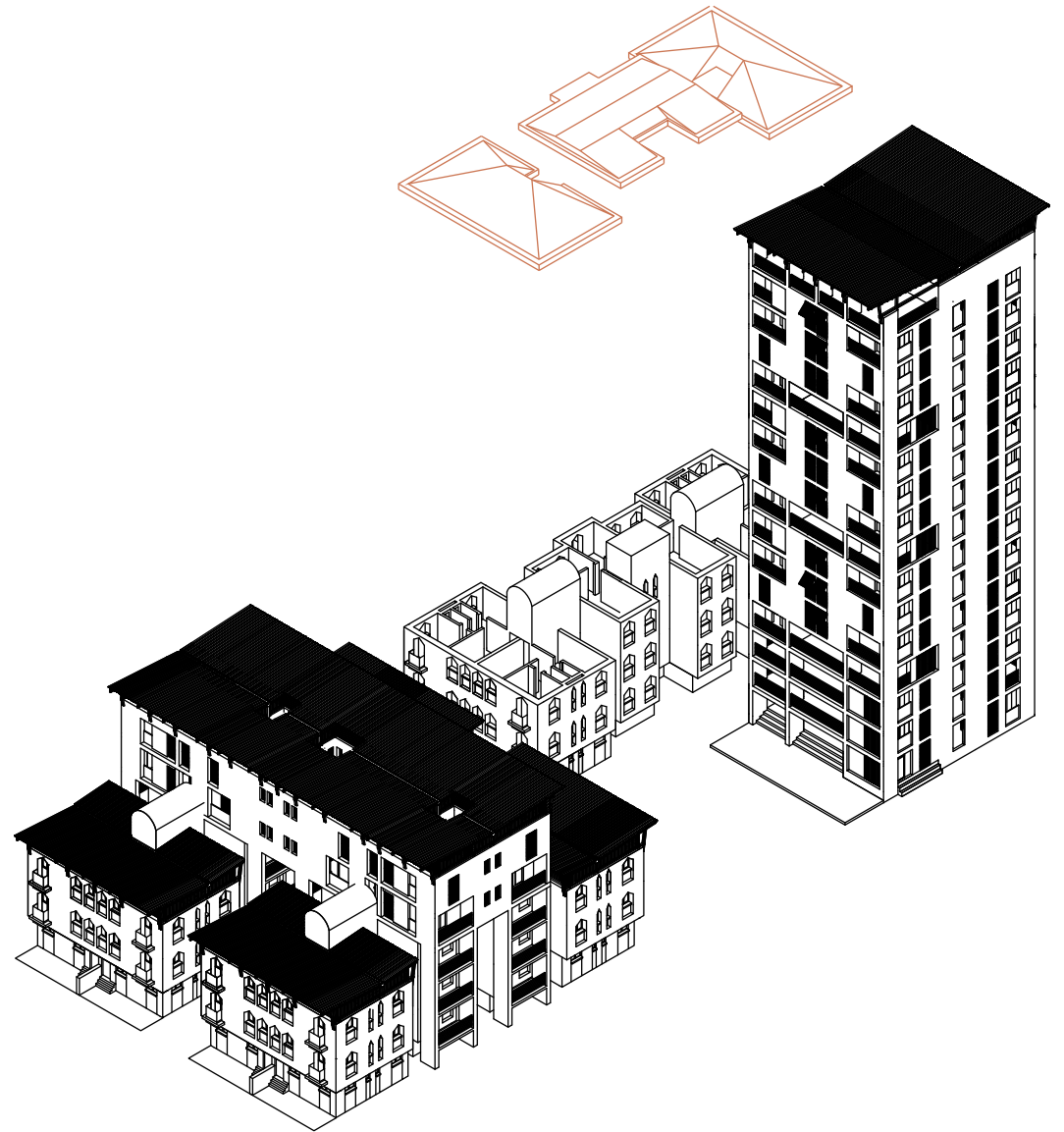
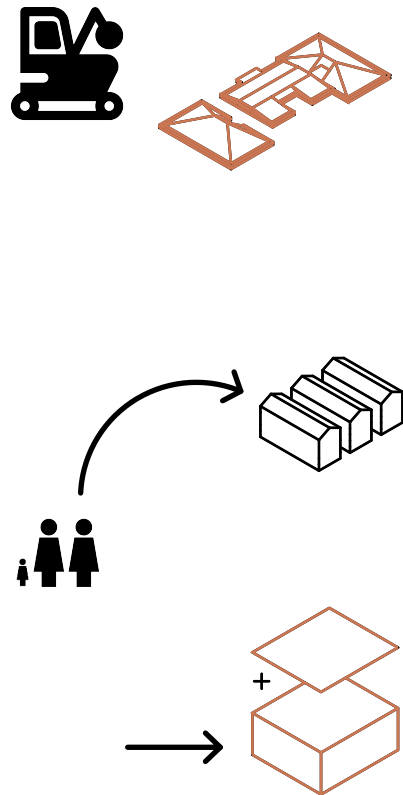


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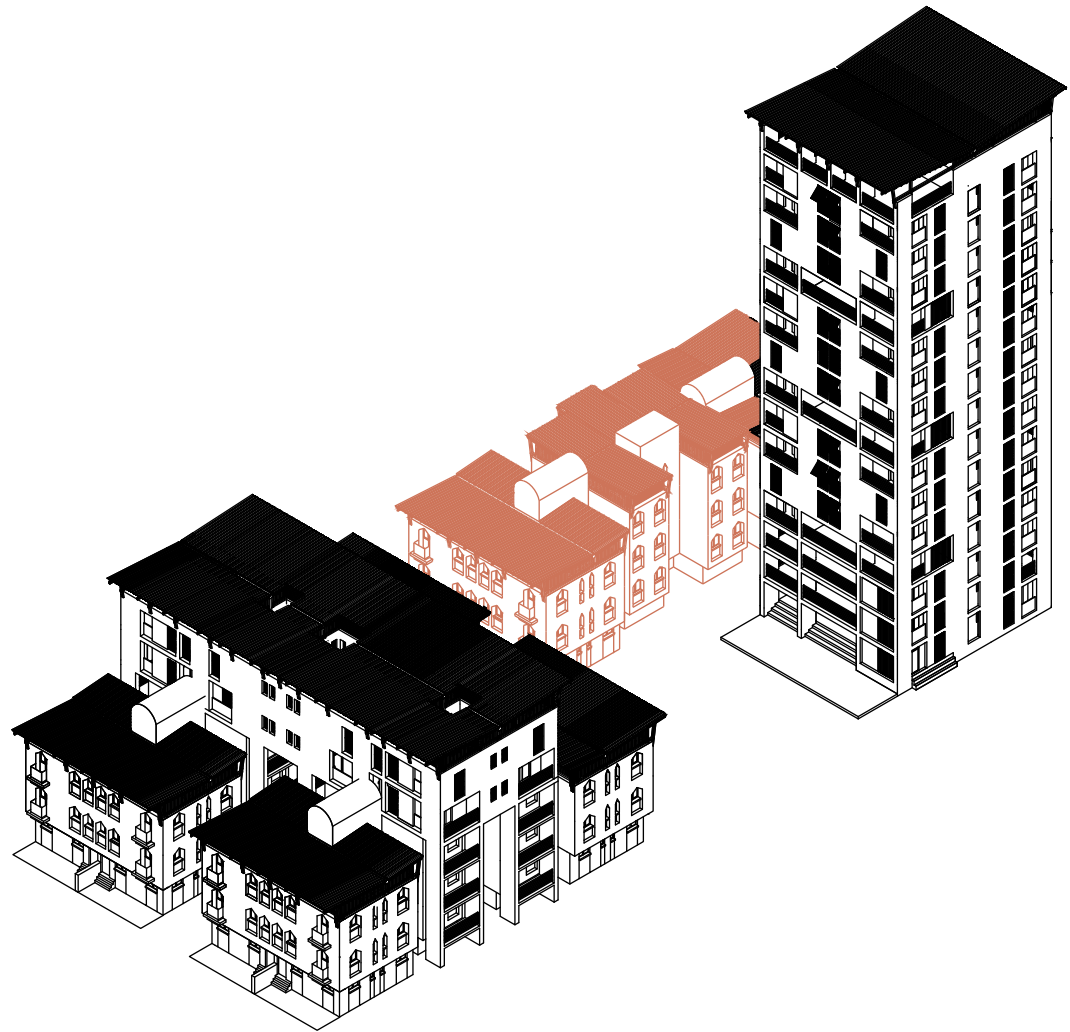
Up-build



Option 3 | New roof



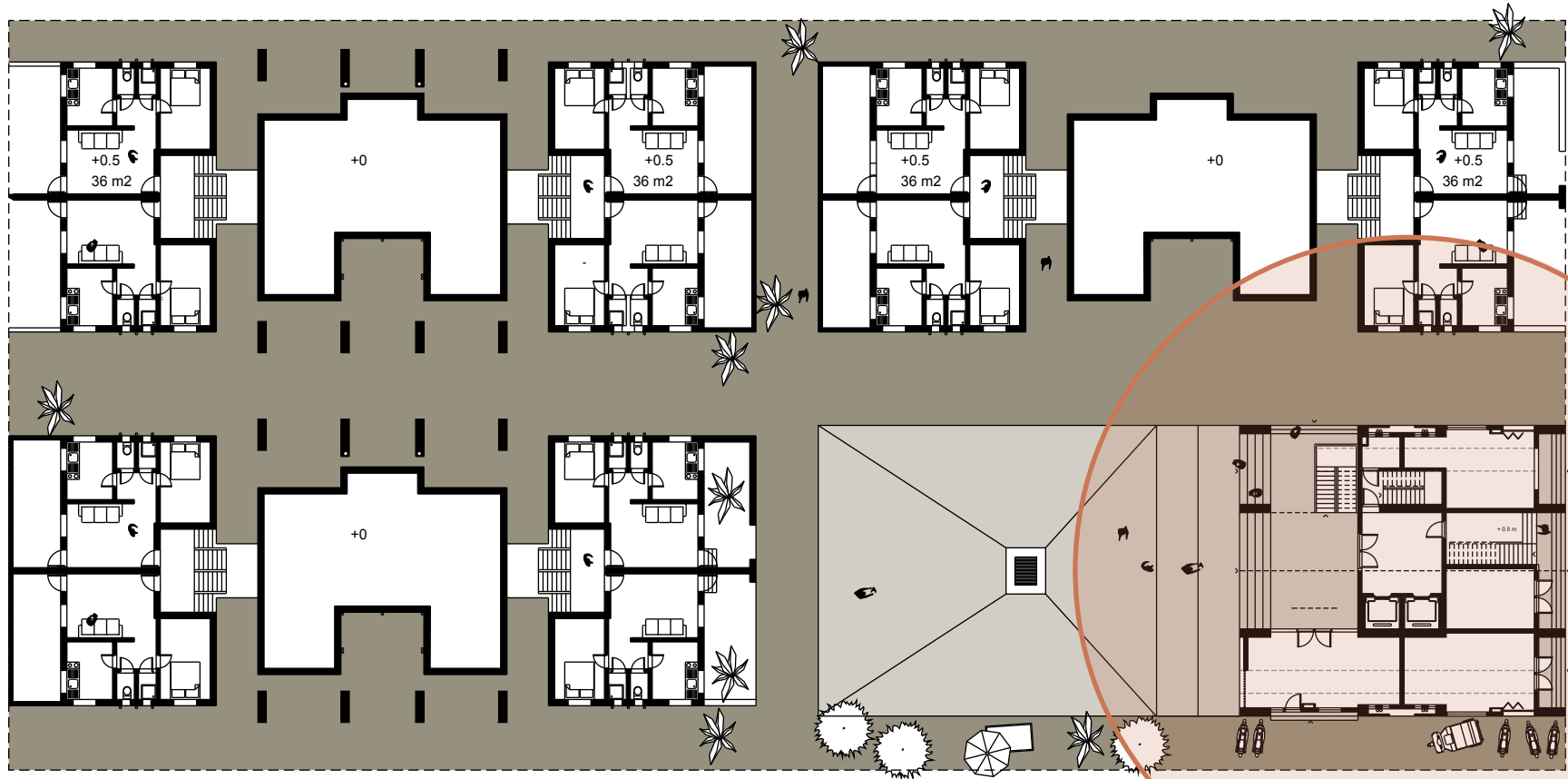
New roof



New roof

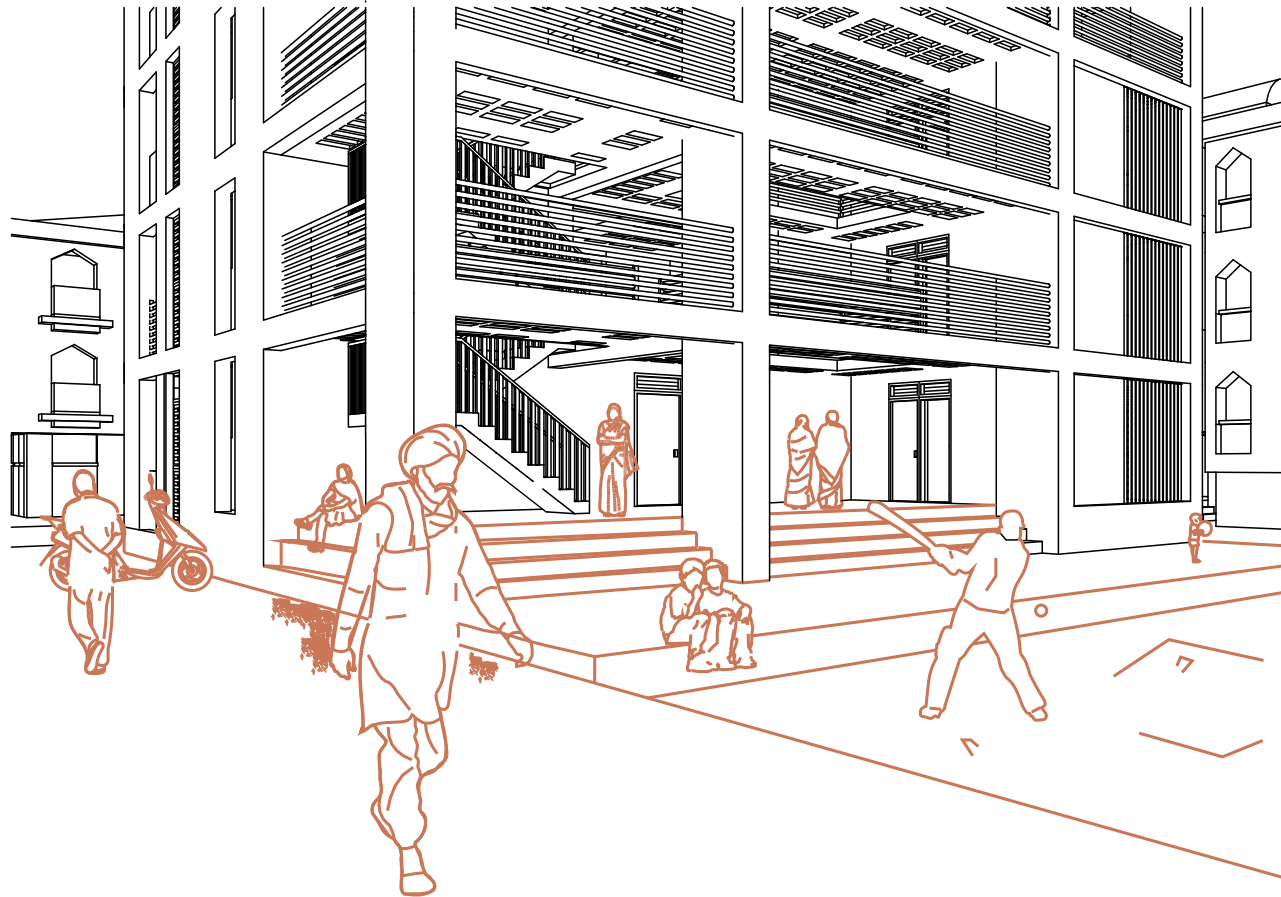


Cluster



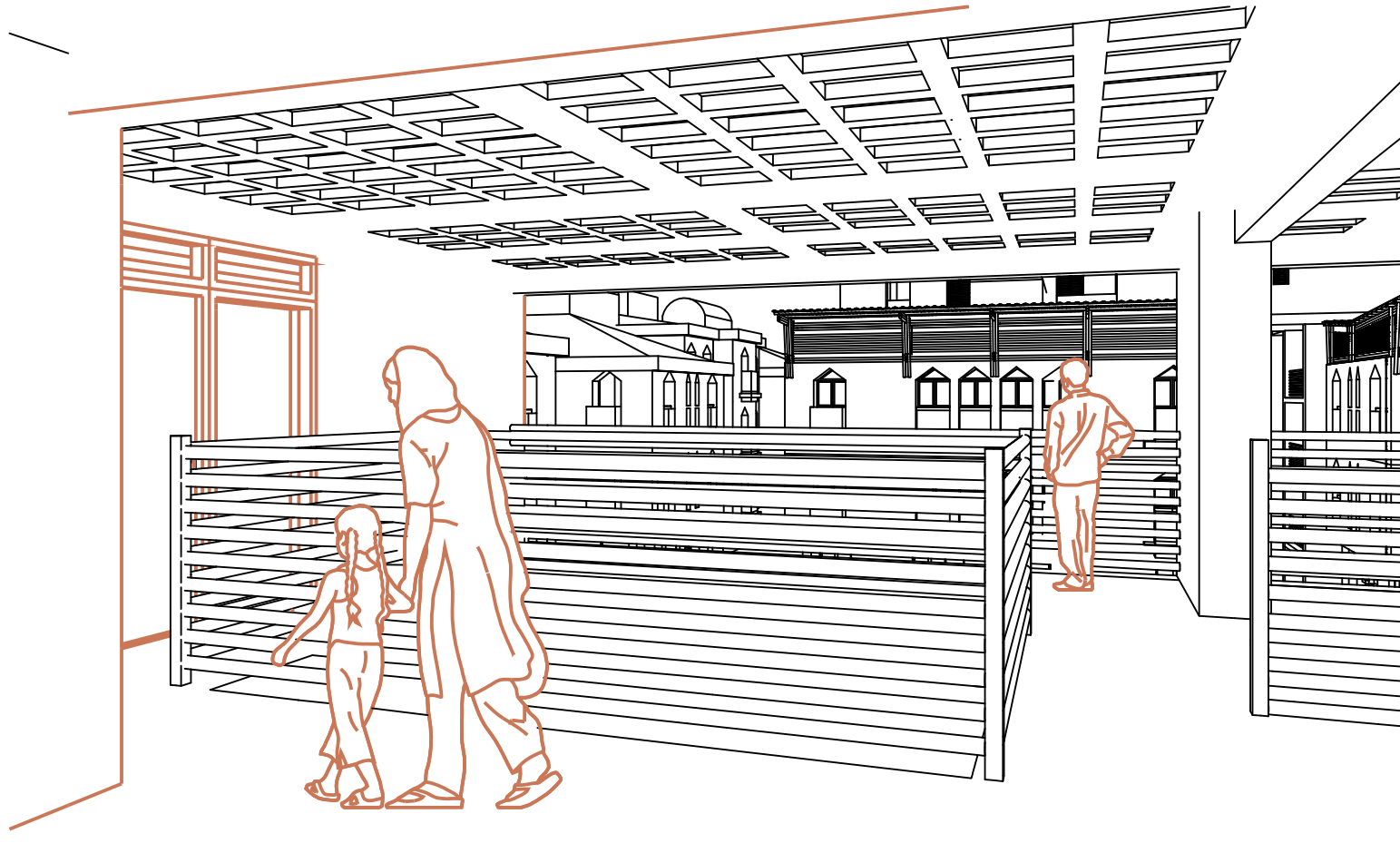
Patterns

Square



play ground | commercial

Amenity floor



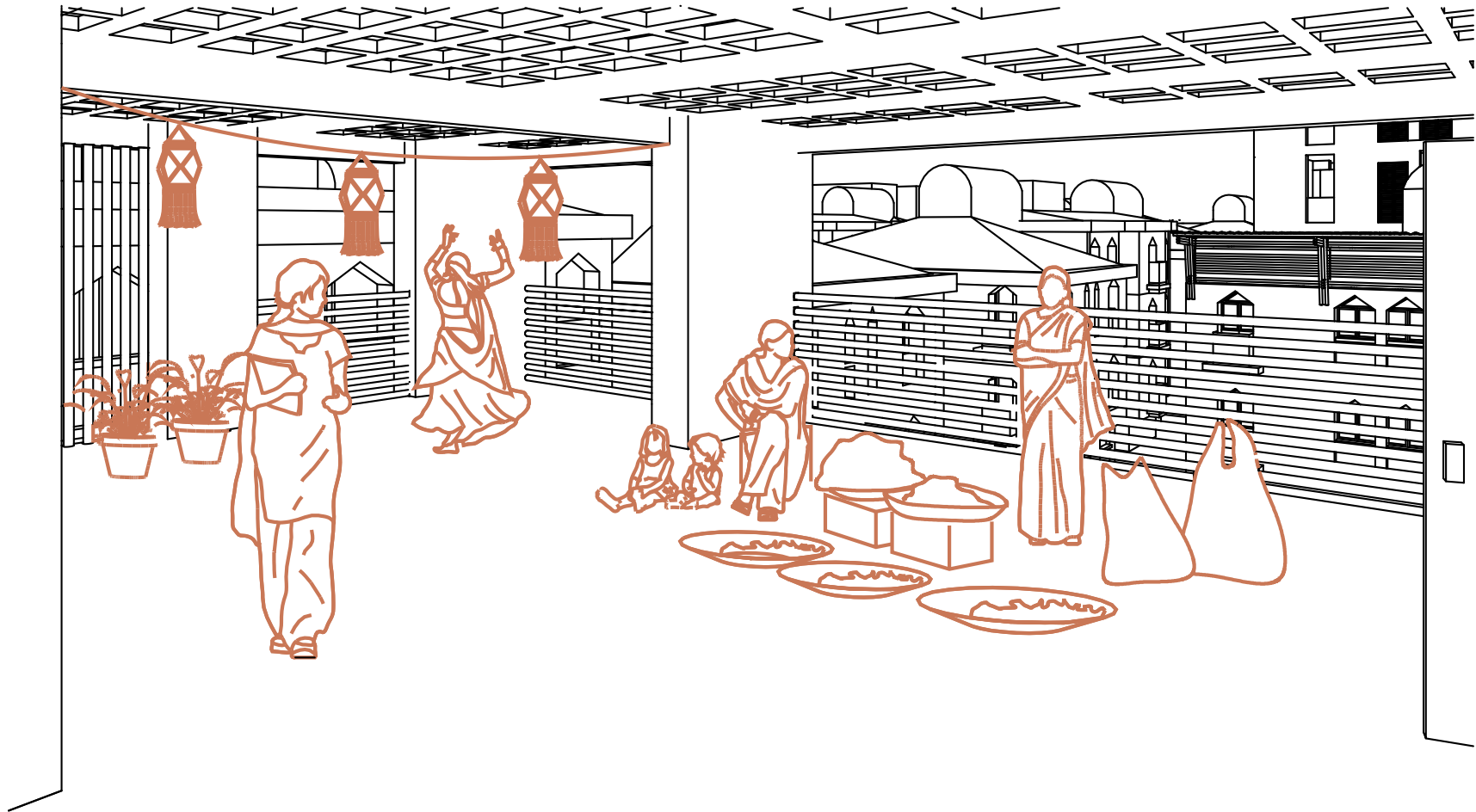
amenities | community

Commercial plint



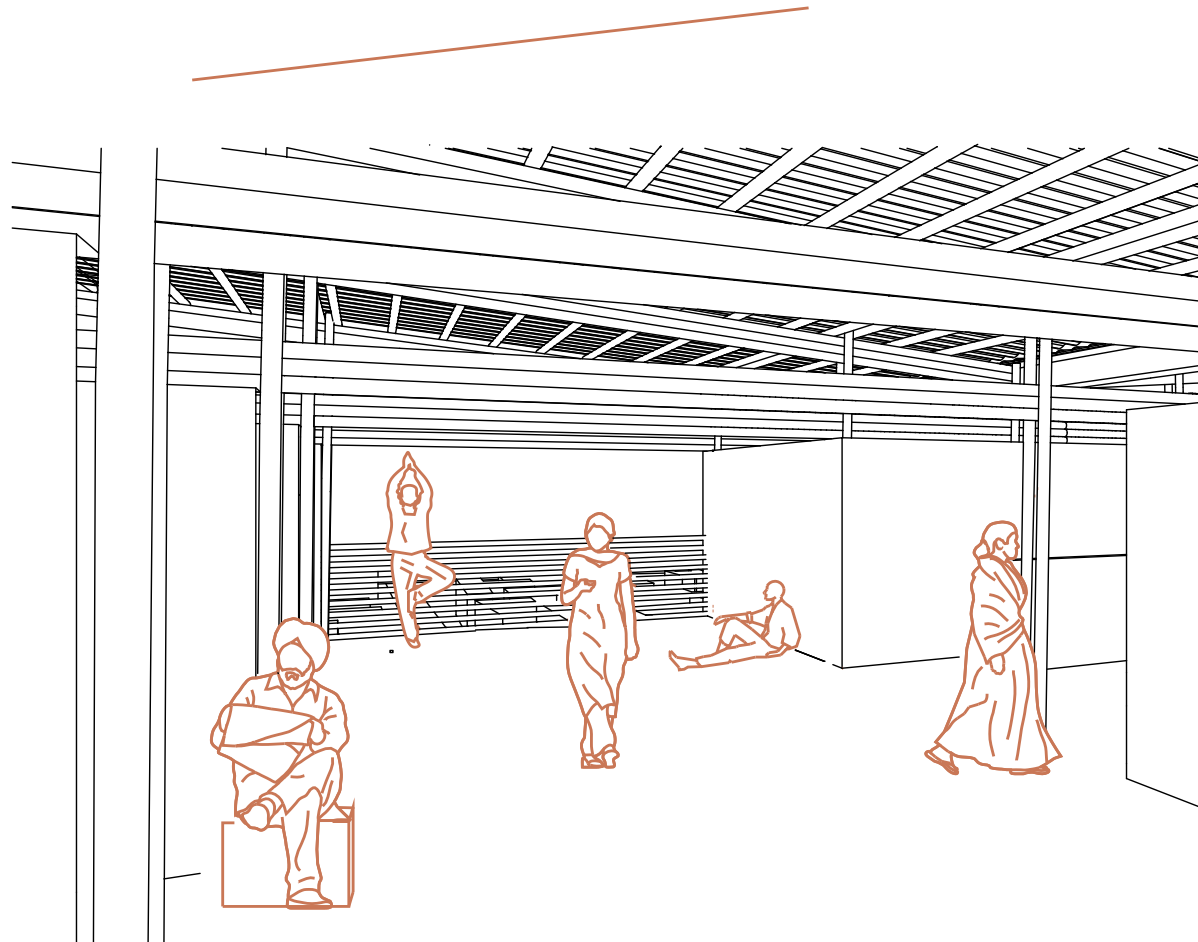
amenities | community

Community floor



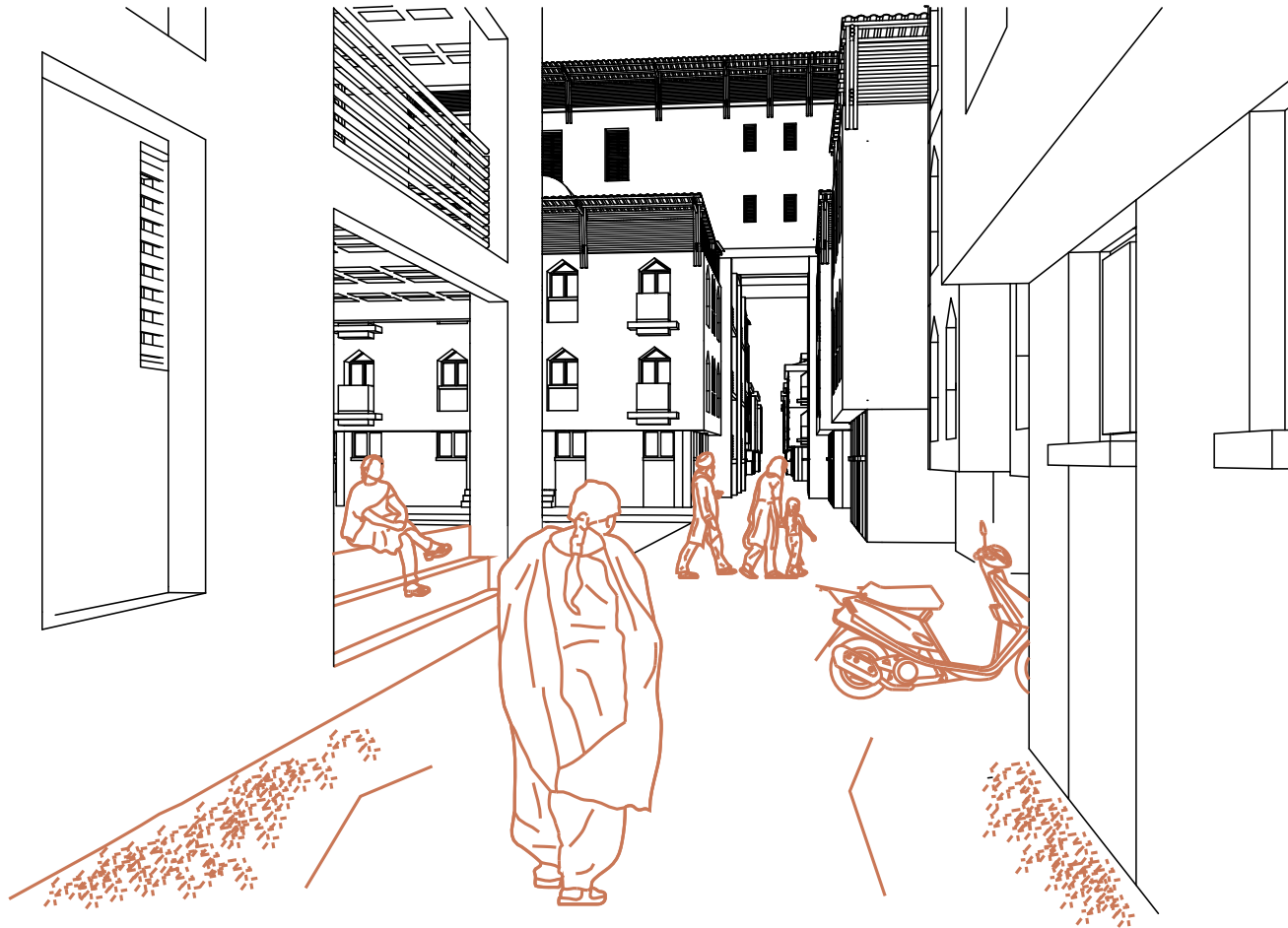
community | society

Community roof



community

Small street



parking | commercial

Balconies



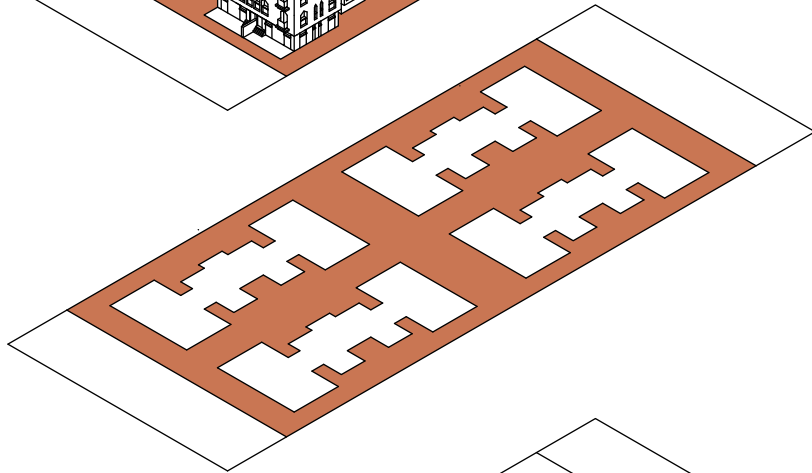
parking | balconies

Comparison

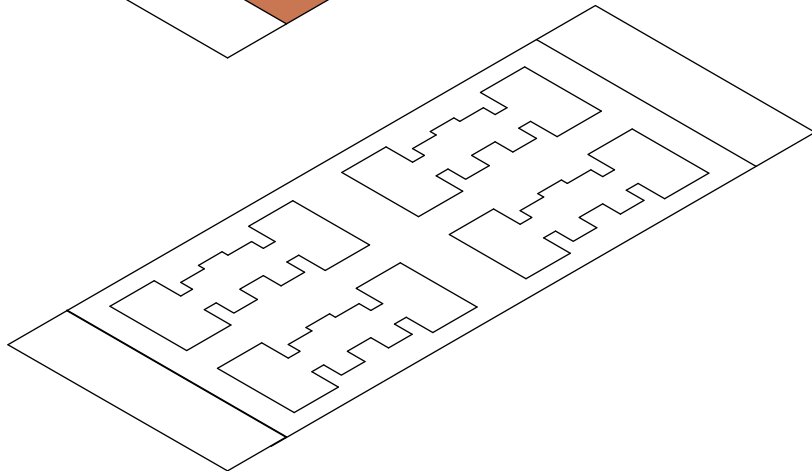
FSI: 1.5



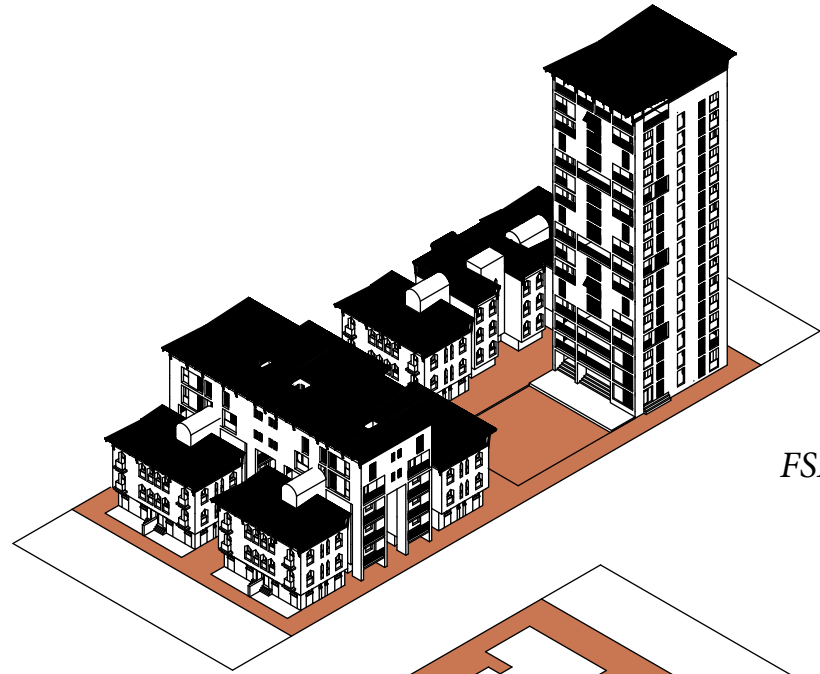
4.4 m²/person



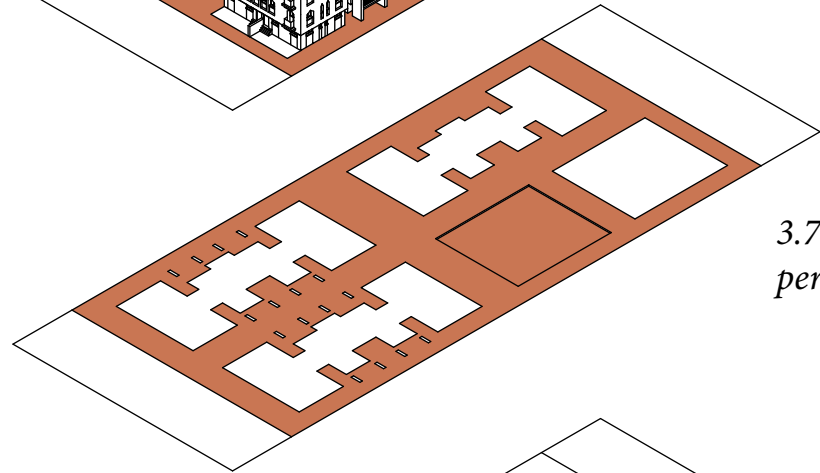
0 m²/person



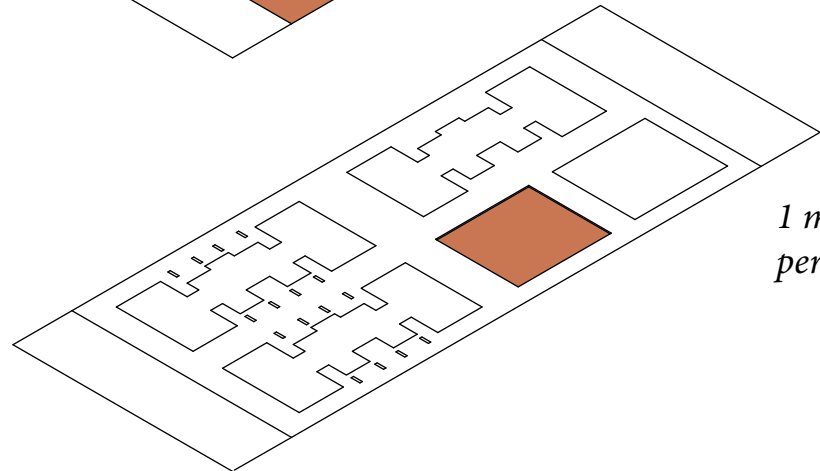
FSI: 2.5



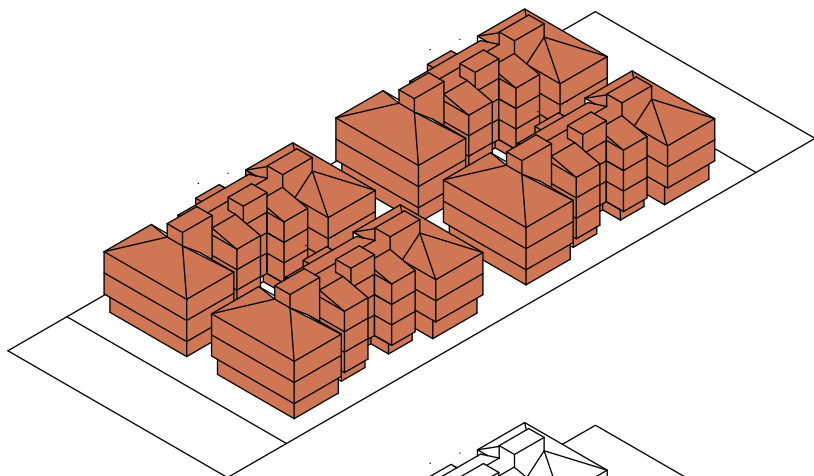
3.7 m²/person



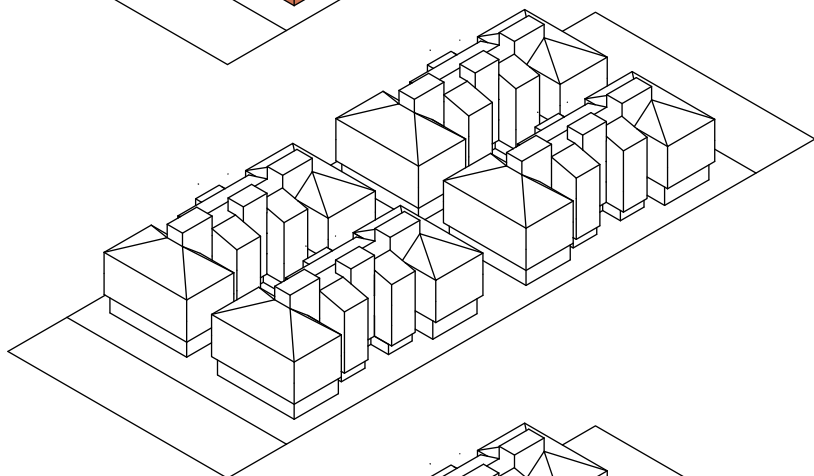
1 m²/person



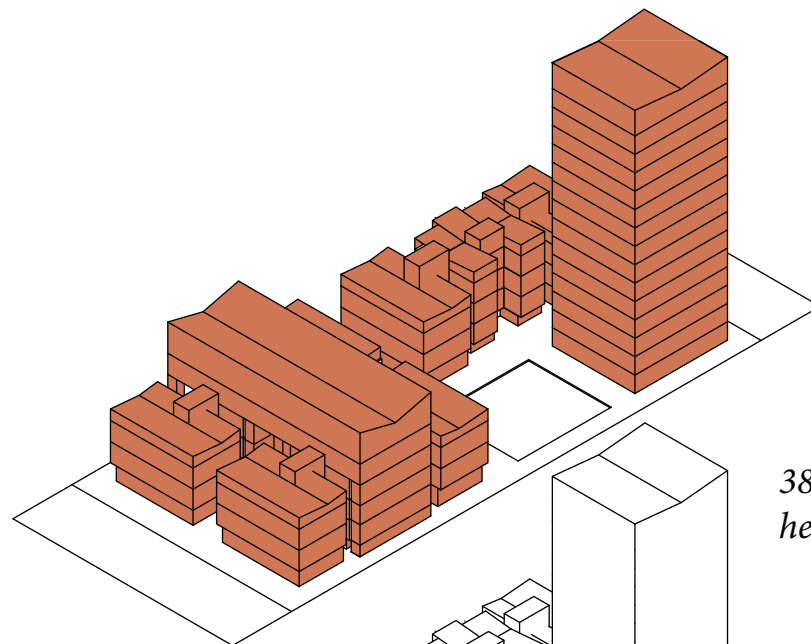
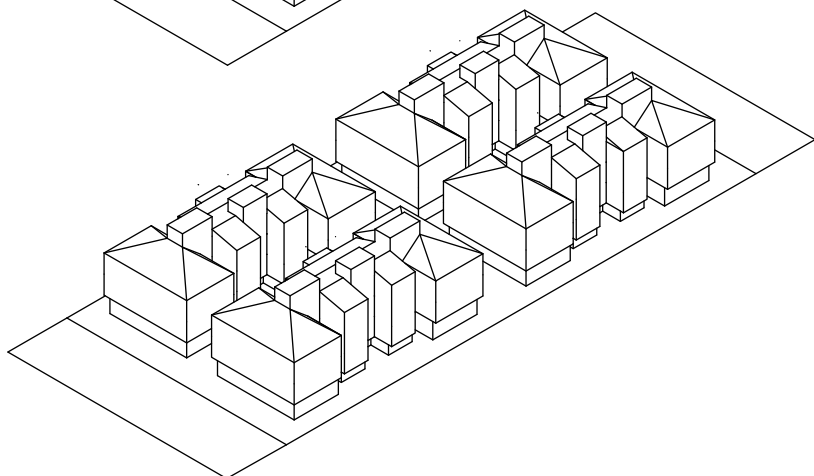
*266 units/
hectare*



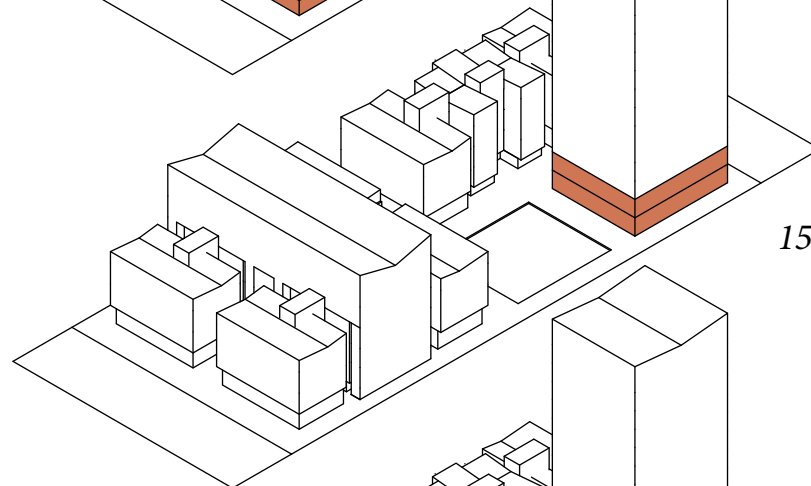
0 m²



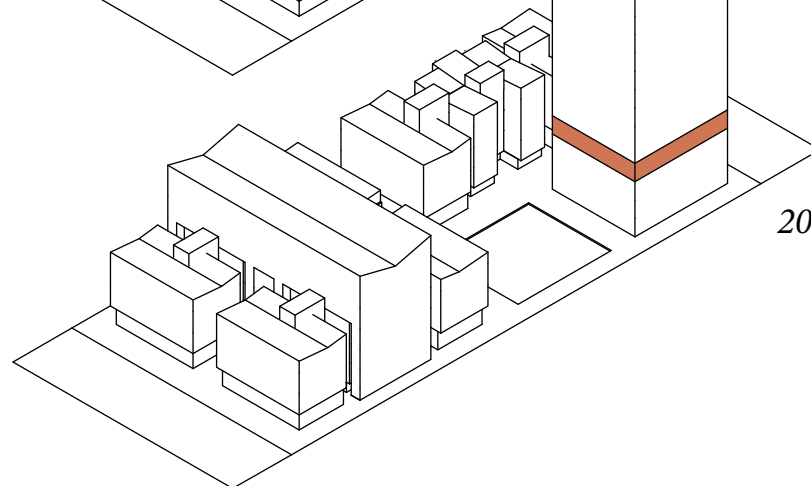
0 m²



*388 units/
hectare*



155 m²



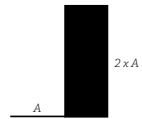
200 m²

Cluster options

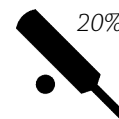
Directives



maximum FSI



maximum height



recreational open space



amenities

rules

goals

one building

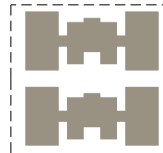


FSI: 1.5



FSI: 5

two buildings



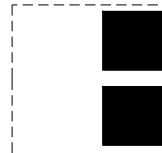
FSI: 1.5



FSI: 3.3

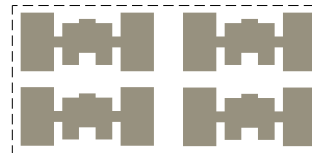


FSI: 3.7

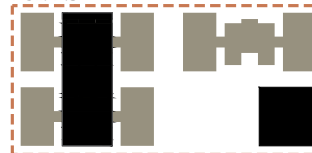


FSI: 5

four buildings



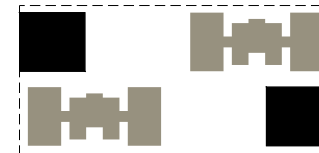
FSI: 1.5



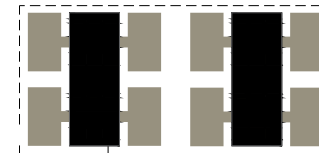
FSI: 2.5



FSI: 2.2



FSI: 3.3

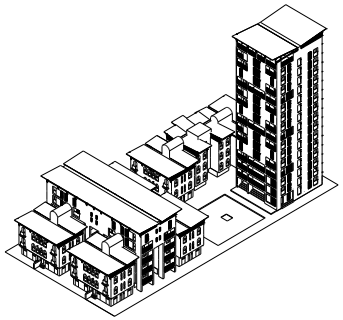


FSI: 3.7

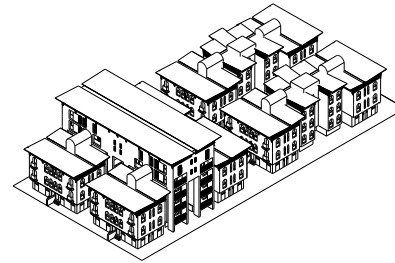


FSI: 1.85

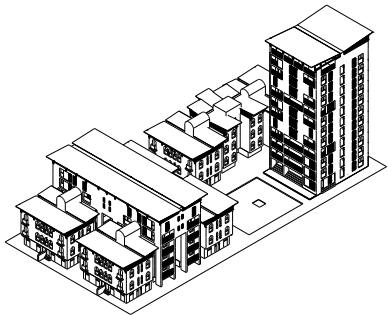
Options



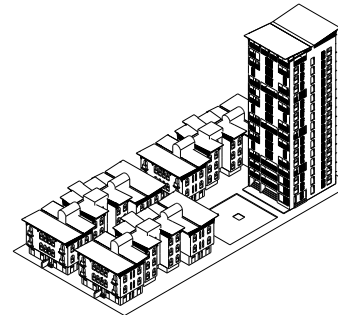
option 1



option 3



option 2

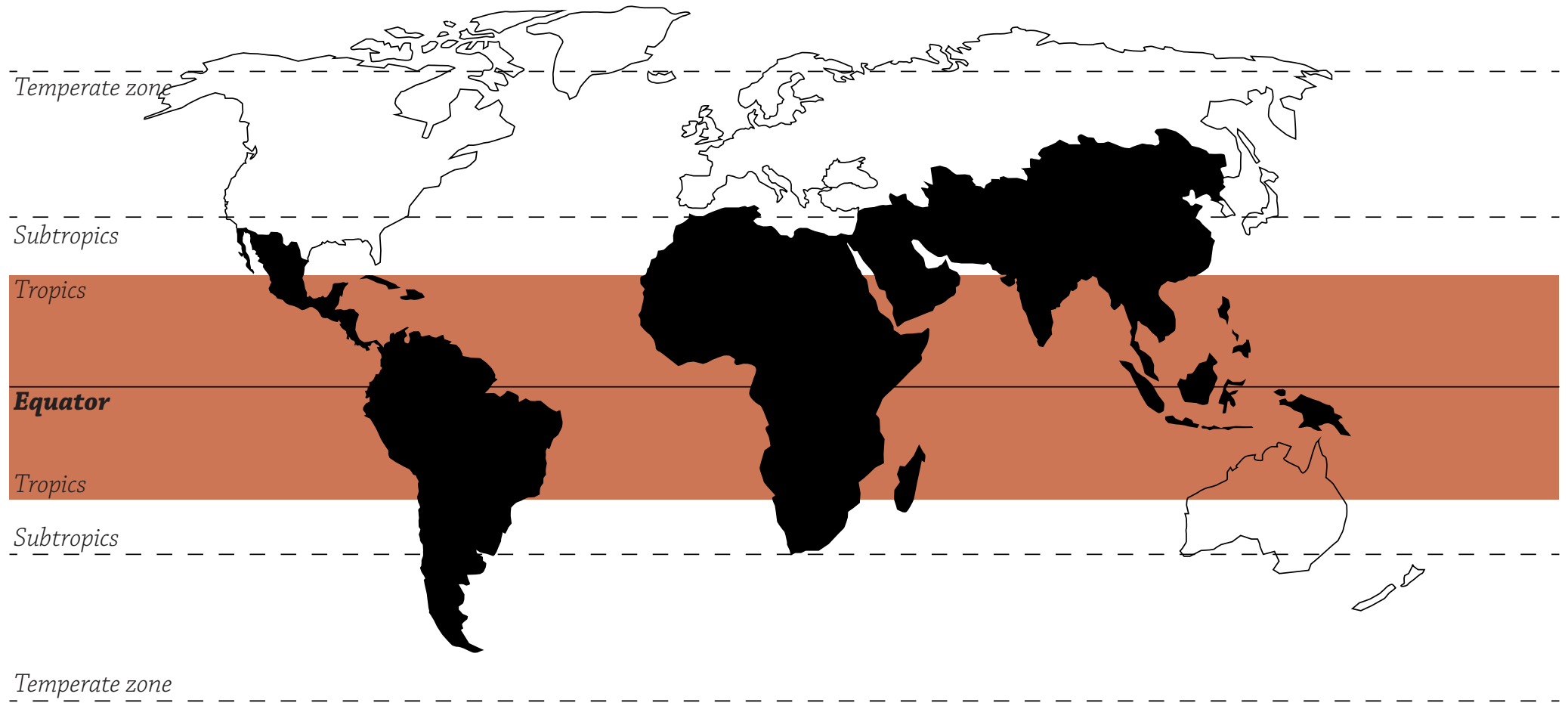


option 4

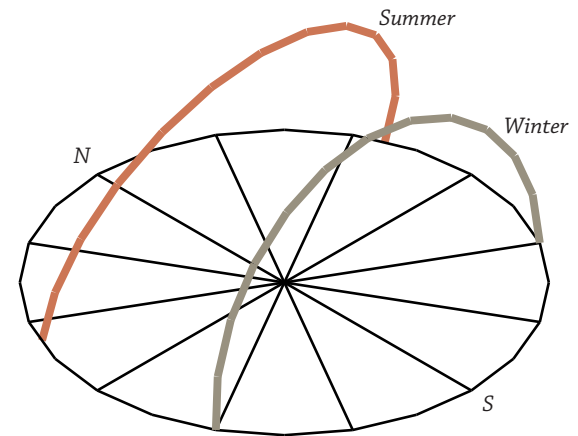
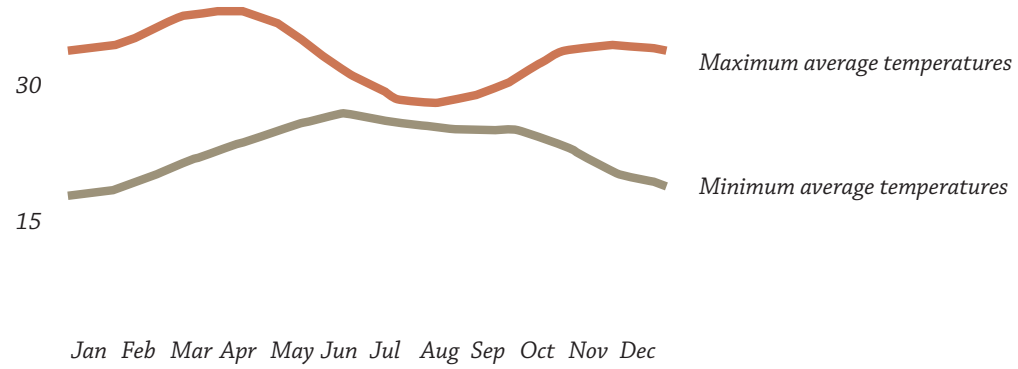


Building technology

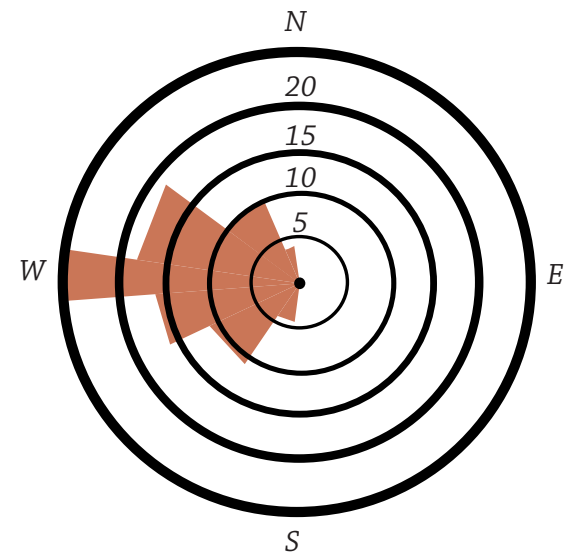
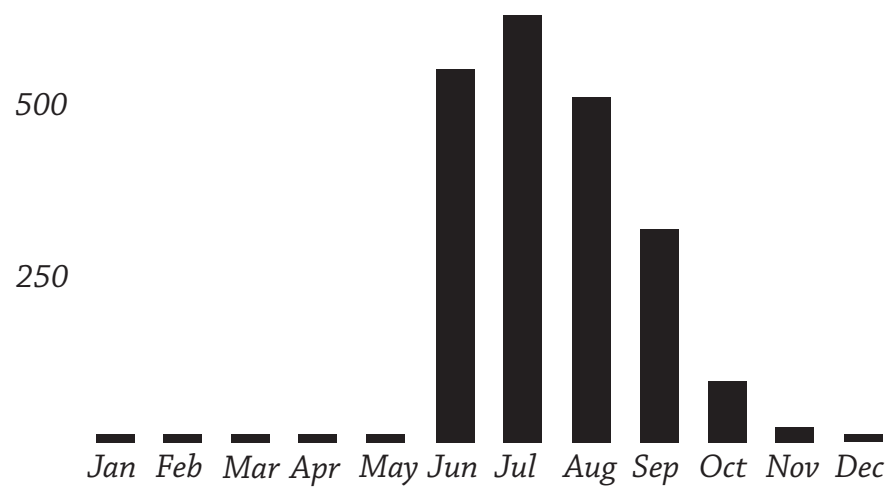
Global South | Climate



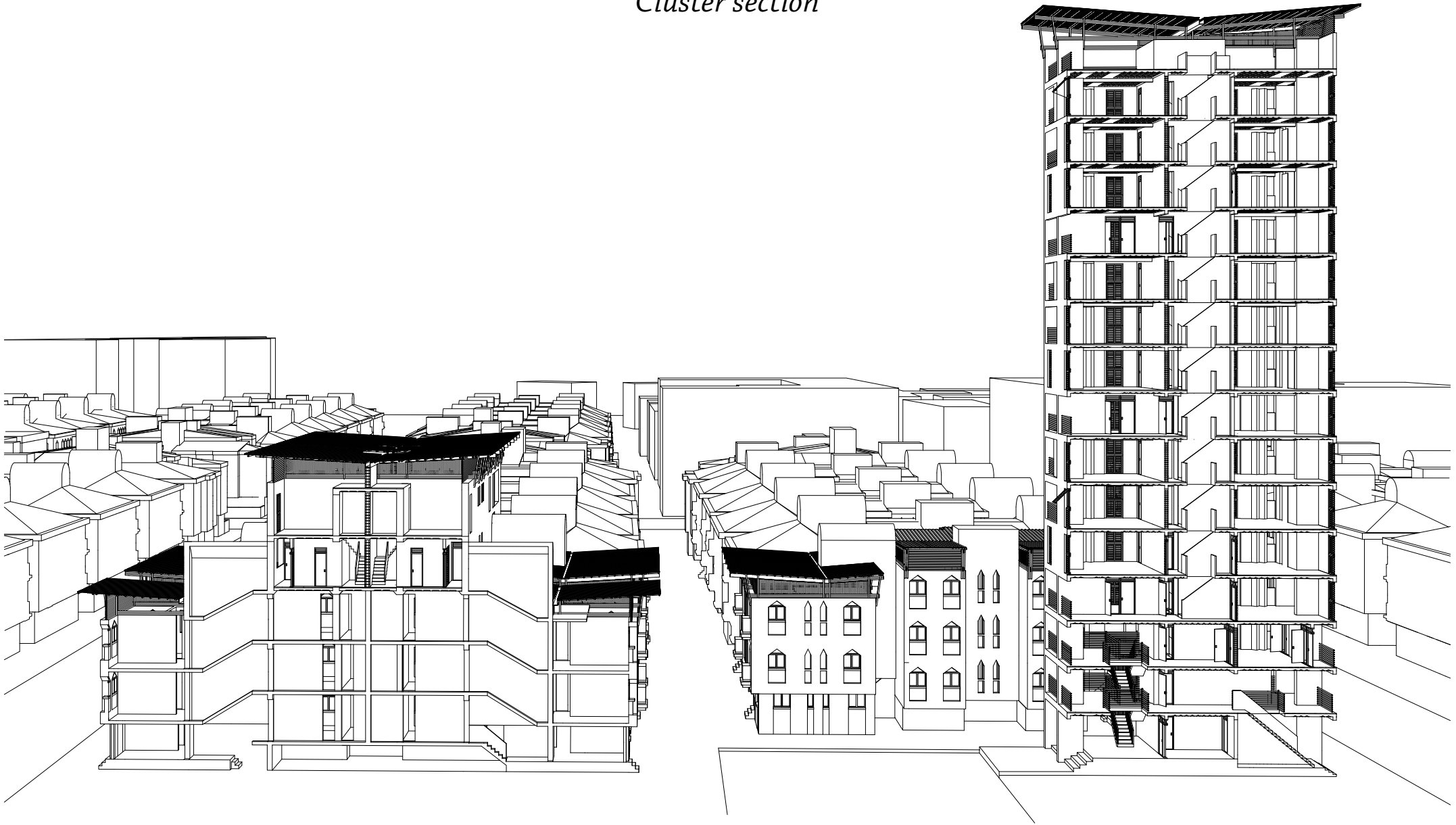
Mumbai | Climate



Mumbai | Climate



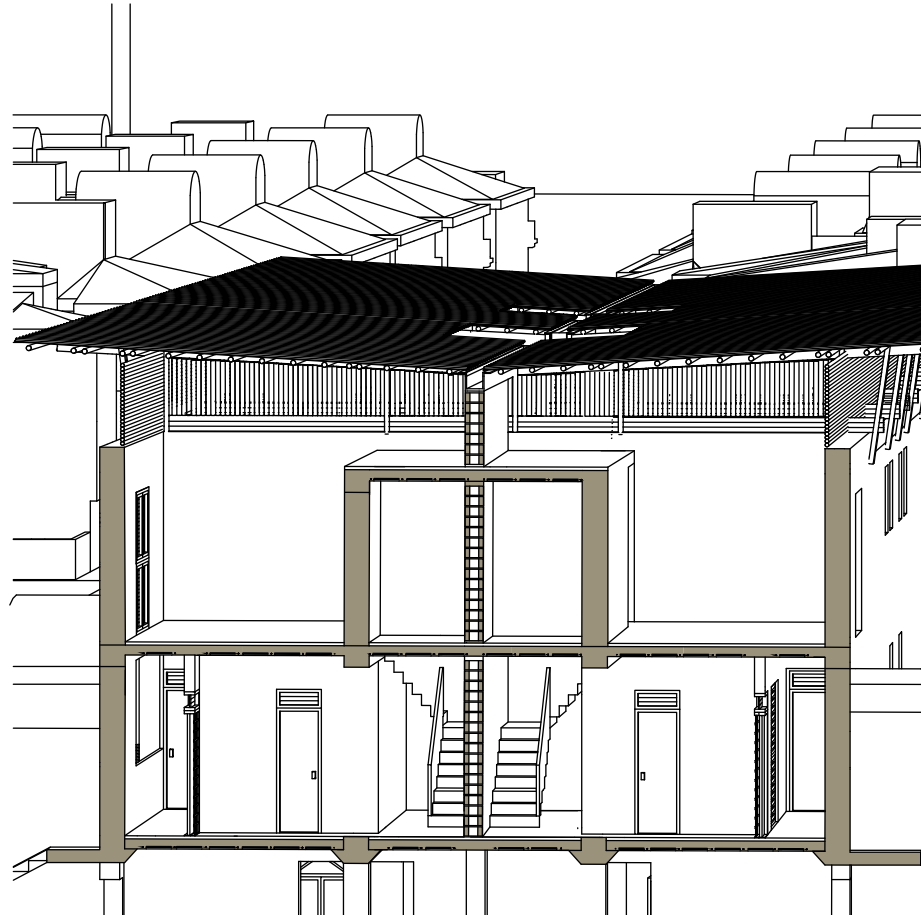
Cluster section



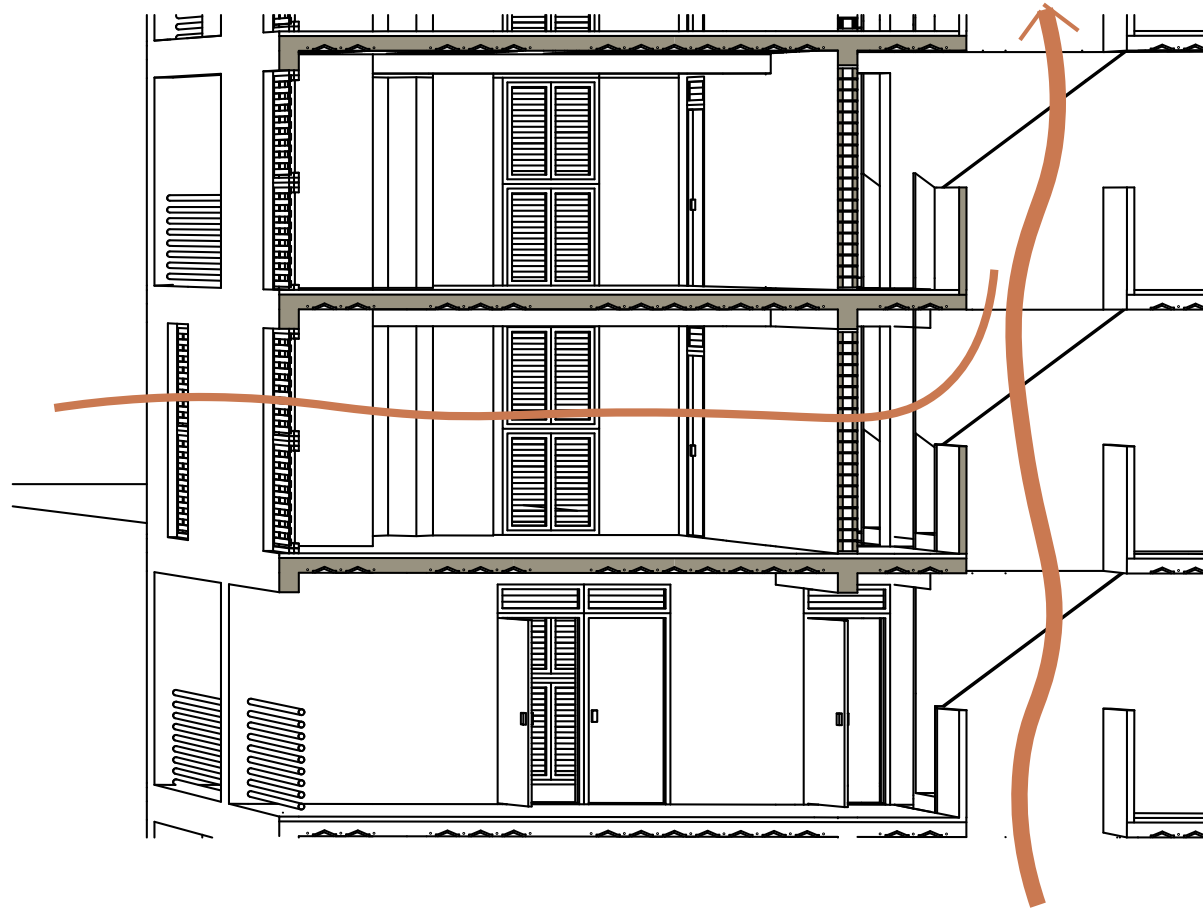
Cluster facades



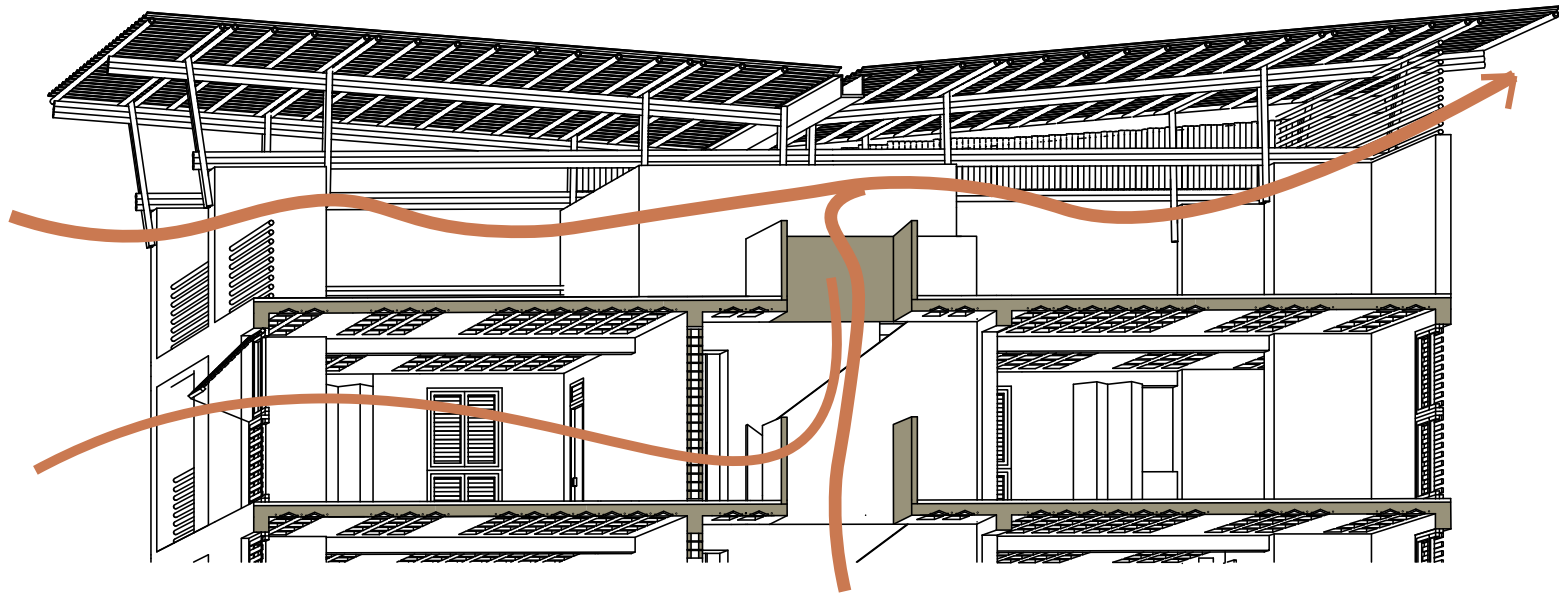
Up-build section



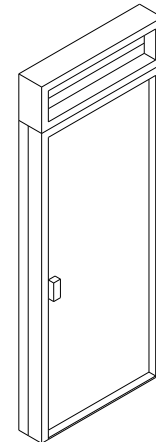
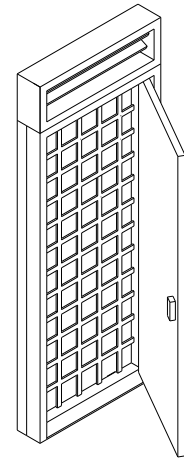
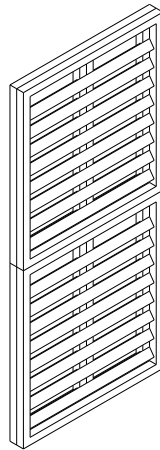
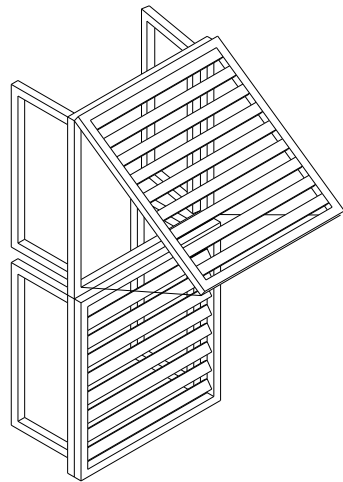
Cross ventilation



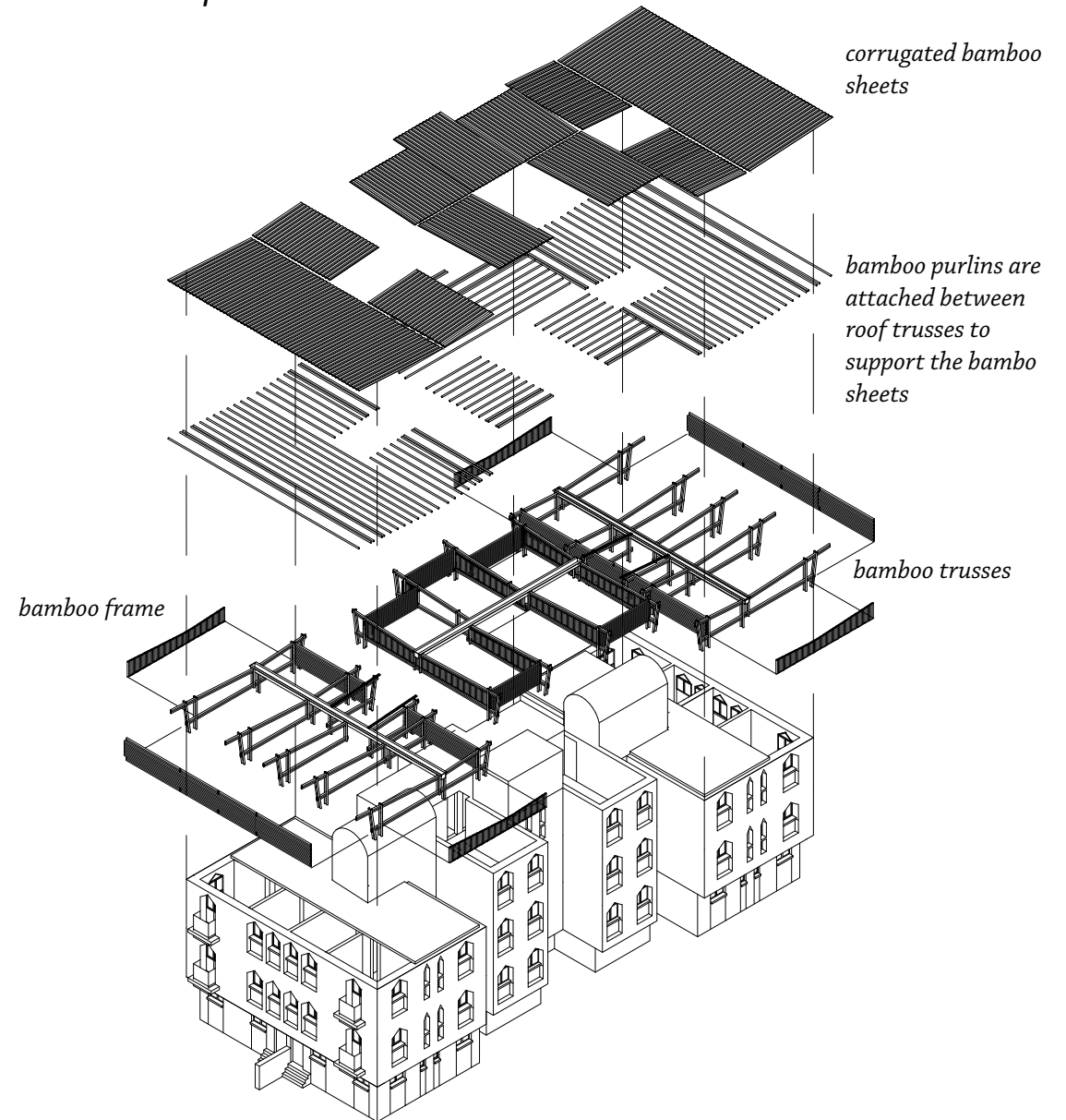
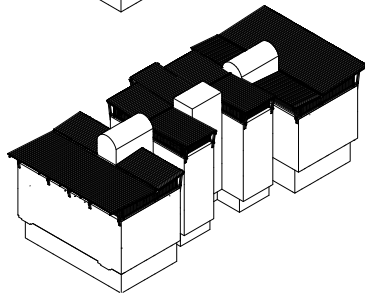
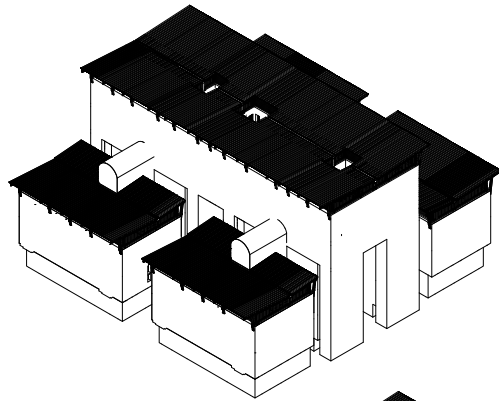
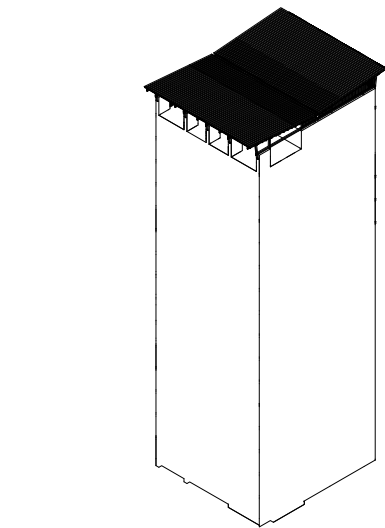
Ventilation



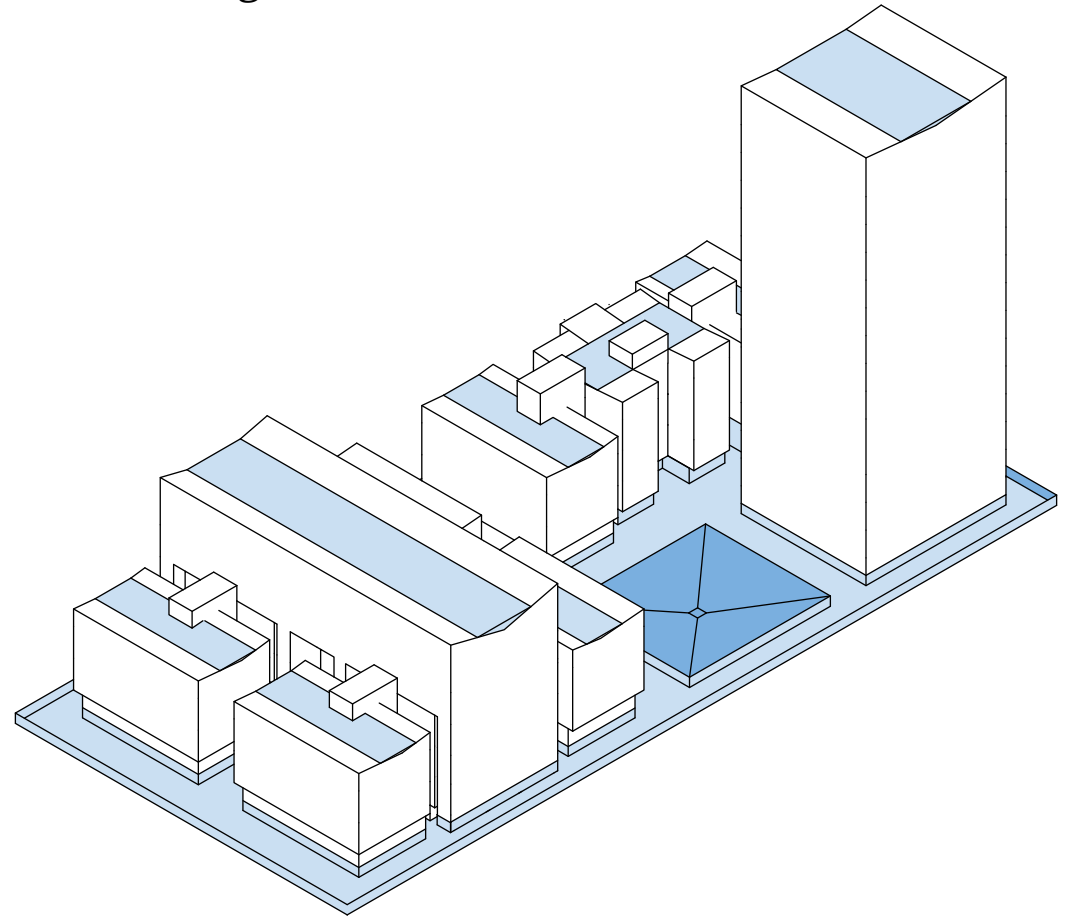
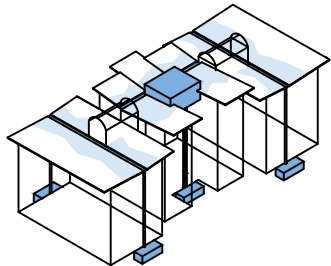
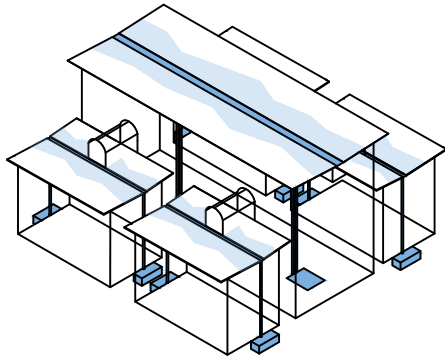
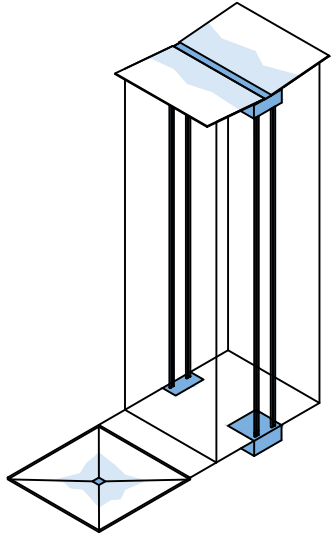
Cross ventilation



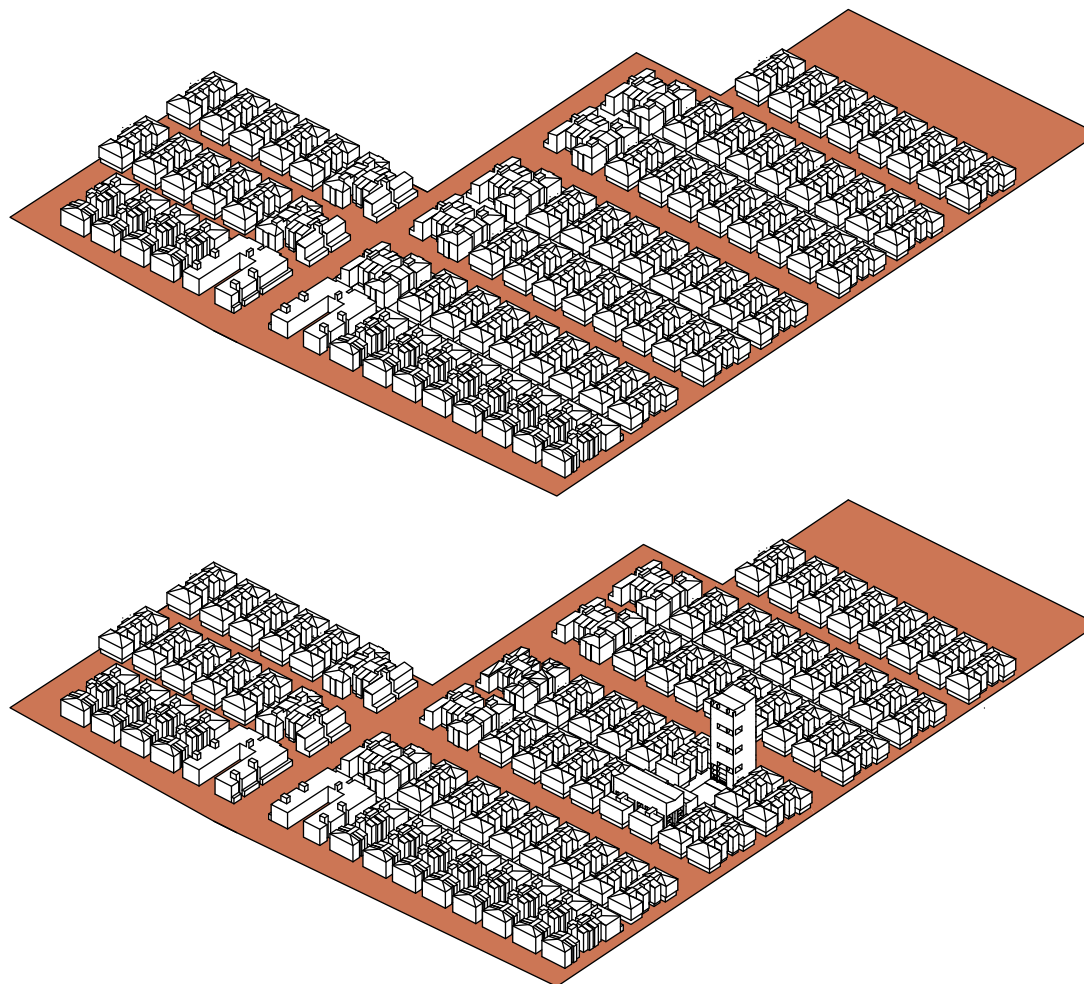
Bamboo roof

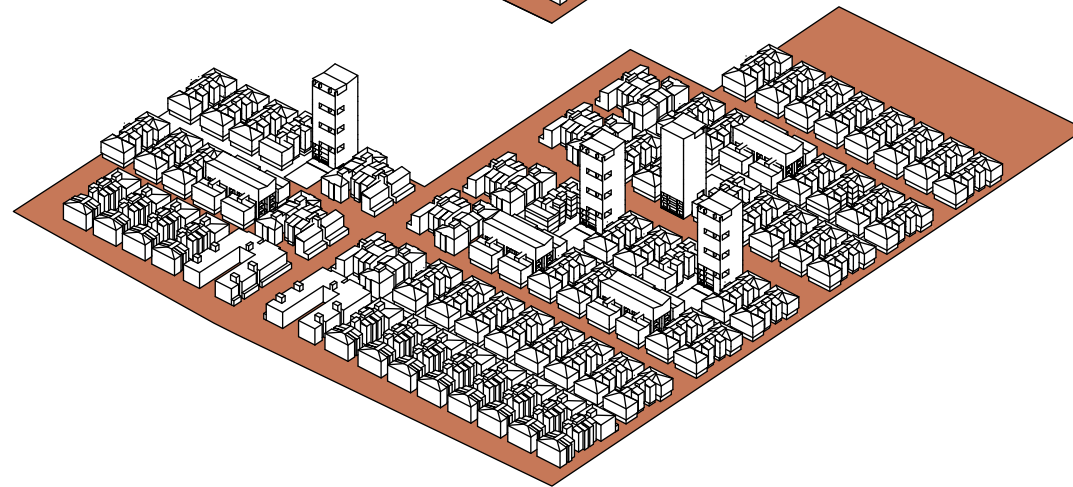
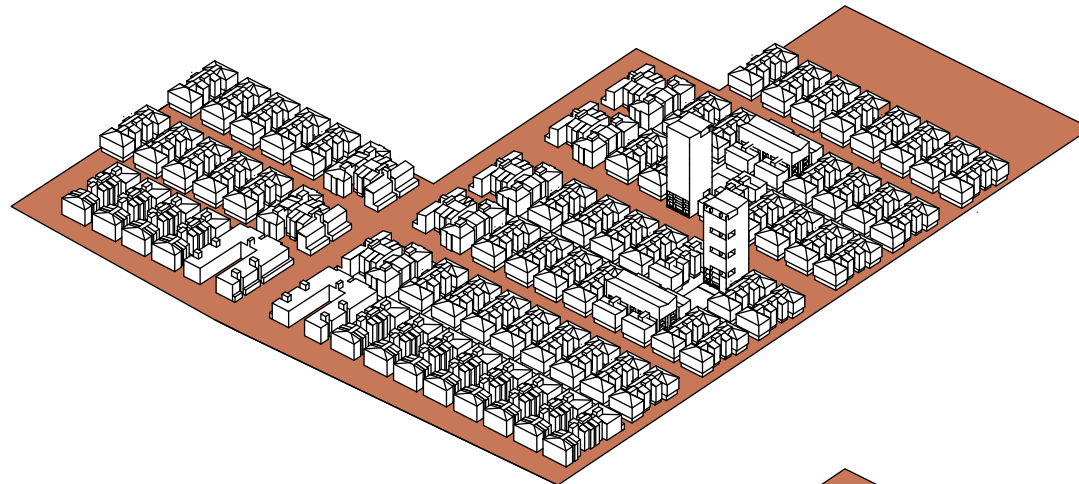


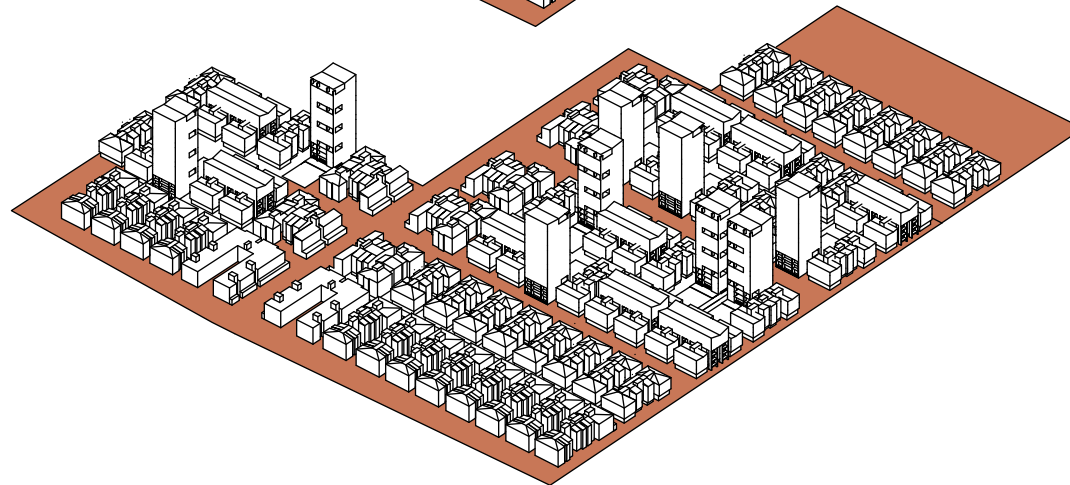
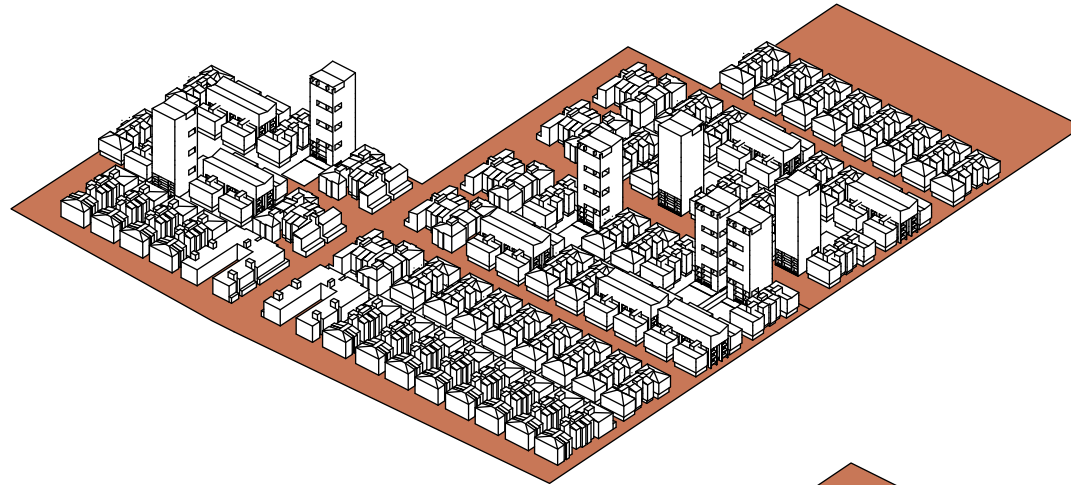
Water harvesting

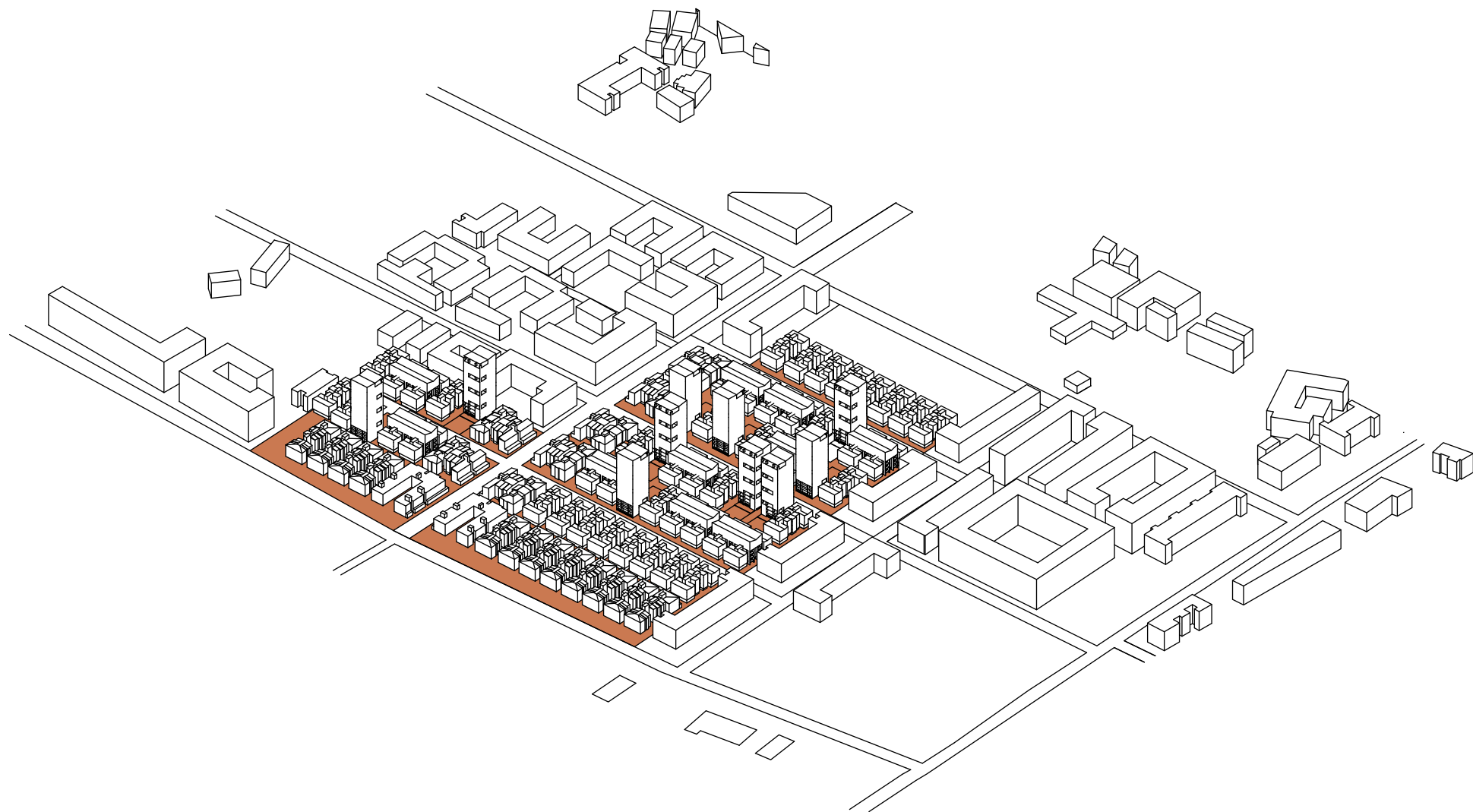


Urban strategy





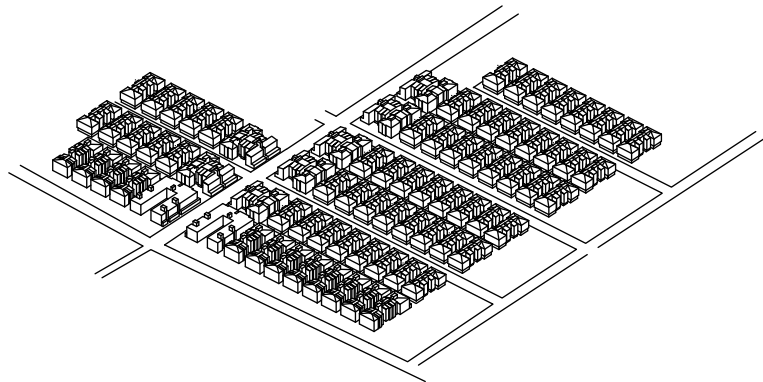




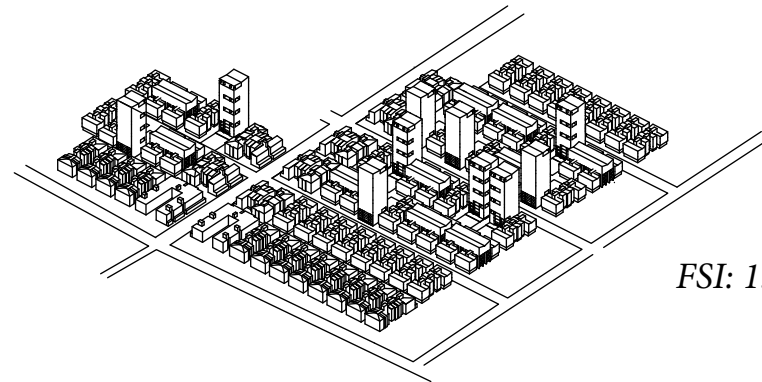


Conclusions

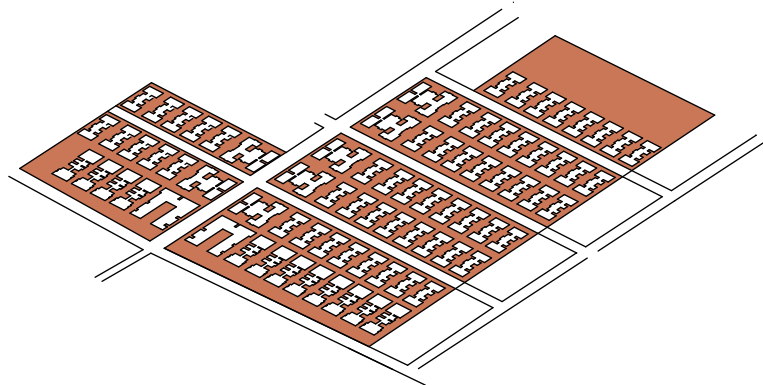
FSI: 1.25



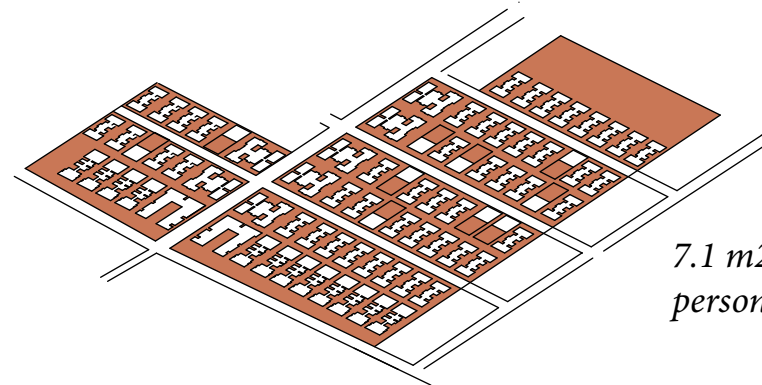
FSI: 1.55



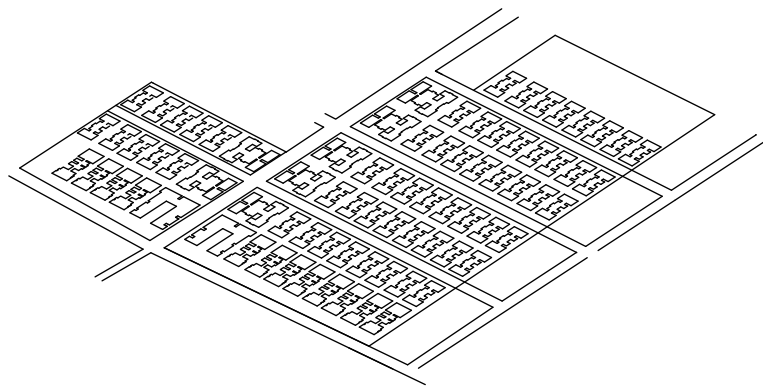
8.2 m²/person



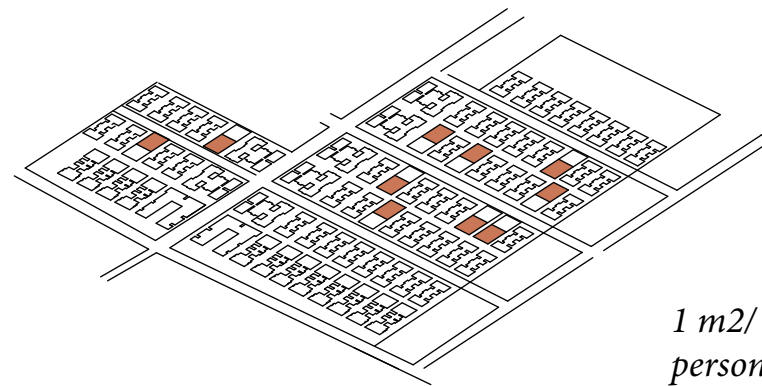
7.1 m²/person

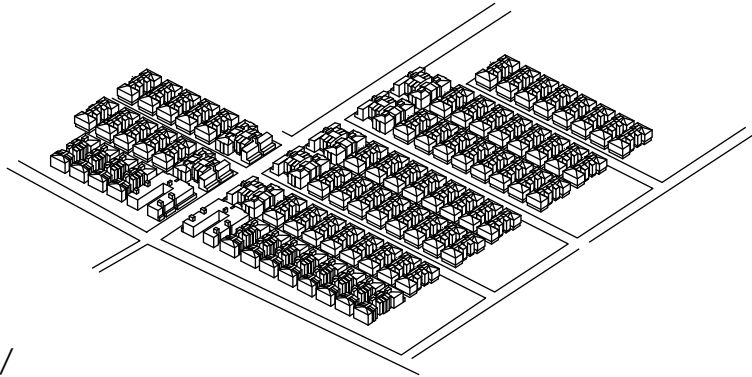


0 m²/person

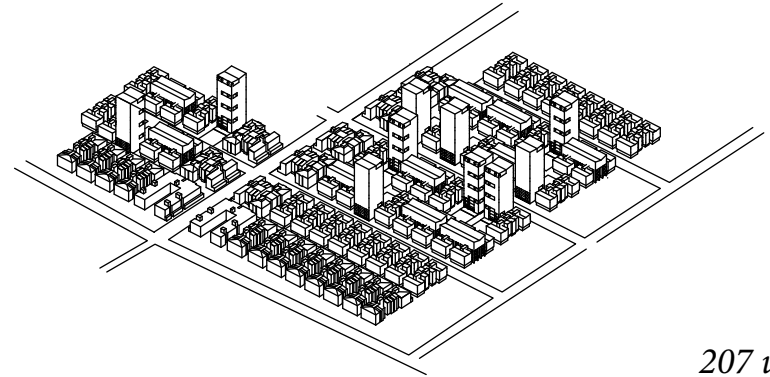


1 m²/person

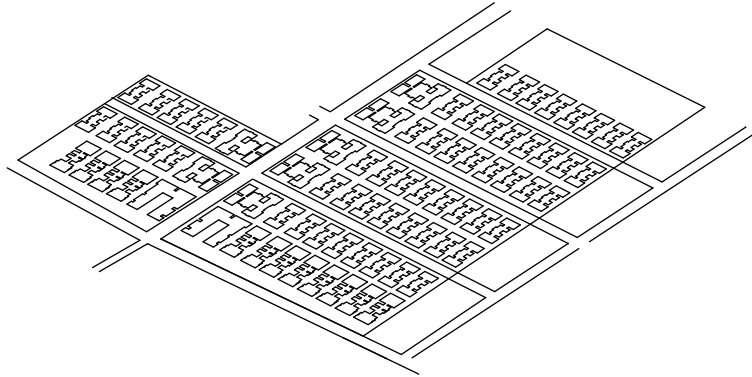




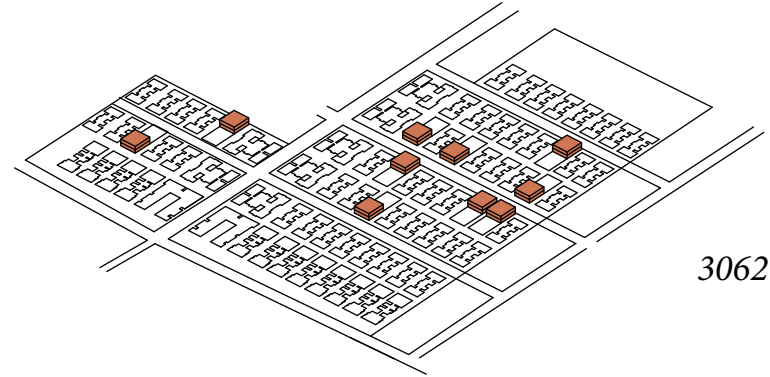
170 units/
hectare



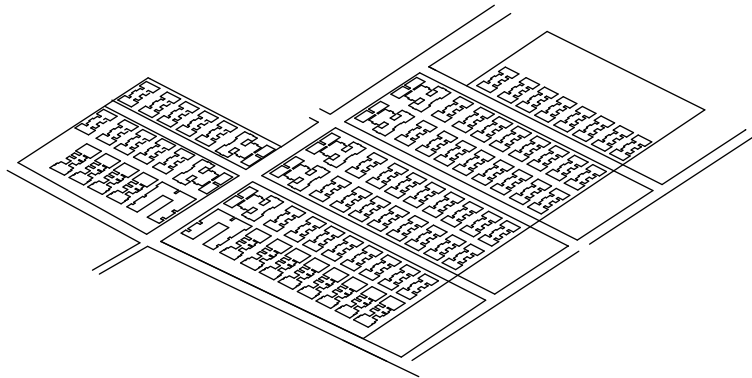
207 units/
hectare



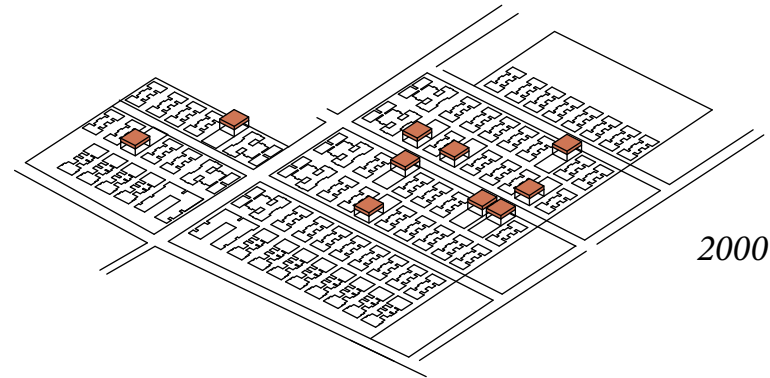
896 m²



3062 m²



0 m²



2000 m²

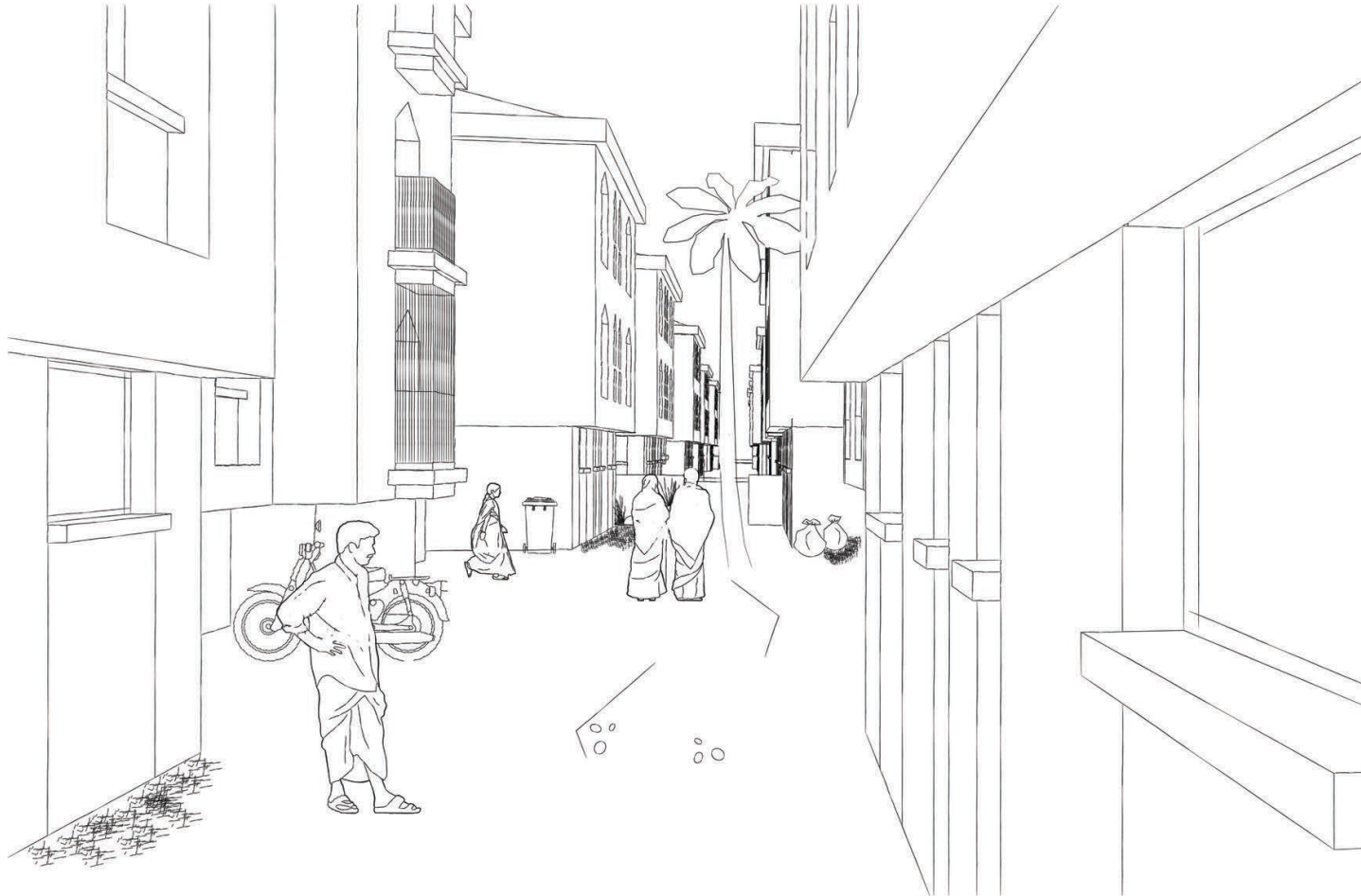
Inbetween two buildings



Community square



Inbetween two buildings



Inbetween two buildings



Big street



Big street



Inbetween four buildings



Inbetween four buildings

